

**SCIENTIFIC COUNCIL MEETING – JUNE 2013****PORTUGUESE RESEARCH REPORT FOR 2012**

by

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Av. BRASÍLIA 1449-006, LISBOA, PORTUGAL**A. Status of the fisheries**

In 2012, the Portuguese provisional nominal catches proceeding from NAFO Regulatory Sub Area 3 reached 16 313 ton (Table 1-A). Nominal catches increased continuously from 2000 to 2003, when they peaked at 21 300 ton, but declined sharply afterwards (Table I-B); during 2004- 2008 catches stabilised between 11 500 and 13 000 ton. Over recent years (2009-2012) catches increased from around 15 400 ton (2009-2010) to near 16 300 ton (2011-2012).

Based on provisional effort data, in 2012 the fishing effort in days reached the highest value since 2003, due mainly to an increase in both Divisions 3L and 3M, while in both Divisions 3N and 3O the fishing effort remained more or less stable. In 2012, 11 trawlers composed the Portuguese fleet that operated in the NAFO area.

Due to the reopening in 2010, of the fishery for cod in Div 3M (Flemish Cap), this species represents now about 30% of the total catch in this division and 16% of the Portuguese catches in all Sub Area 3. Catches of redfish remained more or less stable in Div. 3L, 3N and 3O, but fell 36% in Div. 3M and, because of that, the total catches of this specie decreased 2000 ton from 2011 to 2012. Nevertheless, redfish remains by far the most important species in the Portuguese commercial catches from Sub Area 3, representing in recent years more than 50% of the overall catch.

The by-catch of American plaice in Div. 3N doubled again from 2011 to 2012. A similar increase was observed for the roughhead grenadier catch in Div. 3L and 3M. The shrimp fishery in Div. 3L, that in 2009 its catches reached 20% of the total catch in this division, declined significantly in 2010 and was reduced to values around zero in 2011-2012.

The Greenland halibut catches decreased around 20% from 2011 to 2012, but, Greenland halibut together with redfish continues to be the bulk of the catch on Div. 3L, around 75% of the overall catch (in previous years was around 90%). Grenadiers (roughhead and roundnose grenadiers) in 2012 represent almost 20% of the total catch in Div. 3L.

The catches of other species remained more or less stable in all divisions.

The catch in Div. 3M (mainly cod and redfish) continue, like the most recent years, to represent around 50% of the total catch in 2012. This division is at present the most important ground for the Portuguese NAFO fishery. On both Div. 3M and 3O, redfish is the most important fishery, with more than 50% of the catches in Div. 3M and almost 90% in Div. 3O. In Div. 3N, despite the fall in the redfish catches (30% less), for the third year, the redfish fishery is the most important one (33% of the total catch in 2012 against 84% in 2010, due to rising of both American plaice by-catch and yellowtail flounder catch), replacing the skate fishery that for several years represented 50-70% of the catch in this division.

## **B. Portuguese Annual Sampling Program**

### **1. Catch and effort sampling.**

Effort and CPUE data for 2012 Portuguese trawl fishery on the NAFO Regulatory Area were obtained through the revision of skipper logbook from one trawler, kindly supplied by its owner. All the information (round weight of the catch by species, fishing effort, positions and depths) has been recorded on a tow-by-tow basis. The vessel conversion factors were used to convert its processed landings in catches. Effort data in days and hours were supplied by the Portuguese administration, changes in the administration database make it possible since 2009 (Table II-A/B).

The daily catch and effort data from the logbook were used to estimate the directed effort and CPUE for each of the target species/stock, as well as the main by-catch species and depth range of the different fisheries, on a monthly basis. From the data available, the majority of the fishing effort was directed towards cod, redfish and Greenland halibut. Data regarding directed effort and catch rates of the Greenland halibut fishery are presented in Table III to IV-B and Fig. 1.

The Greenland halibut CPUE series was updated with the 2012 observed CPUEs. The additive model (Ávila de Melo and Alpoim, 1995), was upgraded in 1998 (Alpoim *et al.*, 1998) and used, like in previous years, to standardise the observed CPUEs, but excluding the vessel factor because the sampling program in recent years was carried out on vessels that were not sampled before. If the vessel factor is applied, these new vessels will increase a lot the noise. Because they are the only vessels sampled in the recent years, we assumed that all vessels belong to the same category what is realistic. From January 1988 till April 1995 each monthly observed CPUE of this series was previously corrected for 130mm mesh size (Ávila de Melo and Alpoim, 1996). In this analysis, any observation corresponding to a month and a trawler with less than 10 hours of directed effort was rejected. The CPUEs are presented in Tables IV and Fig. 1, with the associated standard errors ( $\pm 2$  standard errors in the Figures) and coefficients of variation.

### **1.1. Comments on catch and effort data (based on the vessels sampled)**

#### **1.1.1. Greenland halibut in Div. 3L, 3M, 3N and 3O**

In Div. 3L catch rates declined prior to the boom of the deep-water fishery (Table IV-A, Fig. 1). However, it is from 1990 to 1991, i.e. from the first to the second year of this new fishery in the Regulatory Area, that CPUEs fell by half. Between 1991 and 1994 catch rates remained stable at a low level. Since then, catch rates gradually increased, reaching an upper level in 1999-2000. Catch rates declined in 2001 and remained stable at that lower level in 2002 and 2003. In 2004 the catch rates decline again, reaching the lowest value since 1994. However, after 2004 the Greenland halibut catch rates recovered continuously and despite the high variability from 2006 to 2012 the catch rates reached the highest values observed since the monitoring of this fishery.

Div. 3M catch rates despite more noisy follows the same trend as the ones in Div. 3L.

For all Div. 3LMNO combined (Table IV-A, Fig. 1) the observed catch rates series follows the Div. 3L pattern, since this is the division of Sub Area 3 with the highest concentration of Greenland halibut fishing effort.

