

C.M. 1994/G:1 Report of Activities



DEMERSAL FISH COMMITTEE

1993

by

Eero Aro

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BELGIUM

(R. de Clerck)

Recording of densities and growth rates of the 1992 and 1993 year classes of sole, plaice, dab, flounder and whiting was carried out. Two cruises were therefore undertaken according to the criteria of the International Demersal Young Fish Survey. Beamtrawl survey was continued in order to estimate the stock size of adult flatfish in the Southern North Sea by means of beamtrawl fishery in August. This was part of an international survey in collaboration with the Dutch and UK institute. The market sampling was continued covering plaice and sole (North Sea-English Channel-Celtic Sea and Irish Sea). The number of samples is shown in following tables.

SAMPLING	DATA	FOR:
BELGIUM		

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SOLE					
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grandistrations are an area of	in assessment Arrests	N. 400 M. 408-46	4.showner	minus No.	Section Section

93		on the second	Research ve	ssel samples	Market samples		
* Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	-	2	140	70
	2	-	-	-	8	875	80
IV	3	-	-	-	1	113	0
	4	-		-	9	1240	300
	Total:	0	0	0	20	2368	450
· · · · · · · · · · · · · · · · · · ·	1		-	-	0	0	0
	2	-		-	1	109	80
VII f,g	3	-	-	-	1	80	80
	4	-	-	-	2	140	140
	Total:	0	0	0	4	329	300
	1	-	-	-	0	0	0
	2	-	-	-	5	520	160
VII a	3	-	-	-	0	0	0
	4	-	-	-	0	0	0
	Total:	0	0	0	5	520	160
	1	•	-	•	0	0	0
	2	-	-	-	2	120	80
VII d,e	3		-	-	1	105	0
	4	-	-	•	6	505	260
	Total:	0	0	0	9	730	340

SAMPLING DATA FOR:

PLAICE

BELGIUM

993		Till State of the	Research ves	sel samples	Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	0	0	0
	2	-	-	-	10	637	0
IV	3	-	1 -	-]	2	100	40
	4	-	- {	-	10	690	140
	Total:	0	0	0	22	1427	180
	1	-	-	-	0	0	0
	2	-	-	-	1	60	0
VII f,g	3	'	- 1	-	2	80	80
	4	-	-	-	2	100	100
	Total:	0	0	0	5	240	180

1993			Research ve	ssel samples	Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	-	0	0	0
j	2	-	-	-	5	250	80
VII a	3	-	-	-	0	0	0
	4	-	-	•	0	0	0
	Total:	0	0	0	5	250	80
	1	-	-	-	0	0	0
	2	-	-	-	2	85	40
VII d,e	3	-	-	-	1	30	0
	4	-	-	-	6	360	120
	Total:	0	0	0	9	475	160

CANADA

(R. N. O'Boyle)

Canada had no fisheries and no research vessel activity on demersal fish in the ICES area in 1993. Activities in the Northwest Atlantic have been reported to NAFO.

DENMARK

(P. Dengbol)

R/V DANA surveys in 1993

Survey no.	Area	Period	Objectives
1 2 3	North Sea Baltic Sea North Sea	•	International Bottom Trawl Survey Baltic Young Fish Survey Acoustic herring and
4	and Div. Illa North Sea and Div. Illa	November	sprat survey International Bottom Trawl Survey

SAMPLING DATA FOR:

COD

1993		Number of s	amples	Number of fish			
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	-	5	613	613	-	
Baltic Sea	2		3	419	419	-	
SD 22	3	-	1	46	46	-	
	4	-	-	-	-		
	Total:	0	9	1078	1078	0	

Area	* Quarter	Research	Market	Measured	N aged	Racial invest.
3110 41111111111111111111111111111111111	1	-	4	607	605	-
Baltic Sea	2	-	2	319	319	-
SD 24	3	i -	1	251	251	-
	4	-	3	257	257	•
	Total:	0	10	1434	1432	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	67	14	14536	827	-
Baltic Sea	2	-	7	451	451	
SD 25-32	3	-	-	-	-	-
	4	-	2	153	153	-
	Total:	67	23	15140	1431	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	•	13	653	653	-
	2	-	14	365	365	-
Kattegat	3	2	13	335	312	• '
j	4	6	19	575	487	•
	Total:	8	59	1928	1817	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	•	24	760	753	-
	2	-	11	641	616	-
Skagerrak	3	7	22	1006	625	-
	4	6	22	1006	573	-
	Total:	13	79	3413	2567	0
Area (Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	2	4	4	-
Division	2	•	•	-	•	-
IVa E	3	3	1	55	3	-
	4	5	•	54	-	-
	Total:	8	3	113	7	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	•	2	2	2	-
Division	2	-	•	-	-	-
IVa W	3	-	•	-	•	-
i	4 Tratala	•	-		•	•
	Total:	0	2	2	2	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	37	5	613	270	-
Division	2	-	8	308	307	-
IVb	3 4	1 24	6	261 515	256 131	-
						-
to the American	Total:	62 Passarah	25	1697	964	0 Daniel invest
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Third it is	1	-	8	437	435	-
Division IV	3	-	9	293 212	293 212	•
1	3 4		5	212 279	269	
	Total:	0	25	1221	1209	0
L	i viai;			1221	1209	ν

HADDOCK

DENMARK

1993	Number of samples		amples	Number of fish			
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	-	•	-	•	-	
	2	-	1	7	7	-	
Kattegat	3	2	9	103	101	-	
	4	5	5	92	37	-	
	Total:	7	15	202	145	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	-	9	1051	1047	-	
	2	-	8	754	752	-	
Skagerrak	3	14	30	1948	1500	-	
	4	6	18	1607	1100	-	
ļ 	Total:	20	65	5360	4399	0	
Area	Quarter /	Research	Market	Measured	N aged	Racial invest.	
	1	-	13	220	220	-	
Division	2	-	2	4	4	-	
IVa E	3	9	7	240	89	-	
	4	6	4	1285	20	-	
	Total:	15	26	1749	333	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	-	5	275	273	-	
Division	2	- ,	-	-	-	•	
IVa W	3	-	8	57	57		
	4	-	9	54	54	-	
	Total:	0	22	386	384	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	15	3	275	8	•	
Division	2	•	10	17	17	•	
IVb	3	2	3	368	245	-	
	4	18	3	1447	3	-	
	Total:	35	19	2107	273	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	•	2	132	132	•	
Division	2	-	1	245	244	-	
IV	3	-	3	400	397	-	
	4	-	6	777	773		
	Total:	0	12	1554	1546	0	

SAMPLING DATA FOR:

WIITING

1993		Number of s	amples	Number of fish		
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	26	•	693	-	-
Baltic Sea	2	-	1 .	7	•	
SD 25-32	3	-				-
	4	-	-	-	•	-
	Total:	26	1	700	0	0

Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	6	87	46	-
	2	-	6 .	22	14	-
Kattegat	3	5	15 .	754	365	-
	4	6	8	1465	376	-
	Total:	11	35	2328	801	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	20	595	595	-
,	2 .	- ;	2	4	4	-
Skagerrak	3	10	22	1047	855	-
	4	6	19	943	417	
	Total:	16	63	2589	1871	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	- ,	13	71	71	-
Division	2	-	3	4	4	-
IVa E	3	11	1	66	3	-
	4	6	2	721	13	•
	Total:	17	19	862	91	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	3	14	14	-
Division	2	-	-	-	-	-
IVa W	3	-	8	23	15	-
,	4	-	10	60	60	-
	Total:	0	21	97	89	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	43	9	2870	52	•
Division	2	-	12	36	36	-
IVb	3	2	17	393	365	
	4	29	18	2959	362	
	Total:	74	56	6258	815	0

SAITHE

1993		Number of samples		Number of fish		
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	-	-	-	-
	2		-	-	-	-
Kattegat	3	1	1	2	1	-
	4	1	-	2	-	-
	Total:	2	1	4	1	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	5	243	243	-
	2	-	6	239	237	-
Skagerrak	3	9	10	1261	237	-
	4	4	1	61	43	
	Total:	13	22	1804	760	0

Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	3	302	295	-
Division	2	-	•	j -	•	-
IV	3	6	-	533	-	-
	4	3	1	148	70	
	Total:	9	4	983	365	0

BLUE WHITING

DENMARK

1993		Number of samples		Number of fish		
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	-	-	0	-
	2	-	-	-	•	-
Kattegat	3	-	1	22	0	-
	4	-		-	0	-
	Total:	0	1	22	0	0
	1	-	3	5	0	-
	2	-	6	274	•	-
Skagerrak	3	9	19	910	0	-
	4		2	54	-	.
	Total:	9	30	1243	0	0
	1	-	1	2	-	-
Division	2	-	2	26	-	-
IVa	3	7	4	341	0	
	4	2	3	176	0	-
	Total:	9	10	545	0	0

SAMPLING DATA FOR:

NORWAY POUT

1993		Number of s	samples	**************************************	Number of	fish
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	7	48	8	-
	2	-	1	110	110	-
Kattegat	3	1	10	315	299	-
	4	3	7	670	235	
	Total:	4	25	1143	652	0
Area *	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	13	126	124	-
	2	-	7	331	331	-
Skagerrak	3	6	27	1735	1226	-
	4	-5	14	1165	689	
	Total:	11	61	3357	2370	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	14	1533	1533	-
Division	2	-	3	441	441	-
IVa E	3	3	7	946	733	-
	4	5	5	870	428	-
	Total:	8	29	3790	3135	0

Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	4	419	418	-
Division	2	-	-	-	-	-
IVa W	3	-	7	693	693	
,	4	-	10	1020	1020	- '
	Total:	0	21	2132	2131	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	15	4	813	6	_
Division	2	-	-		-	-
IVъ	3	1	1	194	104	-
	4	9	-	758	-	-
	Total:	25	5	1765	110	0

SANDEEL

1993		Number of s	amples	Assertantistis (Astronomicina)			
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	•	-	-	•	-	
	2	-	4	452	-	-	
Kattegat	3	-	2	3	-	-	
	4	-	-	-	-	-	
	Total:	0	6	455	0	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	-	1	180	180	-	
	2	-	8	1140	432	1 -	
Skagerrak	3	-	6	774	159	-	
	4	-	10	1430	229	-	
	Total:	0	25	3524	1000	0	
Area	Quarter .	Research	Market	Measured	N aged	Racial invest.	
	1	•	2	377	•	-	
Division	2	-	1	165	165	-	
IVa E	3	-	1	2	-	-	
	4	-	-	•	-	-	
	Total:	0	4	544	165	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	-	-	-	-	-	
Division	2	-	-	-	-	-	
IVa W	3	-	2	552	367	- 1	
	4		-	-	-	-	
	Total:	0	2	552	367	0	
Area	Quarter	Research	Market	Measured	N aged	Racial invest.	
	1	11	9	1938	1568	-	
Division	2	-	54	8303	3213	-	
IVъ	3	-	28	7754	5854	-	
	4	5	10	2758	960	-	
	Total:	16	101	20753	11595	0	

Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	-	-		-
Division	2	-	1	145	145	-
IVc	3	-	-	-	-	-
4	4		-	1 - 1	-	-
	Total:	0	1	145	145	0

PLAICE

1993		Number of s	amples	at a transmission of the said	Number of f	īsh
Area	Quarter :	Research	Market	Measured	N aged	Racial invest.
	1	•	1	43	43	_
Baltic Sea	2	-	2	10	5	- ,
SD 22	3	-	1	64	62	-
	4	- ,	-	-	•	-
	Total:	0	4	117	110	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	3	565	553	-
	2	-	7	1065	1003	-
Kattegat	3	2	10	984	931	
	4	6	11	918	811	•
	Total:	8	31	3532	3298	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	•	6	467	454	-
	2	-	3	454	436	-
Skagerrak	3	2	5	520	456	-
	4	6	7	759	684	•
	Total:	8	21	2200	2030	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	2	266	261	-
Division	2	-	2	392	379	-
IV	3	-	5	713	686	-
	4	-	3	353	336	•
	Total:	0	12	1724	1662	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	40	3	1161	686	-
Division	2	-	6	846	812	-
IVb	3	1	3	492	433	-
ļ	4	25	1	665	358	•
	Total:	66	13	3164	2289	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	ī	60	58	•
Division	2	-	•	•	-	-
IVc	3	•	-	-	-	-
	4	<u> </u>	-	-	•	•
	Total:	0	1	60	58	0

SOLE

DENMARK

1993		Number of samples		Number of fish		
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	-	-	-	•
	2	-	2	714	714	-
Kattegat	3	-	2	405	405	-
	4		2	374	374	-
	Total:	0	6	1493	1493	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	2	189	189	-
	2	-	2	277	277	-
Skagerrak	3	-	2	225	225	
	4	-	2	263	263	-
	Total:	0	8	954	954	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-		-	-	-
Division	2	-	2	338	338	-
IVb	3	-	2	273	273	-
;	4	-	-	-	-	-
	Total:	0	4	611	611	0

SAMPLING DATA FOR:

COMMON DAB

1993		Number of samples		Number of fish		
** *Area 🗟 🤄	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	1	105	103	_
Baltic Sea	2	-	2	91	90	-
SD 22	3	-	1	90	76	-
	4	-	-		•	-
	Total:	0	4	286	269	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	5	195	158	-
	2	-	5	178	153	
Kattegat	3	3	6	401	184	-
	4	6	7	613	170	-
	Total:	9	23	1387	665	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	15	151	•	-
	2	-	2	2	-	1 - I
Skagerrak	3	1	8	153	-	-
	4	3	12	275	•	-
	Total:	4	37	581	0	0
Area situation of the same of	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	1	1		-
Division	2		-	-	•	-
IVa E	3	1	-	2	-	-
	4	4	1	149	•	-
	Total:	5	2	152	0	0

Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	43	10	3289	-	-
Division	2	•	1	10	-	-
IVb	3	1	6	11	-	-
	4	29	4	1954	-	-
	Total:	73	21	5264	0	0

LONG ROUGH DAB

DENMARK

1993		Number of s	amples		Number of	lish
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
(200	1	-	3	4	103	-
	2	- ;	1	2	90	-
Kattegat	3	-	3	69	76	-
	4	-	6	66	•	
	Total:	0	13	141	269	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	12	66 .	158	-
	2	-	3	127	153	-
Skagerrak	3	-	10	126	184	-
	4	-	8	68	170	
	Total:	0	33	387	665	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	9	24	_	-
Division	2	-	1	1	-	-
IVa E	3	-	4	8	-	-
	4	-	2	10	-	-
	Total:	0	16	43	0	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	3	15	-	-
Division	2	-	-	-	-	-
IVa W	3	-	3	8	-	-
	4	-	9	13	-	- ,
	Total:	0	15	36	0	0
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	-	5	20	-	-
Division	2	-	3	7	-	-
IVъ	3	-	2	10	-	-
	4	-	•		-	
	Total:	0	10	37	0	0

SAMPLING DATA FOR:

FLOUNDER

1993		Number of s	amples	Number of fish				
Area	• Quarter	Research	Market	Measured	N aged	Racial invest.		
	1	-	1	74	74	-		
Baltic Sea	2	-	1	90	88			
SD 22	3	•	1	51	41	-		
	4	-	•	-	-	-		
	Total:	0	3	215	203	0		

Area	Quarter	Research	Market	Measured	N aged	Racial invest.
	1	60	-	1305	-	-
Baltic Sea	2	-	-	-	-	-
SD 25-32	3	-	-	-	-	-
	4	-	-	-	-	
	Total:	60	0	1305	0	0

ESTONIA

(E. Ojaveer)

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

FAROES

(J. Reinert)

The sampling programme for commercial catches of cod, haddock, saithe, Norway pout, blue ling and redfish was continued in 1993. In addition samples of the species mentioned were taken from research vessel catches. The tables provide more details.

The following research cruises with relevance to the Demersal Fish Committee were made in 1993:

- 1. In January-February R/V Magnus Heinason carried out exploratory deep water trawl fishery in national and international waters targeted especially for orange roughy.
- 2. The Faroese Groundfish Surveys with **R/V** Magnus Heinason were continued in March, specially designed for cod and haddock, in April specially for redfish and Faroe Bank cod and in August-September with special emphasize on saithe.
- 3. In April R/V Magnus Heinason carried out deep water trawl survey for blue ling in national waters to the south and southwest of the Faroes.
- 4. In June-July R/V Magnus Heinason continued the 0-group surveys in Faroese waters to get information on the year-class strength of cod, haddock, Norway pout and sandeel.
- 5. In July R/V Magnus Heinason carried out experiments to investigate the survival of fish escaping through the trawl meshes.
- 6. In September an acoustic survey for oceanic Sebastes mentella in the Irminger Sea was carried out with R/V Magnus Heinason in order to investigate the feasibility of stock assessment by acoustics at this time of the year.

In all cruises with R/V Magnus Heinason biological samples were taken as a routine for most fish species from almost every haul and the measurements were entered into the computer system automatically. Since all data have not been edited yet, the number of samples and measurements by species for 1993 can not be given at this stage.

COD

FAROES

1993		Research vessel samples			Market samples		
Area	, Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	49	8109	1237
	2	*	*	*	49	6910	1203
Vb	3	*	*	*	60	10336	1080
	4	*	*	*	52	5585	1940
	Total:	0	0	0	210	30940	5460

SAMPLING DATA FOR:

HADDOCK

FAROES

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	24	7784	646
	2	*	*	*	19	5075	303
Vb	3	*	*	*	22	4615	601
	4	*	*	*	28	6574	1000
	Total:	0	0	0	93	24048	2550

SAMPLING DATA FOR:

SAITHE

FAROES

1993		Research vessel samples			Market samples		
» Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	29	5456	650
•	2	*	*	*	29	7041	500
Vъ	3	*	*	*	34	6769	981
	4	*	*	*	33	7032	951
	Total:	0	0	0	125	26298	3082

SAMPLING DATA FOR:

NORWAY POUT

FAROES

1993		established Malitable Malinganicis	Research ve	ssel samples	Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	5	1229	250
	2	*	*	*	4	811	200
Vъ	3	*	*	*	3	606	150
	4	*	*	*	8	1451	397
	Total:	0	0	0	20	4097	997

SAMPLING DATA FOR:

Sebastes marinus

FAROES

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	8	428	-
	2	*	*	*	-	-	-
Vb	3	*	*	*	8	589	-
	4	*	*	*	2	77	-
	Total:	0	0	0	18	1094	0

Sebastes mentella

FAROES

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	14	3861	•
	2	*	*	*	10	1794	-
Vъ	3	*	*	*	14	2394	-
	4	*	*	*	8	1377	•
	Total:	0	0	0	46	9426	0

SAMPLING DATA FOR:

BLUE LING.

FAROES

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	*	*	*	3	332	-
	2	*	*	*	4	537	-
Vb	3	*	*	*	5	557	-
	4	*	*	*	2	175	-
	Total:	0	0	0	14	1601	0

^{*)} Not possible to quantify at this stage (see text)

FEDERAL REPUBLIC OF GERMANY

(S. Ehrich)

The biological sampling programme of demersal species on board of research vessels, commercial trawlers and on fish markets has been continued. Research vessel cruises related to the national sampling scheme of demersal species were as follows:

R/V WALTHER HERWIG surveys in 1993

Period	ICES area	Objectives
January-February February-March June September-October December	IVa,b VIa,VIIb,e,g,j IVa,b XIVb;NAFO 1B-1F IVb	IBTS Ground and pelagic fish survey IBTS, national groundfish survey Groundfish survey Comparative Fish.
	January-February February-March June September-October	January-February IVa,b February-March VIa,VIIb,e,g,j June IVa,b September-October XIVb;NAFO 1B-1F

R/V SOLEA surveys in 1993

Survey no.	Period	ICES area	Objectives		
1	January	IVb	Shrimp survey		
2	January-February	IVb	Groundfish survey		
3	May	lVb	Flatfish survey		
4	July	lVb,c	Groundfish survey		
5	September	lVb	Flatfish survey		
6	December	Ⅳb	Groundfish survey		

#) Samples of commercial catches taken at sea.

SAMPLING DATA FOR:

COD

1993		The and paragraph of the Control of the Control	Research vo	ssel samples	ra de la Compania de La compania de la Co	Market	samples
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	79#	19961	724
1	2	-	-	-	•	6212	502
Ha	3	•	-	-	•		-
	4	•	-	•	-	-	-
	Total:	0	0	0	79	26173	1226
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-		•	•		•
	2	-	-	-	114#	23646	1223
IIb	3	•	-	-	-	-	-
}	4	-		-	-	-	-
	Total:	0	0	0	114	23646	1223
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	35	806	459	-	•	•
	2	17	212	223	•	-	-
IVa	3	•	-	-	•	-	-
l	4	72	413	366	-	-	-
	Total:	124	1431	1048	0	0	0
Area ***	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	71	3548	482	-	•	•
	2	170	1624	435	•	- :	-
IVb	3	119	1602	630	27 #	53	-
	4	73	1712	427	12#	79	-
	Total:	433	8486	1974	39	132	0
Area:	, Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	•	•	-	-
	2	-	-	-	-	-	-
IVc	3	16	57	-	-	-	-
	4	•	_	•	-	•	-
	Total:	16	57	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	10	20	•	•	-	-
	2	-	•	-	-	• ,	-
VIa	3	•	•	-	-	-	-
	4	-	•	•	•	•	-
	Total:	10	20	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	3	6	-	•	•	•
	2	-	•	-	-	•	•
VIIb	3	-	-	•	-	•	•]
	4	-	<u> </u>	-	-		-
	Total:	3	6	0	0	0	0

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	1	1	-	•.	-	-
	2	-	-	-	-	-	-
VIIe	3	-	-	-	-	-	-
	4	-	- ;	•	-	-	-
	Total:	1	1	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	2	25	-	-	-	-
	2	-	-	-	-	-	-
VIIg	3	-	-	-	-	-	-
	4	-	-	-	•	-	-
	Total:	2	25	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	•	2	821	422
	2	-	-	-	2	989	443
ХIVЪ	3	-	-	-	4	1289	794
	4	35	333	320	-	-	-
	Total:	35	333	320	8	3099	1659
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	-	-	-	•
NAFO	2	•	-	-	-	-	-
1B-1F	3	•	-	-	-	-	-
	4	35	117	115	-	-	-
	Total:	35	117	115	0	0	0

IIADDOCK

1993		adder and see so we	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	29#	5354	256	
	2	-	•	-	-	-	-	
Ha	· 3	-	-	-	-	-	•	
	4	-	-	•	-	-	-	
	Total:	0	0	0	29	5354	256	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-		•	-	-	-	
	2	-	-	-	29#	7493	648	
IIb	3	-	-	-	-	-	-	
	4	-	-	-	-	-	-	
	Total:	0	0	0	29	7493	648	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	37	15941	655	-	-	-	
	2	16	2366	153	-	- 1	-	
IVa	3	-	-		-		-	
	4	71	12067	118	-	-	-	
	Total:	124	30374	926	0	0	0	

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	16	3799	267	-	-	-
	2	25	2219	382	-	_	-
IVb	3	47	2008	289	-		•
	4	82	1	-	-		-
	Total:	170	8027	938	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	15	2641	•	-	-	
	2	-	-	-	-	-	-
VIa	3	-	-	-	-	-	-
	4	•	•	-	-	-	-
	Total:	15	2641	0	0	0	0
Area	- Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	5	87	•	-	-	- ·
	2	-	-	-		•	•
VIIb	3	-	-	-	-	-	-
	4	-	-	-	•	-	-
	Total:	5	87	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	1	1	•	-	-	-
	2	-	-	-	- '	-	-
VIIc	3	-	-	-	-	-	-
	4	•	-	•	•	-	•
	Total:	1	1	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	. 1	2	647	-	-	-	-
	2	-	-	-	-	-	-
VIIg	3	-	-	•	-	-	•
	4	. •	-	-	-	-	-
	Total:	2	647	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	2	4	-	-	-	•
	2	-	-	-	-	-	-
VIIh	3	•	-	-	-	-	-
	4	-	•	•	-	-	•
	Total:	2	4	0	0	0	. 0
Area ···	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	9	123	-	-	•	•
	2	•	-	•	-	-	-
VIIj	3	-	-	-	-	•	•
	4	-	-	-	-	-	•
	Total:	9	123	0	0	0	0

