

International Council for the  
Exploration of the Sea

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Report of Activities



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## 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:

**SOLE**

BELGIUM

1993

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

SAMPLING DATA FOR:

**PLAICE**

BELGIUM

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IV	1	-	-	-	0	0	0
	2	-	-	-	10	637	0
	3	-	-	-	2	100	40
	4	-	-	-	10	690	140
	Total:	0	0	0	22	1427	180
VII f,g	1	-	-	-	0	0	0
	2	-	-	-	1	60	0
	3	-	-	-	2	80	80
	4	-	-	-	2	100	100
	Total:	0	0	0	5	240	180

1993		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VII a	1	-	-	-	0	0	0
	2	-	-	-	5	250	80
	3	-	-	-	0	0	0
	4	-	-	-	0	0	0
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>250</b>
VII d,e	1	-	-	-	0	0	0
	2	-	-	-	2	85	40
	3	-	-	-	1	30	0
	4	-	-	-	6	360	120
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>475</b>

## 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	North Sea	February	International Bottom Trawl Survey
2	Baltic Sea	March	Baltic Young Fish Survey
3	North Sea and Div. IIIa	July	Acoustic herring and sprat survey
4	North Sea and Div. IIIa	November	International Bottom Trawl Survey

SAMPLING DATA FOR:

**COD**

DENMARK

1993

Area	Quarter	Number of samples		Number of fish		
		Research	Market	Measured	N aged	Racial invest.
Baltic Sea SD 22	1	-	5	613	613	-
	2	-	3	419	419	-
	3	-	1	46	46	-
	4	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>9</b>	<b>1078</b>	<b>1078</b>

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

SAMPLING DATA FOR:  
DENMARK

**HADDOCK**

1993

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

SAMPLING DATA FOR:  
DENMARK

**WHITING**

1993

Area	Quarter	Number of samples		Number of fish		
		Research	Market	Measured	N aged	Racial invest.
Baltic Sea SD 25-32	1	26	-	693	-	-
	2	-	1	7	-	-
	3	-	-	-	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>26</b>	<b>1</b>	<b>700</b>	<b>0</b>	<b>0</b>

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

SAMPLING DATA FOR:  
DENMARK

SAITHE

1993

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

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

SAMPLING DATA FOR:

**BLUE WHITING**

DENMARK

1993

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

SAMPLING DATA FOR:

**NORWAY POUT**

DENMARK

1993

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



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

## SAMPLING DATA FOR:

**SANDEEL**

## DENMARK

1993

Area	Quarter	Number of samples		Number of fish		
		Research	Market	Measured	N aged	Racial invest.
Kattegat	1	-	-	-	-	-
	2	-	4	452	-	-
	3	-	2	3	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>6</b>	<b>455</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Skagerrak	1	-	1	180	180	-
	2	-	8	1140	432	-
	3	-	6	774	159	-
	4	-	10	1430	229	-
	<b>Total:</b>	<b>0</b>	<b>25</b>	<b>3524</b>	<b>1000</b>	<b>0</b>
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Division IVa E	1	-	2	377	-	-
	2	-	1	165	165	-
	3	-	1	2	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>4</b>	<b>544</b>	<b>165</b>	<b>0</b>
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Division IVa W	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	2	552	367	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>2</b>	<b>552</b>	<b>367</b>	<b>0</b>
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Division IVb	1	11	9	1938	1568	-
	2	-	54	8303	3213	-
	3	-	28	7754	5854	-
	4	5	10	2758	960	-
	<b>Total:</b>	<b>16</b>	<b>101</b>	<b>20753</b>	<b>11595</b>	<b>0</b>

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

## SAMPLING DATA FOR:

## PLAICE

## DENMARK

1993

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

## SAMPLING DATA FOR:

**SOLE**

DENMARK

1993

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

## SAMPLING DATA FOR:

**COMMON DAB**

DENMARK

1993

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

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

SAMPLING DATA FOR:  
DENMARK

**LONG ROUGH DAB**

1993

		Number of samples		Number of fish		
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Kattegat	1	-	3	4	103	-
	2	-	1	2	90	-
	3	-	3	69	76	-
	4	-	6	66	-	-
	<b>Total:</b>	<b>0</b>	<b>13</b>	<b>141</b>	<b>269</b>	<b>0</b>
Skagerrak	1	-	12	66	158	-
	2	-	3	127	153	-
	3	-	10	126	184	-
	4	-	8	68	170	-
	<b>Total:</b>	<b>0</b>	<b>33</b>	<b>387</b>	<b>665</b>	<b>0</b>
Division IVa E	1	-	9	24	-	-
	2	-	1	1	-	-
	3	-	4	8	-	-
	4	-	2	10	-	-
	<b>Total:</b>	<b>0</b>	<b>16</b>	<b>43</b>	<b>0</b>	<b>0</b>
Division IVa W	1	-	3	15	-	-
	2	-	-	-	-	-
	3	-	3	8	-	-
	4	-	9	13	-	-
	<b>Total:</b>	<b>0</b>	<b>15</b>	<b>36</b>	<b>0</b>	<b>0</b>
Division IVb	1	-	5	20	-	-
	2	-	3	7	-	-
	3	-	2	10	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>10</b>	<b>37</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
DENMARK

**FLOUNDER**

1993

		Number of samples		Number of fish		
Area	Quarter	Research	Market	Measured	N aged	Racial invest.
Baltic Sea SD 22	1	-	1	74	74	-
	2	-	1	90	88	-
	3	-	1	51	41	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>215</b>	<b>203</b>

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

## 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.

## SAMPLING DATA FOR:

**COD**

## FAROES

1993

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

## SAMPLING DATA FOR:

**HADDOCK**

## FAROES

1993

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

## SAMPLING DATA FOR:

**SAITHE**

## FAROES

1993

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

## SAMPLING DATA FOR:

**NORWAY POUT**

## FAROES

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
Vb	1	*	*	*	5	1229	250
	2	*	*	*	4	811	200
	3	*	*	*	3	606	150
	4	*	*	*	8	1451	397
	Total:	0	0	0	20	4097	997

## SAMPLING DATA FOR:

***Sebastes marinus***

## FAROES

1993

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

## SAMPLING DATA FOR:

*Sebastes mentella*

## FAROES

1993

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

## SAMPLING DATA FOR:

## BLUE LING

## FAROES

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
Vb	1	*	*	*	3	332	-
	2	*	*	*	4	537	-
	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

Survey no.	Period	ICES area	Objectives
1	January-February	IVa,b	IBTS
2	February-March	VIa,VIIb,e,g,j	Ground and pelagic fish survey
3	June	IVa,b	IBTS, national groundfish survey
4	September-October	XIVb;NAFO 1B-1F	Groundfish survey
5	December	IVb	Comparative Fish.

## 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	IVb	Flatfish survey
4	July	IVb,c	Groundfish survey
5	September	IVb	Flatfish survey
6	December	IVb	Groundfish survey

## #) Samples of commercial catches taken at sea.

SAMPLING DATA FOR:  
GERMANY

COD

1993

		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
IIa	1	-	-	-	79 #	19961	724
	2	-	-	-	-	6212	502
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>26173</b>
IIb	1	-	-	-	-	-	-
	2	-	-	-	114 #	23646	1223
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>114</b>	<b>23646</b>
IVa	1	35	806	459	-	-	-
	2	17	212	223	-	-	-
	3	-	-	-	-	-	-
	4	72	413	366	-	-	-
	<b>Total:</b>	<b>124</b>	<b>1431</b>	<b>1048</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVb	1	71	3548	482	-	-	-
	2	170	1624	435	-	-	-
	3	119	1602	630	27 #	53	-
	4	73	1712	427	12 #	79	-
	<b>Total:</b>	<b>433</b>	<b>8486</b>	<b>1974</b>	<b>39</b>	<b>132</b>	<b>0</b>
IVc	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	16	57	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>16</b>	<b>57</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIa	1	10	20	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>10</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIIb	1	3	6	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIIe	1	1	1	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIIg	1	2	25	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>2</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
XIVb	1	-	-	-	2	821	422
	2	-	-	-	2	989	443
	3	-	-	-	4	1289	794
	4	35	333	320	-	-	-
	<b>Total:</b>	<b>35</b>	<b>333</b>	<b>320</b>	<b>8</b>	<b>3099</b>	<b>1659</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NAFO 1B-1F	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	35	117	115	-	-	-
	<b>Total:</b>	<b>35</b>	<b>117</b>	<b>115</b>	<b>0</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**IIADDOCK**

## GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IIa	1	-	-	-	29#	5354	256
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>5354</b>	<b>256</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
IIb	1	-	-	-	-	-	-
	2	-	-	-	29#	7493	648
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>7493</b>	<b>648</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	37	15941	655	-	-	-
	2	16	2366	153	-	-	-
	3	-	-	-	-	-	-
	4	71	12067	118	-	-	-
	<b>Total:</b>	<b>124</b>	<b>30374</b>	<b>926</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

SAMPLING DATA FOR:  
GERMANY

**WHITING**

1993

		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	37	8670	389	-	-	-
	2	16	1604	205	-	-	-
	3	-	-	-	-	-	-
	4	63	7190	179	-	-	-
	<b>Total:</b>		<b>116</b>	<b>17464</b>	<b>773</b>	<b>0</b>	<b>0</b>
IVb	1	76	4475	552	-	-	-
	2	178	4428	709	19#	141	-
	3	197	11569	788	41#	1335	-
	4	171	10660	275	12#	98	-
	<b>Total:</b>		<b>622</b>	<b>31132</b>	<b>2324</b>	<b>72</b>	<b>1574</b>
IVc	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	19	2550	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>19</b>	<b>2550</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIa	1	12	3206	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>12</b>	<b>3206</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIIb	1	1	164	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>1</b>	<b>164</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIIe	1	4	48	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>4</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIIg	1	4	1087	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>4</b>	<b>1087</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIIh	1	1	1	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

SAMPLING DATA FOR:  
GERMANY

**NORWAY POUT**

1993

		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	35	5198	-	-	-	-
	2	9	1333	-	-	-	-
	3	-	-	-	-	-	-
	4	35	1268	-	-	-	-
	Total:	79	7799	0	0	0	0
IVb	1	14	1771	-	-	-	-
	2	13	425	-	-	-	-
	3	10	235	-	-	-	-
	4	2	2	-	-	-	-
	Total:	39	2433	0	0	0	0
VIa	1	13	1866	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	Total:	13	1866	0	0	0	0
VIIb	1	2	3	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	Total:	2	3	0	0	0	0
VIIc	1	1	2	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	Total:	1	2	0	0	0	0
VIIe	1	1	4	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	Total:	1	4	0	0	0	0
VIIg	1	4	723	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	Total:	4	723	0	0	0	0