## **2. Biological Sampling**

In 2012, biological sampling was obtained from only one stern trawler fishing in Div. 3L, 3M, 3N and 3O during all the year. Apart from species under moratoria, a priority to be sampled whenever they appear in the hauls, biological sampling was conducted for the two most abundant species in each haul, following the NAFO sampling recommendations.

Cod and redfish (*S. mentella*) were sampled in Div. 3L, 3M, 3N and 3O (Tab. V). Greenland halibut was sampled in Div. 3L, 3M and 3N. American plaice was sampled in Div. 3M and 3N. Roughhead grenadier was sampled in Div. 3L and 3N. Thorny skate was sampled only in Div. 3M, yellowtail flounder only in Div. 3N and both witch flounder and white hake only in Div. 3O.

Since 1996, all commercial information is representative of the catch as a whole, although sampling continues to be carried out by sex, with the exception of cod, white hake, Atlantic halibut and haddock. Due to the scarce individual weight-length sampling during 2012, mean weight and mean weight in the catch are derived from the length-weight relationships calculated from the commercial sampling in 2010-2011 and are presented in Table VI (Vargas *et al*, 2011; Vargas *et al*, 2012). The Hooder (1964) cod length-weight relationship was applied in the cod in Div. 3L.

## **2.1. Catch and by-catch composition of the 2012 trawl fishery (130mm codend mesh size).**

The regular mesh size in the codend used by the monitored trawlers fishing groundfish was the 130mm and, when the mesh size is not mentioned it, means that the sample refers to the 130mm mesh size. Nevertheless, some sets in Div. 3N were made with a skate trawl net with 200mm/280mm mesh size in the codend, representing 6% in Div. 3N of the total effort sampled (lengths only). The size of these catches within the overall sampled catch in Div. 3N is about 6% for cod, 50% for yellowtail flounder, 67% for thorny skate and 72% for both American plaice and witch flounder.

### **2.1.1. Cod Div. 3L**

Information on length composition of the cod by-catch in Div. 3L is available for July, September and October (Table VII, Fig. 2), from 281 m to 486 m depth.

Lengths between 33 cm and 42 cm dominated the catch, with a modal class at 39 cm (mean length and weight of 41.7 cm and 662 g).

### **2.1.2. Cod Div. 3M**

Information on length composition of the cod trawl catch in Div. 3M is available from May to October, except for August (Table VIII, Fig. 3), from 211 m to 483 m depth.

Lengths between 42 cm and 57 cm dominated the catch, with two peaks at 51 cm and at 54 cm (mean length and weight of 52.9 cm and 1482 g).

### **2.1.3. Cod Div. 3N**

Information on length composition of the cod by-catch in Div. 3N is available from June to September (Table IX, Fig. 4), from 101 m to 528 m depth.

Lengths between 33 cm and 45 cm dominated the catch, with a modal class at 39 (mean length and weight of 42.1 cm and 834 g).

### **2.1.4. Cod Div. 3O**

Information on length composition of the cod by-catch in Div. 3O is available for August and September (Table X, Fig. 5), from 178 m to 450 m depth.

Lengths between 39 cm and 45 cm dominated the catch, with a very clear modal class at 39 cm (mean length and weight of 44.2 cm and 987 g).

### **2.1.5. Redfish (*S. mentella*) Div. 3L**

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3L is available from July to October, except for August (Table XI, Fig. 6), from 281 m to 486 m depth.

Lengths between 20 cm and 23 cm and between 30 cm and 33 cm dominated the catch, with a modal class at 22 cm (mean length and weight of 26.1 cm and 274 g).

#### **2.1.6. Redfish (*S. mentella*) Div. 3M**

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3M is available from May to October, except for August (Table XII, Fig. 7), from 211 m to 780 m depth.

Lengths between 21 cm and 23 cm and between 31 cm and 33 cm dominated the catch, with a modal class at 22 cm (mean length and weight of 27.4 cm and 327 g).

#### **2.1.7. Redfish (*S. mentella*) Div. 3N**

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3N is available from June to September (Table XIII, Fig. 8), from 249 m to 528 m depth.

Lengths between 21 cm and 23 cm dominated the catch, with a very clear modal class at 22 cm (mean length and weight of 23.5 cm and 198 g).

#### **2.1.8. Redfish (*S. mentella*) Div. 3O**

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3O is available for August and September (Table XIV, Fig. 9), from 178 m to 520 m depth.

Lengths between 20 cm and 23 cm dominated the catches, with a clear modal class at 22 cm (mean length and weight of 22.3 cm and 152 g).

#### **2.1.9. American plaice Div. 3M**

Information on length composition of the American plaice by-catch in Div. 3M is available for June and July (Table XV, Fig. 10), from 232 m to 443 m depth.

Lengths between 32 and 44 cm dominated the catch, with a modal class at 38 cm (mean length and weight of 39.6 cm and 584 g).

#### **2.1.10. American plaice Div. 3N**

Information on length composition of the American plaice by-catch in Div. 3N is available only for June (Table XVI, Fig. 11), from 101 m to 400 m depth.

Lengths between 24 and 32 cm dominated the catch, with a modal class at 30 cm (mean length and weight of 29.3 cm and 260 g).

#### **2.1.11. Yellowtail flounder Div. 3N**

Information on length composition of the yellowtail flounder catch in Div. 3N is available only for June (Table XVII, Fig. 12), from 101 m to 400 m depth.

Lengths between 26 and 30 cm dominated the catch, with a two modal classes at 26 cm and 28 cm (mean length and weight of 28.1 cm and 194 g).

#### **2.1.12. Greenland halibut Div. 3L**

Information on length composition of the Greenland halibut catches in Div. 3L is available from July to November, except for August (Table XVIII, Fig. 13), from 296 m to 1487 m depth.

Lengths between 32 cm and 36 cm dominated the catch, with a modal class at 34 cm (mean length and weight of 42.1 cm and 592 g).