 ${\bf SAMPLING\,DATA\,FOR:}$

WHITING

1993		and since the second	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	37	8670	389	-	-	-	
	2	16	1604	205	-	-	-	
IVa	3	-	-	-	-	-	-	
	4	63	7190	179	•	-	-	
	Total:	116	17464	773	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	76	4475	552	•	-	•	
	2	178	4428	709	19#	141	-	
IVb	3	197	11569	788	41#	1335	•	
	4	171	10660	275	12#	98	-	
	Total:	622	31132	2324	72	1574	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	• 7	-	-	•	
	2	-	-	-	•	-	-	
IVc	3	19	2550	•	•	-	-	
		19	2550	0	0	0	•	
3 A man 2	Total: Quarter	N samples	N measured	N aged	N samples	N measured	0 N aged	
Area managana	Quarter 1	14 samples	3206	14 aged	14 samples	TV incasured	IN aged	
	2	12	3200	_	_		_	
VIa	3	_	_	-	_		_	
''"	4	•		-	_		-	
	Total:	12	3206	0	0	0	0	
Area	Quarter,	N samples	N measured	N aged	N samples	N measured	N aged	
Approximation of the Ass.	Anna zastrania i en	1	164		-	<u>-</u>	-	
	2	-	-	-	•	-	-	
VIIb	3	-	-	-	-	-	-	
	4	-	-	-	-	-	-	
	Total:	1	164	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	4	48	-	-	-	-	
	2	•	-	-	•	-	-	
VIIe	3	•	-	-	-	•	-	
	4	•	-	-	-	-	-	
	Total:	4	48	0	0	0	0	
Area Names de la apparación de	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	4	1087	-	•	-	-	
X/X*	2	•	-	-	-	-	•	
VIIg	3	-	-	-	-	-	•	
	4 Totals	4	1007	- 0	-	0	-	
sch Malo :	Total:		1087		0 N samples	N measured	0 Nagad	
Area	Quarter	N samples	N measured	N aged	N samples		N aged	
	1 2	1	1	- _	•	_	_	
VIIh	3				_		_	
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4			-		_		
	Total:	1	1	0	0	0	0	
	Total.		l		L	L	<u> </u>	

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	7	45	-	-	-	-
	2	-	-	-	- ,	-	-
VIIj	3	-	-	-	-	-	-
	4	-	-	•	•		-
	Total:	7	45	0	0	0	0

NORWAY POUT

1993		Section of School at the	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	35	5198	-	-	-	-	
	2	9	1333	-	•		-	
IVa	3	-	-	-	-	-	-	
	4	35	1268		-	-		
	Total:	79	7799	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	14	1771	•	-	•		
	2	13	425	-	-	-	-	
IVb	3	10	235	-	-	-	-	
	4	2	2	•	-	<u> </u>	-	
	Total:	39	2433	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	13	1866	-	-	-	-	
	2	-	- ,	-	-	-	-	
VIa	3	-	-	-	•	-	-	
	4	•	-	•	•	-	•	
	Total:	13	1866	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
•	1	2	3	•	•	-	-	
	2	-	-	-	•	-	-	
VIIb	3	-	-	-	•	-	-	
	4		•	-	-	-	-	
	Total:	2	3	0	0	0	0	
Агеа	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	1	2	-	-	-	•	
	2	-	-	-	•	-	•	
VIIc	3	•	-	-	-	-	-	
	4	•	-	•	-	•	•	
	Total:	1	2	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	1	4	-	•	•	-	
	2	-	-	-	-	-	-	
VIIe	3	-	-	-	•	-	-	
	4	-	-	-	•	-	•	
	Total:	1	4	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	4	723	•	•	-	-	
	2	-	•	-	-	•	-	
VIIg	3	•	•	- [•	•	•	
	4	-	-	-	-	-		
	Total:	4	723	0	0	. 0	0	

Area -	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	4	47	-	•	-	-
	2	-	-	-	-	-	-
VIIj	3	-	-	-	-	-	-
	4	-	-	-	-		-
	Total:	4	47	0	0	0	0

BLUE LING

GERMANY

1993		HANGE BELLINGS FARELS	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	-	-	-	
	2	-		-	1	310	154	
Vъ	3	-	-	-	-	-	_	
	4	-		•	-	•	-	
	Total:	0	0	0	1	310	154	
Area .	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-		-	-	•	-	
	2	-	-	-	- '	-	-	
XIV	3	1	178	94	1	359	170	
	4	-		-	-	-	-	
	Total:	1	178	94	1	359	170	

SAMPLING DATA FOR:

SAITHE

1993		The state of the s	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	1	316	167	
	2	-	-	-	-	-	-	
Ha	3	-	-	-	-	-	-	
	4	-	-	-	3	9818	1207	
	Total:	0	0	0	4	10134	1374	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	16	974	398	8	4236	2262	
1	2	9	388	95	3	5841	2380	
1Va	3	1	1967	850	10	3864	1724	
]	4	40	2611		2	865	469	
	Total:	66	5940	1343	23	14806	6835	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	-	-	-	
1 1	2	3	3	-	-	-	-	
IVb	3	7	12	-	- '	-	-	
	4	-		•	•	-		
	Total:	10	15	0	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	5	44	44	-	•	-	
	2	-	-	-	-	-	-	
VIa	3	-	-	-	-	-	-	
	4	_	-	•	•	-	•	
	Total:	5	44	44	0	0	0	

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	5	15	15	-	-	
	2	-	-	-	-	-	•
VIIb	3	-	-	-	-	-	•
	4	-	-	-	•	•	
	Total:	5	15	15	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	8	21	21	•	-	•
	2	-	-	-	-	-	-
VIIj	3	-	-	-	-	-	-
	4	-	-	-	•	•	-
	Total:	8	21	21	0	0	0

POLLACK

GERMANY

1993		Research vessel samples			Market samples		
Агеа	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	-	-	•
	2	-		-	2	401	199
IVa	3	1	138	93	-	-	-
	4	-	-		-	-	-
	Total:	1	138	93	2	401	199

SAMPLING DATA FOR:

to be star thanking in in	4000×100 10
THE A RESE	
HAKE	. :

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	-	•	-	-
	2	•	i -	-	-	-	-
IVa	3	-	- 1	-	-	-	-
	4	15	85	-	•	l - 1	-
	Total:	15	85	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	9	92	-	•	-	-
	2	-		-	-	-	-
VIa	3	-	-	- 1	-	-	-
	4	•		-	-	-	-
	Total:	9	92	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	6	144	-	-	-	-
	2	-	.	-	-	-	-
VIIb	3	-		-	-	-	-
	4	-	1 -	-	-	-	-
	Total:	6	144	0	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
· · · · · · · · · · · · · · · · · · ·	1	4	549	-	-	-	-
	2	-	-	- 1	-	.	-
Vllg	3	-	.		-		-
	4	-	.	-	•	-	-
	Total:	4	549	0	0	0 ,	0

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	27	917	-	-	-	-
	2	-	-	-	-	-	-
VIIj	3	- 1	-	-	-	-	-
	4	-	-	-	-	-	-
	Total:	27	917	0	0	0	0

SOLE

GERMANY

1993		amanan kalendari	Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	10#	61	•	
	2	311	12866	1147	20#	83	-	
IVb	3	83	566	404	30#	46	-	
	4	59	1671	-	•	-	-	
	Total:	453	15103	1551	60	190	0	

 ${\bf SAMPLING\ DATA\ FOR:}$

DAB

1993		tooledware, all in the more to pe	Research vessel samples			Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	33	1407	-	-	-	•		
	2	15	195	-	-	-	-		
IVa	3	-	-	-	-	-	-		
	4	48	620	-	-	-	-		
	Total:	96	2222	0	0	0	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	75	6329	275	10#	95	-		
	2	343	13716	-	21#	213	-		
IVb	3	191	15632	1058	34#	145	-		
	4	131	10741	-	12#	234	-		
	Total:	740	46418	1333	77	687	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	-	-	-	-	-	-		
	2	-	-	-	-	-	-		
IVc	3	20	105	-	-	-	-		
:	4	-		•	-	-	-		
	Total:	20	105	0	0	0	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	10	305	•	-	-	-		
	2	-	-	-	-	-	-		
VIa	3	-	-	-	-	-	•		
	4	-		-	-		-		
	Total:	10	305	0	0	0	0		

PLAICE

GERMANY

1993			Research vessel samples			Market samples			
Arca	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	10	228	-	•	-	-		
	2	18	66	-	-	- 1	•		
IVa	3	-	-	-	-	-	•		
	4	23	231	-	•	-	-		
	Total:	51	525	0	0	0	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	68	1106	111	10#	744	-		
	2	385	17438	-	22#	1198	-		
IVъ	3	285	5731	432	46#	5430	-		
	4	134	5392	-	12#	1259	•		
	Total:	872	29667	543	90	8631	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	10	102	-	-	-	•		
	2	-	-	-	-	• .	-		
VIa	3	•	-	-	•	-	-		
	4	-	-	-	•	-	-		
	Total:	10	102	0	0	0	0		

SAMPLING DATA FOR:

FLOUNDER

GERMANY

1993			Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	48	150	-	10#	107	-	
	2	216	1818	-	20#	166	-	
IVb	3	65	116	-	44#	444	-	
	4	64	332	•	12#	126	-	
	Total:	393	2416	0	0	843	0	

SAMPLING DATA FOR:

TURBOT

GERMANY

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	3	5	-	-	•	-
ļ	2	134	237	-	-	1 -	-
IVb	3	11	24	-	-	-	-
	4	49	168	-	-	-	-
	Total:	197	434	0	0	0	0

SAMPLING DATA FOR:

BRILL

1993		Research vessel samples			Market samples		
Area	Quarter ·	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	•	-	-	-
	2	105	341	-	-	-	•
IVb	3	11	17	-	-	-	-
	4	12	67	-	- ,	- ,	
	Total:	128	425	0	0	0	0

Sebastes marinus

GERMANY

1993		Research vessel samples			Market samples			
. Arca	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	5#	1850	•	
	2	-	-	-	-] -	-	
Ha	3	-	-	-	-	-	-	
	4	-	-	-	3#	903	•	
	Total:	0	0	0	8	2753	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	•		-	-	•	
	2	-	-	-	5#	840	-	
IIb	3	-		-	-	-	-	
	4	-	-	-	-	- :	-	
	Total:	0	0	0	0	840	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	-	•	-	-	
	2	-	- 1	-	-	[- [-	
XIV	3	42	762	-	-	-	-	
	4		-	-	-	-	-	
	Total:	42	762	0	0	0	0	

SAMPLING DATA FOR:

Sebastes mentella

1993		and the state of t	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	-	1	475	-	
	2	-	-	-	-	-	-	
IIa	3	-	•	-	-	-	-	
	4	-		-	2#	750	-	
	Total:	0	0	0	3	1225	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	•	3	1207	•	
	2	-	-	-	-	-	-	
Vъ	3	-		-	-	-	-	
	4	-	-	-	-	-	-	
	Total:	0	0	0	3	1207	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-		•	-	-	-	
	2	-	- 1	-	-	-	-	
XIV	3	39	7118	-	3	1739	-	
	3	-	-	-	13#	2693	165	
	4	-	-	-	-	-	-	
	Total:	39	7118	0	16	4432	165	

Macrourus berglax

GERMANY

1993		anaporator reserver remoder re	Research yes	sel samples	mples Market s		samples	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•		•	•	-	-	
	2	-	-	•	-	l - i	-	
XIV	3	11	244	-	4#	425	72	
	4	-		•	-	-	•	
	Total:	11	244	0	4	425	72	

FINLAND

(E. Aro)

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

FRANCE

(C. Mellon-Duval)

SAMPLING DATA FOR:

COD

1993		Number of	samples	Number of fish			
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.	
	1	29	•	368	267	-	
	2	-	-	-	-	-	
IVb	3	41	-	845	610	-	
	4	-	-	-	-	•	
	Total:	70	0	1213	877	0	
Area	Quarter	Research	Market	Number	Number	Racial	
10 después bases (4,84 de 10) est 2.00.	alogo do wasianya (sewe)	vessel	samples	measured	aged	invest.	
	1	15	-	117	101	-	
	2	•	-	•	-	-	
IVe	3	8	-	34	32	-	
	4	-	-		-		
	Total:	23	0	151	133	0	
Area	Quarter	Research	Market	Number	Number	Racial	
	enno minuscopporate	vessel	samples	measured	aged	invest.	
	1	•	34	805	271	-	
	2	-	37	1081	335	-	
VIa	3	-	35	971	315	-	
	4	-	31	695	254	-	
	Total:	0	137	3552	1175	0	

* Area	Quarter	Research	Market	Number	Number	Racial
Name demonstration		vessel	samples	measured	aged	invest.
***************************************	1	-	-		_	
	2	-	_		_	_
VIId	3	- 1	-	_	-	-
	4	13	-	24	22	
	Total:	13	0	24	22	0
Area	√ Quarter	Research	Market	Number	Number	Racial
secretalique escribance		vessel	samples	measured	aged	invest.
	1	25	-	105	-	-
	2	36	-	744	-	-
VIIe	3	28	-	782	-	-
	4	16	-	343	-	-
	Total:	105	0	1974	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	Service Constitution	vessel	samples	measured	aged	invest.
	1	13	-	135	-	-
	2	9	-	253	-	-
VIIf	3	4	-	35	-	-
	4	2	-	23	-	-
	Total:	28	0	446	0	0
Area	Quarter	Research	Market	Number	Number	Racial
an reconstruction of an investment	participalitici describiti estrumina.	vessel	samples	measured	aged	invest.
	1	14	-	6	-	-
	2	11	-	713	-	-
VIIg	3	3	-	5	-	-
1	4	3	-	20	-	-
	Total:	31	0	744	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	entario monte de la constanta d	vessel	samples	measured	aged	invest.
	1	5	-	2	-	-
	2	4	-	9	-	-
VIIh	3	2	-	18	-	-
	4	3	-	15	•	-
	Total:	14	0	44	0	0
Area	Quarter	Research	Market	Number	Number	Racial
18 augustini 1905,700 Filippa ang pala	desperimental construction of the sec	vessel	samples	measured	aged	invest.
	1	•	44	516	369	-
	2	-	33	403	285	-
VIIf-g	3	-	45	459	325	-
	4	-	40	463	310	-
}	Total:	0	162	1841	1289	0

HADDOCK

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research	Market	Number	Number	Racial
*************************	in the 1990 Charles and a	vessel	samples	measured	aged	invest.
	1	12	-	293	335	-
	2	-	-	-	-	-
1Vb	3	18	-	675	372	-
	4	•	-	•	-	-
	Total:	30	0	968	707	0
Area	Quarter	Research	Market	Number	Number	Racial
and the second s	Maria de Maria de Cara	vessel	samples	measured	aged	invest.
	1	-	33	866	-	-
	2	-	35	2451	-	-
VIa	3	-	36	2412	-	-
	4	-	35	2674	-	-
	Total:	0	139	8403	0	0

SAMPLING DATA FOR:

WHITING

1993		Number o	f samples	ere erennemerennen genein.	Numbe	r of fish
Area	Quarter	Research	Market	Number	Number	Racial
	With the State of the second	vessel	samples	measured	aged	invest.
	1	36	-	3288	874	•
	2	-	-	-	-	-
IVb	3	53	-	11008	1112	-
	4	•	<u> </u>	-	-	-
	Total:	89	0	14296	1986	0
Area	Quarter	Research	Market	Number	Number	Number
in a computarion policie (1998 Bis	is on mercendaya septemblikaka	vessel	samples	measured	aged	aged
	1	14	-	2024	1078	-
	2	13	-	2501	675	-
IVc	3	3	-	-	196	-
	4	-		-	-	-
	Total:	30	0	4525	1949	0
Area	Quarter	Research	Market	Number	Number	Number
graphic and a condition of the graphic and the	grandening district and a special grand	vessel	samples	measured	aged	aged
	1	+	5	840	271	-
	2	-	11	1205	671	-
VIId	3	-	11	1222	523	-
	4	22	-	1157	611	-
	Total:	22	27	4424	2076	0
Area	Quarter	Research	Market	Number	Number	Number
phonic paintes aide (2007 Mr.	a danada pertinadii da mem	vessel	samples	measured	aged	aged
	1	28	-	206	-	-
	2	40	•	1003	-	-
VIIe	3	30	-	1528	-	•
	4	17		564	-	-
	Total:	115	0	3301	0	0

Area	Quarter	Research	Market	Number	Number	Number
		vessel	samples	measured	aged	aged
veriori pi Statilita 1985 de LA PROCESSA (SE PARTE	1	15		638	-	
	2	11		496	_	
VIII	3	5		38	_]
V	4	2	_	23		
ŀ	Total:	33	0	1195	0	0
Ac 2: 2: 20						
Area	Quarter	Research	Market	Number	Number	Number
	Secure powers with the Wester	vessel	samples	measured	aged	aged
	1	16	-	67	-	-
	2	13	-	1416	-	-
VIIg	3	3	-	5	-	-
	4	3	-	20	-	_
	Total:	35	0	1508	0	0
Area	Quarter	Research	Market	Number	Number	Number
and the first of the control of the sample		vessel	samples	measured	aged	aged
	1	6	-	42	-	-
	2	5	-	11	-	-
VIIh	3	2	-	18	-	-
	4	4	-	42	•	-
	Total:	17	0	113	0	0
Area	Quarter	Research	Market	Number	Number	Number
letis de la reconstrata (la constrata de la co	and a substitute of the substitute of the	vessel	samples	measured	aged	aged
	1	-	16	1292	381	
	2	-	36	2140	505	-
VIIf-g	3	-	28	1746	396	-
	4	-	28	1882	401	-
	Total:	0	108	7060	1683	0
· Area	Quarter	Research	Market	Number	Number	Number
Spiller was the desired a state of the state		vessel	samples	measured	aged	aged
	1	31	16	1854	•	-
	2	27	11	990	-	
VIII	3	34	10	3359	-	
					l I	
	4	21	20	1102	-	-

BIB (Trisopterus luscus)

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	-	-	-	•
	2	_	-	-	-	-
VIc	3	-	-	-	-	•
	4	3	-	-	95	-
	Total:	3	0	0	95	0

Area		Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	•	-		-	-
	2	-	-	-	-	-
VIId	3	-	-	-	-	-
	4	17		-	611	-
	Total:	17	0	0	611	0

NORWAY POUT

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	-	-	103	-
	2	-	-	-	-	-
IVЪ	3	-	-	-	126	-
	4 .	•		-	-	-
	Total:	0	0	0	229	0

SAMPLING DATA FOR:

POUT

1993		Number of	samples	Number of fish		
Area	Quarter	Research	Market	Number	Number	Racial
waspingan and and a	and the second second	vessel	samples	measured	aged	invest.
	1	5	-	133	•	-
	2	-	-	-	-	-
IVъ	3	8	-	15	-	-
	4	10	-	239	•	-
	Total:	23	0	387	0	0
Area	Quarter	Research	Market	Number	Number	Racial
amenda sana managa Separa	emer megalinarientejirake	vessel	samples	measured	aged	invest.
	1	5	-	133	-	-
	2	-	-	-	-	-
IVc	3	4	-	21	-	-
	4	-	•		-	-
	Total:	9	0	154	0	0
Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	•	1	376	-	-
	2	-	1	392	-	-
VIId	3	-	1	404	-	-
	4	19	2	2809	-	-
	Total:	19	5	3981	0	0
Агеа	Quarter	Research	Market	Number	Number	Racial
Activity of the same and the same as	Meridia meninima kelikum	vessel	samples	measured	aged	invest.
	1	45	•	743	•	-
	2	52		1536	-	-
VIIe	3	45	-	4111	-	•
	4	25	-	826	-	-
	Total:	167	0	7216	0	0

Area 🖖	Quarter	Research	Market	Number	Number	Racial
come lock Militaria comen	glikin miningana in mili nisi	vessel	samples	measured	aged	invest.
	1	22	-	538	-	-
	2	20	-	560	-	-
VIIf	3	8	-	60	-	-
	4	6	-	34	-	-
	Total:	56	0	1192	0	0
Area	Quarter	Research	Market	Number	Number	Racial
anantiminani manantini	and the second of the second of the second	vessel	samples	measured	aged	invest.
	1	17	-	26	-	•
	2	14	-	1870	-	-
VIIg	3	3	-	5	-	-
	4	2	-	20	•	-
	Total:	36	0	1921	0	0
Area	Quarter	Research	Market	Number	Number	Racial
all polarism gradient at the contract	man Printel William in a surger	vessel	samples	measured	aged	invest.
	1	7	-	90		-
	2	7	-	51	-	-
VIIh	3	2	-	18	•	-
	4	6	-	93	-	-
	Total:	22	0	252	0	0

HAKE

FRANCE

1993	1993		samples	Number of fish		
Area	Quarter	Research	Market	Number	Number	Racial
ige is Meirosophe eine mannegebye	in include the Warden of the	vessel	samples	measured	aged	invest.
	1	-	3	168	-	•
	2	-	6	261	-	-
VII	. 3	-	40	1516	-	-
	4	-	10	208	-	-
	Total:	0	59	2153	0	0
Area	Quarter	Research	Market	Number	Number	Racial
Lawrence and annual control to	The foreign street around the for	vessel	samples	measured	aged	invest.
	1	43	30	4845	180	•
-	2	35	68	6792	175	•
VIII	3	46	63	8363	340	-
	4	35	101	5741	270	-
	Total:	159	262	25741	965	0

SAMPLING DATA FOR:

SAITHE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	55	1762	389	-
	2	-	59	1946	402	-
VIa	3	-	48	1882	421	-
	4	•	54	1722	345	-
	Total:	0	216	7312	1557	0

Total:

Quarter

Total:

VIIh

VIIe-k

Research

vessel

Market

samples

LING

FRANCE	ATA FOR:		LING			
1993		Number o	f samples	Number of fish		
Area	Quarter **	Research	Market	Number	Number	Racial
a a caracterism contact care	garabaansi dan saad	vessel	samples	measured	aged	invest.
	1	•	27	664	242	-
	2	-	38	747	305	
VIa	3	•	20	460	181	-
	4	-	28	683	263	-
	Total:	0	113	2554	991	0
Area	⁸ Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	56	-	192	-	-
	2	62	-	1696		-
VIIe	3	59	-	5177	-	-
	4	28	-	910	-	-
	Total:	205	0	7975	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	AND THE PROPERTY OF THE PROPER	vessel	samples	measured	aged	invest.
	1	23	•	0	-	
	2	23	-	655] -	-
VIIf	3	9	-	251	-	-
	4	6		34		
	Total:	61	0	940	0	0
Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	18	-	0	-	-
	2	16	-	2263	-	-
VIIg	3	3	•	5	-	-
	4	3		20	_	•
	Total:	40	0	2288	0	0
Area	Quarter	Research	Market	Number	Number	Racial
diam'il marking a sure	sea estileptistipidishinkokokokokokok	vessel	samples	measured	aged	invest.

Number

measured

Number

aged

Racial

invest.