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIIj	1	4	47	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>4</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

## BLUE LING

## GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
Vb	1	-	-	-	-	-	-
	2	-	-	-	1	310	154
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>310</b>	<b>154</b>
XIV	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	1	178	94	1	359	170
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>178</b>	<b>94</b>	<b>1</b>	<b>359</b>	<b>170</b>

## SAMPLING DATA FOR:

## SAITHE

## GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IIa	1	-	-	-	1	316	167
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	3	9818	1207
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>10134</b>	<b>1374</b>
IVa	1	16	974	398	8	4236	2262
	2	9	388	95	3	5841	2380
	3	1	1967	850	10	3864	1724
	4	40	2611	-	2	865	469
	<b>Total:</b>	<b>66</b>	<b>5940</b>	<b>1343</b>	<b>23</b>	<b>14806</b>	<b>6835</b>
IVb	1	-	-	-	-	-	-
	2	3	3	-	-	-	-
	3	7	12	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>10</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
VIa	1	5	44	44	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>5</b>	<b>44</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

SAMPLING DATA FOR:

**POLLACK**

GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	-	-	-	-	-	-
	2	-	-	-	2	401	199
	3	1	138	93	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>138</b>	<b>93</b>	<b>2</b>	<b>401</b>	<b>199</b>

SAMPLING DATA FOR:

**HAKE**

GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	15	85	-	-	-	-
	<b>Total:</b>	<b>15</b>	<b>85</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIa	1	9	92	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>9</b>	<b>92</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIIb	1	6	144	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>6</b>	<b>144</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIIg	1	4	549	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>4</b>	<b>549</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIIJ	1	27	917	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>27</b>	<b>917</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

**SOLE**

GERMANY

1993

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

SAMPLING DATA FOR:

**DAB**

GERMANY

1993

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

## SAMPLING DATA FOR:

**PLAICE**

GERMANY

1993

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

## SAMPLING DATA FOR:

**FLOUNDER**

GERMANY

1993

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

## SAMPLING DATA FOR:

**TURBOT**

GERMANY

1993

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

## SAMPLING DATA FOR:

**BRILL**

GERMANY

1993

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



## SAMPLING DATA FOR:

*Sebastes marinus*

## GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IIa	1	-	-	-	5#	1850	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	3#	903	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>2753</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
IIb	1	-	-	-	-	-	-
	2	-	-	-	5#	840	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>840</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
XIV	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	42	762	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>42</b>	<b>762</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

*Sebastes mentella*

## GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IIa	1	-	-	-	1	475	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	2#	750	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1225</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Vb	1	-	-	-	3	1207	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1207</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
XIV	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	39	7118	-	3	1739	-
	3	-	-	-	13#	2693	165
	4	-	-	-	-	-	-
<b>Total:</b>	<b>39</b>	<b>7118</b>	<b>0</b>	<b>16</b>	<b>4432</b>	<b>165</b>	

## SAMPLING DATA FOR:

*Macrourus berglax*

## GERMANY

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
XIV	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	11	244	-	4#	425	72
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>11</b>	<b>244</b>	<b>0</b>	<b>4</b>	<b>425</b>	<b>72</b>

## 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

## FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	29	-	368	267	-
	2	-	-	-	-	-
	3	41	-	845	610	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>70</b>	<b>0</b>	<b>1213</b>	<b>877</b>	<b>0</b>
IVc	1	15	-	117	101	-
	2	-	-	-	-	-
	3	8	-	34	32	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>23</b>	<b>0</b>	<b>151</b>	<b>133</b>	<b>0</b>
VIa	1	-	34	805	271	-
	2	-	37	1081	335	-
	3	-	35	971	315	-
	4	-	31	695	254	-
	<b>Total:</b>	<b>0</b>	<b>137</b>	<b>3552</b>	<b>1175</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIId	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	13	-	24	22	-
	<b>Total:</b>	<b>13</b>	<b>0</b>	<b>24</b>	<b>22</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	25	-	105	-	-
	2	36	-	744	-	-
	3	28	-	782	-	-
	4	16	-	343	-	-
	<b>Total:</b>	<b>105</b>	<b>0</b>	<b>1974</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIf	1	13	-	135	-	-
	2	9	-	253	-	-
	3	4	-	35	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>28</b>	<b>0</b>	<b>446</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIg	1	14	-	6	-	-
	2	11	-	713	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>31</b>	<b>0</b>	<b>744</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIh	1	5	-	2	-	-
	2	4	-	9	-	-
	3	2	-	18	-	-
	4	3	-	15	-	-
	<b>Total:</b>	<b>14</b>	<b>0</b>	<b>44</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIf-g	1	-	44	516	369	-
	2	-	33	403	285	-
	3	-	45	459	325	-
	4	-	40	463	310	-
	<b>Total:</b>	<b>0</b>	<b>162</b>	<b>1841</b>	<b>1289</b>	<b>0</b>

## SAMPLING DATA FOR:

**HADDOCK**

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	12	-	293	335	-
	2	-	-	-	-	-
	3	18	-	675	372	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>30</b>	<b>0</b>	<b>968</b>	<b>707</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIa	1	-	33	866	-	-
	2	-	35	2451	-	-
	3	-	36	2412	-	-
	4	-	35	2674	-	-
	<b>Total:</b>	<b>0</b>	<b>139</b>	<b>8403</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**WHITING**

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	36	-	3288	874	-
	2	-	-	-	-	-
	3	53	-	11008	1112	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>89</b>	<b>0</b>	<b>14296</b>	<b>1986</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
IVc	1	14	-	2024	1078	-
	2	13	-	2501	675	-
	3	3	-	-	196	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>30</b>	<b>0</b>	<b>4525</b>	<b>1949</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIIId	1	-	5	840	271	-
	2	-	11	1205	671	-
	3	-	11	1222	523	-
	4	22	-	1157	611	-
	<b>Total:</b>	<b>22</b>	<b>27</b>	<b>4424</b>	<b>2076</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIIe	1	28	-	206	-	-
	2	40	-	1003	-	-
	3	30	-	1528	-	-
	4	17	-	564	-	-
	<b>Total:</b>	<b>115</b>	<b>0</b>	<b>3301</b>	<b>0</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIII	1	15	-	638	-	-
	2	11	-	496	-	-
	3	5	-	38	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>33</b>	<b>0</b>	<b>1195</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIIg	1	16	-	67	-	-
	2	13	-	1416	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>35</b>	<b>0</b>	<b>1508</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIIh	1	6	-	42	-	-
	2	5	-	11	-	-
	3	2	-	18	-	-
	4	4	-	42	-	-
	<b>Total:</b>	<b>17</b>	<b>0</b>	<b>113</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIII-f-g	1	-	16	1292	381	-
	2	-	36	2140	505	-
	3	-	28	1746	396	-
	4	-	28	1882	401	-
	<b>Total:</b>	<b>0</b>	<b>108</b>	<b>7060</b>	<b>1683</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Number aged
VIII	1	31	16	1854	-	-
	2	27	11	990	-	-
	3	34	10	3359	-	-
	4	21	20	1102	-	-
	<b>Total:</b>	<b>113</b>	<b>57</b>	<b>7305</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

BIB (*Trisopterus luscus*)

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIc	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	3	-	-	95	-
	<b>Total:</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>95</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIId	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	17	-	-	611	-
	<b>Total:</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>611</b>	<b>0</b>

SAMPLING DATA FOR:

**NORWAY POUT**

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	-	-	-	103	-
	2	-	-	-	-	-
	3	-	-	-	126	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>229</b>	<b>0</b>

SAMPLING DATA FOR:

**POUT**

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	5	-	133	-	-
	2	-	-	-	-	-
	3	8	-	15	-	-
	4	10	-	239	-	-
	<b>Total:</b>	<b>23</b>	<b>0</b>	<b>387</b>	<b>0</b>	<b>0</b>
IVc	1	5	-	133	-	-
	2	-	-	-	-	-
	3	4	-	21	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>9</b>	<b>0</b>	<b>154</b>	<b>0</b>	<b>0</b>
VIId	1	-	1	376	-	-
	2	-	1	392	-	-
	3	-	1	404	-	-
	4	19	2	2809	-	-
	<b>Total:</b>	<b>19</b>	<b>5</b>	<b>3981</b>	<b>0</b>	<b>0</b>
VIIe	1	45	-	743	-	-
	2	52	-	1536	-	-
	3	45	-	4111	-	-
	4	25	-	826	-	-
	<b>Total:</b>	<b>167</b>	<b>0</b>	<b>7216</b>	<b>0</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII f	1	22	-	538	-	-
	2	20	-	560	-	-
	3	8	-	60	-	-
	4	6	-	34	-	-
	<b>Total:</b>	<b>56</b>	<b>0</b>	<b>1192</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII g	1	17	-	26	-	-
	2	14	-	1870	-	-
	3	3	-	5	-	-
	4	2	-	20	-	-
	<b>Total:</b>	<b>36</b>	<b>0</b>	<b>1921</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII h	1	7	-	90	-	-
	2	7	-	51	-	-
	3	2	-	18	-	-
	4	6	-	93	-	-
	<b>Total:</b>	<b>22</b>	<b>0</b>	<b>252</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

IIAKE

## FRANCE

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII	1	-	3	168	-	-
	2	-	6	261	-	-
	3	-	40	1516	-	-
	4	-	10	208	-	-
	<b>Total:</b>	<b>0</b>	<b>59</b>	<b>2153</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIII	1	43	30	4845	180	-
	2	35	68	6792	175	-
	3	46	63	8363	340	-
	4	35	101	5741	270	-
	<b>Total:</b>	<b>159</b>	<b>262</b>	<b>25741</b>	<b>965</b>	<b>0</b>