#### **2.1.13. Greenland halibut Div. 3M**

Information on length composition of the Greenland halibut catches in Div. 3M is available for July and October (Table XIX, Fig. 14), from 355 m to 1074 m depth.

Lengths at 28 cm, 32 cm, 34 cm, 40 cm, 42 cm, 52cm and 54 dominated the catch (mean length and weight of 41.9 cm and 628 g).

#### **2.1.14. Greenland halibut Div. 3N**

Information on length composition of the Greenland halibut catches in Div. 3N is available only for June (Table XX, Fig. 15), from 325 m to 761 m depth.

Despite the small sampling (1 sample, 182 fish measured), the data shows that the lengths at 44 cm and 46 cm dominated the catch (mean length and weight of 45.3 cm and 690 g).

#### **2.1.15. Roughhead grenadier Div. 3L**

Information on length composition of the roughhead grenadier catches in Div. 3L is available for September and October (Table XXI, Fig. 16), from 919 m to 1254 m depth.

Anal fin lengths between 11 cm and 13 cm dominated the catch, with a very clear modal class at 12 cm (mean length and weight of 13.7 cm and 262 g).

#### **2.1.16. Roughhead grenadier Div. 3N**

Information on length composition of the roughhead grenadier by-catch in Div. 3N is available only for June (Table XXII, Fig. 17), from 325 m to 761 m depth.

Despite the small sampling (1 sample, 107 fish measured), the data shows that the anal fin lengths at 12 cm and 13 cm dominated the catch (mean length and weight of 14.8 cm and 339 g).

#### **2.1.17. Witch flounder Div. 3O**

Information on length composition of the witch flounder by-catch in Div. 3O is available for August and September (Table XXIII, Fig. 18), from 178 m to 520 m depth.

Lengths between 26 cm and 34 cm dominated the catch (mean length and weight of 30.6 cm and 360 g).

#### **2.1.18. Thorny skate Div. 3M**

Information on length composition of the thorny skate catches in Div. 3M is available only for June (Table XXIV, Fig. 19), from 234 m to 483 m depth.

The data shows that the lengths at 56 cm, 62-64 cm and 72 cm dominated the catch (mean length and weight of 64.5 cm and 3634 g).

#### **2.1.19. White hake Div. 3O**

Information on length composition of the white hake catches in Div. 3O is available for August and September (Table XXV, Fig. 20), from 178 m to 438 m depth.

Despite the large range of lengths, the data show that lengths between 44 cm and 50 cm, dominated the catch (mean length and weight of 48.4 cm and 983 g).

### 3. Acknowledgements

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### 4. References

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TABLE I-A: PORTUGUESE NOMINAL TRAWL CATCHES (mt) IN NAFO AREA, 2012  
(data extracted from NAFO Database Statlant 21A on 18 June 2013).

| SPECIES             | DIVISION |      |      |      | TOTAL<br>2012 |
|---------------------|----------|------|------|------|---------------|
|                     | 3L       | 3M   | 3N   | 3O   |               |
| Cod                 | 33       | 2663 | 171  | 132  | 2999          |
| Redfish             | 449      | 4236 | 615  | 3593 | 8893          |
| American plaice     | 15       | 66   | 250  | 81   | 412           |
| Yellowtail flounder |          | 1    | 499  | 8    | 508           |
| Witch flounder      | 16       | 30   | 14   | 52   | 112           |
| Greenland halibut   | 1253     | 613  | 103  | 3    | 1972          |
| Atlantic halibut    | 4        | 20   | 15   | 25   | 64            |
| Roughhead grenadier | 263      | 209  | 9    |      | 481           |
| Roundnose grenadier | 178      | 18   | 7    |      | 203           |
| Anarhichas spp.     | 1        | 6    |      |      | 7             |
| Hadocck             |          | 58   |      | 2    | 60            |
| Pollock             |          |      |      |      |               |
| White hake          |          |      |      | 18   | 18            |
| Red hake            | 1        |      |      |      | 1             |
| Capelin             |          |      |      |      |               |
| Skates              | 72       | 47   | 177  | 56   | 352           |
| Monkfish            |          |      |      | 4    | 4             |
| Squid               |          |      |      |      |               |
| Shrimp              | 5        |      |      |      | 5             |
| Unidentified        |          | 187  |      | 35   | 222           |
| TOTAL               | 2290     | 8154 | 1860 | 4009 | 16313         |

TABLE I - B: PORTUGUESE NOMINAL TRAWL CATCHES (mt) IN NAFO DIV. 3LMNO (data extracted from NAFO Database Statlant 21A on 18 Jun 2013).