BLUE LING

FRANCE

1993		Number of	samples	Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	32	544	102	-
	2	-	48	790	192	-
VIIh	3	-	21	341	111	-
	4	•	18	300	-	-
	Total:	0	119	1975	405	0

SAMPLING DATA FOR:

POLLACK

FRANCE

1993		Number of	samples	an and the statement and a statement	Numbe	r of fish
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	8	125	60	•
	2	-	9	150	75	-
VIIb-k	3	-	-	-	-	-
	4	-	-	-	-	•
	Total:	0	17	275	135	0
Area	Quarter	Research	Market	Number	Number	Racial
8 Marie Citarian may said to 1989	amahanningingingingi	vessel	samples	measured	aged	invest.
	1	38	•	114	•	-
	2	44	-	1059	-	-
VIIe	3	39	-	1759	-	-
	4	21	-	575	•	-
	Total:	142	0	3507	0	0
Area	Quarter	Research	Market	Number	Number	Racial
All Marie and Commence	and the state of t	vessel	samples	measured	aged	invest.
	1	20	-	20	-	-
	2	18	-	536	-	-
VIIh	3	7	- 1	47	-	-
	4	6	-	34	-	•
	Total:	51	0	637	0	0

SAMPLING DATA FOR:

SOLE

1993		Number o	f samples	and a consister to produce on the public holds	r of fish	
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	1	-	3	-	-
	2	-		-	-	-
IVb	3	1	-	2	-	-
	4	-	-	-	-	•
	Total:	2	0	5	0	0

Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	3	-	13		-
	2	-	-	-	-	
IVc	3	7	-	51		-
	4	•	-	-	-	
	Total:	10	0	64	0	0
Area	Quarter 🕆	Research	Market	Number	Number	Racial
aromenium parimentalism	1 12 12 12 12 12 12 12 12 12 12 12 12 12	vessel	samples	measured	aged	invest.
	1		16	1528	150	-
	2	-	15	1647	150	i -
VIId	3	-	19	1593	150	-
	4	10	10	797	159	
Ĭ	Total:	10	60	5565	609	0
- Area	Quarter	Research	Market	Number	Number	Racial
constant and the company of the constant of th		vessel	samples	measured	aged	invest.
	1	17	-	24	_	-
	2	33	-	737	-	-
VIIe	3	25	-	676	-	-
	4	15	- !	341	-	-
	Total:	90	0	1778	0	0
Area	Quarter	Research	Market	Number	Number	Racial
merilik mannes armethiak	simulanama mana	vessel	samples	measured	aged	invest.
	1	11	-	2	-	-
]	2	8	-	252	-	-
VIIf	3	3	-	26	-	-
	4	2	-	23	-	-
	Total:	24	0	303	0	0
> Area	Quarter	Research	Market	Number	Number	Racial
and the second of the second o	**************************************	vessel	samples	measured	aged	invest.
	1	13	•	17	-	-
	2	10	-	474	-	-
VIIh	3	3	-	5	-	-
ļ	4	3	-	20	-	-
	Total:	29	0	516	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	annihing propagate e comme	vessel	samples	measured	aged	invest.
	1	42	58	3956	328	•
]	2	29	62	3599	252	-
VIII	3	46	90	5165	299	-
	4	34	53	3417	315	•
	Total:	151	263	16137	1194	0

PLAICE

1993		Number of	samples	Sala reproductive and productive springer	Numbe	r of fish
্ Area ু	Quarter	Research	Market	Number	Number	Racial
same seems are seems and	dhaan aan ee shaalaa	vessel	samples	measured	aged	invest.
	1	32		604	-	-
	2	-	-	-	-	-
IVb	3	45	•	600	-	-
	4	-	-	-	-	-
	Total:	77	0	1204	0	0
Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	i	12	-	60	-	-
	2	-		-	-	-
IVe	3	8	-	59	-	-
	4	•	- '	-	•	•
	Total:	20	0	119	0	0
· Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
<u></u>	1	-	14	1268	355	-
	2	-	16	1345	290	-
VIId	3		25	1661	350	-
	4	27	15	961	199	-
	Total:	27	70	5235	1194	0
Area	Quarter	Research	Market	Number	Number	Racial
All the second sections of the second second	areanistania tangga padibili	vessel	samples	measured	aged	invest.
	1	15	-	204	-	•
	2	29	-	473	-	-
VIIe	3	20	-	450	-	•
	4	12	-	252	-	-
	Total:	76	0	1379	0	0
Area	Quarter	Research	Market	Number	Number	Racial
na destruit des selections	attached service and service	vessel	samples	measured	aged	invest.
	1	10		451	-	•
	2	8	-	252	-	-
VIIf	3	3	-	26	-	-
	4	2	-	23	-	-
	Total:	23	0	752	0	0
, Area	Quarter	Research	Market	Number	Number	Racial
anamen filosofia an almone		vessel	samples	measured	aged	invest.
	1	12	•	20	-	-
	2	10	-	474	-	-
VIIg	3	3	-	5	-	-
	4	2	•	11	•	-
	Total:	27	0	510	0	0

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	3	58	14	-	-
	2	•	62	-	-	-
VIIh	3	•	90	-	-	-
	4	_ 2	53	12	•	-
	Total:	5	263	26	0	0

MEGRIM

1993		Number o	f samples	· Linguignes d'Alle La Mille Little Andreanne	Numbe	r of fish
Area	Quarter	Research	Market	Number	Number	Racial
ant sill the annual of the things on	in many with the state of the same of the	vessel	samples	measured	aged	invest.
	1	•	4	350	-	-
	2	-	4	322	-	-
VIa	3	-	4	270	-	-
	4	-	4	348	-	
	Total:	0	16	1290	0	0
Area	Quarter:	Research	Market	Number	Number	Racial
	and the second section is	vesse1	samples	measured	aged	invest.
	1	-	63	2995	402	-
	2	-	58	2885	395	-
VIIb-k	3	-	47	2610	364	-
ľ	4	-	63	2572	272	-
,	Total:	0	231	11062	1433	0
Area	Quarter	Research	Market	Number	Number	Racial
Maderial William Collision (MICHAEL)	Solden erstendeligen solden in julie	vessel	samples	measured	aged	invest.
	1	2	14	26	-	-
	2	5	16	183	-	-
VIIe	3	3	25	8	-	- 1
	4	1	15	24	•	
	Total:	11	70	241	0	0
Area	Quarter	Research	Market	Number	Number	Racial
Contract Manager and Contract Action Contract	historic mileconist, sale i	vessel	samples	measured	aged	invest.
	1	1	-	5	-	•
	2	1	-	1	-	-
VIII	3	1	-	3	-	-]
	4	•	-	•	•	
	Total:	3	0	9	0	0
Area	Quarter	Research	Market	Number	Number	Racial
t i i vi maning mana i i i i i i i i i i i i i i i i i i	tuge the chief weeking	vessel	samples	measured	aged	invest.
	1	1	•	9	-	•
	2	1	-	2]	.
VIIg	3	-		-	-	.
	4	•	•	•	•	-
	Total:	2	0	11	0	0

Area	Quarter	Research	Market	Number	Number	Racial
mi renjempiranga mpatakin		vessel	samples	measured	aged	invest.
	1	1		6	-	-
	2	-	-	-	-	-
VIIh	3	-	-	-	-	-
	4	1	-	8	-	-
	Total:	2	0	14	0	0
Area	Quarter	Research	Market	Number	Number	Racial
ananananananananan	ASSOCIATION CONTRA	vessel	samples	measured	aged	invest.
	1	3	35	1122	-	-
	2	-	25	841	-	-
VIIIa-b	3	-	37	1248	-	-
	4	2	25	1023	- ,	-
	Total:	5	122	4234	0	0

DAB

1993	1993		samples	Number of fish		
Area	Quarter	Research	Market	Number	Number	Racial
and the second s	manapa a casionerio	vessel	samples	measured	aged	invest.
	1	35	-	4689	-	-
	2	-	-	- .	-	-
IVb	3	53	• ,	5211	-	-
	4	-	-	•	-	-
	Total:	88	0	9900	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	an areas have been been as the	vessel	samples	measured	aged	invest.
	1	16 `	•	695	-	-
	2	-	-	•	-	-
IVe	3	10	-	534	-	-
	4	-	-	-	-	-
	Total:	26	0	1229	0	0
Area	Quarter	Research	Market	Number	Number	Racial
ot our all invitation paper and others	disposacione di manganismi de in-	vessel	samples	measured	aged	invest.
	1	-	1	178	-	-
	2	-	1	465	-	-
VIId	3	-	1	158	-	-
	4	27	-	973	415	-
	Total:	27	3	1774	415	0
Area	Quarter	Research	Market	Number	Number	Racial
timestas e a antiquimentación	magamenterentinalis.	vessel	samples	measured	aged	invest.
	1	10	•	11	-	-
	2	20	-	343	•	-
VIIe	3	14		55	•	•
	4	8	-	51	-	-
	Total:	52	0	460	0	0

Area	Quarter	Research	Market	Number	Number	Racial
Michigan on manifold Market in	ing in the thirty was to be a finished by the co	vessel	samples	measured	aged	invest.
	1	6	•	82	-	-
	2	5	-	127	-	-
VIIf	3	2	-	4	-	ł -
	4	2	-	23		
	Total:	15	0	236	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	manana Sauranan	vessel	samples	measured	aged	invest.
	1	8	•	5	-	-
	2	7	-	69	-	-
VIIg	3	3	-	5	-	-
	4	2	-	11	-	
	Total:	20	0	90	0	0

LEMON SOLE

1993		Number o	samples	Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	12	1	116	•	-
	2	24	1	419	-	-
VIIe	3	17	1	399	-	-
	4	10	•	198	-	<u>-</u>
	Total:	63	3	1132	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	Activity the contribution of the second	vessel	samples	measured	aged	invest.
	1	8	-	52	•	•
	2	7	-	157	-	-
VIIf	3	3	-	26	-	-
	4	. 2	-	23	•	-
	Total:	20	0	258	0	0
Area	Quarter	Research	Market	Number	Number	Racial
merchanismannian	anamin'eraniminane.	vessel	samples	measured	aged	invest.
	1	10	-	46	•	-
	2	9	-	259	-	-
VIIg	3	3	-	5	-	-
	4	2	-	11	-	•
	Total:	24	0	321	0	0
Area	Quarter	Research	Market	Number	Number	Racial
anang katalikan di ang mengang palaya	namen and the second	vessel	samples	measured	aged	invest.
	1	2	-	4	-	-
	2	-	-	-		-
VIIh	3	-	.	-		-
	4	1	-	8	- '	-
	Total:	3	0	12	0	0

GURNARD

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	78	-	993	-	-
	2	84	-	2334	-	•
VIIe	3	89	-	9545	-	-
	4	45		2234	•	-
	Total:	296	0	15106	0	0
Area	Quarter	Research	Market	Number	Number	Racial
man and a second		vessel	samples	measured	aged	invest.
	1	29	-	753	-	-
	2	28	-	1036	-	-
VIIf	3	11	-	381	-	-
	4	7	-	52	-	-
	Total:	75	0	2222	0	0
Area	Quarter	Research	Market	Number	Number	Racial
en e	en e	vessel	samples	measured	aged	invest.
	1	21	-	43	•	-
	2	21	-	2722	-	-
VIIg	3	3	-	5	-	-
	4	3	•	20	• _	•
	Total:	48	0	2790	0	0
Area	Quarter	Research	Market	Number	Number	Racial
communication (p. conseque	Interpretation and a second	vessel	samples	measured	aged	invest.
	1	24	•	87	-	-
	2	24	-	310		•
VIIh	3	10		176	-	-
	4	15		423	-	-
	Total:	73	0	996	0	0

SAMPLING DATA FOR:

RED GURNARD

1993		Number of samples		Number of fish		
Arca	Quarter .	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	•	4	902	291	-
	2	-	4	910	216	
VIIh	3	-	2	461	335	-
]	4	36	7	446	262	-
	Total:	36	17	2719	1104	0

SEA BASS

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	20	-	129	-	-
	2	4	-	50	-	-
VIIh	3	2	-	7	-	
	4	15	_ •	145	-	-
	Total:	41	0	331	0	0

SAMPLING DATA FOR:

NEPHROPS

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	•	6	1183	•	•
	2	-	7	1477	-	-
VIIg-h	3	-	5	994	-	-
	4	-	5	990	-	-
	Total:	0	23	4644	0	0
Area	Quarter	Research	Market	Number	Number	Racial
Strick Charmania Williams	Martin Maria (Maria Maria Mari	vessel	samples	measured	aged	invest.
	1	32	4	4062	•	•
	2	27	4	2728	-	-
VIII	3	34	5	5523	-	-
	4	22	3	2086	-	-
	Total:	115	16	14399	0	0
Area	Quarter	Research	Market	Number	Number	Racial
State and State Manager		vessel	samples	measured	ageđ	invest.
	1	•	35	1876	•	•
	2	-	61	3081	-	-
VIIIa	3	-	55	2737	-	-
	4	-	33	1776	-	-
	Total:	0	184	9470	0	0

SAMPLING DATA FOR:

WHITE ANGLER (Lophius piscatorius)

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	l	•	350	2500	250	-
VIIb, k	2	-	350	2500	250	-
VIIIa, b, d	3	-	300	2000	250	-
	4	-	350	2500	250	-
	Total:	0	1350	9500	1000	0

Area		Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	26	14	483	-	-
1	2	25	7	186	-	-
VIIa	3	24	10	192	-	-
	4	18	13	320	•	-
	Total:	93	44	1181	0	0

BLACK ANGLER (Lophius budegassa)

FRANCE

1993		Number of	samples	Number of fish		
Area	Quarter	Research	Market	Number	Number	Racial
water and the second second second	All the property of the second	vessel	samples	measured	aged	invest.
	1	-	350	3500	200	-
VIIb, k	2	-	350	3500	200	-
VIIIa, b, d	3	-	300	3000	200	-
	4	-	350	3500	200	-
	Total:	0	1350	13500	800	0
Area	Quarter	Research	Market	Number	Number	Racial
Accessed before the State State	to a supplementation of	vessel	samples	measured	aged	invest.
	1	11	5	79		•
	2	10	7	90	-	-
VIIa	3	8	4	64	-	-
	4	6	9	40	-	
	Total:	35	25	273	0	0

SAMPLING DATA FOR:

RED MULLET

1993		Number o	samples	Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	59	-	15	-	-
	2	72	-	1733	-	-
VIIe	3	71	-	5683	-	-
	4	35	-	1059	-	-
	Total:	237	0	8490	0	0
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	25	14	483	1	•
	2	25	7	186	658	-
VIIh	3	9	10	192	251	-
	4	7	13	320	52	-
	Total:	66	44	1181	962	0

ROUNDNOSE GRENADIER

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	•	3	150	150	-
FAO	2	-	3	150	150	-
27	3	-	3	150	150	-
 	4	-	3	150	150	-
	Total:	0	12	600	600	0

SAMPLING DATA FOR:

CUCKOO RAY (Raja naevus)

FRANCE

1993		Number of samples		Number of fish		
Area		Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	9	633	150	-
	2	-	7	378	150	-
VIIg-h	3	-	10	564	150	-
	4	-	7	451	150	
	Total:	0	33	2026	600	0

SAMPLING DATA FOR:

MEAGRE

FRANCE

1993		Number of samples		Number of fish		
Area	40.00	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	-	-	-	-
	2	-		-	•	-
VIIg-h	3	-	3	41	-	-
	4	3	4	179		
	Total:	3	7	220	0	0

SAMPLING DATA FOR:

HERRING

1993		Number of samples		Number of fish		
Area	Quarter .	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	84	-	16	-	-
	2	86	-	2556	-	-
VIIe	3	94	-	11223	•	-
	4	46	-	2529	-	-
	Total:	310	0	16324	0	0
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	32	-	22	•	•
	2	32	-	1164	-	-
VIIf	3	12	-	528	-	-
	4	7	-	52		-
	Total:	83	0	1766	0	0

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	23	-	1	-	•
	2	25	-	2766	-	-
VIIg	3	3	-	5	-	-
	4	3	•	20	-	-
	Total:	54	0	2792	0	0

SPRAT

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	-	-	-	-
	2	-	-	-	-	-
VIId	3	-		-	-	-
	4	11		923		-
	Total:	11	0	923	0	0

SAMPLING DATA FOR:

MACKEREL

1993		Number of	samples	and the state of t	Numbe	r of fish
Area	Quarter	Research	Market	Number	Number	Racial
more management on the Asia s	gresser an emperative manada	vessel	samples	measured	aged	invest.
	1	+	-	-	-	-
	2	-	-	-	-	-
VIId	3	-	-	-	-	-
	4	27	•	197	-	-
	Total:	27	0	197	0	0
Area	Quarter	Research	Market	Number	Number	Number
designation of the second contraction in the second	sam o nocios e a decimando de co	vessel	samples	measured	aged	aged
	1	87	-	110	•	-
	2	88	-	2560	-	-
VIIe	3	98	-	11244	-	-
	4	47	-	2533	-	-
	Total:	320	0	16447	0	0
Area	Quarter	Research	Market	Number	Number	Number
representation of the contract of the con-	the state of the s	vessel	samples	measured	aged	aged
	1	34	-	21	-	-
	2	34	-	1227	-	-
VIIf	. 3	13	-	535	-	-
	4	7	-	52	+	-
	Total:	88	0	1835	0	0
Area	Quarter	Research	Market	Number	Number	Number
Stubismu, coriota magabins	anes us a communication	vessel	samples	measured	aged	aged
	1	25	•	7	-	-
	2	27	-	2872	-	-
VIIg	3	3	-	5	-	-
1	4	3	-	20	+	-
	Total:	58	0	2904	0	0

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
	1	25	-	1	-	-
	2	25	-	323	-	-
VIIh	3	10	-	176	-	-
	4	15	-	423	-	-
	Total:	75	0	923	0	0

MONK FISH

1993		Number o	f samples	na alaman da sa mana	Numbe	r of fish
Area	Quarter	Research	Market	Number	Number	Racial
terkerine oordineet oo roongerine	The continues of the Section of	vessel	samples	measured	aged	invest.
	1	•	6	200	-	-
	2	-	6	200	-	-
VIa	3	-	6	200	-	-
	4	-	6	200		-
	Total:	0	24	800	0	0
Area	Quarter	Research	Market	Number	Number	Number
ministramento de la como	malata manana series	vessel	samples	measured	aged	aged
	1	71	-	364	-	
	2	78	-	1914	j -	
VIIe	3	79	-	6240	-	-
	4	41	-	1190		-
	Total:	269	0	9708	0	0
. Area	Quarter	Research	Market	Number	Number	Number
and proceedings of the contraction of the contracti	communicación de en	vessel	samples	measured	aged	aged
	1	27	•	197		-
	2	26	-	713	-	-
VIIf	3	10	-	267	-	-
	4	7	•	52		•
	Total:	70	0	1229	0	0
Area	Quarter	Research	Market	Number	Number	Number
s again ainmeir sinn eigenflieben geben		vessel	samples	measured	aged	aged
	1	19	•	2	-	-
	2	19	-	2281	-	-
VIIg	3	3	-	5	-	-
	4	3	-	20	-	
	Total:	44	0	2308	0	0
Area	Quarter	Research	Market	Number	Number	Number
New Company of the Party of the	principal de la companya de la comp	vessel	samples	measured	aged	aged
	1	22	•	122	-	•
	2	19	-	263	-	•
VIIh	3	8	.	174	-	•
	4	13		302	-	
	Total:	62	0	861	0	0

ORANGE ROUGHY

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	-	-	5800	200	-
FAO	2	-	-	-	•	-
27	3	-	-	-	-	-
	4	-	- :	-	-	-
	Total:	0	0	5800	200	0

SAMPLING DATA FOR:

TURBOT

FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	5	-	6	-	•
	2	9	-	206	-	
VIIe	3	6	-	18	-	-
	4	3	-	29	•	-
	Total:	23	0	259	0	0
Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	1	•	0	-	-
	2	2	-	21	-	•
VIIg	3	1	-	3	-	-
	4	•	-	-	-	-
	Total:	4	0	24	0	0
Area	Quarter	Research	Market	Number	Number	Racial
racidosarranismo, ensiellostelloste.	ar va minimum particular	vessel	samples	measured	aged	invest.
	1	7	-	27	-	-
	2	6	- :	14	-	-
VIIh	3	3	-	5	-	-
	4	2	-	11	-	-
	Total:	18	0	57	0	0

SAMPLING DATA FOR:

BRILL

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	9	-	16	-	-
	2	17	-	334	-	-
VIIe	3	11	i - 1	40	-	-
	4	8	-	51	-	-
	Total:	45	0	441	0	0

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	4	-	17	-	•
	2	3	-	22	-	-
VIIh	3	2	-	4	-	-
	4	2	-	23	-	=
	Total:	11	0	66	0	0

POOR COD

FRANCE

1993		Number of	samples	Antistration to an advantal construction	Numbe	r of fish
Area	Quarter	Research	Market	Number	Number	Racial
antias minenamentalentina	Allensia and Pales Allensia.	vessel	samples	measured	aged	invest.
	1	47	-	24	-	-
	2	56	-	1634	-	-
VIa	3	52	-	5123	-	-
,	4	26	•	906	-	-
	Total:	181	0	7687	0	0
Area	Quarter	Research	Market	Number	Number	Racial
Said (Miller : James of and Miller See See	and the section of the	vessel	samples	measured	aged	invest.
	1	23	•	4	•	-
	2	22	-	654	-	-
VIIe	3	9	-	251	-	-
	4	6	-	34	•	•
	Total:	60	0	943	0	0
Area	Quarter	Research	Market	Number	Number	Racial
	Mary College Co	vessel	samples	measured	aged	invest.
	1	18	-	2	•	-
	2	15	-	2224	-	-
VIIg	3	3	-	5	-	-
	4	3	-	20		-
	Total:	39	0 .	2251	0	0
Area	Quarter	Research	Market	Number	Number	Racial
intermental comments	and the second second second	vessel	samples	measured	aged	invest.
	1	7	•	0	•	-
	2	8	-	67	-	-
VIIh	3	2	-	18	•	
•	4	2	-	93	-	
	Total:	19	0	178	0	0

SAMPLING DATA FOR:

JOHN DORY

1993		Number o	f samples		Numbe	r of fish
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	57	-	9	-	-
:	2	68	_	1712	-	-
VIIe	3	66	-	5444	-	-
	4	31		927	-	•
	Total:	222	0	8092	0	0

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
de la	a and the second se	24		20	-	
	2	25	_	658	_	_
VIIf	3	9	_	251	-	_
VIII	4	6		34		
	Total:	64	0	963	0	0
Area	Quarter	Research	Market	Number	Number	Racial
Manager of the contract of the	sta de communicación de la composición	vessel	samples	measured	aged	invest.
	1	18	-	0	•	•
	2	18	-	2265	-	-
VIIg	3	3	-	5	-	-
	4	3	-	20	- ;	-
	Total:	42	0	2290	0	0
Area	Quarter	Research	Market	Number	Number	Racial
		vessel	samples	measured	aged	invest.
	1	15	-	26	-	-
	2	13	-	99	-	-
VIIh	3	5	-	36	-	-
	4	9	-	182	-	-
	Total:	42	0	343	0	0

SCAD

1993		Number of	samples	Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	82	8	323	60	-
	2	86	9	2556	75	-
VIIe	3	93	-	11218	-	•
	4	46	-	2529	-	-
	Total:	307	17	16626	135	0
Area	Quarter	Research	Market	Number	Number	Racial
may a lett impliment ymbote et repromy		vessel	samples	measured	aged	invest.
	1	30	-	1	-	•
	2	30	-	1128	-	-
VIIf	3	12	-	528	-	-
	4	7	-	52	-	-
	Total:	79	0	1709	0	0
Arca	Quarter	Research	Market	Number	Number	Racial
an indonesia de la composición de la c	hagin mimushini sasati ilmesek	vessel	samples	measured	aged	invest.
	1	22	-	1	-	-
VIIg	2	23	-	2740		-
	3	3	-	5	-	-
	4	3	-	20	•	-
	Total:	51	0	2766	0	0

меська	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
	1	24	-	0	-	-
•	2	25	-	323	-	-
VIIh	3	10	-	176	-	-
	4	15	-	423	-	-
	Total:	74	0	922	0	0

ICELAND

(S. A. Schopka)

The biological sampling programme and research work on demersal fish was carried out in conventional manner and is thus based both on research vessel data and market samples.

The greatest part of the reasearch vessel data was collected during the annual groundfish survey in March. The survey is carried out simultaneously with five commercial stern trawlers of the same type covering the whole shelf area around Iceland with 600 trawling stations.

Market samples were collected at the headquarters of the Marine Research Institute in Reykjavík and the five branches of MRI located at other important fishing ports. Fishery inspectors collected a considerable amount of data both on board of commercial fishing vessels and at the landing places.

This year stomach sampling was limited to cod only. In 1993 on spawning grounds altogether 3 954 mature cod were tagged for sub-population studies and further 890 immature cod were tagged for growth and migration pattern studies. Tagging on other species did not take place.

The number of fish sampled by species are shown in the following tables.