## SAMPLING DATA FOR:

SAITIE

## FRANCE

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

## SAMPLING DATA FOR:

## LING

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIa	1	-	27	664	242	-
	2	-	38	747	305	-
	3	-	20	460	181	-
	4	-	28	683	263	-
	<b>Total:</b>	<b>0</b>	<b>113</b>	<b>2554</b>	<b>991</b>	<b>0</b>
VIIe	1	56	-	192	-	-
	2	62	-	1696	-	-
	3	59	-	5177	-	-
	4	28	-	910	-	-
	<b>Total:</b>	<b>205</b>	<b>0</b>	<b>7975</b>	<b>0</b>	<b>0</b>
VIIf	1	23	-	0	-	-
	2	23	-	655	-	-
	3	9	-	251	-	-
	4	6	-	34	-	-
	<b>Total:</b>	<b>61</b>	<b>0</b>	<b>940</b>	<b>0</b>	<b>0</b>
VIIg	1	18	-	0	-	-
	2	16	-	2263	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>40</b>	<b>0</b>	<b>2288</b>	<b>0</b>	<b>0</b>
VIIh	1	14	-	35	-	-
	2	13	-	99	-	-
	3	5	-	36	-	-
	4	8	-	99	-	-
	<b>Total:</b>	<b>40</b>	<b>0</b>	<b>269</b>	<b>0</b>	<b>0</b>
VIIe-k	1	-	33	477	265	-
	2	-	44	834	369	-
	3	-	19	369	166	-
	4	-	25	568	257	-
	<b>Total:</b>	<b>0</b>	<b>121</b>	<b>2248</b>	<b>1057</b>	<b>0</b>



SAMPLING DATA FOR:  
FRANCE

**BLUE LING**

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

SAMPLING DATA FOR:  
FRANCE

**POLLACK**

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIb-k	1	-	8	125	60	-
	2	-	9	150	75	-
	3	-	-	-	-	-
	4	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>17</b>	<b>275</b>	<b>135</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	38	-	114	-	-
	2	44	-	1059	-	-
	3	39	-	1759	-	-
	4	21	-	575	-	-
	<b>Total:</b>		<b>142</b>	<b>0</b>	<b>3507</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIh	1	20	-	20	-	-
	2	18	-	536	-	-
	3	7	-	47	-	-
	4	6	-	34	-	-
	<b>Total:</b>		<b>51</b>	<b>0</b>	<b>637</b>	<b>0</b>

SAMPLING DATA FOR:  
FRANCE

**SOLE**

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	1	-	3	-	-
	2	-	-	-	-	-
	3	1	-	2	-	-
	4	-	-	-	-	-
	<b>Total:</b>		<b>2</b>	<b>0</b>	<b>5</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVc	1	3	-	13	-	-
	2	-	-	-	-	-
	3	7	-	51	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>10</b>	<b>0</b>	<b>64</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIId	1	-	16	1528	150	-
	2	-	15	1647	150	-
	3	-	19	1593	150	-
	4	10	10	797	159	-
	<b>Total:</b>	<b>10</b>	<b>60</b>	<b>5565</b>	<b>609</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	17	-	24	-	-
	2	33	-	737	-	-
	3	25	-	676	-	-
	4	15	-	341	-	-
	<b>Total:</b>	<b>90</b>	<b>0</b>	<b>1778</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIf	1	11	-	2	-	-
	2	8	-	252	-	-
	3	3	-	26	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>24</b>	<b>0</b>	<b>303</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIh	1	13	-	17	-	-
	2	10	-	474	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>29</b>	<b>0</b>	<b>516</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIII	1	42	58	3956	328	-
	2	29	62	3599	252	-
	3	46	90	5165	299	-
	4	34	53	3417	315	-
	<b>Total:</b>	<b>151</b>	<b>263</b>	<b>16137</b>	<b>1194</b>	<b>0</b>

SAMPLING DATA FOR:  
FRANCE

**PLAICE**

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	32	-	604	-	-
	2	-	-	-	-	-
	3	45	-	600	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>77</b>	<b>0</b>	<b>1204</b>	<b>0</b>	<b>0</b>
IVc	1	12	-	60	-	-
	2	-	-	-	-	-
	3	8	-	59	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>20</b>	<b>0</b>	<b>119</b>	<b>0</b>	<b>0</b>
VIId	1	-	14	1268	355	-
	2	-	16	1345	290	-
	3	-	25	1661	350	-
	4	27	15	961	199	-
	<b>Total:</b>	<b>27</b>	<b>70</b>	<b>5235</b>	<b>1194</b>	<b>0</b>
VIIe	1	15	-	204	-	-
	2	29	-	473	-	-
	3	20	-	450	-	-
	4	12	-	252	-	-
	<b>Total:</b>	<b>76</b>	<b>0</b>	<b>1379</b>	<b>0</b>	<b>0</b>
VIIf	1	10	-	451	-	-
	2	8	-	252	-	-
	3	3	-	26	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>23</b>	<b>0</b>	<b>752</b>	<b>0</b>	<b>0</b>
VIIg	1	12	-	20	-	-
	2	10	-	474	-	-
	3	3	-	5	-	-
	4	2	-	11	-	-
	<b>Total:</b>	<b>27</b>	<b>0</b>	<b>510</b>	<b>0</b>	<b>0</b>

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

## SAMPLING DATA FOR:

## MEGRIM

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIa	1	-	4	350	-	-
	2	-	4	322	-	-
	3	-	4	270	-	-
	4	-	4	348	-	-
	<b>Total:</b>	<b>0</b>	<b>16</b>	<b>1290</b>	<b>0</b>	<b>0</b>
VIIb-k	1	-	63	2995	402	-
	2	-	58	2885	395	-
	3	-	47	2610	364	-
	4	-	63	2572	272	-
	<b>Total:</b>	<b>0</b>	<b>231</b>	<b>11062</b>	<b>1433</b>	<b>0</b>
VIIe	1	2	14	26	-	-
	2	5	16	183	-	-
	3	3	25	8	-	-
	4	1	15	24	-	-
	<b>Total:</b>	<b>11</b>	<b>70</b>	<b>241</b>	<b>0</b>	<b>0</b>
VIIf	1	1	-	5	-	-
	2	1	-	1	-	-
	3	1	-	3	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>
VIIg	1	1	-	9	-	-
	2	1	-	2	-	-
	3	-	-	-	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIh	1	1	-	6	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	1	-	8	-	-
	<b>Total:</b>	<b>2</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIa-b	1	3	35	1122	-	-
	2	-	25	841	-	-
	3	-	37	1248	-	-
	4	2	25	1023	-	-
	<b>Total:</b>	<b>5</b>	<b>122</b>	<b>4234</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

DAB

## FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVb	1	35	-	4689	-	-
	2	-	-	-	-	-
	3	53	-	5211	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>88</b>	<b>0</b>	<b>9900</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
IVc	1	16	-	695	-	-
	2	-	-	-	-	-
	3	10	-	534	-	-
	4	-	-	-	-	-
	<b>Total:</b>	<b>26</b>	<b>0</b>	<b>1229</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIId	1	-	1	178	-	-
	2	-	1	465	-	-
	3	-	1	158	-	-
	4	27	-	973	415	-
	<b>Total:</b>	<b>27</b>	<b>3</b>	<b>1774</b>	<b>415</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	10	-	11	-	-
	2	20	-	343	-	-
	3	14	-	55	-	-
	4	8	-	51	-	-
	<b>Total:</b>	<b>52</b>	<b>0</b>	<b>460</b>	<b>0</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIf	1	6	-	82	-	-
	2	5	-	127	-	-
	3	2	-	4	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>15</b>	<b>0</b>	<b>236</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIg	1	8	-	5	-	-
	2	7	-	69	-	-
	3	3	-	5	-	-
	4	2	-	11	-	-
	<b>Total:</b>	<b>20</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

## LEMON SOLE

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	12	1	116	-	-
	2	24	1	419	-	-
	3	17	1	399	-	-
	4	10	-	198	-	-
	<b>Total:</b>	<b>63</b>	<b>3</b>	<b>1132</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIf	1	8	-	52	-	-
	2	7	-	157	-	-
	3	3	-	26	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>20</b>	<b>0</b>	<b>258</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIg	1	10	-	46	-	-
	2	9	-	259	-	-
	3	3	-	5	-	-
	4	2	-	11	-	-
	<b>Total:</b>	<b>24</b>	<b>0</b>	<b>321</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIh	1	2	-	4	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	1	-	8	-	-
	<b>Total:</b>	<b>3</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**GURNARD**

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	78	-	993	-	-
	2	84	-	2334	-	-
	3	89	-	9545	-	-
	4	45	-	2234	-	-
	<b>Total:</b>	<b>296</b>	<b>0</b>	<b>15106</b>	<b>0</b>	<b>0</b>
VIIIf	1	29	-	753	-	-
	2	28	-	1036	-	-
	3	11	-	381	-	-
	4	7	-	52	-	-
	<b>Total:</b>	<b>75</b>	<b>0</b>	<b>2222</b>	<b>0</b>	<b>0</b>
VIIg	1	21	-	43	-	-
	2	21	-	2722	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>48</b>	<b>0</b>	<b>2790</b>	<b>0</b>	<b>0</b>
VIIh	1	24	-	87	-	-
	2	24	-	310	-	-
	3	10	-	176	-	-
	4	15	-	423	-	-
	<b>Total:</b>	<b>73</b>	<b>0</b>	<b>996</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**RED GURNARD**

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIh	1	-	4	902	291	-
	2	-	4	910	216	-
	3	-	2	461	335	-
	4	36	7	446	262	-
	<b>Total:</b>	<b>36</b>	<b>17</b>	<b>2719</b>	<b>1104</b>	<b>0</b>

SAMPLING DATA FOR:  
FRANCE

**SEA BASS**

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

SAMPLING DATA FOR:  
FRANCE

**NEPHROPS**

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIg-h	1	-	6	1183	-	-
	2	-	7	1477	-	-
	3	-	5	994	-	-
	4	-	5	990	-	-
	<b>Total:</b>		<b>0</b>	<b>23</b>	<b>4644</b>	<b>0</b>
VIII	1	32	4	4062	-	-
	2	27	4	2728	-	-
	3	34	5	5523	-	-
	4	22	3	2086	-	-
	<b>Total:</b>		<b>115</b>	<b>16</b>	<b>14399</b>	<b>0</b>
VIIIa	1	-	35	1876	-	-
	2	-	61	3081	-	-
	3	-	55	2737	-	-
	4	-	33	1776	-	-
	<b>Total:</b>		<b>0</b>	<b>184</b>	<b>9470</b>	<b>0</b>

SAMPLING DATA FOR:  
FRANCE

**WHITE ANGLER** (*Lophius piscatorius*)

1993		Number of samples		Number of fish		
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIb, k VIIIa, b, d	1	-	350	2500	250	-
	2	-	350	2500	250	-
	3	-	300	2000	250	-
	4	-	350	2500	250	-
	<b>Total:</b>		<b>0</b>	<b>1350</b>	<b>9500</b>	<b>1000</b>