| SPECIES / YEAR      | 2011  | 2010  | 2009  | 2008  | 2007  | 2006  | 2005  | 2004  | 2003  | 2002  | 2001  | 2000  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cod                 | 2832  | 1528  | 1003  | 434   | 255   | 177   | 105   | 281   | 602   | 488   | 361   | 192   |
| Redfish             | 9983  | 10541 | 9361  | 7768  | 7204  | 7805  | 7338  | 5971  | 7804  | 6346  | 5331  | 5678  |
| American plaice     | 198   | 160   | 298   | 355   | 443   | 376   | 371   | 517   | 748   | 634   | 636   | 400   |
| Yellowtail flounder | 71    | 27    | 71    | 145   |       | 134   | 188   | 68    | 287   | 123   | 350   | 151   |
| Witch flounder      | 128   | 71    | 131   | 221   | 124   | 141   | 150   | 591   | 485   | 436   | 576   | 230   |
| Greenland halibut   | 2493  | 2257  | 2075  | 1976  | 1873  | 2326  | 2256  | 1888  | 4369  | 4318  | 5027  | 4688  |
| Atlantic halibut    | 46    | 56    | 469   | 23    | 32    | 43    | 20    | 59    | 89    | 47    | 45    | 28    |
| Roughhead grenadier | 251   | 83    | 266   | 50    | 34    | 77    | 262   | 381   | 302   | 508   | 613   | 397   |
| Roundnose grenadier | 48    | 27    | 198   | 29    | 37    | 54    |       |       |       |       |       |       |
| Anarhichas spp.     | 18    | 13    | 41    | 25    | 16    | 28    | 32    | 45    | 112   | 88    | 142   | 61    |
| Hadocck             | 13    | 1     | 3     | 1     | 2     |       | 6     | 23    | 141   | 78    | 22    | 12    |
| Pollock             |       |       |       |       |       |       |       | 4     | 114   |       |       |       |
| White hake          | 25    | 17    | 24    | 55    | 62    | 102   | 157   | 1266  | 4090  | 1678  |       |       |
| Red hake            | 69    | 1     |       | 3     | 2     | 4     | 18    | 13    | 2     | 1968  | 273   | 43    |
| Capelin             |       |       |       |       |       |       |       |       |       |       |       |       |
| Skates              | 435   | 304   | 1045  | 1252  | 1058  | 1003  | 576   | 1550  | 1942  | 1362  | 883   | 672   |
| Monkfish            | 1     | 11    | 3     | 13    | 35    | 34    | 6     | 73    | 165   | 71    |       |       |
| Squid               | 1     | 2     | 29    | 5     | 2     | 17    |       | 11    |       |       |       |       |
| Shrimp              |       | 15    | 332   |       |       |       |       | 50    |       | 16    | 420   | 289   |
| Unidentified        | 29    | 11    | 77    | 2     | 1     | 216   | 6     | 21    | 13    | 322   | 40    | 1     |
| TOTAL               | 16641 | 15125 | 15426 | 12357 | 11180 | 12537 | 11491 | 12812 | 21265 | 18483 | 14719 | 12842 |

TABLE I - B: cont.

| SPECIES / YEAR      | 1999  | 1998 | 1997 | 1996 | 1995  | 1994  | 1993  | 1992  | 1991  | 1990  | 1989  | 1988  |
|---------------------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cod                 | 325   | 550  | 1545 | 1316 | 1670  | 2640  | 3657  | 5986  | 13362 | 15142 | 24130 | 12963 |
| Redfish             | 6082  | 2370 | 1126 | 2152 | 3297  | 8614  | 9831  | 6584  | 12165 | 17803 | 19032 | 19137 |
| American plaice     | 718   | 361  | 389  | 289  | 170   | 346   | 323   | 453   | 1183  | 715   | 1821  | 1813  |
| Yellowtail flounder | 428   | 87   |      |      |       |       | 21    |       |       | 11    | 5     |       |
| Witch flounder      | 509   | 381  | 350  | 238  | 385   | 579   | 291   | 851   | 1980  | 2257  | 15    | 10    |
| Greenland halibut   | 3997  | 3245 | 3347 | 3313 | 1942  | 5970  | 8811  | 10547 | 13961 | 11171 | 3616  | 4194  |
| Atlantic halibut    | 51    | 29   | 15   | 9    | 18    | 45    | 50    | 79    | 229   | 96    |       | 152   |
| Roughhead grenadier | 1302  | 1088 | 765  | 787  | 1377  | 2224  | 1996  | 2004  | 4053  | 3211  | 290   | 911   |
| Roundnose grenadier |       |      |      |      |       |       |       |       |       |       |       |       |
| Anarhichas spp.     | 552   | 139  | 184  | 121  | 1358  | 3219  | 2303  | 1697  | 2842  | 1941  |       |       |
| Hadocck             | 11    | 5    | 42   |      | 2     | 10    | 10    | 165   | 82    | 17    |       |       |
| Pollock             |       |      |      |      |       | 13    | 41    | 29    | 424   | 11    |       |       |
| White hake          |       |      |      |      |       |       |       |       |       |       |       | 8     |
| Red hake            | 76    | 19   | 54   | 124  | 230   | 270   | 365   | 467   | 1010  | 469   | 104   |       |
| Capelin             |       |      |      |      |       |       |       |       |       | 14    |       |       |
| Skates              | 2168  | 1105 | 908  | 796  | 2062  | 6239  | 7604  | 7019  | 23304 | 13557 | 652   | 1075  |
| Monkfish            |       |      |      |      |       |       |       | 37    | 7     |       | 15    |       |
| Squid               |       | 1    |      | 4    |       |       |       |       |       |       | 47    |       |
| Shrimp              | 227   | 203  | 170  |      | 17    |       |       |       |       |       |       |       |
| Unidentified        | 115   | 38   | 115  | 23   | 15    | 12    | 245   | 325   | 725   | 779   | 158   | 6     |
| TOTAL               | 16561 | 9621 | 9010 | 9172 | 12543 | 30181 | 35548 | 36243 | 75327 | 67194 | 49885 | 40269 |

TABLE II-A: PORTUGUESE PROVISIONAL TRAWL EFFORT IN FISHING DAYS AND FISHING HOURS IN NAFO AREA IN 2012.