SAMPLING DATA FOR:

COD

1993		Number of	samples	Number of fish			
		Research	Market	Number.	Number	Stomach	Number
Area	· Quarter	vessel	samples	measured	aged	samples	tagged
	1	705	-	62426	4645	4806	703
		-	29	6572	1992	-	-
	2	191		16746	2105	-	3251
		-	44	9779	3815	-	-
Va	3	541	-	69323	3207	2438	890
		-	24	6628	2275	-	-
	4	231	-	46226	1480	-	-
		-	22	9581	1651	-	
	Total:	1668	119	227281	21170	7244	4844

HADDOCK

ICELAND

1993		Number of	f samples	Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	505	-	77007	3275
		-	11	2567	799
	2	159	-	30026	865
		•	15	4047	1411
Va	3	246		31316	2262
		-	13	3289	1169
	4	109	-	17331	1254
		-	10	2823	988
	Total:	1019	49	168406	12023

SAMPLING DATA FOR:

SAITHE

ICELAND

1993	Ī	Number of	samples	Number of f	Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	226	-	3053	944	
		-	18	3911	1006	
	2	27	-	1422	184	
		-	11	3135	999	
Va	3	49	-	1790	231	
		-	14	3784	1300	
	4	12	-	1374	243	
		-	7	1902	700	
	Total:	314	50	20371	5607	

SAMPLING DATA FOR:

WHITING

1993	Ţ	Number of	samples	Number of fi	ish
	ľ	Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	137	-	2457	•
		-	-	-	-
	2	9	•	378	-
		-	-	-	-
Va	3	4	-	17	-
		-	-	-	-
	4	-	-	-	-
		-	-	•	•
	Total:	150	0	2852	0

LING

ICELAND

1	u	u	
-	•	•	•

1993		Number of	f samples	Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
•	1	94	-	235	96
		-	-	-	-
į	2	19	-	42	•
	}	-	-	-	-
Va	3	5	•	8	5
		-	-	-	-
	4	-	-	-	-
		•	1	356	100
	Total:	118	1	641	201

SAMPLING DATA FOR:

BLUE LING

ICELAND

1993		Number of	Number of samples		Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	62	-	1345	573	
:		-	2	223	-	
	2	•	-	-	-	
		-	-	-	-	
Va	3	8	-	49	46	
		-	-	-	-	
	4	10	-	59	18	
		-	-	-	•	
	Total:	80	2	1676	637	

SAMPLING DATA FOR:

TUSK

1993		Number of	Number of samples		Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	283	•	1065	357	
		-	2	436	100	
i i	2	5	-	24	-	
		-	1	278	-	
Va	3	25	-	44	3	
		-	1	304	100	
!	4	5	-	36	32	
		-	3	602	200	
	Total:	318	7	2789	792	

Sebaster marinus

ICELAND

1993		Number of samples		Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	580	-	56598	159
1		-	9	2752	332
	2	2	-	187	-
		-	8	2611	-
Va	3	235	-	15138	612
		-	10	2671	-
	4	43	-	6033	-
		-	10	2674	123 .
}	Total:	860	37	88664	1226

SAMPLING DATA FOR:

Sebastes mentella

ICELAND

1993		Number of samples		Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	65	-	2184	1576
		-	3	752	97
	2	11	-	2110	-
		-	2	719	-
Va	3	29	-	2313	876
		-	7	1606	-
	4	29	-	3315	-
		-	4	996	-
	Total:	134	16	13995	2549

SAMPLING DATA FOR:

Sebastes mentella Type oceanicus

1993		Number of	Number of samples		Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	2	-	1	118	
		-	-	-	-	
	2	1	-	-	114	
		-	-	-	-	
Va	3	20	-	4863	1660	
		-	-	-	-	
	4	-	-	-	-	
		-	-	·*· -	-	
	Total:	23	0	4864	1892	

PLAICE]

ICELAND

1993		Number of	Number of samples		Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	248	-	5178	472	
		-	-	-	-	
	2	11	-	591	-	
		•	2	601	200	
Va	3	71	-	1535	-	
1		-	6	1884	500	
	4	3	-	328	-	
		-	1	304	100	
	Total:	333	9	10421	1272	

SAMPLING DATA FOR:

DAB

ICELAND

1993		Number of	Number of samples		Number of fish	
	İ	Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	117	•	3185	•	
		-	-	-	-	
	2	7	-	529	-	
		-	3	901	300	
Va	3	16	-	375	-	
		-	3	739	200	
	4	-	<u>-</u>	-	-	
		•	1	317	99	
	Total:	140	7	6046	599	

SAMPLING DATA FOR:

GREAT SILVERSMELT

1993		Number of samples		Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	66	-	2009	536
		-	2	298	100
	2	-	-	-	- :
		-	-	-	-
Va	3	15	-	217	170
		-	-	-	-
	4	10	-	234	17
		-	-	-	•
	Total:	91	2	2758	823

CATFISH

ICELAND

1993		Number o	f samples	Number of f	ish
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	516	-	19734	2121
ļ		-	6	1172	398
	2	14	-	235	-
		-	5	1377	401
Va	3	137	-	1831	-
		-	-	•	-
	4	-	-	-	-
		-	-	-	•
	Total:	667	11	24349	2920

SAMPLING DATA FOR:

LUMPSUCKER

ICELAND

1993		Number of samples		Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	303	-	1138	1
		-	-	-	-
	2	5	-	7	-
		•	-	-	-
Va	3	27	-	33	10
		-	-	•	-
	4	1	-	1	-
		-	-	-	-
	Total:	336	0	1179	11

SAMPLING DATA FOR:

WITCH

1993		Number of	Number of samples		Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	173	-	1709	27	
		-	1	314	100	
	2	1	-	1	-	
		-	1	301	100	
Va	3	20	-	54	-	
		-	-	-	-	
	4	-	-	-	-	
		•	1	305	100	
	Total:	194	3	2684	327	

GREENLAND HALIBUT

ICELAND

1993		Number o	Number of samples		Number of fish	
		Research	Market	Number	Number	
Area	Quarter	vessel	samples	measured	aged	
	1	63	-	2023	3	
		•	-	-	•	
	2	21	-	3703	391	
		-	7	2189	695	
Va	3	151	-	3718	1279	
		-	-	-	-	
	4	54	-	3777	681	
			6	960	600	
	Total:	289	13	16370	3649	

SAMPLING DATA FOR:

HALIBUT

ICELAND

1	9	9	3

1993		Number of samples		Number of fish	
	Ī	Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	117	-	332	143
}		•	} •	-	-
	2	8	-	9	2
		-		-	-
Va	3	15	-	52	-
j		-	•	-	-
	4	1	-	1	1
		-		-	-
	Total:	141	0	394	146

SAMPLING DATA FOR:

ROUNDNOSE GRENADIER

1993		Number of samples		Number of fish	
		Research	Market	Number	Number
Area	Quarter	vessel	samples	measured	aged
	1	34	-	2037	1606
!		-	-	-	-
1	2	•	•	-	-
	<u>'</u>	•	•	-	-
Va	3	•	-	-	•
		•	-	-	-
	4	5		31	3
		-	-	•	•
	Total:	39	0	2068	1609

IRELAND

(P. Connolly)

The Demersal Section of the Fisheries Research Centre (FRC) is responsible for monitoring of fish stocks around Irish coast. The FRC stock monitoring programme is focused on species of cod, whiting, haddock, plaice and sole in ICES Divisions VIIa (Irish Sea), VIa (West of Scotland), VIb (Rockall), VIIb, c (West of Ireland), VIIj, k (South West Ireland) and VIIg (Celtic Sea). This programme was expanded in 1993 to include species of hake (length data only), monk (length data only) and megrim (age and length data) in ICES Divisions VI andVII. Length and age data are collected through a comprehensive sampling programme at the Dublin Fish Market, supplemented by quarterly visits to the main commercial ports. Contract samplers are also based at the main commercial ports and provide monthly data on the length composition of landings at their respective ports. Several young fish surveys were conducted in Divisions VIIa, VIIb-c, VIIj-k, VIIa and VIIg and these data were used to supplement the sampling and ageing programmes and construct recruit indices for stock assessment purposes.

These data are collated and analysed at the FRC and annual stock summaries are presented to ICES for use by the Northern Shelf and Southern Shelf Working Groups in the various international stock assessments.

Two deep water sampling surveys (April, September) were also carried out in ICES Divisions VIa, VIb, VIIb-c and VIIj-k in order to secure samples of potentially commercial deep water species for biological parameter estimations (funded by EC STRIDE Programme).

A comprehensive sea sampling programme for discards commenced in 1993, using funding provided by the EC STRIDE programme.

The following surveys were undertaken in 1993:

IRELAND
Research Vessel Survey Programme in 1993

Survey no.	Month	Area	Research vessel	Objectives
1	June	VIIa	R/V Lough Beltra	Young Gadoids
2	July	VIIa	R/V Lough Beltra	Young Gadoids
3	May	Vila	Commercial vessel	Young Plaice
4	July	VIIb-c	R/V Lough Beltra	Young Gadoids
5	July	VIIg	R/V Lough Beltra	Young Gadoids
6	November	Vilg, Vlib-c, Vllj-k	Commercial vessel	Groundfish Survey
7	April September	Vla, Vlb Vlib-c, Vilj-k	Commercial vessel	Deep Water Demersal Species
				<u></u>

COD

IRELAND

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
	1	41	•	1231	-
1	2	41	-	1357	330
VIa	3	29	5	1345	138
	4	27	5	1055	82
_	Total:	138	10	4988	550
VIb	Total:	151	•	584	104
	1	10	•	775	278
	2	5	5	749	117
VIIa	3	9	8	276	142
	4	8	-	263	182
	Total:	32	13	2063	719
VIIb, c	Total:	67	•	1457	263
	1	25	•	1337	213
	2	23	•	489	270
Vllg	3	14	5	369	311
	4	7		263	158
	Total:	69	5	2458	952
VIIj, k	Total:	14	•	790	316
Total all year:		471	28	12340	2904

SAMPLING DATA FOR:

WHITING

IRELAND

IKLLAND					
1993		Number of s	amples	Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
	1	34	•	5562	272
	2	20	-	4242	201
VIa	3	17	-	3166	332
	4	24	33	8783	465
	Total:	95	33	21753	1270
VIb	Total:	-	•	•	•
	1	4	-	2362	165
	2	4	33	5280	553
VIIa	3	11	25	6612	617
	4	7	-	1759	192
	Total:	26	58	16013	1527
VIIb, c	Total:	130	23	8829	
	1	29	-	4055	312
	2	20	-	4242	201
VIIg	3	8	-	1654	52
	4	20	-	4286	317
	Total:	77	0	14237	882
VIIj, k	Total:	75		6866	371
Total all year:		403	114	67698	4050

 ${\bf SAMPLING\ DATA\ FOR:}$

IRELAND

HADDOCK

1993		Number of s	Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged	
	1	24	-	2691	106	
	2	28	-	3280	212	
VIa	3	15	-	1030	260	
	4	20	29	3464	373	
	Total:	87	29	10465	951	
VIb	Total:	106	-	15065	559	
VIIa	Total:	•	-	•	•	
VIIb, c	Total:	26	20	920	343	
VIIg	Total:	•	•	•	•	
VIIj, k	Total:	55	10	2131	162	
Total all year:		274	59	28581	2015	

SAMPLING DATA FOR:

PLAICE

IRELAND

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
VIa	Total:	55	19	10141	540
VIb	Total:	-	-	-	•
	1	23	•	2837	301
	2	5	58	3302	420
VIIa	3	8	14	1653	342
	4	2	-	435	177
	Total:	38	72	8227	1240
VIIb, c	Total:	73	20	4534	306
	1	39	•	2577	359
	2	12	-	1380	125
VIIg	3	12	8	1243	165
	4	15	-	939	50
	Total:	78	8	6139	699
VIIj, k	Total:	65	6	5302	334
Total all year:		309	125	34343	3119

SAMPLING DATA FOR:

BLACK SOLE

IRELAND

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
VIa	Total:	35	5	2087	
VIb	Total:	-	-		-
	1	49	-	9937	138
	2	-	-	-	•
Vlia	3	-	-	-	-
	4	51	-	3411	199
	Total:	100	0	13348	337
VIIb, c	Total:	23	•	1957	214
VIIg	Total:	9	•	538	•

VIIj, k	Total:	28	5	3450	218
Total all year:		195	10	21380	769

MEGRIM

IRELAND

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
	1	17	•	2204	54
	2	12	-	1541	195
VIa	3	6	-	650	37
	4	9	16	1670	240
l	Total:	44	16	6065	526
	1	4	-	265	106
1	2	17	•	1728	141
VIb	3	6	-	762	-
	4	4	-	450	118
	Total:	31	0	3205	365
VIIa	Total:	•	•	•	•
VIIb, c	Total:	29	22	4382	91
	1	8	•	914	-
	2	12	-	687	65
VIIg	3	12	8	914	114
	4	15	-	194	138
	Total:	47	8	2709	317
'VIIj, k	Total:	61	8	10926	629
Total all year:		212	54	27287	1928

SAMPLING DATA FOR:

HAKE

IRELAND

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
VIa	Total:	38	7	2045	-
VIb	Total:	•	•	-	•
VIIa	Total:	•	•	-	-
VIIb, c	Total:	23	31	1442	•
VIIg	Total:	30	4	1273	•
VIIj, k	Total:	37	10	3376	-
Total all year:		128	52	8136	0

SAMPLING DATA FOR:

MONK

IRELAND

1993		Number of sa	imples	Number of fish		
Area	Quarter	Commercial	Research	N measured	N aged	
Vla	Total:	63	11	1317	-	
Vlb	Total:		-	•	•	
VIIa	Total:		-		•	
VIIb, c	Total:	31	1	229	•	
VIIg	Total:	•	-		-	
VIIj, k	Total:	19	10	781	-	
Total all year:		113	22	2327	0	

LATVIA

(M. Plikshs)

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

THE NETHERLANDS

(F. van Beek and H. Heessen)

In 1993 the market sampling of landings of the Dutch fleet from the North Sea in The Netherlands was continued for the following species: Cod (<u>Gadus morhua</u>), plaice (<u>Pleuronectes platessa</u>), sole (<u>Solea solea</u>), whiting (<u>Merlangius merlangus</u>) and greater silversmelt (<u>Argentina silus</u>). For all species, except silversmelt samples were taken stratified by harbour and market category. The tables below indicate the level of sampling. These tables also include the number of otoliths taken during research vessel surveys. During these surveys also a limited number of otoliths were taken from by-catch species.

In Januray R/V Isis (1 week) collected gonads of female sole in the German Bight for fecundity studies.

In each quarter *R/V Tridens* (12 weeks) and *R/V Isis* (8 weeks) participated in the International Bottom Trawl Survey (IBTS), fishing with a standard GOV trawl. These surveys are a continuation and extension of the International Young Fish Survey (IYFS) and the Dutch Groundfish Survey (DGFS). The IBTS surveys on R/V Isis (8 weeks) were partly combined with a monitoring programme in an area north of the Dutch Wadden Islands using a 8 meter beam trawl.

In March and June two tagging surveys were carried on *R/V Isis* (4 weeks) in the southern North Sea directed to dab. rays and skates. The following species were tagged: Dab (*Limanda limanda*) 2978, roker (*Raja clavata*) 776, spotted ray (*Raja montagui*) 230, blonde ray (*Raja brachyura*) 50, starry ray (*Raja radiata*) 90 and cuckoo ray (*Raja naevus*) 2.

Between May and August five surveys were carried out on *R/V Isis* (5 weeks) along the Dutch coast to investigate the growth and mortality of 0-group dab and sole and to investigate the growth of brown shrimp (*Crangon crangon*) in relation to eutrofication.

In August-September the International Beam Trawl Survey (BTS) was carried out by *R/V Isis* (5 weeks) in the southern North Sea and in the English Channel in collaboration with Belgium, Germany and the U.K. in order to investigate the abundance and distribution of adult plaice and sole in this area.

In September-October a SNS survey (Sole Net Survey) was carried out by *R/V Tridens* (2 weeks) along the continental coast between Belgium and Denmark. This survey provides recruitment indices for 1- and 2-year-old plaice and sole.

In September-October *R/V Isis* (4 weeks), *R/V Stern* (3 weeks) and *R/V Schollevaar* (2 weeks) participated in the Demersal Young Fish Survey (DYFS). These surveys estimate the relative abundance of brown shrimp and juvenile plaice and sole in the continental nursery areas. The surveys are carried out since 1969 in collaboration with Belgium and Germany.

SAMPLING DATA FOR: THE NETHERLANDS

884 mile - Amberly 110	elpesterate esta	mother	henpe.	allihin.	agency distribute	regions y regions	2009
COD							- 3
COD			٠.	100	A	Salar Co	4
dammer and		سنس			enimen.	and the same of	

1993	!	wante is the first property	Research vo	ssel samples	alimateria di meneria di matanina	Market	samples
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	162	-	-	•
	2	-	-	-	-	•	-
NRFA 1	3	-	-	38	•		-
l	4	•	-	-	•	-	
	Total:	0	0	200	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	•	-	•	-
	2	-		91	-	244	50
NRFA 2	3	-	-	102	-	97	-
1	4			13	-	77	·
	Total:	0	0	206	0	418	50
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	64	-	-	•
	2	-	-	5	-	-	-
NRFA 3	3	-	-	20	-	-	•
	4			•		<u> </u>	•
	Total:	0	0	89	0	0	0
Area *) *:	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	-	229	50
	2	•	•	63	•	•	
NRFA 4	3	•	•	104	-	•	-
	4	•	•	51	•	228	142
	Total:	0	0	218	0	457	192
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	11	-	224	150
	2	•	-	2	-	463	94
NRFA 5	3	•	;	5	•	228	146
	4	-	-	9	•	259	-
	Total:	0	0	27	0	1174	390
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	96	-	1609	402
	2	-	•	92	-	936	285
NRFA 6	3	-	-	84 260	-	711	200
	4	•	-	269		1352	348
	Total:	0	0	541	0	4608	1235
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	· .	-	-	-
NID 514 =	2	•	•	111	-	-	-
NRFA 7	3	-		74	•	-	-
		0	-	185			
m . 11 "	Total:	0	0		0	0	0
Total in all quar	rters:	0	0	1466	0	6657	1867

^{*)=}North Sea Roundfish Sampling areas

SILVER SMELT

THE NETHERLANDS

1993		The state of the s	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	-	-	-	
	2	-	-	-	-	128	75	
VIa	3	-	-	-	-	1 -	-	
	4	-			-	-	-	
	Total:	0	0	0	0	128	75	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	-	•	241	50	
	2	-	-	-	-	368	75	
VIIc	3] -	j -	-	-	-	-	
	4		-	-	-	[- [-	
	Total:	0	0	0	0	609	125	
Area ***	Quarter :	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	•	-	•	
	2	-		-	-	155	25	
VIIj	3	-	-	-	-	-	-	
	4	-	-	-	-	-	-	
ľ	Total:	0	0	0	0	155	25	
Total in all qua	rters:	0	0	0	0	892	225	

SAMPLING DATA FOR:

HADDOCK

993			Research ve	ssel samples	Market samples :			
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	262	-	-	-	
	2	-	-	-	-	-	-	
NRFA 1	3	-	-	122	-	-	-	
	4	-	-	-	-	} - }	.=	
	Total:	0	0	384	• 0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	-	•	-	-	
	2	-	-	153	-	-	-	
NRFA 2	3	-	-	137	-	.	•	
	4	-	-	29	-	-		
	Total:	0	0	319	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	228	-	<u>.</u> .	-	
	2	-	-	132	-		-	
NRFA 3	3	-	-	130	-	-	-	
	4	-	-	-	-	-	-	
	Total:	0	0	490	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	-	•	-	-	
	2	-	-	125	-	-	-	
NRFA 4	3	-	-	98	-	-	-	
	4	•		75	-	-	-	
	Total:	0	0	298	0	0	0	

Area *).	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	•	•	-	
	2	-	-	-	-	-	-
NRFA 5	3	-		-	-	-	-
	4	•	-	-	-	-	•
	Total:	0	0	0	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•		•		-	•
	2	•		-	•	-	-
NRFA 6	3	•	- 1	-	-	-	-
	4	-	-	1	-	-	•
į	Total:	0	0	1	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	•	-	-	-
	2	-	-	151	-	-	
NRFA 7	3	-		92	-	-	-
	4	-		-	-	-	-
	Total:	0	0	243	0	0	0
Total in all qua	rters:	0	0	1735	0	0	0

^{*)=}North Sea Roundfish Sampling areas

NORWAY POUT

1993		Research vessel samples			Market samples			
Area *)	Quarter *	N samples	N measured	N aged	N samples	N measured	N aged	
	1		-	66	•	-	-	
	2	-		-	-	-	•	
NRFA 1	3	-		17	-	-	•	
	4	-		•	-	-	-	
	Total:	0	0	83	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	•	-	-	-	
	2	-	-	49	-	-	•	
NRFA 2	3	-	-	42	-	-	•	
	4	-	-	-	-	· •	-	
	Total:	0	0	91	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	57	-	-	•	
	2	-	-	25	-	-	-	
NRFA 3	3	-	-	29	-	-	-	
	4	-		-	-		-	
	Total:	0	0	111	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	•	•	-	•	-	
	2			52	-	-	•	
NRFA 4	3			23	-	-	•	
	4	-	-	25	-		-	
	Total:	0	0	100	0	0	0	

Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	i	•	-	•	-	-	-
	2	•	-	•		-	-
NRFA 5	3	-	; - <u> </u>	•	-	J - J	-
	4	•	-	-	-	-	-
	Total:	0	0	0	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	-	-	-
	2	-	-	1	-	- [-
NRFA 6	3	-	- 1	•	-	-	-
	4	-	-	-	-	-	-
	Total:	0	0	1	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	-	- 1	-
	2	•	-	-	-	-	-
NRFA 7	3	-	-	-	-	-	-
	. 4	-	.	-		.	-
	Total:	0	0	0	0	0	0
otal in all qua	rters:	0	0	386	0	0	0

^{*)=}North Sea Roundfish Sampling areas

WHITING

1993			Research ves	sel samples	Market samples			
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	187	-	-	-	
	2	-	-	-	-		-	
NRFA 1	3	-	l - 1	78	•	-	-	
	4	-	-	-	•	-	-	
	Total:	0	0	· 265	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	•	-	-	
	2	-		137	-	172	50	
NRFA 2	3	-	-	108	-	45	-	
	4	-	-	95	•	-	-	
	Total:	0	0	340	0	217	50	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-		201	-	-	•	
	2	-	-	119	-	-	-	
NRFA 3	3	-	1 - 1	94	-	-	-	
	4	-	-		-	-	-	
	Total:	0	0	414	0	0	0	
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	-	123	-	
	2	-	-	136	-	-	-	
NRFA 4	3		•	77	-		-	
	4	-		173	-	141	-	
	Total:	0	0	386	0	264	0	

Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	ı	•	-	40	_	257	-
	2	-	-	120	-	770	100
NRFA 5	3	•	-	43	-	278	-
	4	-		81	-	249	50
	Total:	0	0	284	0	1554	150
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	203	-	2342	250
	2	-	-	150	- '	1991	250
NRFA 6	3	-	-	73		1992	300
	4	-		364	-	1770	250
	Total:	0	0	790	0	8095	1050
Area *)	Quarter *	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	-	-	-	-
	2	-	-	84	-	-	•
NRFA 7	3	•	-	81	-	-	-
	4	-	-	-		-	-
	Total:	0	0	165	0	0	0
Total in all qua	rters:	0	0	2644	0	10130	1250

^{*)=}North Sea Roundfish Sampling areas

SAITHE

1993	1993		Research vessel samples			Market samples			
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	ı	•	-	6	•	-	-		
	2	-	-	-	-		-		
NRFA 1	3	-	-	1	-	-	•		
	4	-	-	-	-	-	-		
	Total:	0	0	7	0	0	0		
Area *)	Quarter	N samples	N measured	N ageđ	N samples	N measured	N aged		
	1	-	-	•	-	-	•		
	2	-	-	3	-	-	-		
NRFA 2	3	•	-	11	-	-	-		
	4	-	-	-	-	-	-		
	Total:	0	0	14	0	0	0		
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	•	-	4	-	-	-		
	2	-	-	-	-	-	-		
NRFA 3	3	-	-	-	-	-	•		
	4	-	-	•	-	-	•		
	Total:	0	0	4	0	0	0		
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	•	-	•	-	-	-		
	2	-	-	-	-	-	-		
NRFA 4	3	-	-	-	-	-	-		
	4	-		-	-		•		
	Total:	0	0	0	0	0	0		

Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	•	-	-	•
	2	-	-	-	-	-	-
NRFA 5	3	-] -]	-	-	-	-
	4	-	-	-	-	-	-
	Total:	0	0	0	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	•	•	-	-	-
	2	-	-	1	-	-	-
NRFA 6	3	-	-	-	-	-	-
	4	-	-	-	-	•	•
	Total:	0	0	1	0	0	0
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	-	•	-	-	•
	2	-	-	-	-	-	-
NRFA 7	3	-	-	4	-	-	-
	4	-	-	1	-	-	-
	Total:	0	0	5	0	0	0
Total in all qua	rters:	0	0	31	0	0	0

^{*)=}North Sea Roundfish Sampling areas

PLAICE

1993		and the state of the same of t	Research ve	ssel samples	Market samples				
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	•	-	126	•	-	1500		
	2	-	-	-	•	-	998		
IV	3	-	-	543	•] -	1075		
	4	-		933	•	-	900		
	Total:	0	0	1602	0	0	4473		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	•	-	-	-	-	+		
	2	-	-	-	-	-	-		
Wadden-	3	-	-	-	-	-	-		
sea	4	-	-	161	-	-	-		
	Total:	0	0	161	0	0	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	-	•	•	-	-	-		
	2 .	-	-	-	-	-	-		
Zeeland	3	-		117	-		•		
estuary	4	-	-	-	-	-	-		
	Total:	0	0	117	0	0	0		
Total in all quarters:		0	0	1880	0	0	4473		

SOLE

THE NETHERLANDS

1993		madeline is not make in the control	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	- 1	108		-	889	
	2	-		-	-	-	1400	
IV	3	-	ļ -	361	-		800	
	4	-	-	570	•	-	868	
	Total:	0	0	1039	0	0	3957	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	•	-	-	-	-	•	
	2	-	.	-	-	-	-	
Wadden-	3	-	ł - I	-	-		-	
sea	4	-	•	43	-	-	-	
	Total:	0	0	43	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	-	-	-	
	2	-	-	-	-	-	-	
Zeeland	3	-	ł - I	67	-	-	-	
estuary	4	-		-		-	-	
	Total:	0	0	67	0	0	0	
Total in all qua	rters:	0	0	1149	0	0	3957	

SAMPLING DATA FOR:

TURBOT

THE NETHERLANDS

1993		ne construe o construe in	Research ves	ssel samples	Supplies to the production	samples	
Arca	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	-	-	13	•	-	-
	2	-	1 - 1	-	-	-	-
IV	3	-	-	169	-	-	-
	4	-	1 - 1	114	-	-	-
	Total:	0	0	296	0	0	0
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
	1	•	- 1	•	-	-	-
	2	-	l - I	-	-		-
Wadden-	3	-	-	•	-	- ,	•
sea	4	-	-	6	-	-	-
	Total:	0	0	6	0	0	0
Total in all qua	Total in all quarters:		0	302	0	0	0

SAMPLING DATA FOR:

BRILL

1993		the countries at the complete and the countries of the	Research ves	sel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	- I	25	•	-	-	
	2	-	1 - 1	-	-	-	-	
IV	3	-		111	-	-	•	
	4	-] -]	40	-] -]	-	
	Total:	0	0	176	0	0	0	
Fotal in all quarters:		0	0	176	0	0	0 ·	

DAB

THE NETHERLANDS

1993		Considerate Control to the Section	Research ve	ssel samples	Market samples			
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	383	•	-	-	
:	2	-	-	-	-	-	-	
IVa	3	-	-	363	-	-	-	
	4		-	794	-	-	-	
	Total:	0	0	1540	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	•	•	-	-	
	2	-	-	-	-	-	-	
Wadden-	3	-	-	-	-	-	•	
sea	4	-	-	15	-	-	-	
-	Total:	0	0	15	0	0	0	
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged	
	1	-	-	-	-	-	-	
	2	-		-	-	-	-	
Zeeland	3		-	34	•	-	-	
estuary	4	-	-	-	-	-	-	
	Total:	0	0	34	0	0	0	
Fotal in all quarters:		0	0	1589	0	0	0	

SAMPLING DATA FOR:

FLOUNDER

1993		Landa and a characteristic conservation	Research ve	ssel samples	Market samples				
Arca	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	•	-	•	-	-	•		
	2	-		-	-	-	-		
IVa	3	-	-	88	-	-	-		
	4	-	-	87	-	-	-		
	Total:	0	0	175	0	0	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	-	-	-	-		•		
	2	-	-	-	-	.	-		
Wadden-	3	-	-	95	-	-	-		
sea	4	-		-	-	-	-		
	Total:	0	0	95	0	0	0		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged		
	1	-	-	-	-	-	•		
	2	-	-	-	-	- 1	•		
Zeeland	3	-	-	26	-	-	-		
estuary	4			-	-	-	-		
	Total:	0	0	26	0	0	0		
Total in all qua	rters:	0	0	296	0	0	0		

NORWAY

(T. Jakobsen)

Sub-areas I and II

Routine research surveys were carried out as in previous years, accounting for most of the activity at sea. Most of the activity is aimed at Northeast Arctic cod, but other species are also covered during the same surveys. The experiment to use commercial trawlers for a bottom trawl survey in the Barents Sea/Svalbard area was finished in 1993 when the survey was carried out for the fifth consecutive year. The results of the experiment will nowbe evaluated. Stomach sampling for multispecies research was carried out on routine surveys throughout most of the year. Investigations on cod and haddock spawning (eggs and larvae) were combined with other surveys.