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

SAMPLING DATA FOR:

**BLACK ANGLER** (*Lophius budegassa*)

FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIb, k VIIIa, b, d	1	-	350	3500	200	-
	2	-	350	3500	200	-
	3	-	300	3000	200	-
	4	-	350	3500	200	-
	<b>Total:</b>	<b>0</b>	<b>1350</b>	<b>13500</b>	<b>800</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIa	1	11	5	79	-	-
	2	10	7	90	-	-
	3	8	4	64	-	-
	4	6	9	40	-	-
	<b>Total:</b>	<b>35</b>	<b>25</b>	<b>273</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

**RED MULLET**

FRANCE

1993

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

## SAMPLING DATA FOR:

## ROUNDNOSE GRENADE

FRANCE

1993

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

## SAMPLING DATA FOR:

CUCKOO RAY (*Raja naevus*)

FRANCE

1993

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

## SAMPLING DATA FOR:

## MEAGRE

FRANCE

1993

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

## SAMPLING DATA FOR:

## HERRING

FRANCE

1993

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

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

## SAMPLING DATA FOR:

**SPRAT**

## FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIId	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	11	-	923	-	-
	<b>Total:</b>	<b>11</b>	<b>0</b>	<b>923</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**MACKEREL**

## FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIId	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	27	-	197	-	-
	<b>Total:</b>	<b>27</b>	<b>0</b>	<b>197</b>	<b>0</b>	<b>0</b>
VIIe	1	87	-	110	-	-
	2	88	-	2560	-	-
	3	98	-	11244	-	-
	4	47	-	2533	-	-
	<b>Total:</b>	<b>320</b>	<b>0</b>	<b>16447</b>	<b>0</b>	<b>0</b>
VIIIf	1	34	-	21	-	-
	2	34	-	1227	-	-
	3	13	-	535	-	-
	4	7	-	52	-	-
	<b>Total:</b>	<b>88</b>	<b>0</b>	<b>1835</b>	<b>0</b>	<b>0</b>
VIIg	1	25	-	7	-	-
	2	27	-	2872	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>58</b>	<b>0</b>	<b>2904</b>	<b>0</b>	<b>0</b>

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

SAMPLING DATA FOR:  
FRANCE

**MONK FISH**

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIa	1	-	6	200	-	-
	2	-	6	200	-	-
	3	-	6	200	-	-
	4	-	6	200	-	-
	Total:	0	24	800	0	0
VIIe	1	71	-	364	-	-
	2	78	-	1914	-	-
	3	79	-	6240	-	-
	4	41	-	1190	-	-
	Total:	269	0	9708	0	0
VIIf	1	27	-	197	-	-
	2	26	-	713	-	-
	3	10	-	267	-	-
	4	7	-	52	-	-
	Total:	70	0	1229	0	0
VIIg	1	19	-	2	-	-
	2	19	-	2281	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	Total:	44	0	2308	0	0
VIIh	1	22	-	122	-	-
	2	19	-	263	-	-
	3	8	-	174	-	-
	4	13	-	302	-	-
	Total:	62	0	861	0	0

## SAMPLING DATA FOR:

**ORANGE ROUGHY**

FRANCE

1993

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

## SAMPLING DATA FOR:

**TURBOT**

FRANCE

1993

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

## SAMPLING DATA FOR:

**BRILL**

FRANCE

1993

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

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIh	1	4	-	17	-	-
	2	3	-	22	-	-
	3	2	-	4	-	-
	4	2	-	23	-	-
	<b>Total:</b>	<b>11</b>	<b>0</b>	<b>66</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
FRANCE

**POOR COD**

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIa	1	47	-	24	-	-
	2	56	-	1634	-	-
	3	52	-	5123	-	-
	4	26	-	906	-	-
	<b>Total:</b>	<b>181</b>	<b>0</b>	<b>7687</b>	<b>0</b>	<b>0</b>
VIIe	1	23	-	4	-	-
	2	22	-	654	-	-
	3	9	-	251	-	-
	4	6	-	34	-	-
	<b>Total:</b>	<b>60</b>	<b>0</b>	<b>943</b>	<b>0</b>	<b>0</b>
VIIg	1	18	-	2	-	-
	2	15	-	2224	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>39</b>	<b>0</b>	<b>2251</b>	<b>0</b>	<b>0</b>
VIIIh	1	7	-	0	-	-
	2	8	-	67	-	-
	3	2	-	18	-	-
	4	2	-	93	-	-
	<b>Total:</b>	<b>19</b>	<b>0</b>	<b>178</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
FRANCE

**JOHN DORY**

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIe	1	57	-	9	-	-
	2	68	-	1712	-	-
	3	66	-	5444	-	-
	4	31	-	927	-	-
	<b>Total:</b>	<b>222</b>	<b>0</b>	<b>8092</b>	<b>0</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII f	1	24	-	20	-	-
	2	25	-	658	-	-
	3	9	-	251	-	-
	4	6	-	34	-	-
	<b>Total:</b>	<b>64</b>	<b>0</b>	<b>963</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII g	1	18	-	0	-	-
	2	18	-	2265	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>42</b>	<b>0</b>	<b>2290</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII h	1	15	-	26	-	-
	2	13	-	99	-	-
	3	5	-	36	-	-
	4	9	-	182	-	-
	<b>Total:</b>	<b>42</b>	<b>0</b>	<b>343</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

SCAD

## FRANCE

1993

Area	Quarter	Number of samples		Number of fish		
		Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII e	1	82	8	323	60	-
	2	86	9	2556	75	-
	3	93	-	11218	-	-
	4	46	-	2529	-	-
	<b>Total:</b>	<b>307</b>	<b>17</b>	<b>16626</b>	<b>135</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII f	1	30	-	1	-	-
	2	30	-	1128	-	-
	3	12	-	528	-	-
	4	7	-	52	-	-
	<b>Total:</b>	<b>79</b>	<b>0</b>	<b>1709</b>	<b>0</b>	<b>0</b>
Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VII g	1	22	-	1	-	-
	2	23	-	2740	-	-
	3	3	-	5	-	-
	4	3	-	20	-	-
	<b>Total:</b>	<b>51</b>	<b>0</b>	<b>2766</b>	<b>0</b>	<b>0</b>

Area	Quarter	Research vessel	Market samples	Number measured	Number aged	Racial invest.
VIIIh	1	24	-	0	-	-
	2	25	-	323	-	-
	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 research 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**

ICELAND

1993

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



## SAMPLING DATA FOR:

**HADDOCK**

ICELAND

1993

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

## SAMPLING DATA FOR:

**SAITHE**

ICELAND

1993

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

## SAMPLING DATA FOR:

**WHITING**

ICELAND

1993

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	137	-	2457	-
		-	-	-	-
	2	9	-	378	-
		-	-	-	-
	3	4	-	17	-
		-	-	-	-
	4	-	-	-	-
		-	-	-	-
	<b>Total:</b>	<b>150</b>	<b>0</b>	<b>2852</b>	<b>0</b>

SAMPLING DATA FOR:  
ICELAND  
1993

**LING**

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	94	-	235	96
	2	19	-	42	-
	3	5	-	8	5
	4	-	-	-	-
		-	1	356	100
	<b>Total:</b>	<b>118</b>	<b>1</b>	<b>641</b>	<b>201</b>

SAMPLING DATA FOR:  
ICELAND

**BLUE LING**

1993

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

SAMPLING DATA FOR:  
ICELAND

**TUSK**

1993

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	283	-	1065	357
	2	5	2	436	100
	3	25	1	278	-
	4	5	1	44	3
		-	1	304	100
	-	3	602	36	32
	<b>Total:</b>	<b>318</b>	<b>7</b>	<b>2789</b>	<b>792</b>

## SAMPLING DATA FOR:

*Sebaster marinus*

## ICELAND

1993

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

## SAMPLING DATA FOR:

*Sebastes mentella*

## ICELAND

1993

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

## SAMPLING DATA FOR:

*Sebastes mentella* Type oceanicus

## ICELAND

1993

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

SAMPLING DATA FOR:  
ICELAND

**PLAICE**

1993

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

SAMPLING DATA FOR:  
ICELAND

**DAB**

1993

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

SAMPLING DATA FOR:  
ICELAND

**GREAT SILVERSMELT**

1993

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

SAMPLING DATA FOR:  
ICELAND  
1993

**CATFISH**

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	516	-	19734	2121
	2	-	6	1172	398
	3	14	-	235	-
	4	-	5	1377	401
	5	137	-	1831	-
	6	-	-	-	-
	<b>Total:</b>	<b>667</b>	<b>11</b>	<b>24349</b>	<b>2920</b>

SAMPLING DATA FOR:  
ICELAND  
1993

**LUMPSUCKER**

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	303	-	1138	1
	2	-	-	-	-
	3	5	-	7	-
	4	-	-	-	-
	5	27	-	33	10
	6	-	-	-	-
	<b>Total:</b>	<b>336</b>	<b>0</b>	<b>1179</b>	<b>11</b>

SAMPLING DATA FOR:  
ICELAND  
1993

**WITCH**

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	173	-	1709	27
	2	-	1	314	100
	3	1	-	1	-
	4	-	1	301	100
	5	20	-	54	-
	6	-	-	-	-
	<b>Total:</b>	<b>194</b>	<b>3</b>	<b>2684</b>	<b>327</b>

SAMPLING DATA FOR:  
ICELAND

**GREENLAND HALIBUT**

1993

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

SAMPLING DATA FOR:  
ICELAND

**HALIBUT**

1993

Area	Quarter	Number of samples		Number of fish	
		Research vessel	Market samples	Number measured	Number aged
Va	1	117	-	332	143
		-	-	-	-
	2	8	-	9	2
		-	-	-	-
	3	15	-	52	-
		-	-	-	-
	4	1	-	-	1
	-	-	-	-	-
	<b>Total:</b>	<b>141</b>	<b>0</b>	<b>394</b>	<b>146</b>

SAMPLING DATA FOR:  
ICELAND

**ROUNDNOSE GRENADIER**

1993

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

## 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 and VII. 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	VIIa	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	VIIg, VIIb-c, VIIj-k	Commercial vessel	Groundfish Survey
7	April September	VIa, VIb VIIb-c, VIIj-k	Commercial vessel	Deep Water Demersal Species