| MONTH | DIVISION |       |      |       |      |       |      |       | TOTAL |       | MONTH |
|-------|----------|-------|------|-------|------|-------|------|-------|-------|-------|-------|
|       | 3L       |       | 3M   |       | 3N   |       | 3O   |       |       |       |       |
|       | DAYS     | HOURS | DAYS | HOURS | DAYS | HOURS | DAYS | HOURS | DAYS  | HOURS |       |
| JAN.  | 8        | 117   | 19   | 265   | 10   | 38    | 16   | 126   | 53    | 546   | JAN.  |
| FEB.  | 37       | 551   | 17   | 146   | 32   | 154   | 36   | 218   | 122   | 1069  | FEB.  |
| MAR.  | 56       | 697   | 148  | 1755  | 41   | 207   | 27   | 241   | 272   | 2900  | MAR.  |
| APR.  | 107      | 1444  | 112  | 1454  | 13   | 86    | 37   | 391   | 269   | 3374  | APR.  |
| MAY   | 45       | 650   | 150  | 2184  | 18   | 123   | 38   | 371   | 251   | 3328  | MAY   |
| JUN.  | 38       | 591   | 123  | 1950  | 20   | 78    | 9    | 95    | 190   | 2714  | JUN.  |
| JUL.  | 47       | 699   | 56   | 774   | 22   | 173   | 11   | 110   | 136   | 1756  | JUL.  |
| AUG.  | 84       | 1112  | 110  | 1695  | 13   | 100   | 9    | 62    | 216   | 2969  | AUG.  |
| SEP.  | 76       | 1030  | 50   | 777   | 47   | 382   | 21   | 188   | 194   | 2377  | SEP.  |
| OCT.  | 63       | 933   | 44   | 622   | 20   | 136   | 19   | 178   | 146   | 1869  | OCT.  |
| NOV.  | 24       | 378   | 37   | 550   | 44   | 232   | 21   | 165   | 126   | 1325  | NOV.  |
| DEC.  | 2        | 15    | 20   | 294   | 29   | 94    | 2    | 16    | 53    | 419   | DEC.  |
| TOTAL | 587      | 8217  | 886  | 12465 | 309  | 1803  | 246  | 2160  | 2028  | 24644 | TOTAL |

TABLE II - B: PORTUGUESE TRAWL EFFORT IN FISHING DAYS  
IN NAFO Div. 3LMNO (data extracted from NAFO  
Database Statlant 21B on 18 Jun 2013).

| YEAR | 3L  | 3M  | 3N  | 3O  | Total Geral |
|------|-----|-----|-----|-----|-------------|
| 2000 | 518 | 248 | 281 | 300 | 1347        |
| 2001 | 729 | 467 | 327 | 243 | 1766        |
| 2002 | 585 | 254 | 464 | 436 | 1739        |
| 2003 | 492 | 246 | 708 | 714 | 2160        |
| 2004 | 427 | 293 | 387 | 461 | 1568        |
| 2005 | 476 | 288 | 213 | 338 | 1315        |
| 2006 | 393 | 350 | 106 | 485 | 1334        |
| 2007 | 295 | 359 | 133 | 338 | 1125        |
| 2008 | 272 | 424 | 169 | 200 | 1065        |
| 2009 | 493 | 603 | 226 | 151 | 1473        |
| 2010 | 449 | 609 | 164 | 162 | 1384        |
| 2011 | 372 | 632 | 292 | 217 | 1513        |



TABLE III: Portuguese trawl fishery cpue's and bycatch by month and division for 2012.

| DIVISION | TARGET SPECIES | MONTH | DEPTH RANGE (m) |      | CPUE (ton/hour) | MAIN BYCATCH |      | WITCH FLOUNDER BYCATCH (%) | TOTAL BYCATCH (%) |
|----------|----------------|-------|-----------------|------|-----------------|--------------|------|----------------------------|-------------------|
|          |                |       | MIN.            | MAX  |                 | SPECIES      | %    |                            |                   |
| 3M       | COD            | MAR   | 267             | 532  | 3.277           | RED          | 20.1 | 0.0                        | 21.6              |
| 3M       | COD            | APR   | 290             | 600  | 2.751           | RED          | 22.9 | 0.0                        | 25.1              |
| 3M       | COD            | MAY   | 356             | 486  | 1.417           | RED          | 21.2 | 0.0                        | 22.3              |
| 3M       | COD            | JUN   | 242             | 481  | 1.056           | RED          | 32.5 | 0.0                        | 33.9              |
| 3M       | COD            | JUL   | 262             | 435  | 1.290           | RED          | 36.3 | 0.0                        | 37.5              |
| 3M       | COD            | SEP   | 226             | 411  | 1.493           | RED          | 36.1 | 0.0                        | 36.1              |
| 3M       | COD            | OCT   | 204             | 481  | 1.213           | RED          | 22.6 | 0.0                        | 24.3              |
| 3L       | RED            | JUL   | 357             | 500  | 0.954           | COD          | 8.5  | 0.0                        | 9.5               |
| 3L       | RED            | SEP   | 285             | 348  | 10.099          | COD          | 8.1  | 0.0                        | 8.4               |
| 3L       | RED            | OCT   | 281             | 361  | 7.120           | COD          | 11.9 | 0.0                        | 11.9              |
| 3M       | RED            | MAR   | 408             | 479  | 1.364           | COD          | 40.5 | 0.0                        | 42.2              |
| 3M       | RED            | APR   | 290             | 458  | 2.148           | COD          | 55.6 | 0.0                        | 56.8              |
| 3M       | RED            | MAY   | 255             | 479  | 1.307           | COD          | 20.0 | 0.0                        | 20.9              |
| 3M       | RED            | JUN   | 233             | 483  | 1.468           | COD          | 34.4 | 0.0                        | 35.4              |
| 3M       | RED            | JUL   | 364             | 435  | 0.786           | COD          | 49.1 | 0.0                        | 51.0              |
| 3M       | RED            | OCT   | 221             | 410  | 0.627           | COD          | 45.1 | 0.0                        | 47.4              |
| 3N       | RED            | FEB   | 280             | 464  | 10.352          | COD          | 3.3  | 0.0                        | 3.7               |
| 3N       | RED            | MAR   | 245             | 446  | 14.557          | COD          | 1.9  | 0.0                        | 2.2               |
| 3N       | RED            | APR   | 52              | 678  | 5.943           | COD          | 9.0  | 0.1                        | 11.5              |
| 3N       | RED            | JUN   | 110             | 761  | 3.711           | COD          | 35.0 | 0.0                        | 51.8              |
| 3N       | RED            | JUL   | 382             | 528  | 2.302           | COD          | 50.9 | 0.0                        | 52.7              |
| 3N       | RED            | AUG   | 289             | 467  | 10.471          | COD          | 13.4 | 0.0                        | 13.5              |
| 3N       | RED            | SEP   | 207             | 587  | 6.585           | COD          | 11.5 | 0.0                        | 12.0              |
| 3N       | RED            | NOV   | 267             | 420  | 14.804          | COD          | 7.0  | 0.0                        | 7.3               |
| 3O       | RED            | MAR   | 346             | 595  | 1.757           | WIT          | 33.5 | 33.5                       | 52.4              |
| 3O       | RED            | APR   | 122             | 130  | 0.250           | HKW          | 18.0 | 9.3                        | 53.6              |
| 3O       | RED            | AUG   | 220             | 442  | 4.211           | COD          | 20.0 | 4.0                        | 28.7              |
| 3O       | RED            | SEP   | 175             | 520  | 5.998           | COD          | 11.8 | 5.2                        | 24.6              |
| 3O       | RED            | NOV   | 139             | 433  | 2.923           | COD          | 13.6 | 0.0                        | 23.2              |
| 3L       | GHL            | APR   | 1282            | 1413 | 0.376           | RHG          | 27.4 | 0.0                        | 30.7              |
| 3L       | GHL            | JUL   | 755             | 763  | 0.218           | #N/D         | 0.0  | 0.0                        | 0.0               |
| 3L       | GHL            | OCT   | 919             | 1461 | 0.272           | RHG          | 45.6 | 0.0                        | 47.9              |
| 3L       | GHL            | NOV   | 1128            | 1247 | 0.440           | RHG          | 25.8 | 0.0                        | 34.3              |
| 3M       | GHL            | OCT   | 1012            | 1074 | 0.260           | RHG          | 45.3 | 0.0                        | 48.7              |
| 3L       | RHG            | OCT   | 1140            | 1461 | 0.247           | GHL          | 48.6 | 0.0                        | 51.0              |
| 3M       | RHG            | OCT   | 1012            | 1074 | 0.230           | GHL          | 51.3 | 0.0                        | 54.7              |