The abundance of cod, haddock and redfish in the Barents Sea was investigated during a combined acoustic and stratified bottom trawl survey in January-March. The distribution and abundance of spawning cod was investigated by acoustic survey in the Lofoten area in March-April. The distribution of cod, haddock, redfish and Greenland halibut was investigated in the Svalbard area in August-September. Part of this survey was included in the combined 0-group/multispecies survey carried out together with Russian vessels during the same period, when the distribution of cod, haddock, redfish and pelagic species was investigated in the Barents Sea. Stomach samples from cod and haddock were collected on all routine surveys for cod/haddock in the Barents Sea and at Svalbard and in addition on shrimp and pelagic fish surveys.

In November a bottom trawl survey with six commercial trawlers was carried out during two weeks in the Barents Sea under the supervision of the Institute of Marine Research, Bergen. The results so far indicate that this could be a valuable survey, especially with regard to the older age groups of cod, which are poorly covered in the winter survey. In addition to the abundance estimation, emphasis was put on comparison between commercial trawls and the standard sampling trawl used by research vessels. The survey will not be continued in 1994, but evaluation of the results will be used as a basis for planning future activities.

In August-September the International 0-group survey was carried out in the Barents Sea and adjacent waters in cooperation with Russian vessels.

An acoustic survey for saithe and redfish was carried out on the coastal banks of Norway south of 62° N in October-November.

In 1992 direct fishery for Greenland halibut was banned, but in order to continue the series of commercial CPUE data, a fishery with selected vessels was allowed in two periods under the supervision of the Institute of Marine Research. In addition a survey on 0-group Greenland halibut was carried out in the Svalbard fjord areas in September-October.

The sampling programme for commercial catches of cod, haddock, saithe, redfish and Greenland halibut was continued.

Sub-area IV

Norway participated in the Quarterly International Bottom Trawl Surveys in three quarters. During four weeks in January-February the Norwegian part of the International Young Fish Survey was carried out. The other two surveys were carried out in May-June and in October-November. In the

latter survey, acoustic abundance estimation of the resources in the northern North Sea was also attempted.

Stomach samples were collected on all surveys. In April-May the distribution of saithe post-larvae was studied. The sampling of commercial catches of saithe, sandeel and Norway pout was continued.

SAMPLING DATA FOR:

ANGLER

1993		Research	vessel sam	ples	apparent for a large grown with the co-	Market samples			
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	•	-	-		-
	2	-	-	-	-	.	-		-
I	3	-	-	•	-	-	-	1 -	-
	4	-	-	-	-	-	-		-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	-	-	-
	2	•	-	1	1	1	-	-	-
Ha	3	-	-	•	1	1	-	-	-
	4	-	•	•	4	6	-	-	-
	Total:	0	0	1	6	8	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
IIb	3	- '	-	-	-	-	-	-	-
	4	• .	-	-	-	-	-	-	, -
	Total:	0	0	0	0	0	0	0	0
Area :>	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	-	•	-	-	•	· -
	2	-	-	•	-	-	-	-	-
IVa	3	-	-	-	-	-	-	-	-
	4	-	-	•	-	•	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	•	-	-	•	•
,	2	-	-	-	-	-	-	-	-
IVb	3	-	-	-	-	-	-	-	-
	4	-	-	-	-		•	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•		•	•	•	- 7	•
	2	-	-	-	-	-	-	-	-
Vъ	3	l ·	-	-	-	-	-	-	*
	4	<u> </u>	-	•	•	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

BLUE WHITING

NORWAY

1993		Research	vessel sam	ples	Calinger e asign	Market sa	mples	A marke of second of the	en en fransk en
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		-	69	901	-	•	-	-
	2	-	-	1	9	-	-	-	-
I	3	-	-	8	136	-	-	-	-
 	4	-	-	6	73	-	-	-	-
	Total:	0	0	84	1119	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	58	1056	•	•	-	-
	2	2	100	12	273	-	-		-
IIa	3	27	1050	46	1359	-	-	-	-
	4		-	28	266	•	-	-	-
	Total:	29	1150	144	2954	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	2	6	-	-	-	-
	2	-	-	-	-	-	-	-	-
Пр	3	-	-	44	507	-	-	-	-
·	4		-		•	-	-	-	•
	Total:	0	0	46	513	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	•	•	•	-	-	-
i	2	-	-	-	•	-	-	-	-
IVa	3] -]	-	-	-	-	-	-	-
	4	-		2	2		-		-
	Total:	0	0	2	2	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	•	-	•	•	•
	2	•	-	•	•	i - i	-	•	-
IVb	3	-	-	-	-	-	-		-
	4		-				-	-	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	;	-	-	•	•	-	•	• .
<u>.</u>	2	1	114	1	114	-	-	- [-
Vъ	3	•	-	•	-	•	-	-	-
	4		-	<u> </u>	-	-	-		
	Total:	1	114	1	114	0	0	0	0

SAMPLING DATA FOR:

CATFISH

1993	1993		essel san	ples	negative disconnection as the	Market samples				
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	- 1	-	124	436	-	-	1 -	-	
	2	-	-	4	17	- [-	· -	•	
I	3	- 1	-	58	138	1 - 1	•	1 - 1	-	
	4		-	4	6	-		-	•	
	Total:	0	0	190	597	0	. 0	0	0	

Area	Quarter	N samples	N fish						
	1	-	-	32	77	-	•	-	-
	2	-	-	1	7	-	-	-	-
IIa	3	-	-	4	4	-	-	-	-
:	4		•	22	72	-	-	-	-
	Total:	0	0	59	160	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	-	12	27	•	•	-	•
	2	-	-	-	•		-	-	-
Hb	3	-	-	227	2369	-	-	-	-
	4	-	-	3	109		•	-	-
	Total:	0	0	242	2505	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-	-		•	-	-
	2	•	•	-	-	-	-	-	-
IVa	3	•	•	•	-	-	-	-	-
	4	•	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area :	Quarter	N samples	N fish						
	1	•	•	-	-		-	•	- ,
	2	-	•	-	-	-	-	-	-
IVb	3	-	-	-	-	-	-		-
	4	-	-	-	-	-	-	-	
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	-	-	•	•	•	-	-
	2	•	-	-	-	-	-	.	-
Vъ	3	•	-	-	-	-	•	-	•
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

COD

1993		Research v	ressel san	iples		Market samples				
		Aged				Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	152	3267	378	45229	4	393		•	
	2	2	35	13	941	17	1691	2	296	
I	3	52	2285	207	14796	-	-	-	•	
	4	-	-	-	-	-	-		-	
	Total:	206	5587	598	60966	21	2084	2	296	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	73	2299	142	12679	56	5678	4	554	
	2	5	174	17	810	17	1279	-	-	
IIa	3	7	316	75	2785	-	_	- 1	-	
	4	1	46	53	628	-	•	-	-	
	Total:	86	2835	287	16902	73	6957	4	554	

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	8	163	32	4533	-	-		
	2	-	-	3	,282	-		1 - 1	-
IIb	3	76	2376	489	39871	-		- 1	-
i	4	2	140	4	688	-	-	i - i	-
	Total:	86	2679	528	45374	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	-	-	-
1	2	-	-		-	-	-		-
IVa	3	-	•	-	-	-	-	-	-
	4	-	-	-	•	-	-	-	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	•	-	-	-	•
	2	-	-	-	-	-	-	-	-
IVb	3	-	-	-	•	-	-		-
Î	4	•	•	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	•	-	-	•	-	-
	2		-	-	-	-	-	-	•
Vъ	3	-]	-		-] • [-] -]	-
	4	-	-		-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

CAPELIN

1002		\$10,000 \$100 B	respect to the second	do∎3336 · ••.		1.038.1002.837	10110 = 7216	a : 4× s	ed grant and service
1993		Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	67	3751	191	11268	1	100	1	100
	2	-	-	22	495	-	-	-	-
	3	67	4065	172	10311	-	-		-
	4	-	-	9	174	-	-	-	-
	Total:	134	7816	394	22248	1	100	1	100
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
На	1	12	644	48	1821	3	297	3	297
	2	-	-	5	396	-	-		-
	3	-	-	5	77	-	-	-	-
	4	-	-	2	108	-		-	-
	Total:	12	644	60	2402	3	297	3	297
'Area'	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
llb	1	11	612	30	1716	- 1	•	-	-
	2	-	-	1	30	-	-		-
	3	11	575	119	3565	-	-	[.]	•
	4		-	-		-	-	-	-
ĺ	Total:	22	1187	150	5311	0	0	0	0

Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	-	-	•
	2	-	-	-	-	-	-	-	-
IVa	3	-	-	-	-	-	-		-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	•	-	•	-	-	-	•
	2	-	-	-	-	-	-	-	-
IVb	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	-	-	-
	2	-	-	-	•	-	-	-	-
Vъ	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

DAB

1993		Research v	essel san	iples		Market sa	mples	an en	oceano de Maladas
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	-	-	-	-	-	-
	2	-	-	-	-	.	-	-	-
I	3		-		-		-	-	-
	4	1 -	-	1	2	-	-	•	-
	Total:	0	0	1	2	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	1	8	-	•	- 1	-
	2	.	-	-	-	-	-	-	-
IIa	3		-	-	-	-	-	-	-
	4	-	-	2	66	-	-	-	-
	Total:	0	0	3	74	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	· 1	-	-	-	-	-	-	-
	2	-	-	-	•	h -	-	•	-
IIb	3	-	-		-	-	-	-	-
	4	-	-		-	-	-		-
	Total:	0	0	0	0	0	0	0	0
Area.	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	-	-	-	-	•	-
	2	-	-	.	•	-	-	•	-
IVa	3	-	-	-	-	-	-	•	-
	4		-	<u> </u>	-	<u> </u>	-	-	
	Total:	0	0	0	0	0	0	0	0

Area	Quarter	N samples	N fish						
	1	•	-		•	,	-	-	•
	2	-	•	-		-	-	- 1	-
IVъ	3	- J	•		-	-	-	-	-
	4	-	-	-	-		•	.	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-		-	•	-	-
	2	-	-		-	-	. •	-	-
Vъ	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

GREATER SILVER SMELT

1993		Research v	vessel sam	ples	iki i i kana mana mana mana mana mana mana mana	Market samples				
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	4	4	-	-	-	-	
	2	-	-		-	•	-	-	-	
I	3	1 -	•	-	•		-	-	-	
	4	-	-	2	3	-	-	-	_	
	Total:	0	0	6	7	0	0	0	0	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1		-	27	508	-	•	-	•	
	2	-	-	9	127	6	225	7	804	
IIa	3	-	-	3	21	4	90	4	284	
:	4	-	-	25	490	-	-	-	-	
	Total:	0	0	64	1146	10	315	11	1088	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	-	-	-	-	-	-	
	2	-	-	-	-	-	-	-	-	
ПР	3	- 1	-	4	4	-	•	-	-	
	4	·		-	-		-	-	-	
	Total:	0	0	4	4	0	0	0	0	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	•	-	-	-	-	-	
	2	-	-	- 1	-	•	-	-	-	
IVa	3	-	-	-	-	•	-	1 -	-	
	4		-	•	•	<u> </u>	-		•	
	Total:	0	0	0	0	0	0	0	0	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	•	-	-	-	•	-	-	
	2	-	-	-	-	-	-	-	-	
IVb	3	-	-	-	-	•	-	-	-	
	4	-	-	-	•	-	•		-	
	Total:	0	0	0	0	0	0	0	0	

Area	Quarter	N samples	N fish						
	1	•	•	•	-	-	-	-	•
	2	•	-	-	-	-	-	-	•
Vb	3	-	•	-	•		-	-	•
	4	-	-	-	- ,	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

GREENLAND HALIBUT

1993		Research	vessel sam	ples	e endre er in er inderendent ine	Market sa	mples	400 MM 2 Acres on a supposed of	Spilipperalists of the second confi
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	5	66	71	292	•	-	-	•
	2	-	-	3	38	-	-		•
I	3	1	6	22	82	-	-		-
	4	-	•	1	3	•		-	-
	Total:	6	72	97	415	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	5	69	21	149	-	-	-	•
	2	75	3618	146	29142	-	-		-
IIa	3	1	11	9	37	-	•		-
	4		-	1	2	-	-	-	-
	Total:	81	3698	177	29330	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	1	10	18	108	-	-	-	•
	2	13	579	25	2673	-	-] -	•
IIb	3	32	513	136	1469	-	-	.]	-
	4	-	-	2	3	-	-	-	-
	Total:	46	1102	181	4253	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
1	1	-	-	-	-	-	-	-	•
	2	-	•	-	-	-	-	-	•
IVa	3	-	-	-	-	-	-	- 1	-
	4	-	•	-	-	-	-	-	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-		-	•	•
	2	-	-	-	-	-	-	-	-
IVb	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	•	•	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		-	-	-	-	-		-
	2] -	-	-	-	-	-	-	•
Vb	3	-	•	-	-	-	-	-	•
	4	-	-	-	-	-	-		-
]	Total:	0	0	0	0	0	0	0	0

GRENADIER

NORWAY

1993		Research	vessel sam	ples	war na mar kay sight it. is	Market sa	mples	de la partir de la	maninamaning de la Am
		Aged		Measured		Aged		Measured	
Area	. Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	1	1	•	•	•	•
	2	-	-	-	-		-	-	-
I	3	-	-	-	-	-	•	-	-
	4	-	•	-	•	•	-	•	•
	Total:	0	0	1	1	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	•	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
IIa	3	-	•	-	-] -	•	-	-
:	4	•	•	-	•	-		-	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-		-	-	-
	2	-	-	-	-	-	-	-	-
llb	3	-	-	-	-	-	-	-	-
	4	-	-	•	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter *	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	-	•	•	-	-	•
	2	-	-	-	-	-	-	-	-
IVa	3	-	-	-	-	-	-	-	-
	4	•	-	•	•	-	-	-	•
	Total:	0	0	0	0	0	• 0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	-	•	-	-	-	•
	2	•	-	-	-	•	-	-	-
IVb	3	-	-	-	•	-	-	-	-
	4	•	•	-	•	•	-	٠	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	-	•	•	-	•	•
	2	-	-		-	-	-	.	-
Vъ	3		-	•	-	-	-	•	-
	4	-	-	•	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

SAMPLING DATA FOR:

HADDOCK

1993		Research y	essel san	ples	anana Amilia ada man	Market samples				
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	83	1255	382	43083	5	425	1	144	
	2	.	-	16	782	12	888	2	561	
I	3	11	392	115	4929	.	-	1 - 1	-	
;	4	4	125	25	1440	.	-		, -,	
i	Total:	98	1772	538	50234	17	1313	3	705	

Area	Quarter	N samples	N fish						
	1	35	726	134	11563	23	1385	1	61
	2		-	11	143	7	464	-	-
Ha	3	4	113	87	2903	-	-	-	-
	4	13	408	56	3524	-	-		•
	Total:	52	1247	288	18133	30	1849	1	61
Area	Quarter	N samples	N fish						
	1	2	24	28	908	•	-	-	-
	2	-	-	-	•	•	-	-	-
IIb	3	19	420	229	6726	-	-	-	-
	4	-	-	3	151	-	-	•	-
	Total:	21	444	260	7785	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	•		-		-		-
	2	•	-	•	-	-	•	-	-
IVa	3	-	-	-	-	-	-	-	•
	4	-	-	• _	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	-	•	-	•	•	-	•
	2	-	-	•	-	-	-	-	-
IVb	3	-	-	-	-	-	•	-	-
	4	-	-		-	-	-	•	-
	Total:	0	0	0	0	0	0	0	0
Area -	Quarter	N samples	N fish						
	1	-	•	-	-	•	-	-	-
	2	-	-	-	-	-	-	-	-
Vъ	3	•	-	-	-	-	-	-	-
	4	-	-		-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

HAKE

1993		Research y	essel sam	ples	in district the first first	Market samples				
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	1	1	-	-	-	-	
	2	-	•	-	-		-	-	•	
I	3	.	-	-	-	-	-		-	
	4	-	-		-	-	-		-	
	Total:	0	0	1	1	0	0	0	0	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	2	3	-	-	-	-	
	2	-	-	2	13		-		-	
IIa	3	-	-			-	-		-	
	4	-	-	3	3	-	•	-	-	
	Total:	0	0	7	19	0	0	0	0	

Area	Quarter	N samples	N fish						
	1	-	•	-	•	-	•	-	•
	2	-	-	-	•	-	-	-	-
llb	3	-	-	-	-	-	-	-	-
	4	-	-	•		-	•	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	•	-	•	-	•	-	-
	2	-	-		-	-	-	-	-
IVa	3	-	-	-	-		-	-	-
	4	•		1	1	-		-	-
	Total:	0	0	1	1	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	•	•	•	-	•	-
	2		-	-	-	-	-	ł -	-
IVb	3	-	-	-	•	-	-	-	-
	4	-	-	•	•	•	•	-	_
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	-		•	•	-	-	•
	2	-	-		-	-	-	-	-
Vb	3	-	-	-	-	•	-	٠ -	-
	4	-	-	-	-	•	•		<u>-</u>
	Total:	0	0	0	0	0	0	0	0

HALIBUT

1993		Research v	essel san	iples	The state of the s	Market samples				
		Aged		Measured		Aged		Measured		
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	8	15		-		-	
	2	. [-	-	-	- 1	-	l - l	-	
1	3	- 1	-	-	-		-	- {	-	
	4	-	-	-	•] -]	-	-	- ,	
	Total:	0	0	8	15	0	0	0	0	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish .	
	1	- 1	-	1	1	-	-		-	
	2	-	-	-	-	-	-	-	-	
IIa	3	.	-	1 - 1	-	-	-	-	-	
	4	1 - 1	-	-	-	1 - 1	-	1 - 1	-	
	Total:	0	0	1	1	0	0	0	0	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	-	-		-	-	-	
:	2		-	-	-	-	-	-	-	
IIb	3	-	-	-	-	-	-	-	-	
	4	-	•	•	•	•				
	Total:	0	0	0	0	0	0	0	0	

Area	Quarter	N samples	N fish						
	1	-	•	-	-		-	-	•
	2	-	-	-	-	-	-	-	-
IVa	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-		-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1		-	-	•	•		•	•
	2	-	-	-	•	-	-		-
IVb	3	-	-	-	-	-	-	-	-
	4	-	-	- '	-		•	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	_	-	•	,	-	-	•
	2	-	•	-	-	-	-	-	-
Vъ	3	-	-	[-	-	-	-	-	-
	4	-	•	-	,	-	-	-	•
	Total:	0	0	0	0	0	0	0	0

HERRING

1993		Research v	essel sam	ples		Market sa	mples	e de samb e como de secución administración de como différente.	
		Aged	-	Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	55	2376	220	9761	-	-	- 1	-
	2	13	390	25	1852		•	-	-
I	3	38	2018	152	12211		-	- 1	•
	4	9	420	24	1893	•	-	-	•
	Total:	115	5204	421	25717	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	11	829	65	1480	-	-	-	-
,	2	28	1434	32	2042	3	300	i - I	300
Ha	3	60	2969	112	4995		-	-	•
	4	19	1527	46	2101	-	-	-	•
	Total:	118	6759	255	10618	3	300	0	300
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	ī	-	•	7	11	-	-	-	•
	2	- '	-	- 1	•	-	-	-	-
ПР	3	4	257	81	2423	-	-	-	-
)	4	-	-	-	-	-	-	-	•
	Total:	4	257	88	2434	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	1	100	1	100	•	•	-	•
	2	1	2	1	2	7	700	1 - 1	700
IVa	3	-	-	-	-	-	-	-	-
	4	7	450	18	1294		-	<u> </u>	-
,	Total:	9	552	20	1396	7	700	0	700

Area	Quarter	N samples	N fish						
	1	-	-		•	-	-		
	2	-	-	-	-	-	-	.	-
IVb	3	-	-	-	-	-	•	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter '	N samples	N fish						
	1	-	-	- 1	-	·	-	-	
	2	-	-	1	1	-	-	-	-
Vb	3	-	-	-	-	.	-	.	•
	4	-	-	-	-	-	-	-	-
	Total:	0	0	1	1	0	0	0	0

LEMON SOLE

NORWAY

\$

1993		Research	vessel sam	ples	Barrell St. Land	Market sa	mples		
		Aged		Measured		Aged		Measured	
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	î	-	-	9	33	-	. -	-	-
	2	-	•	-	-	-	-	-	-
I	3	-	-	1	1	•	-	-	-
ı	4	<u> </u>	-	3	15	<u> </u>	-	<u> </u>	_
	Total:	0	0	13	49	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	, N fish	N samples	N fish
	1	-	-	8	14	-	•		-
	2	-	•	2	3	-	-	-	-
Ha	3	-	-	-	-	-	•	-	-
	4	-	-	22	90	•	•	-	-
	Total:	0	0	32	107	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-		-		-		
	2	-	-	[-	•	-	-	-	-
IIb	3	-		-	-	-	-	-	-
	4		-	<u> </u>	-		-	-	-
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		-	-	•	-	•	•	-
	2	-	-	•	-	-	· -	-	-
IVa	3	-	-	-	-	-	. •	-	-
	4	•	<u> </u>	-	-		-	-	•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	-	-	-	-	-
	2	-	-	-	-	-	• •	-	-
IVъ	3	•	-	-	-	•	-	-	-
	4	-		•	-	·	-	-	-
	Total:	0	0	0	0	0	. 0	0	0

Area	Quarter	N samples	N fish						
	1	-	-	•	-		-	-	-
	2	-	-	-	-	-	-	-	-
Vъ	3	•	•	-	-		-	-	-
	4	-	•	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

LING

1993		Research v	essel sam	ples	To a series of the series of t	Market sa	mples	and the second second	e di canalini a pamamana peradikini
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		•	-	-		-	-	-
	2	-	-	-	-		-	-	-
I	3	-	-		-	-	-	-	-
	4		-		•	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	12	27	-	•	-	-
]	2		-	-	-	-	-	-	-
IIa	3	-	-	-	-	-	-	-	-
	4	-	-	10	25	-	-	-	-
	Total:	0	0	22	52	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	•	-	-
	2	-	-	-	•	-	-	-	•
IIb	3	-	-	-	-	-	-	-	•
	4	-	-	-]	•	•	-		•
1	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	•	•	•	•	-	•
1	2 .	-	-	-	•	-	•		-
IVa	3	-	-	-	-	•	•	-	•
	4	•	-	-	-	-	•	-	•
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-		•	-	•
	2	-	-	-	-	-	-	-	•
IVъ	3	-	-	-	-	- 1	-	•	-
	4	•		•	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	-	-	-
	2	-	-	[-]	-	-	-	-	-
Vъ	3	-	-	-	-	-	-	• .	-
	4	-	-	-	-	•	•	•	-
	Total:	0	0	0	0	0	0	0	0