SAMPLING DATA FOR:  
IRELAND

**COD**

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
VIa	1	41	-	1231	-
	2	41	-	1357	330
	3	29	5	1345	138
	4	27	5	1055	82
	Total:	138	10	4988	550
VIb	Total:	151	-	584	104
VIIa	1	10	-	775	278
	2	5	5	749	117
	3	9	8	276	142
	4	8	-	263	182
	Total:	32	13	2063	719
VIIb, c	Total:	67	-	1457	263
VIIg	1	25	-	1337	213
	2	23	-	489	270
	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:  
IRELAND

**WHITING**

1993		Number of samples		Number of fish	
Area	Quarter	Commercial	Research	N measured	N aged
VIa	1	34	-	5562	272
	2	20	-	4242	201
	3	17	-	3166	332
	4	24	33	8783	465
	Total:	95	33	21753	1270
VIb	Total:	-	-	-	-
VIIa	1	4	-	2362	165
	2	4	33	5280	553
	3	11	25	6612	617
	4	7	-	1759	192
	Total:	26	58	16013	1527
VIIb, c	Total:	130	23	8829	-
VIIg	1	29	-	4055	312
	2	20	-	4242	201
	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



## SAMPLING DATA FOR:

**HADDOCK**

IRELAND

1993

Area	Quarter	Number of samples		Number of fish	
		Commercial	Research	N measured	N aged
VIa	1	24	-	2691	106
	2	28	-	3280	212
	3	15	-	1030	260
	4	20	29	3464	373
	Total:	87	29	10465	951
VIIb	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

Area	Quarter	Number of samples		Number of fish	
		Commercial	Research	N measured	N aged
VIa	Total:	55	19	10141	540
VIIb	Total:	-	-	-	-
VIIa	1	23	-	2837	301
	2	5	58	3302	420
	3	8	14	1653	342
	4	2	-	435	177
	Total:	38	72	8227	1240
VIIb, c	Total:	73	20	4534	306
VIIg	1	39	-	2577	359
	2	12	-	1380	125
	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

Area	Quarter	Number of samples		Number of fish	
		Commercial	Research	N measured	N aged
VIa	Total:	35	5	2087	-
VIIb	Total:	-	-	-	-
VIIa	1	49	-	9937	138
	2	-	-	-	-
	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

## SAMPLING DATA FOR:

## MEGRIM

## IRELAND

1993

Area	Quarter	Number of samples		Number of fish	
		Commercial	Research	N measured	N aged
VIa	1	17	-	2204	54
	2	12	-	1541	195
	3	6	-	650	37
	4	9	16	1670	240
	Total:	44	16	6065	526
VIb	1	4	-	265	106
	2	17	-	1728	141
	3	6	-	762	-
	4	4	-	450	118
	Total:	31	0	3205	365
VIIa	Total:	-	-	-	-
VIIb, c	Total:	29	22	4382	91
VIIg	1	8	-	914	-
	2	12	-	687	65
	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

Area	Quarter	Number of samples		Number of fish	
		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

Area	Quarter	Number of samples		Number of fish	
		Commercial	Research	N measured	N aged
VIa	Total:	63	11	1317	-
VIb	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 (*Gadus morhua*), plaice (*Pleuronectes platessa*), sole (*Solea solea*), whiting (*Merlangius merlangus*) and greater silversmelt (*Argentina silus*). 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 January *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 Schollebaar* (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

COD

1993

		Research vessel samples			Market samples		
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 1	1	-	-	162	-	-	-
	2	-	-	-	-	-	-
	3	-	-	38	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>
NRFA 2	1	-	-	-	-	-	-
	2	-	-	91	-	244	50
	3	-	-	102	-	97	-
	4	-	-	13	-	77	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>206</b>	<b>0</b>	<b>418</b>	<b>50</b>
NRFA 3	1	-	-	64	-	-	-
	2	-	-	5	-	-	-
	3	-	-	20	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>0</b>	<b>0</b>	<b>0</b>
NRFA 4	1	-	-	-	-	229	50
	2	-	-	63	-	-	-
	3	-	-	104	-	-	-
	4	-	-	51	-	228	142
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>218</b>	<b>0</b>	<b>457</b>	<b>192</b>
NRFA 5	1	-	-	11	-	224	150
	2	-	-	2	-	463	94
	3	-	-	5	-	228	146
	4	-	-	9	-	259	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>1174</b>	<b>390</b>
NRFA 6	1	-	-	96	-	1609	402
	2	-	-	92	-	936	285
	3	-	-	84	-	711	200
	4	-	-	269	-	1352	348
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>541</b>	<b>0</b>	<b>4608</b>	<b>1235</b>
NRFA 7	1	-	-	-	-	-	-
	2	-	-	111	-	-	-
	3	-	-	74	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>185</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>1466</b>	<b>0</b>	<b>6657</b>	<b>1867</b>

\*)=North Sea Roundfish Sampling areas

SAMPLING DATA FOR:  
THE NETHERLANDS

**SILVER SMELT**

1993

		Research vessel samples			Market samples		
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
VIa	1	-	-	-	-	-	-
	2	-	-	-	-	128	75
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>128</b>
VIIc	1	-	-	-	-	241	50
	2	-	-	-	-	368	75
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>609</b>
VIIj	1	-	-	-	-	-	-
	2	-	-	-	-	155	25
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>155</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>892</b>	<b>225</b>

SAMPLING DATA FOR:  
THE NETHERLANDS

**HADDOCK**

1993

		Research vessel samples			Market samples		
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 1	1	-	-	262	-	-	-
	2	-	-	-	-	-	-
	3	-	-	122	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>384</b>	<b>0</b>	<b>0</b>
NRFA 2	1	-	-	-	-	-	-
	2	-	-	153	-	-	-
	3	-	-	137	-	-	-
	4	-	-	29	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>319</b>	<b>0</b>	<b>0</b>
NRFA 3	1	-	-	228	-	-	-
	2	-	-	132	-	-	-
	3	-	-	130	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>490</b>	<b>0</b>	<b>0</b>
NRFA 4	1	-	-	-	-	-	-
	2	-	-	125	-	-	-
	3	-	-	98	-	-	-
	4	-	-	75	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>298</b>	<b>0</b>	<b>0</b>

Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 5	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 6	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	1	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 7	1	-	-	-	-	-	-
	2	-	-	151	-	-	-
	3	-	-	92	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>243</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>1735</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*)=North Sea Roundfish Sampling areas

SAMPLING DATA FOR:  
THE NETHERLANDS

**NORWAY POUT**

1993

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

Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 5	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 6	1	-	-	-	-	-	-
	2	-	-	1	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 7	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>386</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*)=North Sea Roundfish Sampling areas

SAMPLING DATA FOR:  
THE NETHERLANDS

**WHITING**

1993

Area *)	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
NRFA 1	1	-	-	187	-	-	-
	2	-	-	-	-	-	-
	3	-	-	78	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>265</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 2	1	-	-	-	-	-	-
	2	-	-	137	-	172	50
	3	-	-	108	-	45	-
	4	-	-	95	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>340</b>	<b>0</b>	<b>217</b>	<b>50</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 3	1	-	-	201	-	-	-
	2	-	-	119	-	-	-
	3	-	-	94	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>414</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 4	1	-	-	-	-	123	-
	2	-	-	136	-	-	-
	3	-	-	77	-	-	-
	4	-	-	173	-	141	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>386</b>	<b>0</b>	<b>264</b>	<b>0</b>





Area *)	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
NRFA 5	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
NRFA 6	1	-	-	-	-	-	-
	2	-	-	1	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
NRFA 7	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	4	-	-	-
	4	-	-	1	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*)=North Sea Roundfish Sampling areas

SAMPLING DATA FOR:  
THE NETHERLANDS

**PLAICE**

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IV	1	-	-	126	-	-	1500
	2	-	-	-	-	-	998
	3	-	-	543	-	-	1075
	4	-	-	933	-	-	900
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1602</b>	<b>0</b>	<b>0</b>	<b>4473</b>
Wadden- sea	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	161	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>161</b>	<b>0</b>	<b>0</b>	<b>0</b>
Zeeland estuary	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	117	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>117</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>1880</b>	<b>0</b>	<b>0</b>	<b>4473</b>

SAMPLING DATA FOR:  
THE NETHERLANDS

**SOLE**

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IV	1	-	-	108	-	-	889
	2	-	-	-	-	-	1400
	3	-	-	361	-	-	800
	4	-	-	570	-	-	868
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1039</b>	<b>0</b>	<b>0</b>	<b>3957</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Wadden- sea	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	43	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Zeeland estuary	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	67	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>1149</b>	<b>0</b>	<b>0</b>	<b>3957</b>

SAMPLING DATA FOR:  
THE NETHERLANDS

**TURBOT**

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IV	1	-	-	13	-	-	-
	2	-	-	-	-	-	-
	3	-	-	169	-	-	-
	4	-	-	114	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Wadden- sea	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	6	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>302</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
THE NETHERLANDS

**BRILL**

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IV	1	-	-	25	-	-	-
	2	-	-	-	-	-	-
	3	-	-	111	-	-	-
	4	-	-	40	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>176</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>176</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
THE NETHERLANDS

**DAB**

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	-	-	383	-	-	-
	2	-	-	-	-	-	-
	3	-	-	363	-	-	-
	4	-	-	794	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1540</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Wadden- sea	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	15	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Zeeland estuary	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	34	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>1589</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
THE NETHERLANDS

**FLOUNDER**

1993

Area	Quarter	Research vessel samples			Market samples		
		N samples	N measured	N aged	N samples	N measured	N aged
IVa	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	88	-	-	-
	4	-	-	87	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Wadden- sea	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	95	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>95</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N samples	N measured	N aged
Zeeland estuary	1	-	-	-	-	-	-
	2	-	-	-	-	-	-
	3	-	-	26	-	-	-
	4	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total in all quarters:</b>		<b>0</b>	<b>0</b>	<b>296</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 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 now be 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