TABLE IV - A: GREENLAND HALIBUT TRAWL CATCH RATES, 1988-2012: mean annual cpue's corrected for the month, division and vessel of each observation.

|      | 3L    |          |      | 3M    |          |      | 3N    |          |      | 3LMN  |          |      |      |
|------|-------|----------|------|-------|----------|------|-------|----------|------|-------|----------|------|------|
|      | CPUE  | ST.ERROR | C.V. | CPUE  | ST.ERROR | C.V. | CPUE  | ST.ERROR | C.V. | CPUE  | ST.ERROR | C.V. |      |
| 1988 | 0.449 | 0.083    | 37.1 |       |          |      |       |          |      | 0.413 | 0.089    | 43.2 | 1988 |
| 1989 | 0.430 | 0.072    | 50.0 |       |          |      |       |          |      | 0.389 | 0.072    | 55.7 | 1989 |
| 1990 | 0.363 | 0.037    | 35.7 | 0.146 |          |      | 0.161 |          |      | 0.312 | 0.036    | 43.3 | 1990 |
| 1991 | 0.238 | 0.048    | 45.3 |       |          |      | 0.123 | 0.030    | 42.6 | 0.183 | 0.034    | 53.0 | 1991 |
| 1992 | 0.170 | 0.030    | 56.6 |       |          |      | 0.254 | 0.032    | 43.4 | 0.245 | 0.032    | 62.6 | 1992 |
| 1993 | 0.119 | 0.006    | 7.1  |       |          |      | 0.171 | 0.019    | 37.9 | 0.223 | 0.025    | 41.1 | 1993 |
| 1994 | 0.098 | 0.003    | 4.3  |       |          |      | 0.109 | 0.016    | 36.6 | 0.151 | 0.031    | 58.1 | 1994 |
| 1995 | 0.131 | 0.015    | 33.4 | 0.158 | 0.012    | 16.4 | 0.136 | 0.021    | 40.1 | 0.152 | 0.017    | 49.8 | 1995 |
| 1996 | 0.172 | 0.020    | 42.6 | 0.185 | 0.022    | 35.6 | 0.164 | 0.020    | 32.6 | 0.165 | 0.012    | 38.5 | 1996 |
| 1997 | 0.191 | 0.013    | 22.7 | 0.241 | 0.023    | 26.5 | 0.119 | 0.009    | 10.1 | 0.185 | 0.014    | 34.9 | 1997 |
| 1998 | 0.270 | 0.017    | 24.1 | 0.234 | 0.024    | 36.0 | 0.213 | 0.016    | 25.0 | 0.251 | 0.012    | 30.2 | 1998 |
| 1999 | 0.290 | 0.025    | 26.8 | 0.340 | 0.038    | 33.9 | 0.260 | 0.020    | 23.5 | 0.297 | 0.018    | 33.2 | 1999 |
| 2000 | 0.270 | 0.020    | 19.7 | 0.289 | 0.020    | 15.6 | 0.297 | 0.042    | 28.4 | 0.277 | 0.022    | 31.3 | 2000 |
| 2001 | 0.205 | 0.023    | 30.0 | 0.202 | 0.011    | 14.6 | 0.198 | 0.011    | 12.6 | 0.204 | 0.015    | 32.0 | 2001 |
| 2002 | 0.222 | 0.016    | 24.4 | 0.221 | 0.030    | 45.4 | 0.260 | 0.032    | 24.4 | 0.218 | 0.017    | 39.3 | 2002 |
| 2003 | 0.223 | 0.025    | 35.5 | 0.216 | 0.031    | 40.7 | 0.206 | 0.023    | 27.3 | 0.220 | 0.020    | 43.5 | 2003 |
| 2004 | 0.118 | 0.015    | 37.5 | 0.101 | 0.024    | 71.5 | 0.135 | 0.010    | 20.9 | 0.134 | 0.015    | 59.0 | 2004 |
| 2005 | 0.237 | 0.027    | 16.0 | 0.298 | 0.086    | 41.0 |       |          |      | 0.238 | 0.022    | 18.1 | 2005 |
| 2006 | 0.442 | 0.049    | 27.4 | 0.251 | 0.045    | 30.8 |       |          |      | 0.343 | 0.046    | 39.8 | 2006 |
| 2007 | 0.653 | 0.084    | 31.4 | 0.400 | 0.065    | 32.4 |       |          |      | 0.520 | 0.068    | 41.5 | 2007 |
| 2008 | 0.441 | 0.036    | 19.9 | 0.424 | 0.028    | 13.2 |       |          |      | 0.405 | 0.021    | 16.4 | 2008 |
| 2009 | 0.715 | 0.091    | 38.0 | 0.632 | 0.047    | 21.1 |       |          |      | 0.647 | 0.050    | 32.5 | 2009 |
| 2010 | 0.419 | 0.036    | 27.2 | 0.367 | 0.021    | 10.1 | 0.470 |          |      | 0.398 | 0.027    | 25.8 | 2010 |
| 2011 | 0.785 | 0.072    | 42.5 | 0.630 | 0.082    | 50.3 |       |          |      | 0.686 | 0.060    | 50.9 | 2011 |
| 2012 | 0.388 | 0.021    | 7.3  | 0.311 |          |      |       |          |      | 0.352 | 0.033    | 14.9 | 2012 |