LONG ROUGH DAB

NORWAY

1993		Research	vessel sam	ples		Market sa	mples	North North Colors (18) March North Colors (18)	
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	2270	12048	-	-	-	-
	2	-	-	9	458	-		-	
i	3	-	-	100	4631	-	-		-
	4	-	-	7	180	-	•	-	-
	Total:	0	0	2386	17317	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	79	2963	•		-	•
	2	-	-	2	13	-	-	-	-
IIa	3	-	-	15	518	-	-	-	-
	4	-	•	30	340	_ •	•	-	-
	Total:	0	0	126	3834	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	24	1133	•	•		-
	2	-	-	•	-	-	-	-	•
ПР	3	-	-	255	11756		-	-	-
	4	-	-	•	-	•	-	-	•
	Total:	0	0	279	12889	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	•	•	-	-
	2	-	•	-	-	•	-	-	-
IVa	3	-	-	•	-	-	-	-	•
	4	-	-	•	-	-	<u> </u>	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	•	•	-	-
	2	•	-	-	-	- [-	•	-
IVb	3	•	•	-	-	-	-	•	-
	4	-	-	•	-	-	-	-	
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	•		-	-	•	
	2	-	-	-	-	-	-	.	-
Vъ	3	-	-	-	•	-	-	-	-
	4	-	-	-	-	-		-	
	Total:	0	0	0	0	0	0	0	0

SAMPLING DATA FOR:

MACKEREL

1993		Research y	essel san	ples	Market sai	Market samples				
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	-	-	-	-		-	
	2	•	-] -]	-	j - j	-		-	
I	3	-	-	1 - 1	-	-	-		-	
1	4	-	-	-	-	-	- '	: -		
	Total:	0	0	0	0	0	0	0	0	

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	-	-	-	-	•
	2	1	11	1	11	-	-	l - 1	-
Па	3	12	174	34	456	-	-	-	-
	4		-	4	6	-	-		-
	Total:	13	185	39	473	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
IIb	3		-	1	1	-	-	-	-
	4		-	- '	-	•	-	•	-
	Total:	0	0	1	1	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	•	-	•
	2		-	-	-	-	-	:	-
IVa	3	-	-	-	-	-	-	-	•
	4		-		-		-		•
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	•	-	-		-
	2		-	-	-	-	-		-
IVb	3		•	-	-	•	-		-
	. 4	-	-		•	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		-	-	-	-	-	-	•
	2	-	-	-	-	-	-	-	-
Vъ	3	-	-	-	-	-	-	-	•
	4	-	-		-	-]	-		-
	Total:	0	0	0	0	0	0	0	0

MEGRIM

1993		Research v	vessel san	ples	er e	Market sa	mples	and the second s	neil Wilde Surgementour
		Aged		Measured		Aged		Measured	
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	-	-	-	-	-
	2	-	-	-	-	.	-		-
I	3	-	-	-	-	-		-	-
	4	. [-		-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	3	11	-	-	-	-
	2	.	-		•	.	-		-
Ila	3	-	-		-	-	-	-	-
-	4	-	-	5	8	-	-	-	-
	Total:	0	0	8	19	0	0	0	0

Area	Quarter	N samples	N fish						
	1		-	-	-	-	•	-	-
	2	•	-		•	-	•	<u> </u>	-
IIb	3	-	-	-	-	-	-	j -	-
]	4	-		-	•	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	-	-	-	-	-	•	-
	2	-	-	-	•	-	-	-	-
IVa	3	-	-	-	-	-	•	-	-
	4	•	•	-		-	-	-	•
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish						
	1	•	-	•	-		-	-	•
	2	-	-		-		-	-	-
IVъ	3	-	•	-	-	-	-	-	-
	4	-	•	-	•	-	•	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	•	•	-	-	•	•	-
	2	•	-		-	- 1	-	-	-
Vъ	3	-	-		-		•	- ,	•
	4	-	•	-	-		•		-
	Total:	0	0	0	0	0	0	0	. 0

MYCTOPHIDAE

NORWAY

.

1993		Research v	vessel sam	ples	i Prijaj kompo je doliškej statej masocije,	Market sa	mples	nakan di sik sakibaka ka in ope in	i si not man mayo balin
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	1	1	-	-	-	•
	2	-	-	- 1	-	-	-	-	-
I	3	-	•	1	1	-	-	1 -	-
	4	-		-	-		-	· .	-
	Total:	0	0	2	2	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-		-	-	-
	2		-	6	135	-	-		-
Ha	3	-	•	10	481	-	-		-
	4	-	-	1	1		-	<u> </u>	-
	Total:	0	0	17	617	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	-	-	-	•	•
	2	-	-	- 1	-		-	-	-
IIb	3	-	-	1	33	-	-	•	-
	4	-	-		-		-	<u> </u>	-
	Total:	0	0	1	33	0	0	0	0

Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
IVa	3	-	-		-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	-	•	-		-	-	-
	2	-	-	-	-	-	-		-
IVb	3	-	-	-	-	-	-	-	-
	4	• _	•	-	-	-	•	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	•	•	•	-	•	-	-	•
	2	-	-	-	-		-	-	-
Vъ	3	-	•	-	-	-	-	-	-
	4	-	-	-	•	•	•	-	
	Total:	0	0	0	0	0	0	0	0

PLAICE

1993		Research v	essel san	iples		Market sa	mples	to the Lorenza con a companied to	A COLLEGE OF THE STATE OF THE S
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	57	636	-	-	-	-
	2		_	1	3	.	-	.	•
I	3		-	2	42	-	-	-	-
	4	-	-	2	59	-	-	-	-
	Total:	0	0	62	740	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	6	176	-	-		-
	2	- 1	-	1	38	-	-	1 - 1	-
IIa	3	i - i	-	-	•	-	-	-	-
	4	-	-	3	14	-	-	•	-
	Total:	0	0	10	228	0	0	0	0
, Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	-	-	-		-
	. 2	-	-	-	•	-	•	-	-
IIb	3	•	-	-	-	-	-	-	-
	4	•	-	-	•	-]	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	· 1	-	•	•		•	-	
	2	-	-	-	-	-	-		-
IVa	3	-	•	-	-	.	-		-
	4	•	•	-		<u> </u>		-	-
	Total:	0	0	0	0	0	0	0	0

Area	Quarter	N samples	N fish						
	1	•	-	•	•	•	-	-	-
	2	-	-	-	-	-	· -		-
IVb	3	-]	-					-	-
	4	-	•	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	- 1	•	•	-	-	-	-	•
	2	-	-	-	-		-	i - i	-
Vb	3	-	-	-	•		-	-	-
	4	٠.	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

POLAR COD

1993		Research v	essel sam	ples	The second second	Market sa	niples		
		Aged		Measured		Aged		Measured	
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	41	1752		•	-	-
	2	1 - 1	-	5	442	1 - 1	-	-	-
I	3	19	1055	· 103	7451	l' - I	-	-	-
	4	1	50	8	421	- 1	-		_
	Total:	20	1105	157	10066	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	-	-	-
	2	-	-		-	•	-	-	-
Ha	3	[-]	-	1	1	-	-	-	-
	4	1 1	-		-	<u> </u>	-	-	-
	Total:	0	0	1	1	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	6	105		-	-	-
	2	-	-	-	-	-	-		-
IIb	3	5	280	208	8900	-	-	-	-
	4	-	-	·	-		•	· .	-
	Total:	5	280	214	9005	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-		-	-	-	-	-
	2	-	-	1 - 1	-	-	-	-	-
IVa	3	- }	-	-	-	-	-	-	-
	. 4		-	<u> </u>	-	<u> </u>	-	-	-
	Total:	0	0	0	. 0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		-	-	-	-	-	-	-
	2	-	-		<u>-</u>	-	-	-	-
IVb	3	-	-	•	-	, -	. •	-	-
	4		•	- '	•		-		-
	Total:	0	0	0	0	0	0	0	0

Area	Quarter	N samples	N fish						
	1	•	-	-	-	•	-	•	•
}	2	•	-	-	-	-	-	-	•
Vъ	3	-	-	-	-	-	-	•	-
	4	•	-		-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

REDFISH Sebastes marinus

1993		Research	vessel sam	ples		Market sa	mples		and the second second
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	9	156	129	2498	1	50		-
	2	-	-	1	7	1	31	-	-
I	3	1	23	24	610	-	-	-	-
	4	3	111	8	420	-	-	-	
	Total:	13	290	162	3535	2	81	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	9	233	95	1764	4	649	1	200
	2	-	-	3	14	6	311	4	684
Ha	3	•	-	12	27	•	-	-	-
	4	8	294	31	658		-	-	
	Total;	17	527	141	2463	10	960	5	884
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	7	73	-	-	-	•
	2	-	-		-	-	•	-	-
IIb	3	13	263	113	3632	-	-	-	-
	4	-	•	3	22	-	-	-	-
	Total:	13	263	123	3727	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	-		-	-	-
	2	`-	-	-	-	-	-	-	-
IVa	3	-	•	-	-	-	-	•	-
	4	-	•	•	-	•	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	•	-	-	-	-	•
	2	-	-	-	-	-	-	-	-
IVb	3	-	-	-	-		-	-	-
Ì	4	-	•			-	•	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	- :	-	-	-	-	•	•	-
	2	-	-	-	-	-	-	•	•
Vb	3	•	-	-	-	•	-	-	•
	4	•	-		•			-	-
<u></u>	Total:	0	0	0	0	0	0	0	0

REDFISH Sebastes mentella

NORWAY

1993		Research y	vessel sam	pleš	i limber a kaning	Market sa	mples	Matter Langua Sampion de	o de la compania del compania de la compania del compania de la compania del compania de la compania de la compania del compania de la compania de la compania de la compania de la compania del compania
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	10	199	186	9518	-	-	-	•
1	2	-	-	· 3	20	-	-	-	-
I	3	4	135	27	1810	-	-	-	-
	4	1	16	2	147	•	•	-	-
	Total:	15	350	218	11495	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	9	211	79	5376	-	•	-	-
ł	2	-	-	1	138		-	-	-
IIa	3	2	67	29	1672	-	•	-	-
	4	2	137	3	239	-	-	-	-
	Total:	13	415	112	7425	0	0	0	. 0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	1	27	24	2160	-	•	•	-
	2	-	-	-	-	-	-	-	-
IIb	3	15	230	194	9896	-	-		•
	4	-	-	1	1	-	-	•	
	Total:	16	257	219	12057	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	•	•	-	•	•	•
	2	•	-	-	-	•	-	-	-
IVa	3	-	-	-	-	•	-	•	-
	4	•	-	•	-	-	•	•	-
	Total:	0	0	0	0	0	0	0	0
Area	. Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-		-	-	-	-	-
	2	-	•	-	-	-	-	-	-
IVb	3	-	-	•	•	•	-	-	•
	4	-	-	-	-	-	-	0	-
× 400000	Total:	0	0	0	0	0	0		0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1 .	•	-	·	-	•	-	-	-
	2	.	-	•	-	-	-	•	•
Vb	3	-	-	•	-	•	-	•	-
]	4			-	•		-	-	-
	Total:	0	0	0	0	0	0	0	0

SAMPLING DATA FOR:

REDFISH Sebastes viviparus

1993		Research v	essel san	ples	of Some wheeler	Market samples				
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1		•	8	28	-	-	-	-	
	2	-	-	3	61	-	-	-	-	
I	3	- [-	1 1	2	1 - 1	-		-	
.•	4	-	-	1	4	-	-		, <u>-</u>	
`	Total:	0	0	13	95	0	0	0	0	

Area	Quarter	N samples	N fish						
	1	-	-	37	1161	-	•	-	-
	2		-	2	58	-	•	-	-
IIa	3	-	-	-	-	-	-	-	-
	4	-	-	26	908	-	-	<u> </u>	-
	Total:	0	0	65	2127	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-	-	•	-	-	-
	2	- 1	-	-	-	-	-	-	-
IIb	3	-	-	4	5	-	•	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	4	5	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	•	-	-	•	-	-	-
	2	-	-	-	-	-	-	· -	-
IVa	3	-	-	-	•	-	-	-	-
	4	-	-	1	2	-	-	-	-
	Total:	0	0	1	2	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	-		•
	2	-	-	-	-	-	-	-	-
IVb	3	-	-	-	•	-	-		-
	4	-	-	•	•	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	•	-	•	-	-	-
	2	-	-	-	-	-	-	-	-
Vъ	3		-	-	-	-	-	-	-
	4	-	-	-	-	-	-	.	-
	Total:	0	0	0	0	0	0	0	0

SAITHE

1993		Research v	essel sam	ples	i kanana ka Kanana kanana kanan	Market sa	mples	description of sector of the manner of the	and the state of the state of the same
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	39	975	-	-	-	
	2 .		•	2	2	1	108	-	-
I	3	1	11	27	268	-	-	- 1	•
	4	5	152	10	311	-	-	-	-
	Total:	6	163	78	1556	1	108	0	0
Area	Quarter	N samples	N fish	N samples	N samples	N samples	N fish	N samples	N fish
	1	3	93	71	2320	4	187		-
	2		-	11	59	7	595	1	87
Ha	3	-	-	36	495	-	-	-	-
	4	31	717	57	4086	-	-	-	•
	Total:	34	810	175	6960	11	782	1	87

Area :	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	1	1	-	•	•	-
	2		-	-	-	-	-	-	•
IIb	3	-	-	45	212	-	•		-
	4		•	2	8	<u> </u>	-	-	_
	Total:	0	0	48	221	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•		•	-		-	•
	2	-	-	-	-	[-	-	- 1	-
IVa	3	-	-	-	-	-	-	-	-
	4	1	17	3	213	•	<u>.</u>	-	-
	Total:	1	17	3	213	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	-	•	•	-	-
[2	-	-	-	-	-	-		-
IVb	3	-	-	-	-	-	-	-	-
]	4	-	•	-		-	•		-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	•	•	-	•	-	•
	2	-	•	•	-	-	-	-	-
Vb	3	-	-	-`	-	-	-	1 - 1	-
	4	-	-	•		•	-		-
	Total:	0	0	0	0	0	0	0	0

SANDEEL

1993		Research v	essel sam	pleš	married for the street state.	Market sa	mples	managa ang ang ang ang ang ang ang ang an	some in the second
		Aged		Measured		Aged		Measured	
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	-	-	-		-
	2	-	-	2	101	-	-	-	-
I	3	-	•	17	403	-	-	-	- ,
	4	-	-	-	-	-	-	- 1	-
	Total:	0	0	19	504	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-		-	-	-	-	•
	2		-	2	2	-	-	-	-
IIa	3	-	-	2	2	-	-	-	-
	4 .	-	<u>-</u>	1	2	- 1	-		
	Total:	0	0	5	6	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	•		•	-	-
i	2	-	-	-	-	-	-	-	-
llb	3	-	•	2	10	-	-		•
1	4 .	•	•		-		-	-	-
	Total:	0	0	2	10	0	0	0	0

Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	•	-	-
	2	-	-	-	-	-	-	-	-
IVa	3	-	-	-	-	-	-		•
	4	-	-	-	-		-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	•	-	-
	2	-	•	-	-	-	-	-	-
IVb	3	•	•	-	-	-	-	.	•
	4	-	-	-	-	-	•		-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	•	-	-
	2	-	-	-	-		-	-	-
Vb	3	-	-	-	-		-	.	-
	4		-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

SPRAT

1993		Research v	essel sam	ples	ing and specification	Market sa	mples	Mallegale Server - 200 com	maring the comme
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	•	-	-
	2	-	-	l - i	-	-	-	-	-
I	3	-	-	-	-	-	-	.	•
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	•	-	•	-	-
	2	-	-	1	1	-	-	-	•
Ha	3	-	-	- 1	-	-	-	-	-
	4	8	430	16	1408	-	-	-	-
	Total:	8	430	17	1409	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	•	-	•
ļ	2	-	-	-	-	-	-	-	-
ПР	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-		• _	-
	Total:	0	0	0	0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	•		-		•
	2	-	-	-	-	-	-	-	-
IVa	3	-	-	-	-	-	-	-	-
	4	12	1006	20	1633		-		-
	Total:	12	1006	20	1633	0	0	0	0

Area	Quarter	N samples	N fish						
	1	-	-	-	-	-	•		-
	2	-	-	-	-	- 1	-	[-]	-
IVb	3		-	-	-	-	-	-	-
	4	-	•	-	-	-	-	[- [-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish						
	1	-	•	-	-	-	-	-	-
	2	-	-	-	-	i - i	-	-	-
Vb	3	-	•	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

TURBOT

1993		Research	roccel cam	nlec		Market ca	mnlee	Same Continue the contact	*** ** ** ** ***
1770		Aged	resser sum	Measured		Aged	mpico	Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
- 1996 Malain an marine de c	1		-	-		-	-		-
	2	-	-	-	-	-	-		•
I	3	-	-	-	-	-	-	-	-
	4	-	-	-		-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	1	1	-	•	-	•
}	2	-	-	[-]	-	-	-] -]	-
lla	3	-	-	-	-	.	-	-	-
	4	-	-	1	1	-	-	-	•
	Total:	0	0	2	2	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	-	•	-]	-	-	•
	2	-	-	•	-	-	-	-	-
ПР	3	-	-	-	-	-	-	•	-
	4	·		•		<u> </u>	•	-	
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	•	-	-	-	-
	2.	- 1	-	-	-	-	-	-	-
IVa	3	-	-	-	-	-	-	-	-
	4			1	1	<u> </u>	-	· [-
	Total:	0	0	1	1	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	- [•	-	•	-	-		-
	2	-	-	-	-	•	-	-	-
IVb	3	-	-	-	-	•	-	-	-
	4		-	<u> </u>			· · ·	-	-
	Total:	0	0	0	0	0	0	0	0

Area	Quarter	N samples	N fish						
	1	•	-	•	-	-	-	-	· -
	2	-	-	-	-	-	-	-	-
Vb	3	-	•	-	-	•	-	-	•
	4	-	-	-	-		-	•	-
	Total:	0	0	0	0	0	0	0	0

TUSK

1993		Research	vessel sam	ples	More in all an entropy and	Market sa	mples	An Madeiran parametris in in it M	Marconico como por escar
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	11	20	-	•	-	
	2		-	1	1	1	100	-	
1	3		-	2	4	-	-	-	-
1	4	-	-	4	6		-	-	-
	Total:	0	0	18	31	1	100	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	25	128	•	•	-	-
	2	-	-	4	89	-	•	-	-
IIa	3	-	-	2	2	•	-	-	-
	4	-	-	27	116	-	•	-	
	Total:	0	0	58	335	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	-	•	•
Ì	2	-	-	-	• •	-	-	-	-
IIb	3	-	-	7	8	•	-		- 1
	4	•	-	-	•	-	-	-	-
	Total:	0	0	7	8	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	•	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
IVa	3	-	-		•	-	-	-	- [
:	4	-	-	-	•	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	•	-	-	-
	2	-	-	-	-	•	-	-	-
IVb	3	-	-	-	-	-	•	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	. 0	0	0	0	0
Arca	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	•	-	-	-	-	•
	2	-	-	•	-	-	-	-	-
Vb	3	-	-	-	-	-	-	•	-
	4	٠	-	-	-	•	-	•	•
	Total:	0	0	0	0	0	0	0	0

WHITING

NORWAY

1993		Research	vessel sam	ples	ه روه د مهرم ای بازین م روه د مهرم ای	Market sa	mples	we neg sam bower in sweet	more was the constitution of
		Aged		Measured		Aged		Measured	
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1		•	5	11	-		-	-
ļ l	2	-	-	3	6	-	-		-
I	3	-	-	2	2	-	•	-	-
,	4	-	-	-		•	•	-	-
	Total:	0	0	10	19	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	7	31	-	-	-	-
	2	-	-	7	55	-	-	-	-
Ha	3	-	•	9	20	-	-	-	-
	4		-	31	350	-	-	-	•
	Total:	0	0	54	456	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	-	•	•	_	-	•
]]	2	•	-	-	-	-	-	-	-
llb	3	-	-	- 1	-	•	-	[- [-
	4	-	-		-	-	•	<u> </u>	
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	•	-		-
ļ	2	-	-	-	-	-	-	•	•
IVa	3	-	-	-	-	-	-	•	-
	4	-	•	14	88	-		-	
	Total:	0	0	14	88	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	•	•	-	-] -]	-
	2	-	-	•	-	•	, -	-	-
IVъ	3	•	•	-	-	•	-		•
	4	•	<u> </u>	-	-	-	•		
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	•	• 7	-
	2	-	-	-	-	-	-	-	-
Vb	3	•	-	•	-	-	-	•	-
	4	•		-	-	<u> </u>		<u> </u>	-
	Total:	0	0	0	0	0	0	0	0

SAMPLING DATA FOR:

WITCH

1993		Research v	essel san	iples	ak didda a ina a sain (a) ak d	Market sar	Market samples			
		Aged		Measured		Aged		Measured		
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish	
	1	-	-	6	19	-	•		-	
	2		-	-	-] -]	-] -]	-	
I	3	- 1	-	-	-	-	-	-	-	
	4		-	-	-	ļ - j	•	1 - 1	. •	
	Total:	0	0	6	19	0	0	1 0	0	

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	•	6	19	-	_	-	
	2	•	-	1	2	-	-	-	-
lla	3	-	•	-	-	-	•	-	-
	4	-		4	6	-	-	-	-
	Total:	0	0	11	27	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•		•	•	-	-	-
	2	-	-	-	-	-	•		-
ПÞ	3	-	-	-	-	-	-	-	-
	4	•	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	•	•	-	-	-	-	•
	2	-	-	-	-	•	-	-	-
IVa	3	-	-	-	-	-	•	-	-
	4	-	•	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
* Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	•	-	•	-	-	-	-	•
	2	-	-	-	-	-	-	} -	-
IVb	3	-	-	-	-	-	-	-	-
	4	-	•	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
	1	-	-	-	-	-	•	-	-
	2		-	•	-	-	-	-	-
Vb	3	-	-	-	-	-	-	-	-
	4		-	-	-	-		-	-
	Total:	0	0	0	0	0	0	0	0

POLAND

(K. Radtke)

No activities carried out on demersal fishes other than that reported to the Baltic Fish Committee. In 1993 no biological samples were collected in the Northeast Atlantic by Poland.

PORTUGAL

(F. Cardador)

During 1993 the National Institute of Fisheries Research (INIP/IPIMAR, Lisbon) had continued its National Sampling Programme at the main fishing ports. The main objective of this sampling programme is to provide length frequency distributions of the landings for the most important commercial species.

The Portuguese Institute has carried out during 1993 three groundfish syrveys on board *R/V Noruega*, under an EC FAR programme (MA 1.203). These surveys has covered the entire Portuguese coast from depths ranging from 20 to 750 m. The main goal of the surveys is to provide

abundance indices and to study the distribution patterns of the most important species. The second aim of the surveys is to estimate the abundance and distribution of eggs and larvae of the main species in relation to basic environmental parameters. These surveys took place in February-March, July and November-December. The methodology adopted was a fixed station scheme. Each survey had a duration of 30 fishing days, using a bottom trawl net (Norwegian Campell Trawl) with 20 mm cod-end mesh-size. Stations were hauled during day light with a mean tow duration of 60 minutes and mean hauling speed of 3.5 knots.

Other surveys have been also conducted covering the SW (Alentejo) and South (Algarve) of the Portuguese waters and mainly directed to deep shellfish, hake and monkfish. These surveys took place in January (17 days), April (9 days), September (8 days) and December (6 days).

The following tables present the sampling data collected by IPIMAR for hake (<u>Merluccius</u> merluccius), black scabbard fish (<u>Aphanopus carbo</u>), some species of seabreams (<u>Boops boops</u>, <u>Pagellus acarne</u> and <u>Spondyliosoma cantharus</u>), monkfish (<u>Lophius budegassa</u> and <u>Lophius piscatorius</u>) and megrim (<u>Lepidorhombus boscii</u> and <u>Lepidorhombus whiffiagonis</u>).