## SAMPLING DATA FOR:

**BLUE WHITING**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	69	901	-	-	-	-
	2	-	-	1	9	-	-	-	-
	3	-	-	8	136	-	-	-	-
	4	-	-	6	73	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>1119</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IIa	1	-	-	58	1056	-	-	-	-
	2	2	100	12	273	-	-	-	-
	3	27	1050	46	1359	-	-	-	-
	4	-	-	28	266	-	-	-	-
	<b>Total:</b>	<b>29</b>	<b>1150</b>	<b>144</b>	<b>2954</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IIb	1	-	-	2	6	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	44	507	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>513</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	2	2	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Vb	1	-	-	-	-	-	-	-	-
	2	1	114	1	114	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>114</b>	<b>1</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**CATFISH**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	124	436	-	-	-	-
	2	-	-	4	17	-	-	-	-
	3	-	-	58	138	-	-	-	-
	4	-	-	4	6	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>190</b>	<b>597</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	32	77	-	-	-	-
	2	-	-	1	7	-	-	-	-
	3	-	-	4	4	-	-	-	-
	4	-	-	22	72	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	12	27	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	227	2369	-	-	-	-
	4	-	-	3	109	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>242</b>	<b>2505</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

COD

NORWAY

1993

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

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	8	163	32	4533	-	-	-	-
	2	-	-	3	282	-	-	-	-
	3	76	2376	489	39871	-	-	-	-
	4	2	140	4	688	-	-	-	-
	<b>Total:</b>		<b>86</b>	<b>2679</b>	<b>528</b>	<b>45374</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

CAPELIN

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		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	-	-	-	-
	<b>Total:</b>		<b>134</b>	<b>7816</b>	<b>394</b>	<b>22248</b>	<b>1</b>	<b>100</b>	<b>1</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	12	644	48	1821	3	297	3	297
	2	-	-	5	396	-	-	-	-
	3	-	-	5	77	-	-	-	-
	4	-	-	2	108	-	-	-	-
	<b>Total:</b>		<b>12</b>	<b>644</b>	<b>60</b>	<b>2402</b>	<b>3</b>	<b>297</b>	<b>3</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	11	612	30	1716	-	-	-	-
	2	-	-	1	30	-	-	-	-
	3	11	575	119	3565	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>		<b>22</b>	<b>1187</b>	<b>150</b>	<b>5311</b>	<b>0</b>	<b>0</b>	<b>0</b>









## SAMPLING DATA FOR:

**GRENADIER**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	1	1	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IIa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## SAMPLING DATA FOR:

**HADDOCK**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	83	1255	382	43083	5	425	1	144
	2	-	-	16	782	12	888	2	561
	3	11	392	115	4929	-	-	-	-
	4	4	125	25	1440	-	-	-	-
	<b>Total:</b>	<b>98</b>	<b>1772</b>	<b>538</b>	<b>50234</b>	<b>17</b>	<b>1313</b>	<b>3</b>	<b>705</b>

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

SAMPLING DATA FOR:

**HAKE**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	1	1	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	2	3	-	-	-	-
	2	-	-	2	13	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	3	3	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
NORWAY

**HERRING**

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	55	2376	220	9761	-	-	-	-
	2	13	390	25	1852	-	-	-	-
	3	38	2018	152	12211	-	-	-	-
	4	9	420	24	1893	-	-	-	-
	<b>Total:</b>	<b>115</b>	<b>5204</b>	<b>421</b>	<b>25717</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IIa	1	11	829	65	1480	-	-	-	-
	2	28	1434	32	2042	3	300	-	300
	3	60	2969	112	4995	-	-	-	-
	4	19	1527	46	2101	-	-	-	-
	<b>Total:</b>	<b>118</b>	<b>6759</b>	<b>255</b>	<b>10618</b>	<b>3</b>	<b>300</b>	<b>0</b>	<b>300</b>
IIb	1	-	-	7	11	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	4	257	81	2423	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>4</b>	<b>257</b>	<b>88</b>	<b>2434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IVa	1	1	100	1	100	-	-	-	-
	2	1	2	1	2	7	700	-	700
	3	-	-	-	-	-	-	-	-
	4	7	450	18	1294	-	-	-	-
	<b>Total:</b>	<b>9</b>	<b>552</b>	<b>20</b>	<b>1396</b>	<b>7</b>	<b>700</b>	<b>0</b>	<b>700</b>









Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	-	-	-	-	-	-
	2	1	11	1	11	-	-	-	-
	3	12	174	34	456	-	-	-	-
	4	-	-	4	6	-	-	-	-
	<b>Total:</b>	<b>13</b>	<b>185</b>	<b>39</b>	<b>473</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	1	1	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

**MEGRIM**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	3	11	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	5	8	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:  
NORWAY

**MYCTOPHIDAE**

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	1	1	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	1	1	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	-	-	-	-	-	-
	2	-	-	6	135	-	-	-	-
	3	-	-	10	481	-	-	-	-
	4	-	-	1	1	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>617</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	1	33	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>







SAMPLING DATA FOR:

**REDFISH***Sebastes mentella*

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	10	199	186	9518	-	-	-	-
	2	-	-	3	20	-	-	-	-
	3	4	135	27	1810	-	-	-	-
	4	1	16	2	147	-	-	-	-
	Total:	15	350	218	11495	0	0	0	0
IIa	1	9	211	79	5376	-	-	-	-
	2	-	-	1	138	-	-	-	-
	3	2	67	29	1672	-	-	-	-
	4	2	137	3	239	-	-	-	-
	Total:	13	415	112	7425	0	0	0	0
IIb	1	1	27	24	2160	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	15	230	194	9896	-	-	-	-
	4	-	-	1	1	-	-	-	-
	Total:	16	257	219	12057	0	0	0	0
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	Total:	0	0	0	0	0	0	0	0

SAMPLING DATA FOR:

**REDFISH***Sebastes viviparus*

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	8	28	-	-	-	-
	2	-	-	3	61	-	-	-	-
	3	-	-	1	2	-	-	-	-
	4	-	-	1	4	-	-	-	-
	Total:	0	0	13	95	0	0	0	0



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

SAMPLING DATA FOR:  
NORWAY

**SAITHE**

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	39	975	-	-	-	-
	2	-	-	2	2	1	108	-	-
	3	1	11	27	268	-	-	-	-
	4	5	152	10	311	-	-	-	-
	<b>Total:</b>		<b>6</b>	<b>163</b>	<b>78</b>	<b>1556</b>	<b>1</b>	<b>108</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	3	93	71	2320	4	187	-	-
	2	-	-	11	59	7	595	1	87
	3	-	-	36	495	-	-	-	-
	4	31	717	57	4086	-	-	-	-
	<b>Total:</b>		<b>34</b>	<b>810</b>	<b>175</b>	<b>6960</b>	<b>11</b>	<b>782</b>	<b>1</b>

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	1	1	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	45	212	-	-	-	-
	4	-	-	2	8	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>221</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	1	17	3	213	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>17</b>	<b>3</b>	<b>213</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

**SANDEEL**

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	-	-	-	-	-	-
	2	-	-	2	101	-	-	-	-
	3	-	-	17	403	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>504</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	-	-	-	-	-	-
	2	-	-	2	2	-	-	-	-
	3	-	-	2	2	-	-	-	-
	4	-	-	1	2	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	2	10	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

SPRAT

NORWAY

1993

Area	Quarter	Research vessel samples				Market samples			
		Aged		Measured		Aged		Measured	
		N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
I	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	-	-	-	-	-	-
	2	-	-	1	1	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	8	430	16	1408	-	-	-	-
	<b>Total:</b>	<b>8</b>	<b>430</b>	<b>17</b>	<b>1409</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	12	1006	20	1633	-	-	-	-
	<b>Total:</b>	<b>12</b>	<b>1006</b>	<b>20</b>	<b>1633</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>





SAMPLING DATA FOR:

**WHITING**

NORWAY

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	-	-	5	11	-	-	-	-
	2	-	-	3	6	-	-	-	-
	3	-	-	2	2	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	7	31	-	-	-	-
	2	-	-	7	55	-	-	-	-
	3	-	-	9	20	-	-	-	-
	4	-	-	31	350	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>456</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	14	88	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

**WITCH**

NORWAY

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	-	-	6	19	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIa	1	-	-	6	19	-	-	-	-
	2	-	-	1	2	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	4	6	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IIb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVa	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
IVb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N fish	N samples	N fish	N samples	N fish	N samples	N fish
Vb	1	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 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 surveys 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 (*Merluccius merluccius*), black scabbard fish (*Aphanopus carbo*), some species of seabreams (*Boops boops*, *Pagellus acarne* and *Spondylisoma cantharus*), monkfish (*Lophius budegassa* and *Lophius piscatorius*) and megrim (*Lepidorhombus boscii* and *Lepidorhombus whiffiagonis*).

## SAMPLING DATA FOR:

**HAKE**

## PORTUGAL

1993

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

## SAMPLING DATA FOR:

**BLACK SCABBARD FISH**

## PORTUGAL

1993

Area	Quarter	Number of samples		Number of fish measured
		Research vessel	Market samples	
IXa	1		26	504
	2	-	-	-
	3	-	-	-
	4	-	-	-
	<b>Total:</b>	<b>0</b>	<b>26</b>	<b>504</b>

## SAMPLING DATA FOR:

**Boops boops**

## PORTUGAL

1993

Area	Quarter	Number of samples		Number of fish measured
		Research vessel	Market samples	
IXa	1	31	22	2800
	2	-	20	918
	3	23	9	1987
	4	26	9	1524
	<b>Total:</b>	<b>80</b>	<b>60</b>	<b>7229</b>



## SAMPLING DATA FOR:

*Pagellus acarne*

## PORTUGAL

1993

Area	Quarter	Number of samples		Number of fish measured
		Research vessel	Market samples	
IXa	1	16	40	4210
	2	-	46	2539
	3	8	46	2900
	4	9	54	3369
	<b>Total:</b>	<b>33</b>	<b>186</b>	<b>13018</b>

## SAMPLING DATA FOR:

*Spondyliosoma cantharus*

## PORTUGAL

1993

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

## SAMPLING DATA FOR:

MONKFISH (*Lophius budegassa*)

## PORTUGAL

1993

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

## SAMPLING DATA FOR:

MONKFISH (*Lophius piscatorius*)

## PORTUGAL

1993

Area	Quarter	Number of samples		Number of fish measured
		Research vessel	Market samples	
IXa	1	7	41	207
	2	2	36	220
	3	-	24	206
	4	1	31	467
	<b>Total:</b>	<b>10</b>	<b>132</b>	<b>1100</b>