TABLE IV - B: GREENLAND HALIBUT TRAWL CATCH RATES,  
1988-2012 mean cpue's by division corrected for the year, month  
and vessel of each observation.

|      | CPUE  | ST.ERROR | C.V. |      |
|------|-------|----------|------|------|
| 3L   | 0.316 | 0.008    | 35.1 | 3L   |
| 3M   | 0.286 | 0.008    | 31.2 | 3M   |
| 3N   | 0.197 | 0.006    | 30.9 | 3N   |
| 3LMN | 0.276 | 0.005    | 37.6 | 3LMN |

TABLE V: Intensity of the trawl sampling during 2012, by species, division and month.

| SPECIES               | DIV. | MONTH | N° OF<br>SAMPLES | N° FISH<br>MEASURED | SAMPLING<br>WEIGHT(Kg) | OTOLITHS |                   |
|-----------------------|------|-------|------------------|---------------------|------------------------|----------|-------------------|
|                       |      |       |                  |                     |                        | N°       | LENGTH RANGE (cm) |
| COD                   | 3L   | JUL   | 2                | 100                 | 459                    | -        | -                 |
| COD                   | 3L   | SEP   | 7                | 1007                | 1441                   | -        | -                 |
| COD                   | 3L   | OCT   | 5                | 589                 | 523                    | -        | -                 |
| COD                   | 3M   | MAY   | 4                | 713                 | 1174                   | -        | -                 |
| COD                   | 3M   | JUN   | 28               | 5082                | 7566                   | -        | -                 |
| COD                   | 3M   | JUL   | 12               | 3263                | 4361                   | -        | -                 |
| COD                   | 3M   | SEP   | 4                | 593                 | 1015                   | -        | -                 |
| COD                   | 3M   | OCT   | 8                | 1367                | 1854                   | -        | -                 |
| COD                   | 3N   | JUN   | 4                | 747                 | 757                    | -        | -                 |
| COD                   | 3N   | JUL   | 1                | 138                 | 146                    | -        | -                 |
| COD                   | 3N   | AUG   | 2                | 287                 | 295                    | -        | -                 |
| COD                   | 3N   | SEP   | 13               | 1966                | 2723                   | -        | -                 |
| COD                   | 3O   | AUG   | 2                | 250                 | 346                    | -        | -                 |
| COD                   | 3O   | SEP   | 9                | 1096                | 1435                   | -        | -                 |
| REDFISH (S. mentella) | 3L   | JUL   | 2                | 523                 | 312                    | -        | -                 |
| REDFISH (S. mentella) | 3L   | SEP   | 7                | 2538                | 705                    | -        | -                 |
| REDFISH (S. mentella) | 3L   | OCT   | 5                | 1579                | 444                    | -        | -                 |
| REDFISH (S. mentella) | 3M   | MAY   | 4                | 1384                | 464                    | -        | -                 |
| REDFISH (S. mentella) | 3M   | JUN   | 28               | 11396               | 3344                   | -        | -                 |
| REDFISH (S. mentella) | 3M   | JUL   | 12               | 5619                | 1870                   | -        | -                 |
| REDFISH (S. mentella) | 3M   | SEP   | 4                | 1326                | 371                    | -        | -                 |
| REDFISH (S. mentella) | 3M   | OCT   | 7                | 1843                | 645                    | -        | -                 |
| REDFISH (S. mentella) | 3N   | JUN   | 4                | 1566                | 391                    | -        | -                 |
| REDFISH (S. mentella) | 3N   | JUL   | 1                | 403                 | 94                     | -        | -                 |
| REDFISH (S. mentella) | 3N   | AUG   | 2                | 535                 | 118                    | -        | -                 |
| REDFISH (S. mentella) | 3N   | SEP   | 13               | 4100                | 995                    | -        | -                 |
| REDFISH (S. mentella) | 3O   | AUG   | 2                | 636                 | 146                    | -        | -                 |
| REDFISH (S. mentella) | 3O   | SEP   | 9                | 2831                | 647                    | -        | -                 |
| AMERICAN PLAICE       | 3M   | JUN   | 5                | 185                 | 171                    | -        | -                 |
| AMERICAN PLAICE       | 3M   | JUL   | 9                | 1003                | 486                    | -        | -                 |
| AMERICAN PLAICE       | 3N   | JUN   | 4                | 1049                | 416                    | -        | -                 |
| YELLOWTAIL FLOUNDER   | 3N   | JUN   | 3                | 685                 | 223                    | -        | -                 |
| GREENLAND HALIBUT     | 3L   | JUL   | 1                | 103                 | 111                    | -        | -                 |
| GREENLAND HALIBUT     | 3L   | SEP   | 6                | 850                 | 461                    | -        | -                 |
| GREENLAND HALIBUT     | 3L   | OCT   | 18               | 4620                | 2662                   | -        | -                 |
| GREENLAND HALIBUT     | 3L   | NOV   | 3                | 926                 | 518                    | -        | -                 |
| GREENLAND HALIBUT     | 3M   | JUL   | 3                | 311                 | 331                    | -        | -                 |
| GREENLAND HALIBUT     | 3M   | OCT   | 3                | 845                 | 602                    | -        | -                 |
| GREENLAND HALIBUT     | 3N   | JUN   | 1                | 182                 | 159                    | -        | -                 |