SAMPLING DATA FOR:

HAKE

PORTUGAL

1993		Number o	of samples	Number of fish	
Area	Quarter	Research vessel Market samples		measured	
	1	115	519	33121	
	2	25	417	24830	
IXa	3	76	269	14309	
	4	80	378	17830	
	Total:	296	1583	90090	

SAMPLING DATA FOR:

BLACK SCABBARD FISH

PORTUGAL

1993		Number o	of samples	Number of fish	
Area	Quarter	Research vessel	Market samples	beruzbem	
	1		26	504	
	2	•	•	-	
IXa	3	-	-	-	
	4	-	-	•	
	Total:	0	26	504	

SAMPLING DATA FOR:

Boops boops

PORTUGAL

1993		Number of	of samples	Number of fish
Area	Quarter .	Research vessel	Market samples	measured
	1	31	22	2800
	2	•	20	918
IXa	3	23	9	1987
	4	26	9	1524
	Total:	80	60	7229

Pagellus acarne

PORTUGAL

1993		Number of samples		Number of fish
Area	Quarter	Research vessel	Market samples	measured
	1	16	40	4210
]	2	•	46	2539
IXa	3	8	46	2900
	4	9	54	3369
	Total:	33	186	13018

SAMPLING DATA FOR:

Spondyliosoma cantharus

PORTUGAL

1993		Number o	of samples	Number of fish
Area	Quarter	Research vessel	Market samples	measured
	1	16	16	505
	2		19	528
IXa	3	16	13	512
	4	11	17	540
	Total:	43	65	2085

SAMPLING DATA FOR:

MONKFISH (Lophius budegassa)

PORTUGAL

1993		Number of	of samples	Number of fish
Area	Quarter	Research vessel	Market samples	measured
	1	34	62	955
	2	10	41	371
IXa	3	2	24	170
	4	1	25	304
·	Total:	47	152	1800

SAMPLING DATA FOR:

MONKFISH (Lophius piscatorius)

PORTUGAL

1993		Number o	Number of samples	
Area	Quarter	Research vessel	Market samples	measured
	1	7	41	207
]	2	2	36	220
IXa	3	•	24	206
1	4	1	31	467
	Total:	10	132	1100

MEGRIM

PORTUGAL

Lepidorhombus boscii & Lepidorhombus whiffiagonis

1993		Number of samples		
Area	Quarter	Research vessel	Market samples	measured
	1	49		1363
	2	25	-	912
lXa	3	10	•	71
	4	15	<u>-</u>	99
	Total:	99	0	2445

RUSSIA

(V. Shleinik)

In 1993, as in preceding years, the trawl-, trawl-acoustic and ichthyoplankton surveys were conducted to assess abundance and biomass of the main commercial fish, possible recruitment of the abundant demersal fish species to commercial stocks in the Barents Sea area and adjacent waters.

Studies on effect of abiotic and biotic factors of environment upon fish ditribution and behaviour have been continued. Population structure, dynamics of biological parameters, trophic interrelations between stocks and migration of main commercial fish have been studied.

Data collected in 1993 are shown in following tables:

SAMPLING DATA FOR:

RUSSIA

·

COD

1993		The state of the s			
Area	Quarter	Measured	Feeding analysis	Aged	
	i	27313	2538	444	
	2	47426	3639	1842	
I	3	53366	3969	1202	
,	4	35125	3393	887	
	Total:	163230	13539	4375	
Area	Quarter	Measured	Feeding analysis	Aged	
	1	17720	1644	229	
	2	44599	4100	2795	
IIa	3	17	1	1	
	4	9842	1492	726	
	Total:	72178	7237	3751	
Area	Quarter	Measured	Feeding analysis	Aged	
	1	1004	75	-	
	2	5644	788	334	
Шь	3	5716	650	225	
	4	33691	4305	1930	
	Total:	46055	5818	2489	
Total all areas		281463	26594	10615	

HADDOCK

RUSSIA

1993		Andrew Advanced to the State of the Control of the		
Area	Quarter	Measured	Feeding analysis	Aged
	1	6255	975	225
	2	16794	1351	651
I	3	20349	· 1233	625
	4	9443	1461	858
	Total:	52841	5020	2359
Area	Quarter	Measured	Feeding analysis	Aged
	1	792	252	101
	2	5560	1066	357
IIa	3	14		- ,
	4	2947	592	396
	Total:	9313	1910	854
Area	Quarter	Measured	Feeding analysis	Aged
	1	 		•
	2	2405	275	175
IIb	3	-		-
	4	7310	1716	970
	Total:	9715	1991	1145
Total all areas:		71869	8921	4358

SAMPLING DATA FOR:

REDFISH (Sebastes marinus)

RUSSIA

1993	1	Number of fish			
, Area	Quarter	Measured	Feeding analysis	Aged	
	1	163	•	•	
	2	2677	140	•	
I	3	63			
	4	2256	164	164	
	Total:	5159	304	164	
Area	Quarter	Measured	Feeding analysis	Aged	
	1	•	-	-	
	2	15109	2171	600	
IIa	3	67		-	
	4	2390	294	294	
	Total:	17566	2465	894	
Area	Quarter	Measured	Feeding analysis	Aged	
	1	-		-	
	2	6531	475	190	
Пь	3	48		-	
	4	5613	438	438	
	Total:	12192	913	628	
Total all areas		34917	3682	1686	

 ${\bf SAMPLING\,DATA\,FOR:}$

GREENLAND HALIBUT

RUSSIA

1993		Partie of fish and residence of residence of the control of the co		
Area	Quarter	Measured	Feeding analysis	Aged
	1	17	•	•
	2	129		•
I	3	-	-	-
	4	794	339	289
	Total:	940	339	289
Area	Quarter	Measured	Feeding analysis	Aged
	1	-	•	-
	2	208	174	174
Ha	3	-		-
	4	2111	646	419
	Total:	2319	820	593
Area	Quarter	Measured	Feeding analysis	Aged
	1	-	•	•
	2	1135	397	372
IIb	3	-		
	4	3306	1197	920
	Total:	4441	1594	1292
Total all areas:		7700	2753	2174
				_l

SAMPLING DATA FOR:

SAITHE

RUSSIA

1993		was a sum of the sum o				
Area	Quarter	Measured	Feeding analysis	Aged		
	1	50		-		
	2	738	71	5		
I	3	196	25	-		
	4	24	_			
	Total:	1008	96	5		
Arca	Quarter	Measured	Feeding analysis	Aged		
	1	-		-		
i	2	1030	175	125		
IIa	3	1				
	4	3				
	Total:	1034	175	125		
Area :	Quarter	Measured	Feeding analysis	Aged		
	1			•		
	2	-	•	-		
IIb	3	-	•			
		•	-			
	4	36		-		
	Total:	36	0	0		
`otal all areas:		2078	271	130		

CATFISH

RUSSIA

1993		was a supposed and the			
Area	Quarter	Measured	Feeding analysis	Aged	
	1	112	•	-	
	2	56	2	2	
I	3	169	25	-	
	4	109	67	14	
	Total:	446	94	16	
Area	Quarter	Measured	Feeding analysis	Aged	
	1	-	-	-	
	2	155	37	29	
Ha	3	-		-	
	4	465	237	60	
	Total:	620	274	89	
Area	Quarter	Measured	Feeding analysis	Aged	
	1	•	-	•	7
	2	489	266	62	S. F.
IIb	3	5		-	
	4	684	369	133	
	Total:	1178	635	195	
Total all areas:		2244	1003	300	

SAMPLING DATA FOR:

PLAICE

RUSSIA

1993		and the second s	Number of fish	o de la company de la comp	
Area		Measured	Feeding analysis	Aged	
	1	666	106	1	
	2	238	97	-	
I	3	6783	848	471	
	4	1	-	-	
	Total:	7688	1051	472	
Area	Quarter	Measured	Feeding analysis	Aged	
	1			•	
	2	-	-	_	
IIa	3	-	`-	-	
	4	-	-	-	
	Total:	0	0	0	
Area	Quarter	Measured	Feeding analysis	Aged	
	1			•	
	2	•	-		
IIb	3	-	-		
	1 . 1	-	-		
	4	-		1	
	Total:	0	0	0	
Fotal all areas	s:	7688	1051	472	

LONG ROUGH DAB

RUSSIA

1993		Number of fish					
Area	Quarter	Measured	Feeding analysis	Aged			
	1	234	-	•			
	2	68	63				
I	3	21	76	-			
	4	2525	46	71			
	Total:	2848	185	71			
Area	Quarter	Measured	Feeding analysis	Aged			
	1	-		-			
	2	1329	142	142			
Ha	3			- ,			
	. 4	4168	134	24			
	Total:	5497	276	166			
Area	Quarter	Measured	Feeding analysis	Aged			
	1			-			
	2	2668	212	112			
IIb	3	2					
	4	9364	405	290			
	Total:	12034	617	402			
Total all areas:		20379	1078	639			

SPAIN

(P. Pereda)

In 1993 three groundfish surveys were conducted on board *R/V Cornide de Saavedra*. In September and October "DEMERSALES0903" covered the continental shelf of Galicia and Cantabrico Sea (Divisions VIIIc and IXa North) to estimate recruitment indices of hake, as well as abundance indices and spatial distribution patterns of the main demersal species.

The aims of two other surveys "ARSA0393" in March and "ARSA1093" in October both in IXa South were to stimate abundance indices and selectivity parameters.

In addition to these surveys a sampling programme on board commercial fishing boats took place in IXa South, VIIIc and IXa North. The number of samples and fish measured are summarised below:

IXa South	Fishing Trips	Number of fish measured
M. merluccius	19	2151

IXa North	Number of Samples	Number of fish measured
M. merluccius	14	479
L. boscii	11	787
L. budegassa	5	30
L. piscatorius	3	4

VIIIc	Number of Samples	Number of fish measured
M. merluccius	65	1137
L. wiffiagonis	28	450
L. boscii	23	452
L. budegassa	51	254
L. piscatorius	56	317

Stomach content analysis was carried out during 1993. The number of stomachs studied by species was:

Species	Winter	Spring	Summer	Autumn	Total
L. merluccius	412	249	37	823	1521
Lophius spp	27	101	43	297	468
Lepidorhombus spp		26		1777	1803
S. canicula		69	31	372	472
Other species		17	12	2120	2149
Total	439	462	123	5389	6413

The number of samples and fish measured both on board research vessels and in the market sampling programme are given in the following tables:

SAMPLING DATA FOR:

COD

SPAIN

1993		Number of samples		Number of fish	
Area	Quarter	Research	Market	Measured	Aged
	1	•	-	-	-
	2	-	-	-	-
IIb	3	22	-	5540	-
	4		-	} - }	-
	Total:	22	0	5540	0

SAMPLING DATA FOR:

HAKE

1993		Number of samples		Number of fish	
Area!	Quarter	Research	Market	Measured	Aged
	1	-	2	180	-
	2	-	-	-	-
VI	3		2	344	-
	4	-	3	390	-
	Total:	0	7	914	0
Area	Quarter	Research	Market	Measured	Aged
	1		31	7336	-
	2	-	34	8773	-
VII	3	-	34	6981	-
	4	-	32	6726	•
	Total:	0	131	29816	0
Area	Quarter	Research	Market	Measured	Aged
	1	-	95	8378	•
	2	-	77	10237	<u>-</u>
VIIIa, b	3		66	8651	-
	4		72	8868	-
	Total:	0	310	36134	0

Area	Quarter	Research	Market	Measured	Aged
	1	-	73	4763	-
	2	-	75	4666	-
VIIIc	3	67	65	11726	-
	4	15	65	3764	-
	Total:	82	278	24919	0
Area	Quarter	Research	Market	Measured	Aged
	1	34	44	5278	-
	2	-	38	4394	-
IXa	3	19	35	4122	-
	4	29	41	4751	-
	Total:	82	158	18545	0
Total in all are	as	164	884	110328	0

Lepidorhombus whiffiagonis

1993		Number of samples		Number of fish	
Area	Quarter	Research	Market	Measured	Aged
	1		5	443	-
	2	-	7	581	-
VI	3	-	8	557	-
	4		6	396	-
_	Total:	0	26	1977	0
Area	Quarter	Research	Market	Measured	Aged
	1	-	29	5098	409
	2	-	35	5620	193
VII	3	-	29	4159	124
	4	•	23	3716	327
	Total:	0	116	18593	1053
Area	Quarter	Research	Market	Measured	Aged
	1	-	46	3609	193
	2	-	26	1732	96
VIIIa, b	3	-	32	2818	-
	4	•	31	2418	•
	Total:	0	135	10577	289
Area	Quarter	Research	Market	Measured	Aged
	1	-	37	1109	-
	2	-	42	2150	111
VIIIc	3	57	37	3244	515
	4	11	37	2667	77
	Total:	68	153	9170	703
Area	Quarter	Research	Market	Measured	Aged
	1	-	11	8	-
	2	-	10	11	-]
IXa	3	3	10	34	- [
	4		11	16	
	Total:	3	42	69	0
Total in all are	as	71	472	40386	2045

Lepidorhombus boscii

SPAIN

1993		Number of samples		Number of fish	
Area	Quarter	Research	Market	Measured	Aged
	1	•	4	22	•
	2	-	5	122	-
VI	3	-	6	192	-
	4	<u>-</u>	5	188	-
	Total:	0	20	524	0
Area	Quarter	Research	Market	Measured	Aged
	1	-	24	619	-
	2	-	27	962	-
VII	3	-	26	1409	-
	4	•	19	2303	•
	Total:	0	96	5293	0
Arca	Quarter	Research	Market	Measured	Aged
	1	•	36	605	67
	2	-	22	595	45
VIIIa, b	3	-	26	513	-
	4	-	28	389	•
	Total:	0	112	2102	112
Area	Quarter	Research	Market	Measured	Aged
	1	-	37	2175	-
	2	-	42	2261	52
VIIIc	3	70	37	5439	726
	4	14	36	2118	16
	Total:	84	152	11993	794
Arca	Quarter	Research	Market	Measured	Aged
	ı	-	14	1434	-
	2	-	15	1450	-
IXa	3	17	12	2164	259
	4	•	15	1698	•
	Total:	17	56	6746	259
Total in all are	as	101	436	26658	1165

SAMPLING DATA FOR:

Lophius budegassa

1993		Number of samples		Number of fi	sh
Area	Quarter	Research	Market	Measured	Aged
	1		•	- 1	-
	2		-	1 - 1	-
VI	3	-	-	- 1	-
	4	-	-	- 1	-
	Total:	0	0	0	0
Area	Quarter	Research	Market	Measured	Aged
	1	-	26	1676	_
	2	-	26	1598	-
VII	3	•	23	1388	-
	4		18	1128	-
	Total:	0	93	5790	0

Area	Quarter	Research	Market	Measured	Aged
	1	-	57	2886	-
	2	- '	27	1579	-
VIIIa, b	3	-	31	1473	-
	. 4	•	29	1172	•
	Total:	0	144	7110	0
Area	Quarter	Research	Market	Measured	Aged
,	1		37	410	-
	2	-	45	610	-
VIIIc	3	37	33	444	-
	4	9	33	638	-
	Total:	46	148	2102	0
Area	Quarter	Research	Market	Measured	Aged
	1	-	5	395	-
	2	-	4	297	-
IXa	3	2	6	152	-
	4	-	7	305	-
	Total:	2	22	1149	0
Total in all are	as	48	407	16151	0

Lophius piscatorius

1993		Number of s	amples	Number of fish		
Area	Quarter	Research	Market	Measured	Aged	
	1	-	5	472	-	
	2	-	7	515	-	
VI	3	-	8	814	-	
	4	-	5	287	-	
	Total:	0	25	2088	0	
Area	Quarter	Research	Market	Measured	Aged	
	1	•	25	1372	-	
	2	-	26	1416	-	
VII	3	•	23	1444	-	
	4	-	18	1218	•	
	Total:	0	92	5450	0	
Area	Quarter	Research	Market	Measured	Aged	
	1	-	57	2566	-	
	2	-	28	1044	-	
VIIIa, b	3	-	32	1244	-	
	4	-	29	1500	-	
	Total:	0	146	6354	0	
Area	Quarter	Research	Market	Measured	Aged	
	1	-	38	608	-	
	2	•	46	795	-	
VIIIc	3	39	34	647	-	
	4	14	33	722	-	
	Total:	53	151	2772	0	

Area	Quarter	Research	Market	Measured	Aged
	1	-	4	15	-
	2	-	4	13	•
IXa	3	-	4	16	•
	4	-	4	22	-
	Total:	0	16	66	0
Total in all areas		53	430	16730	0

SWEDEN

(P.-O. Larsson)

IBTSs (International Bottom Trawl Surveys) were performed in February, April and September in Division IIIa and the eastern North Sea.

The joint Danish, Norwegian, Swedish project on recruitment to the cod stocks in the Skagerrak and the Kattegat continued with coordinated larvae/fry surveys in Division IIIa and the northeastern North Sea in May. MIK-trawl was used to catch the larvae and a number of hydrographic parameters were registered.

Some 350 hatchery-reared plaice (1-group, 15-20 cm) were tagged (Floy T-bar tags) and released in a fjord at the Skagerrak coast (Division IIIa) mainly to study the efficiency of such enhancement release. Also ca. 250 hatchery reared cod (Skagerrak coastal-fjord stock) were tagged and released in October as a 0-group in the same area.

A research project on recruitment and year class dimensioning mechanisms in flatfish, mainly plaice and flounder, in Division IIIa continued. 0-group flatfish were sampled from settling onwards in shallow nursery areas. Larvae were marked with Alizarin Complexon to study daily increment zones in the otoliths, especially around metamorphosis.

Numbers of fish sampled for size and age are given in the following tables:

SAMPLING DATA FOR:

COD

SWEDEN

1993		Number of samples		Number of fish				
				Measured		Aged		
Area	Quarter	Research	Market	Research	Market	Research	Market	
	1	48	10	3865	1631	1148	890	
	2	51	1	3122	150	1357	100	
Illa	3	53	4	3217	-	819	-	
	4	-	4	-	446	-	-	
	Total:	152	19	10204	2227	3324	990	

HADDOCK

SWEDEN

1993		Number of sa	Number of samples		Number of fish				
		Research	Market	Measured		Aged			
Area	Quarter			Research	Market	Research	Market		
	1	48	•	1645	-	223	-		
	2	51	-	1471	-	282	-		
Illa	3	53	-	3359	-	218	-		
	4	-	-	- 1	-		-		
	Total:	152	0	6475	0	723	0		

SAMPLING DATA FOR:

WHITING

SWEDEN

1993		Number of samples		Number of fish				
				Measured		Aged		
Area	Quarter	Research	Market	Research	Market	Research	Market	
	1	48	-	4988	_	509	-	
	2	51	-	4853	-	455	-	
IIIa	3	53	-	5986	-	557	•	
	4	-	-	-	-	-	-	
	Total:	152	0	15827	0	1521	0	

SAMPLING DATA FOR:

NORWAY POUT

SWEDEN

1993		Number of samples		Number of fish			
				Measured		Aged	
Area	Quarter	Research	Market	Research	Market	Research	Market
	1	48	•	3033	-	148	-
	2	51	-	2416	-	118	-
IIIa	3	53	-	3732	-	184	-
	4	i - i	-	-	-	1 - 1	-
:	Total:	152	0	9181	0	450	0

SAMPLING DATA FOR:

PLAICE

SWEDEN

1993		Number of samples		Number of fish				
				Measured		. Aged		
Area	Quarter	Research	Market	Research	Market	Research	Market	
	1	48	-	947	-	730	-	
	2	51	-	463	-	435	-	
Illa	3	53	-	826	-	546	-	
	4	-	-	-	-	-	-	
	Total:	152	0	2236	0	1711	0	

UNITED KINGDOM (England and Wales)

(C. T. Macer)

UK (England and Wales) research vessel activity in 1993:

R/V CIROLANA surveys in 1993

Survey no.	Period	Commission Locality with the second s	meaninger property and activities connection and animatical
3	2/3-30/3	South Western Approaches Western Channel	PHH trawl survey
8	9/8-5/9	North Sea	GOV trawl survey Macrobenthos survey Antroprogenic debris survey
10	18/10-15/11		GOV trawl survey Macrobenthos survey Antroprogenic debris survey

R/V CORYSTES surveys in 1993

Survey no.	Period	Locality September 1998 Annie 199	Constitution of the consti
3	4/3-29/3		Beam trawl survey Pre-recruit survey
8	2/8-16/8	Southern Bight, Channel	Beam trawl survey
10	2/9-27/9	North Sea, Irish Sea, Bristol Channel Celtic Sea	Beam trawl survey Pre-recruit survey

PHH = Portuguese High Headline GOV = Grande Ouverture Verticale

The sampling programme was continued in 1993. Details of number of fish sampled, measured and aged are presented in the tables.

SAMPLING DATA FOR:

ANGLER FISH

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	•	•
	2	-	! -	-	-
IVa	3	-	-	-	11
	4	-	.	-	20
	Total:	0	0	0	31

Area	Quarter	N samples	N measured	N aged	N aged
	1	-		-	•
ļ	2	•	ļ · .	1 -	
lVb	3	-	· -	-	5
	4	•	· ·	-	4
	Total:	0	0	0	9
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	60		•
	2	1	639	-	•
VIIa	3	-	-		83
	4	•	-	-	-
	Total:	2	699	0	83
Агеа	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	1	313	-	-
VIId	3	-	•	-	•
	4	-	-	-	-
	Total:	1	313	0	0
Area	Quarter	N samples	N measured	N aged	N aged
,	1	17	1683	-	2
j	2	10	1246	-	•
VIIe	3	11	968	-	-
	4	16	1436	-	<u> </u>
	Total:	54	5333	0	2
Area	Quarter	N samples	N measured	N aged	N aged
	1	5	810	•	2
	2	3	460	•	•
VIII	3	3	634	•	33
	4	2	153	•	•
	Total:	13	2057	0	35
Arca	Quarter	N samples	N measured	N aged	N aged
	1	3	485	-	22
·	2	-	-	•	48
VIIg	3	•	-	•	•
	4	6	998		70
A 400 % 200 4	Total:	9	1483	0	70
Area	Quarter	N samples	N measured	N aged	N aged
	1	3	524	-	·
VIIh	2 3	6 4	1403 938		-
V110	4	2	938 344		_
	Total:	15	3209	0	- 0
Ares	Quarter	N samples	N measured	N aged	N aged
Area	Quarter 1	11 sumples	Ty measured	14 ageu	52
]	2	1	- 78		J.L
VIIj	3	•	,		
''''	4	_	•		_
	Total:	1	78	0	52
	- *****				

SPRAT

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-	-	-	•
IVa	3	-	-	-	7
	4	-	-	-	131
	Total:	0	0	0	138
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	-
	2	-	-	-	•
IVb	3	-	-	-	410
	4	-	-	-	392
	Total:	0	0	0	802
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-	-	-	-
IVe	3	•	-	-	155
	4	•	-	-	145
	Total:	0	0	0	300

SAMPLING DATA FOR:

BASS

1993		Marine and Andreas (1996)	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	_	-
	2		-	-	-
IVb	3	•	[-	-	-
	4	-	-	1	-
	Total:	0	0	1	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	20	73	20	-
IVc	3	19	200	77	•
	4	12	27	64	•
	Total:	51	300	161	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	2	8	1	-
VIIa	2	3	8	-	-
	3	14	193	87	•
	4	-	i - i	-	-
	Total:	19	209	88	0

Area	Quarter	N samples	N measured	N aged	N aged
	1	6	21	51	•
	2	47	684	496	-
VIId	3	51	1045	1152	-
	4	17	496	290	•
	Total:	121	2246	1989	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	20	266	342	-
	2	15	438	226	-
VIIe	3	13	176	81	-
	4	15	547	251	-
	Total:	63	1427	900	0
* Area	Quarter	N samples	N measured	N aged	N aged
	1	4	7	6	•
	2	7	138	228	•
VIIf	3	22	331	422	•
	4	7	252	19	
	Total:	40	728	675	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	•	-
	2	•	-	6	-
VlIg	3	-	•	4	-
	4	-	•	•	-
	Total:	0	0	10	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	2	2	-
	2	•	-	•	-
VIIh	3	•	-	-	- ,
	4	-	•	•	•
	Total:	1	2	2	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	•
	2		455	•	•
VIIj	3	1	102	•	-
	4	-	-	•	-
	Total:	1	102	0	0
Агеа	Quarter	N samples	N measured	N aged	N aged
	1	-	•	-	6
	2	-	•	-	-
VIIIa	3	-	•	•	-
	4	-	-	-	-
	Total:	0	0	0	6

COD

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	4	621	144	•
	2	-	•	•	•
IIa	3	•	-	•	-
	4	-	-	-	-
	Total:	4	621	144	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	2	263	77	-
IIb .	3	2	323	85	-
	4	-	-		-
	Total:	4	586	162	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	3	583	17	-
	2	10	1186	134	-
IVa	3	5	625	64	337
	4	4	467	48	340
	Total:	22	2861	263	677
Area	Quarter	N samples	N measured	N aged	N aged
	1	128	19959	1469	•
	2	123	19658	1497	-
IVb	3	133	20829	1447	314
	4	125	17489	1202	116
	Total:	509	77935	5615	430
5 Area	Quarter	N samples	N measured	N aged	N aged
	1	13	1454	179	•
	2	21	1980	212	-
IVc	3	14	1480	175	3
	4	17	1510	220	14
	Total:	65	6424	786	17
Area	Quarter	N samples	N measured	N aged	N aged
	1	2	426	29	•
	2	2	327	-	-
VIa	3	1	145	•	•
	4	-	-	18	-
	Total:	5	898	47	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	14	1831	141	-
	2	18	2006	194	-
VIIa	3	14	1866	178	84
	4	16	2024	230	
	Total:	62	7727	743	84