SAMPLING DATA FOR:  
PORTUGAL

MEGRIM  
*Lepidorhombus boscii* & *Lepidorhombus whiffiagonis*

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

## 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 distribution 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		Number of fish		
Area	Quarter	Measured	Feeding analysis	Aged
I	1	27313	2538	444
	2	47426	3639	1842
	3	53366	3969	1202
	4	35125	3393	887
	<b>Total:</b>	<b>163230</b>	<b>13539</b>	<b>4375</b>
IIa	1	17720	1644	229
	2	44599	4100	2795
	3	17	1	1
	4	9842	1492	726
	<b>Total:</b>	<b>72178</b>	<b>7237</b>	<b>3751</b>
IIb	1	1004	75	-
	2	5644	788	334
	3	5716	650	225
	4	33691	4305	1930
	<b>Total:</b>	<b>46055</b>	<b>5818</b>	<b>2489</b>
<b>Total all areas:</b>		<b>281463</b>	<b>26594</b>	<b>10615</b>

## SAMPLING DATA FOR:

**HADDOCK**

RUSSIA

1993

**Number of fish**

Area	Quarter	Measured	Feeding analysis	Aged
I	1	6255	975	225
	2	16794	1351	651
	3	20349	1233	625
	4	9443	1461	858
	Total:	52841	5020	2359
Area	Quarter	Measured	Feeding analysis	Aged
IIa	1	792	252	101
	2	5560	1066	357
	3	14	-	-
	4	2947	592	396
	Total:	9313	1910	854
Area	Quarter	Measured	Feeding analysis	Aged
IIb	1	-	-	-
	2	2405	275	175
	3	-	-	-
	4	7310	1716	970
	Total:	9715	1991	1145
<b>Total all areas:</b>		<b>71869</b>	<b>8921</b>	<b>4358</b>

## SAMPLING DATA FOR:

**REDFISH (*Sebastes marinus*)**

RUSSIA

1993

**Number of fish**

Area	Quarter	Measured	Feeding analysis	Aged
I	1	163	-	-
	2	2677	140	-
	3	63	-	-
	4	2256	164	164
	Total:	5159	304	164
Area	Quarter	Measured	Feeding analysis	Aged
IIa	1	-	-	-
	2	15109	2171	600
	3	67	-	-
	4	2390	294	294
	Total:	17566	2465	894
Area	Quarter	Measured	Feeding analysis	Aged
IIb	1	-	-	-
	2	6531	475	190
	3	48	-	-
	4	5613	438	438
	Total:	12192	913	628
<b>Total all areas:</b>		<b>34917</b>	<b>3682</b>	<b>1686</b>

SAMPLING DATA FOR:  
RUSSIA

**GREENLAND HALIBUT**

1993

		Number of fish		
Area	Quarter	Measured	Feeding analysis	Aged
I	1	17	-	-
	2	129	-	-
	3	-	-	-
	4	794	339	289
	<b>Total:</b>	<b>940</b>	<b>339</b>	<b>289</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIa	1	-	-	-
	2	208	174	174
	3	-	-	-
	4	2111	646	419
	<b>Total:</b>	<b>2319</b>	<b>820</b>	<b>593</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIb	1	-	-	-
	2	1135	397	372
	3	-	-	-
	4	3306	1197	920
	<b>Total:</b>	<b>4441</b>	<b>1594</b>	<b>1292</b>
<b>Total all areas:</b>		<b>7700</b>	<b>2753</b>	<b>2174</b>

SAMPLING DATA FOR:  
RUSSIA

**SAITHE**

1993

		Number of fish		
Area	Quarter	Measured	Feeding analysis	Aged
I	1	50	-	-
	2	738	71	5
	3	196	25	-
	4	24	-	-
	<b>Total:</b>	<b>1008</b>	<b>96</b>	<b>5</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIa	1	-	-	-
	2	1030	175	125
	3	1	-	-
	4	3	-	-
	<b>Total:</b>	<b>1034</b>	<b>175</b>	<b>125</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIb	1	-	-	-
	2	-	-	-
	3	-	-	-
	4	36	-	-
	<b>Total:</b>	<b>36</b>	<b>0</b>	<b>0</b>
<b>Total all areas:</b>		<b>2078</b>	<b>271</b>	<b>130</b>

SAMPLING DATA FOR:  
RUSSIA

**CATFISH**

1993

		Number of fish		
Area	Quarter	Measured	Feeding analysis	Aged
I	1	112	-	-
	2	56	2	2
	3	169	25	-
	4	109	67	14
	<b>Total:</b>	<b>446</b>	<b>94</b>	<b>16</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIa	1	-	-	-
	2	155	37	29
	3	-	-	-
	4	465	237	60
	<b>Total:</b>	<b>620</b>	<b>274</b>	<b>89</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIb	1	-	-	-
	2	489	266	62
	3	5	-	-
	4	684	369	133
	<b>Total:</b>	<b>1178</b>	<b>635</b>	<b>195</b>
<b>Total all areas:</b>		<b>2244</b>	<b>1003</b>	<b>300</b>

SAMPLING DATA FOR:  
RUSSIA

**PLAICE**

1993

		Number of fish		
Area	Quarter	Measured	Feeding analysis	Aged
I	1	666	106	1
	2	238	97	-
	3	6783	848	471
	4	1	-	-
	<b>Total:</b>	<b>7688</b>	<b>1051</b>	<b>472</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIa	1	-	-	-
	2	-	-	-
	3	-	-	-
	4	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>
Area	Quarter	Measured	Feeding analysis	Aged
IIb	1	-	-	-
	2	-	-	-
	3	-	-	-
	4	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total all areas:</b>		<b>7688</b>	<b>1051</b>	<b>472</b>

## SAMPLING DATA FOR:

## LONG ROUGH DAB

RUSSIA

1993

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

## 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 estimate 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
<i>M. merluccius</i>	19	2151

IXa North	Number of Samples	Number of fish measured
<i>M. merluccius</i>	14	479
<i>L. boschii</i>	11	787
<i>L. budegassa</i>	5	30
<i>L. piscatorius</i>	3	4

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

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

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

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

Area	Quarter	Number of samples		Number of fish	
		Research	Market	Measured	Aged
IIb	1	-	-	-	-
	2	-	-	-	-
	3	22	-	5540	-
	4	-	-	-	-
	<b>Total:</b>	<b>22</b>	<b>0</b>	<b>5540</b>	<b>0</b>

## SAMPLING DATA FOR:

HAKE

## SPAIN

1993

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

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

## SAMPLING DATA FOR:

*Lepidorhombus whiffiagonis*

## SPAIN

1993

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



## SAMPLING DATA FOR:

*Lepidorhombus boscii*

SPAIN

1993

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

## SAMPLING DATA FOR:

*Lophius budegassa*

SPAIN

1993

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

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

## SAMPLING DATA FOR:

*Lophius piscatorius*

## SPAIN

1993

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

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

## 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

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

## SAMPLING DATA FOR:

**HADDOCK**

SWEDEN

1993

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

## SAMPLING DATA FOR:

**WHITING**

SWEDEN

1993

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

## SAMPLING DATA FOR:

**NORWAY POUT**

SWEDEN

1993

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

## SAMPLING DATA FOR:

**PLAICE**

SWEDEN

1993

Area	Quarter	Number of samples		Number of fish			
		Research	Market	Measured		Aged	
				Research	Market	Research	Market
Illa	1	48	-	947	-	730	-
	2	51	-	463	-	435	-
	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	Locality	Activities
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 Antropogenic debris survey
10	18/10-15/11	North Sea	GOV trawl survey Macrobenthos survey Antropogenic debris survey

### R/V CORYSTES surveys in 1993

Survey no.	Period	Locality	Activities
3	4/3-29/3	Irish Sea, Bristol Channel, Celtic Sea and Western Channel	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 Overture 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**

UNITED KINGDOM (England and Wales)

1993

Area	Quarter	Market samples			Research vessel
		N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	11
	4	-	-	-	20
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>

Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	5
	4	-	-	-	4
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIa	1	1	60	-	-
	2	1	639	-	-
	3	-	-	-	83
	4	-	-	-	-
	<b>Total:</b>	<b>2</b>	<b>699</b>	<b>0</b>	<b>83</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIId	1	-	-	-	-
	2	1	313	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>313</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIe	1	17	1683	-	2
	2	10	1246	-	-
	3	11	968	-	-
	4	16	1436	-	-
	<b>Total:</b>	<b>54</b>	<b>5333</b>	<b>0</b>	<b>2</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIIf	1	5	810	-	2
	2	3	460	-	-
	3	3	634	-	33
	4	2	153	-	-
	<b>Total:</b>	<b>13</b>	<b>2057</b>	<b>0</b>	<b>35</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIg	1	3	485	-	22
	2	-	-	-	48
	3	-	-	-	-
	4	6	998	-	-
	<b>Total:</b>	<b>9</b>	<b>1483</b>	<b>0</b>	<b>70</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIh	1	3	524	-	-
	2	6	1403	-	-
	3	4	938	-	-
	4	2	344	-	-
	<b>Total:</b>	<b>15</b>	<b>3209</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIj	1	-	-	-	52
	2	1	78	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>78</b>	<b>0</b>	<b>52</b>

SAMPLING DATA FOR:

**SPRAT**

UNITED KINGDOM (England and Wales)

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

SAMPLING DATA FOR:

**BASS**

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	1	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVc	1	-	-	-	-
	2	20	73	20	-
	3	19	200	77	-
	4	12	27	64	-
	<b>Total:</b>	<b>51</b>	<b>300</b>	<b>161</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIa	1	2	8	1	-
	2	3	8	-	-
	3	14	193	87	-
	4	-	-	-	-
	<b>Total:</b>	<b>19</b>	<b>209</b>	<b>88</b>	<b>0</b>

Area	Quarter	N samples	N measured	N aged	N aged
VII d	1	6	21	51	-
	2	47	684	496	-
	3	51	1045	1152	-
	4	17	496	290	-
	<b>Total:</b>	<b>121</b>	<b>2246</b>	<b>1989</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VII e	1	20	266	342	-
	2	15	438	226	-
	3	13	176	81	-
	4	15	547	251	-
	<b>Total:</b>	<b>63</b>	<b>1427</b>	<b>900</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VII f	1	4	7	6	-
	2	7	138	228	-
	3	22	331	422	-
	4	7	252	19	-
	<b>Total:</b>	<b>40</b>	<b>728</b>	<b>675</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VII g	1	-	-	-	-
	2	-	-	6	-
	3	-	-	4	-
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VII h	1	1	2	2	-
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VII j	1	-	-	-	-
	2	-	-	-	-
	3	1	102	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>1</b>	<b>102</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIII a	1	-	-	-	6
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>



SAMPLING DATA FOR:  
UNITED KINGDOM (England and Wales)

**COD**

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

Area	Quarter	N samples	N measured	N aged	N aged
VIId	1	6	186	41	-
	2	2	71	9	-
	3	3	57	29	-
	4	17	261	164	-
	<b>Total:</b>	<b>28</b>	<b>575</b>	<b>243</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIle	1	21	815	144	7
	2	11	607	130	-
	3	13	202	127	-
	4	5	75	102	-
	<b>Total:</b>	<b>50</b>	<b>1699</b>	<b>503</b>	<b>7</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIf	1	18	1752	-	-
	2	3	231	26	-
	3	2	57	-	2
	4	15	498	80	-
	<b>Total:</b>	<b>38</b>	<b>2538</b>	<b>106</b>	<b>2</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIfg	1	1	17	7	72
	2	-	-	-	-
	3	-	-	-	1
	4	-	-	48	-
	<b>Total:</b>	<b>1</b>	<b>17</b>	<b>55</b>	<b>73</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIfh	1	3	63	-	9
	2	4	154	-	-
	3	2	45	27	-
	4	1	87	-	-
	<b>Total:</b>	<b>10</b>	<b>349</b>	<b>27</b>	<b>9</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIfj	1	-	-	-	1
	2	1	121	-	-
	3	1	22	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>2</b>	<b>143</b>	<b>0</b>	<b>1</b>

SAMPLING DATA FOR:

**SPURDOG**

UNITED KINGDOM (England and Wales)

1993

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

Area	Quarter	N samples	N measured	N aged	N aged
IVc	1	6	149	-	-
	2	9	342	-	-
	3	-	-	-	-
	4	7	345	-	-
	<b>Total:</b>		<b>22</b>	<b>836</b>	<b>0</b>
VIa	1	-	-	-	-
	2	1	82	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>		<b>1</b>	<b>82</b>	<b>0</b>
VIIa	1	-	-	-	-
	2	2	205	-	-
	3	10	327	-	-
	4	4	335	-	-
	<b>Total:</b>		<b>16</b>	<b>867</b>	<b>0</b>
VIIe	1	2	84	-	-
	2	-	-	-	-
	3	2	77	-	-
	4	1	88	-	-
	<b>Total:</b>		<b>5</b>	<b>249</b>	<b>0</b>
VIIf	1	3	194	-	-
	2	5	438	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>		<b>8</b>	<b>632</b>	<b>0</b>
VIIg	1	1	55	-	-
	2	-	-	-	-
	3	-	-	-	-
	4	1	81	-	-
	<b>Total:</b>		<b>2</b>	<b>136</b>	<b>0</b>
VIIh	1	-	-	-	-
	2	-	-	-	-
	3	2	197	-	-
	4	-	-	-	-
	<b>Total:</b>		<b>2</b>	<b>197</b>	<b>0</b>
VIIj	1	1	5	-	-
	2	1	39	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>		<b>2</b>	<b>44</b>	<b>0</b>

SAMPLING DATA FOR:

**HADDOCK**

UNITED KINGDOM (England and Wales)

1993

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

SAMPLING DATA FOR:

**HERRING**

UNITED KINGDOM (England and Wales)

1993

		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	454
	4	-	-	-	493
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>947</b>

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

SAMPLING DATA FOR:

**HAKE**

UNITED KINGDOM (England and Wales)

1993

		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	18
	4	-	-	-	16
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	7
	4	-	-	-	1
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIa	1	1	219	-	-
	2	2	443	-	-
	3	1	115	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>4</b>	<b>777</b>	<b>0</b>	<b>0</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIa	1	4	549	-	69
	2	7	727	-	-
	3	1	43	-	-
	4	2	192	-	-
	<b>Total:</b>	<b>14</b>	<b>1511</b>	<b>0</b>	<b>69</b>

Area	Quarter	N samples	N measured	N aged	N aged
VIIe	1	11	633	-	2
	2	4	148	-	-
	3	12	865	-	-
	4	10	824	-	-
	<b>Total:</b>	<b>37</b>	<b>2470</b>	<b>0</b>	<b>2</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIf	1	13	1129	-	14
	2	10	814	-	-
	3	5	385	-	-
	4	6	346	-	-
	<b>Total:</b>	<b>34</b>	<b>2674</b>	<b>0</b>	<b>14</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIg	1	1	135	-	24
	2	1	115	-	-
	3	3	394	-	-
	4	8	964	-	-
	<b>Total:</b>	<b>13</b>	<b>1608</b>	<b>0</b>	<b>24</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIh	1	3	219	-	9
	2	3	205	-	-
	3	6	596	-	-
	4	4	411	-	-
	<b>Total:</b>	<b>16</b>	<b>1431</b>	<b>0</b>	<b>9</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIj	1	2	274	-	102
	2	3	353	-	-
	3	4	498	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>9</b>	<b>1125</b>	<b>0</b>	<b>102</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIIa	1	-	-	-	15
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>

SAMPLING DATA FOR:

**HORSE MACKEREL**

UNITED KINGDOM (England and Wales)

1993

Area	Quarter	Market samples			Research vessel
		N samples	N measured	N aged	N aged
VIIe	1	2	266	-	-
	2	1	33	-	-
	3	2	182	-	-
	4	3	383	-	-
	<b>Total:</b>	<b>8</b>	<b>864</b>	<b>0</b>	<b>0</b>

SAMPLING DATA FOR:

## LEMON SOLE

UNITED KINGDOM (England and Wales)

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

SAMPLING DATA FOR:

**MACKEREL**

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	127
	4	-	-	-	230
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>357</b>
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	334
	4	-	-	-	101
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>435</b>
IVc	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	128
	4	-	-	-	119
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>247</b>
VIIe	1	13	2281	212	-
	2	7	760	-	-
	3	8	470	153	-
	4	10	1307	-	-
	<b>Total:</b>	<b>38</b>	<b>4818</b>	<b>365</b>	<b>0</b>
VIIIf	1	1	242	-	-
	2	5	729	-	-
	3	5	825	-	-
	4	4	532	-	-
	<b>Total:</b>	<b>15</b>	<b>2328</b>	<b>0</b>	<b>0</b>
VIIIa	1	-	-	-	3
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>



SAMPLING DATA FOR:

**MEGRIM**

UNITED KINGDOM (England and Wales)

1993

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

SAMPLING DATA FOR:

**PILCHARD**

UNITED KINGDOM (England and Wales)

1993

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

SAMPLING DATA FOR:

**PLAICE**

UNITED KINGDOM (England and Wales)

1993

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

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

SAMPLING DATA FOR:

SAITHE

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVa	1	1	54	-	-
	2	2	49	-	-
	3	3	291	-	312
	4	1	92	-	230
	<b>Total:</b>	<b>7</b>	<b>486</b>	<b>0</b>	<b>542</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	7	439	-	-
	2	12	489	-	-
	3	12	456	-	13
	4	7	258	-	3
	<b>Total:</b>	<b>38</b>	<b>1642</b>	<b>0</b>	<b>16</b>

SAMPLING DATA FOR:

SOLE

UNITED KINGDOM (England and Wales)

1993

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

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

SAMPLING DATA FOR:

**WHITING**

UNITED KINGDOM (England and Wales)

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

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

SAMPLING DATA FOR:

**DAB**

UNITED KINGDOM (England and Wales)

1993

Area	Quarter	Market samples			Research vessel
		N samples	N measured	N aged	N aged
VIIId	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	250
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>250</b>

SAMPLING DATA FOR:

**TURBOT**

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	1
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
Area	Quarter	N samples	N measured	N aged	N aged
VIIIa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	6
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>

SAMPLING DATA FOR:

**BRILL**

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
VIIIa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	20
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>

SAMPLING DATA FOR:

**NORWAY POUT**

UNITED KINGDOM (England and Wales)

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

SAMPLING DATA FOR:

**CATFISH**

UNITED KINGDOM (England and Wales)

1993

Area	Quarter	Market samples			Research vessel
		N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	4
	4	-	-	-	2
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	2
	4	-	-	-	-
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>

SAMPLING DATA FOR:

**FOUR-BEARDED ROCKLING**

UNITED KINGDOM (England and Wales)

1993

Area	Quarter	Market samples			Research vessel
		N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	19
	4	-	-	-	4
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	24
	4	-	-	-	18
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>

SAMPLING DATA FOR:

**POOR COD**

UNITED KINGDOM (England and Wales)

1993

Area	Quarter	Market samples			Research vessel
		N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	16
	4	-	-	-	34
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>



Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	11
	4	-	-	-	28
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVc	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	13
	4	-	-	-	24
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>

SAMPLING DATA FOR:

**POLLACK**

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVa	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	11
	4	-	-	-	5
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>

SAMPLING DATA FOR:

**POUT WHITING**

UNITED KINGDOM (England and Wales)

1993		Market samples			Research vessel
Area	Quarter	N samples	N measured	N aged	N aged
IVb	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	23
	4	-	-	-	19
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>
Area	Quarter	N samples	N measured	N aged	N aged
IVc	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	11
	4	-	-	-	24
	<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>

SAMPLING DATA FOR:

**HALIBUT**

UNITED KINGDOM (England and Wales)

1993

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

SAMPLING DATA FOR:

**TUSK**

UNITED KINGDOM (England and Wales)

1993

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

**UNITED KINGDOM (Scotland 1992)**

(P. A. Kunzlik)

Monitoring of the 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

Species	North Sea IV		West Scotland VIa		Rockall VIb	
	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	-	-

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

## Discards

UNITED KINGDOM (Scotland)

1992

Species	North Sea IV		West Scotland VIa	
	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 used by ICES for North Sea stocks 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)

Monitoring of the 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 1993 is tabulated below. Samples are stratified by month, gear type and sea area.

## SAMPLING DATA

**Market Samples**

UNITED KINGDOM (Scotland)

1993

Species	North Sea IV		West Scotland VIa		Rockall VIb	
	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	-	-
Megrim	2973	-	14368	283	1369	30
Anglerfish	3879	-	16955	299	1206	61
Spurdog	1169	-	1244	-	-	-
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

**Discards**

UNITED KINGDOM (Scotland)

1993

Species	North Sea IV		West Scotland VIa	
	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	-	65487	-

## UNITED KINGDOM (Scotland) 1993

Vessel	Period	Area	Comment
Scotia	February	North Sea IV	Scottish contribution to IBTS. Results used by ICES for North Sea stocks 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

## 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.