Area	Quarter	N samples	N measured	N aged	N aged
	1	6	186	41	•
	2	2	71 ·	9	-
VIId	3	3	57	29	-
	4	17	261	164	•
	Total:	28	575	243	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	21	815	144	7
:	2	11	607	130	•
VIIe	3	13	202	127	•
	4	5	75	102	-
	Total:	50	1699	503	7
Area	Quarter	N samples	N measured	N aged	N aged
	1	18	1752	-	-
	2	3	231	26	•
VIIf	3	2	57	-	2
	4	15	498	80	-
	Total:	38	2538	106	2
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	·17	7	72
	2	-	-	-	-
VIIg	3	-	-	-	1
,	` 4	-	•	48	•
	Total:	1	17	55	73
Area	Quarter	N samples	N measured	N aged	N aged
	1	3	63	-	9
	2	4	154	•	•
VIIh	3	2	45	27	•
	4	1	87	' -	-
	Total:	10	349	27	9
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	-	1 .
	2	1	121	-	- 1
VIIj	3	1	22		•
	4	-	•		•
	Total:	2	143	0	1

SPURDOG

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	•
	2	10	390	-	•
IVb	3	13	426		•
	4	13	429		•
	Total:	36	1245	0	0

Area	Quarter	N samples	N measured	N aged	N aged
Same summer and successive.	1	6	149		-
	2	9	342	-	-
1Vc	3	-	-	-	•
	4	7	345	-	•
	Total:	22	836	0	0
Area	Quarter	N samples	N measured	N aged	N aged
State and the residual State	1	-	•	-	•
	2	1	82	-	•
VIa	3	-	-	-	•
	4	-	-	-	-
	Total:	1	82	0	0
Area	Quarter	N samples	N measured	N aged	N aged
The big box sounded with a visit of a visit of		-	-	•	-
	2	2	205	-	-
VIIa	3	10	327	-	-
	4	4	335	-	
	Total:	16	867	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	2	84	-	•
	2	-		-	-
VIIe	3	2	77	•	-
	4	1	88	-	-
1	Total:	5	249	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	3	194	-	•
	2	5	438	-	•
VIIf	3	-	-	-	•
	4	-	-	-	-
	Total:	8	632	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	55	-	-
	2	•	-	-	-
VIIg	3	•	•	-	-
	4	1	81	•	-
	Total:	2	136	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-	-	-	•
VIIh	3	2	197	•	·
	4	-	107		
	Total:	2	197	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	5	-	-
.,,	2	1	39	-	
VIIj	3 4	-			-
					<u>-</u>
	Total:	2	44	0	0

HADDOCK

UNITED KINGDOM (England and Wales)

1993		symmen marramajemen	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	6	1004	173	•
	2	3	488	129	•
Ha	3	-		-	•
j	4	-		-	•
	Total:	9	1492	302	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	•	-	•
	2	2	367	82	-
ПР	3	2	315	69	•
	4	-	-	-	<u> </u>
	Total:	4	682	151	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	174	-	•
	2	5	645	93	-
IVa	3	2	222	13	992
	4	2	305	28	774
	Total:	10	1346	134	1766
Area	Quarter	N samples	N measured	N aged	N aged
	1	70	9870	798	•
	2	92	12683	935	•
IVb	3	84	12893	1032	546
	4	79	10214	899	356
	Total:	325	45660	3664	902
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	
	2	1	110	9	-
IVc	3	-	•	.	-
	4	•	•	-	·
	Total:	1	110	9	0

SAMPLING DATA FOR:

HERRING

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	•	-	•
	2	-	-	-	•
1Va	3	•	-	-	454
	4	-		•	493
·	Total:	0	0	0	947

Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	•	•
	2	-	-	-	-
IVb	3	-	-	-	846
	4	•	-	-	838
	Total:	0	0	0	1684
Arca	Quarter	N samples	N measured	N aged	N aged
	1	10	2587	325	•
	2	-	-	-	-
IVc	3	-	-	-	88
	4	3	623	-	62
	Total:	13	3210	325	150
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	•	-
	2	-		-	•
VIId	3	-	•	-	-
	4	2	37	•	-
	Total:	2	37	0	0

HAKE

1993		ini ananya mandanana spira syangan	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	•
	2	-	-	-	•
IVa	3	•	-	-	18
	4	-	-	-	16
	Total:	0	0	0	34
» Area	Quarter	N samples	N measured	N aged	N aged
	1	-	•	-	•
	2	-	-	-	•
IVb	3	-	-	-	7
	4	•	-	-	1
	Total:	0	0	0	8
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	219	-	•
	2	2	443	-	•
VIa	3	1	115	-	-
	4	-	-	-	•
	Total:	4	777	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	4	549	-	69
	2	7	727	-	•
VIIa	3	1	43	•	
	4	2	192	-	-
	Total:	14	1511	0	69

Area Quarter N samples N measured N aged N ag	ed
1 11 633 -	2
2 4 148 -	-
VIIe 3 12 865 -	-
4 10 824 -	
Total: 37 2470 0	2
Area Quarter N samples N measured N aged N age	ed .
	4
2 10 814 -	-
VIII 3 5 385 -	-
4 6 346 -	-
Total: 34 2674 0	4
Area Quarter N samples N measured N aged N age	ed
1 1 135 - 2	24
2 1 115 -	-
VIIg 3 3 394 -	•
4 8 964 -	-
Total: 13 1608 0 2	14
Area Quarter N samples N measured N aged N age	ed
1 3 219 -	9
2 3 205 -	-
VIIh 3 6 596 -	-
4 4 411 -	
Total: 16 1431 0	9
Area Quarter N samples N measured N aged N age	d
1 2 274 - 10)2
2 3 353 -	-
VIIj 3 4 498 -	-
4	-
Total: 9 1125 0 10)2
Area Quarter N samples N measured N aged N age	·d
Area Quarter N samples N measured N aged N age	
Application of the Control of the Co	5
Application of the Control of the Co	
Adaptive(0.00001) proper (1000 0.00000 0.0000001) 1	

HORSE MACKEREL

1993		Establish dara bid Williams of	Market	Research vessel	
Area	Quarter	N samples	N measured	N aged	N aged
	1	2	266	-	•
	2	1	33	- [•
VIIe	3	2	182	-	-
	4	3	383	-	-
	Total:	8	864	0	0

LEMON SOLE

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	•	-	•
	2	-	-	-	-
VIIa	3	-	-	-	123
	4	-	-	-	-
	Total:	0	0	0	123
Arca	Quarter	N samples	N measured	N aged	N aged
	1	24	2877	406	20
	2	26	2995	378	-
VIIe	3	22	2040	364	•
	4	25	1866	258	•
	Total:	97	9778	1406	20
Area	Quarter	N samples	N measured	N aged	N aged
	1	5	541	5	50
	2	2	234	17	-
VIIf	3	1	84	-	-
	4	-		-	-
	Total:	8	859	22	50
Area	Quarter.	N samples	N measured	N aged	N aged
	1	1	101	-	-
	2	-	-	-	-
VIIg	3	-	-	-	44
	4	1	150	-	-
	Total:	2	251	0	44
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	109	-	38
	2	-	-	-	-
VIIh	3	3	409	43	-
	4	-	-	10	-
	Total:	4	518	53	38
Arca	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	16
	2		-	-	
VIIj .	3	-	-	-	-
	4			-	-
	Total:	0	0	0	16

MACKEREL

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	-	•
	2	-	-	-	-
IVa	3	-	-	-	127
	4	-	•		230
	Total:	0	0	0	357
Arca	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	•
)	2	•	-	-	-
IVb	3	-	-	-	334
	4	-	•	•	101
	Total:	0	0	0	435
Area	Quarter	N samples	N measured	N aged	N aged
	1	•		•	•
	2	•	-	-	•
IVc	3	-	-	-	128
	4	•	-	-	119
	Total:	0	0	0	247
Area	Quarter	N samples	N measured	N aged	N aged
	1	13	2281	212	•
	2	7	760	-	-
VIIe	3	8	470	153	-
	4	10	1307	-	•
	Total:	38	4818	365	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	242	-	•
	2	5	7 29	- [-
VIIf	3	5	825	-	•
	4	4	532	-	
	Total:	15	2328	0	0
Area .	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	3
	2	•	•	-	
VIIIa	3	-	•	•	` -
	4	•	•	•	<u> </u>
	Total:	0	0	0	3

MEGRIM

1993		agencia, and amount from	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	22	•
	2	-	•	-	•
VIIa	3	-	-	-	•
	4	-	. <u>-</u>	-	-
	Total:	0	0	22	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	5	460	37	2
	2	1	189	24	•
VIIe	3	9	1309	135	-
	4	5	787	190	-
i	Total:	20	2745	386	2
Area	Quarter	N samples	N measured	N aged	N aged
	1	5	721	67	52
	2	4	403	-	•
VIIf	3	-	•	-	2
	4	1	155	-	-
	Total:	10	1279	67	54
Area	Quarter	N samples	N measured	N aged	N aged
	1	5	557	56	86
	2	-	-	-	14
VIIg	3	-	-	28	-
	4	5	905	-	-
	Total:	10	1462	84	100
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	190	125	192
	2	6	1021	239	-
VIIh	3	3	480	184	-
	4	1	149	108	-
	Total:	11	1840	656	192
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	780
	2	1	95	109	•
VIIj	3	-	-	-	•
	4	-	- [-	•
	Total:	1	95	109	780
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	•	-	17
	2	-	-	-	
VIIIa	3	-	-	-	-
	4	-	-		•
	Total:	0	0	0	17

PILCHARD

UNITED KINGDOM (England and Wales)

1993 .		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	
	1	3	339	-	•
	2	-] -]	-]	•
VIIe	3	-	-	•	-
	4	2	242	•	•
	Total:	5	581	0	0

SAMPLING DATA FOR:

PLAICE

1993		AND RANGE COMPANY STATE OF	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	•	-
	2	7	1314	100	-
IVa	3	3	480	45	52
	4	3	385	67	45
	Total:	13	2179	212	97
Area	Quarter	N samples	N measured	N aged	N aged
	1	35	7804	661	-
	2	29	6724	580	•
IVb	3	35	6952	595 ·	195
	4	41	7014	512 ·	125
	Total:	140	28494	2348	320
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	74	-	-
	2	1	286	24	•
IVc	3	-	-	-	8
	4	-		-	60
	Total:	2	360	24	68
Area	Quarter	N samples	N measured	N aged	N aged
	1	14	2224	122	-
	2	22	4177	243	-
VIIa	3	16	2461	216	1003
	4	7	1051	173	-
	Total:	. 59	9913	754	1003
Area	Quarter	N samples	N measured	N aged	N aged
	1	23	1659	351	•
}	2	36	2751	433	•
VIId	3	56	2536	604	407
	4	44	2650	359	-
	Total:	159	9596	1747	407

Area	Quarter	N samples	N measured	N aged	N aged
	1	25	3316	374	1
	2	21	3247	370	-
VIIe	3	15	1596	265	-
	4	19	2230	355	-
	Total:	80	10389	1364	1
Area	Quarter	N samples	N measured	N aged	N aged
	1	13	2156	145	9
	2	5	530	263	•
VIIf	3	4	410	128	267
	4	12	654	91	•
	Total:	34	3750	627	276
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	•	178	88
	2	2	388	88	-
VIIg	3	2	287	9	27
	4	-		19	-
	Total:	4	675	294	115
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	303	-	11
	2	1	100	54	-
VIIh	3	1	41	13	-
	4	1	39	12	-
	Total:	4	483	79	11
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	7
	2	-	-	-	-
VIIj	3	•	-	-	•
	4	-	-	-	-
	Total:	0	0	0	7

SAITHE

1993		na de para de la composición del composición de la composición del composición de la composición del	Market	Research vessel	
Arca	Quarter	N samples	N measured	N aged	N aged
	1	1	54	-	-
	2	2	49	-	-
IVa	3	3	291	-	312
	4	1	92	-	230
	Total:	7	486	0	542
Area	Quarter	N samples	N measured	N aged	N aged
	1	7	439	-	-
	2	12	489	-	-
IVb	3	12	456	-	13
	4	7	258	.	3
	Total:	38	1642	0	16

SOLE

1993		Secretary description of the	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	24	2935	370	-
	2	19	1310	98	-
IVb	3	19	1327	102	1.
	4	28	2430	362	-
	Total:	90	8002	932	1
Area	Quarter	N samples	N measured	N aged	N aged
	1	6	497	14	-
Į į	2	25	4049	362	-
IVc	3	21	2341	293	-
	4	4	244	65	•
	Total:	56	7131	734	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	15	2582	162	•
	2	15	2700	206	-
VIIa	3	11	1771	198	430
	4	8	1143	145	-
	Total:	49	8196	711	430
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	183	-	•
[]	2	-	-	-	-
VIa	3	-	-	•	-
	4	•	•	-	-
	Total:	1	183	0	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	4	730	120	-
	2	18	2815	199	-
VIIa	3	6	572	14	803
	4	4	609	122	•
	Total:	32	4726	455	803
Area	Quarter	N samples	N measured	N aged	N aged
	1	45	2839	496	•
	2	59	4613	1042	-
VIId	3	63	4737	498	757
	4	24	1954	442	
	Total:	191	14143	2478	757
Area	Quarter	N samples	N measured	N aged	N aged
	1	32	4136	461	•
	2	43	4837	409	•
VIIe	3	27	3444	387	-
	4	29	2654	236	•
	Total:	131	15071	1493	0

Area	Quarter	N samples	N measured	N aged	N aged
	1	23	3845	254	1
	2	9	1466	91	-
VIII	3	4	511	28	389
	4	15	438	141	•
	Total:	51	6260	514	390
Area	Quarter	N samples	N measured	N aged	N aged
	1	3	507	38	3
	2	-	-	-	-
VIIg	3	-	-	32	46
	4	5	516	49	-
	Total:	8	1023	119	49
Area	Quarter	N samples	N measured	N aged	N aged
	1	3	501	18	-
	2	11	1744	102	-
VIIh	3	6	975	35	-
	4	3	313	43	-
	Total:	23	3533	198	0

WHITING

1993	1993		Market	samples	Research vessel
Arca	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-	•	•	-
IVa	3	•	-	-	702
1	4	-	•	- ,	624
	Total:	0	0	0	1326
Area	Quarter	N samples	N measured	N aged	N aged
	1	57	5299	508	•
	2	54	4640	577	-
IVb	3	54	4688	592	703
	4	55	4589	536	578
	Total:	220	19216	2213	1281
Area	Quarter	N samples	N measured	N aged	N aged
	1	10	700	159	•
	2	11	826	151	•
IVc	3	4	353	79	89
	4	12	837	168	101
	Total:	37	2716	557	190
Area	Quarter	N samples	N measured	N aged	N aged
	1	15	1759	-	•
	2	22	2476	-	-
VIIa	3	19	2024	-	168
	4	14	1268		•
	Total:	70	7527	0	168

Area	Quarter	N samples	N measured	N aged	N aged
	1	3	465	•	•
	2	•	-	-	•
VIId	3	4	398	9	•
	4	4	230		•
	Total:	11	1093	9 .	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	15	2095	4	-
	2	16	2361	•	-
VIIe	3	7	1106	-	-
	4	10	1353	-	-
	Total:	48	6915	4	0
Area	Quarter	N samples	N measured	N aged	N aged
	1	10	1383	•	-
	2	4	316	-	-
VIII	3	2	132	-	86
	4	17	916	•	• .
	Total:	33	2747	0	86
Area	Quarter	N samples	N measured	N aged	N aged
	1	1	212	-	100
	2	1	63	-	•
VIIg	3	2	342	-	55
	4	3	309	24	-
	Total:	7	926	24	155
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	-	•
	2	1	139	•	•
VIIh	3	-	-		-
	4	•		-	•
	Total:	1	139	0	0

DAB

1993		samina manganingan	Market s	Research vessel	
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	•	•
	2	-	-		•
VIId	3	-	-	-	250
	4	-	-	-	•
	Total:	0	0	0	250

TURBOT

UNITED KINGDOM (England and Wales)

1993		arananan menindanya meninda	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	•	-
]	2	-	-	-	-
IVb	3	-	-	-	1
	4	•	-	-	-
	Total:	0	0	0	1
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-	-	-	•
VIId	3	-	- 1	-	6
	4	-			-
	Total:	0	0	0	6

SAMPLING DATA FOR:

BRILL

UNITED KINGDOM (England and Wales)

1993 Area Quarter		and the contract of the contra	Market	Research vessel	
		N samples N measured N aged		N aged	N aged
	1	•	-	•	-
	2	-		•	•
VIId	3	•		-	20
	4	-	.	-	-
	Total:	0	0	0	20

SAMPLING DATA FOR:

NORWAY POUT

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-		-	-
IVa	3	-	-	-	213
	4	-	-	-	145
	Total:	0	0	0	358
Area	Quarter	N samples	N measured	N aged	N aged
	1	•		-	-
	2	-	-	-	-
IVb	3	-	-	-	82
	4	-	-	-	62
	Total:	0	0	0	144

CATFISH

UNITED KINGDOM (England and Wales)

1993		namen interpretation of	Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	•
	2	-	-	-	-
IVa	3	•	-	-	4
	4	-	-	•	2
	Total:	0	0	0	6
Area	Quarter	N samples	N measured	N aged	N aged
	1	•	•	•	- .
	2	•	-	-	•
IVb	3	-			2
	4	-	-	-	-
	Total:	0	0	0	2

SAMPLING DATA FOR:

FOUR-BEARDED ROCKLING

UNITED KINGDOM (England and Wales)

1993	1993		Market	samples	Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	•	•
1	2	-	-	` -	-
IVa	3	-	-	-	19
	4	-	-	-	4
	Total:	0	0	0	23
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	•	-
	2	-	-	-	-
IVb	3	•	-	-	24
	4	-		-	18
	Total:	0	0	0	42

SAMPLING DATA FOR:

POOR COD

1993		Stational materials at the	Market :	samples	Research vessel
Area	Area Quarter		samples N measured N aged	N aged	
	1	-	•	-	•
	2	-] - [-	•
IVa	3	-		-	16
	4	-	-	-	34
	Total:	0	0	0	50

Area	Quarter	N samples	N measured	N aged	N aged
	1	•	-	-	-
	2	-	-	-	-
IVb	3	-	-	-	11
!	4	-	-	•	28
	Total:	0	0	0	39
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	-
	2	-	-	-	-
IVc	3	-	-	-	13
	4	•	-	-	24
	Total:	0	0	0	37

POLLACK

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	•	
	2	•	-	•	•
IVa	3	-	[-]	•	11
	4	-] -]		5
	Total:	0	0	0 .	16

SAMPLING DATA FOR:

POUT WHITING

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
	1		-	-	-
1	2	-	-	-	-
IVb	3	-	-	-	23
	4	-	-	-	19
	Total:	0	0	0	42
Area	Quarter	N samples	N measured	N aged	N aged
	1	-	-	-	•
	2	-	-	-	-
1Ve	3	-	-	-	11
	4	-		•	24
	Total:	0	0	0	35

HALIBUT

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel	
Area	Quarter	N samples	N measured	N aged	N aged	
	1	-	-	-	-	
	2	-	-	•	•	
IVb	3	-	l - 1	-	1	
	4	-	-	-	-	
	Total:	0	0	0	1	

SAMPLING DATA FOR:

TUSK

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel	
Area	Quarter	N samples	N measured	N aged	N aged	
·	1	•	•	•	•	
	2	-	-	-	-	
IVa	3	-	-	- ,	1	
,	4	-	- 1	-	•	
	Total:	0	0	0	1	

UNITED KINGDOM (Scotland 1992)

(P. A. Kunzlik)

Monitoring of he main demersal species by Scotland is undertaken through three main sampling activities. These are market sampling of fish landed by the commercial fishery, sampling fish caught but discarded at sea and annual trawl surveys by the Department's research vessels. Most of the data collected are used by the ICES Demersal WG, Northern Shelf Demersal WG and the Industrial Fisheries WG.

The sampling carried out in 1992 is tabulated below. Samples are stratified by month, gear type and sea area.

SAMPLING DATA

Market Samples

UNITED KINGDOM (Scotland)

1992

	North Sea IV		West Scotland	West Scotland VIa		
Species	Measured	Otolithed	Measured	Otolithed	Measured	Otolithed
Cod	65285	11457	10133	3358	582	412
Haddock	129029	11504	23662	3341	4041	686
Whiting	105711	7332	31018	2902	-	-
Saithe	15662	6734	5215	2087	257	180
Lemon Sole	33271	2642	4436	522	384	119
Plaice	42131	3392	8694	938	-	-
Megrim	-	•	13968	300	-	-
Anglerfish	79	-	10824	603	33	
Spurdog	934		1732	-		
Sandeel		•	2957	373	_	
	1		I	1	I	

During 1992, 79 vessels were sampled for discards. Discard sampling, like market sampling, is stratified by gear type and sea area but because of resource limitations, sampling is undertaken on a quarterly basis. Aggregate numbers of fish sampled are given below:

SAMPLING DATA
UNITED KINGDOM (Scotland)

1992

	North Sea IV			VIa
Species	Measured	Otolithed	Measured	Otolithed
Cod	7836	1943	625	248
Haddock	76099	4421	19831	1581
Whiting	30094	3372	23908	1646
Saithe	1217	369	129	45
Others	65645	-	50529	-

Annual bottom trawl surveys conducted for demersal fish in 1992 were as follows:

UNITED KINGDOM (Scotland) 1992

Vessel	Period	Area	Comment
Scotia	February	North Sea IV	Scottish contribution to IBTS, Results
Scotta	reordary	North Sca IV	used by ICES for North Sea stocks
			l '
			forecasts
Scotia	March	West of Scotland VIa	Results used by ICES for
			Division VIa stock forecasts
Scotia	May	North Sea IV	Scottish contribution to IBTS
Scotia	August	North Sea IV	Scottish contribution to IBTS. Results
			used by ICES for North Sea stocks
			forecasts
Scotia	September	Rockall VIb	Results used by ICES for Rockall
			haddock assessment
Clupea	August	Shetland/VIa	Indices used in Industrial WG

UNITED KINGDOM (Scotland 1993)

(P. A. Kunzlik)

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The sampling carried out in 1993 is tabulated below. Samples are stratified by month, gear type and sea area.

SAMPLING DATA
UNITED KINGDOM (Scotland)

Market Samples

1993

	North Sea IV		West Scotland	VIa	Rockall VIb	
Species	Measured	Otolithed	Measured	Otolithed	Measured	Otolithed
Cod	55049	11403	11139	3252	312	212
Haddock	147630	12860	34094	4143	4288	655
Whiting	89861	7433	31333	3057	-	-
Saithe	18858	9428	6320	2827	256	169
Lemon Sole	27557	2704	6687	768	766	109
Plaice	15868	23	8292	14	1 - 1	•
Megrim	2973	-	14368	283	1369	30
Anglerfish	3879	-	16955	299	1206	61
Spurdog	1169	-	1244	-	- 1	-
Sandeel		-	3008	557	-	-

During 1993, 80 vessels were sampled for discards. Discard sampling, like market sampling, is stratified by gear type and sea area but because of resource limitations, sampling is undertaken on a quarterly basis. Aggregate numbers of fish sampled are given below:

SAMPLING DATA
UNITED KINGDOM (Scotland)

Discards

1993

	North Sea IV		West Scotland	VIa
Species	Measured	Otolithed	Measured	Otolithed
Cod	7117	1508	244	177
Haddock	75480	4763	44556	1599
Whiting	29630	3389	22530	1715
Saithe	1026	425	1711	102
Others	58772	<u>-</u>	65487	-

UNITED KINGDOM (Scotland) 1993

Vessel	Period	атер реплектация в мере в поставления по поставля в поставления по поставля в поставля	Comment State Western State Comment State
Scotia	February	North Sea IV	Scottish contribution to IBTS. Results
Scoua	rebluary	Notal Sca IV	used by ICES for North Sea stocks
			forecasts
			loiceasis
Scotia	March	West of Scotland VIa	Results used by ICES for
			Division VIa stock forecasts
Scotia	May	North Sea IV	Scottish contribution to IBTS
Scotia	August	North Sea IV	Scottish contribution to IBTS. Results
Scoula			used by ICES for North Sea stocks
			forecasts
!			
Scotia	September	Rockall VIb	Results used by ICES for Rockall
			haddock assessment
Clupea	August	Shetland/VIa	Indices used in Industrial WG
1			

U. S. A.

(F. Serchuk and B. Rothschild)

The U.S.A. had no fisheries and no research vessel activity on demersal fish in the ICES area in 1993. Activities in the Northwest Atlantic have been reported to NAFO.