TABLE V (cont.).

| SPECIES             | DIV. | MONTH | N° OF<br>SAMPLES | N° FISH<br>MEASURED | SAMPLING<br>WEIGHT(Kg) | OTOLITHS |                   |
|---------------------|------|-------|------------------|---------------------|------------------------|----------|-------------------|
|                     |      |       |                  |                     |                        | N°       | LENGTH RANGE (cm) |
| ROUGHHEAD GRENADIER | 3L   | SEP   | 1                | 188                 | 107                    | -        | -                 |
| ROUGHHEAD GRENADIER | 3L   | OCT   | 4                | 819                 | 503                    | -        | -                 |
| ROUGHHEAD GRENADIER | 3N   | JUN   | 1                | 107                 | 67                     |          |                   |
| WITCH FLOUNDER      | 3O   | AUG   | 2                | 419                 | 103                    | -        | -                 |
| WITCH FLOUNDER      | 3O   | SEP   | 7                | 1127                | 289                    | -        | -                 |
| WHITE HAKE          | 3O   | AUG   | 2                | 268                 | 305                    | -        | -                 |
| WHITE HAKE          | 3O   | SEP   | 7                | 831                 | 1002                   | -        | -                 |
| THORNY SKATE        | 3M   | JUN   | 3                | 59                  | 259                    | -        | -                 |

TABLE VI: Length-weight relationship by species, stock and sex.

| Species | Stock    | Sex | a       | b      | n    | $r^2$ | Length interval (cm) |
|---------|----------|-----|---------|--------|------|-------|----------------------|
| COD     | 3L       | T   | 0.00001 | 3.0849 | -    | -     | -                    |
| COD     | 3M       | T   | 0.0058  | 3.0950 | 933  | 0.991 | 15-115               |
| COD     | 3NO      | T   | 0.0042  | 3.2386 | 34   | 0.969 | 54-102               |
| REB     | 3LN      | F   | 0.0231  | 2.8428 | 776  | 0.985 | 18-40                |
| REB     | 3LN      | M   | 0.0207  | 2.8737 | 753  | 0.990 | 18-42                |
| REB     | 3LN      | T   | 0.0214  | 2.8659 | 1529 | 0.989 | 18-42                |
| REB     | 3M       | F   | 0.0145  | 2.9946 | 454  | 0.988 | 15-41                |
| REB     | 3M       | M   | 0.0165  | 2.9464 | 398  | 0.989 | 20-40                |
| REB     | 3M       | T   | 0.0145  | 2.9911 | 852  | 0.990 | 15-41                |
| REB     | 3O       | F   | 0.0371  | 2.6493 | 112  | 0.930 | 16-36                |
| REB     | 3O       | M   | 0.0281  | 2.7549 | 107  | 0.957 | 16-32                |
| REB     | 3O       | T   | 0.0480  | 2.5736 | 219  | 0.935 | 16-36                |
| PLA     | 3LNO     | F   | 0.0081  | 3.0343 | 1269 | 0.992 | 26-71                |
| PLA     | 3LNO     | M   | 0.0305  | 2.6928 | 1090 | 0.947 | 18-66                |
| PLA     | 3LNO     | T   | 0.0252  | 2.7449 | 2359 | 0.959 | 18-71                |
| PLA     | 3M       | F   | 0.0015  | 3.4693 | 45   | 0.984 | 31-60                |
| PLA     | 3M       | M   | 0.0016  | 3.4690 | 38   | 0.983 | 21-60                |
| PLA     | 3M       | T   | 0.0017  | 3.4457 | 83   | 0.986 | 21-60                |
| YEL     | 3LNO     | F   | 0.0024  | 3.3699 | 43   | 0.976 | 29-57                |
| YEL     | 3LNO     | M   | 0.0027  | 3.3328 | 41   | 0.977 | 28-61                |
| YEL     | 3LNO     | T   | 0.0031  | 3.2911 | 84   | 0.984 | 28-61                |
| GHL     | 2J3KLMNO | F   | 0.0007  | 3.6095 | 231  | 0.991 | 28-74                |
| GHL     | 2J3KLMNO | M   | 0.0006  | 3.6566 | 192  | 0.991 | 25-73                |
| GHL     | 2J3KLMNO | T   | 0.0007  | 3.6218 | 423  | 0.993 | 25-74                |
| RHG     | 3LMNO    | F   | 0.0698  | 3.0620 | 31   | 0.951 | 12.5-32              |
| RHG     | 3LMNO    | M   | 0.0880  | 2.9962 | 21   | 0.984 | 11.5-30              |
| RHG     | 3LMNO    | T   | 0.0885  | 2.9867 | 52   | 0.977 | 11.5-32              |
| WIT     | 3NO      | F   | 0.1263  | 2.3112 | 701  | 0.962 | 27-51                |
| WIT     | 3NO      | M   | 0.1164  | 2.3348 | 631  | 0.954 | 27-51                |
| WIT     | 3NO      | T   | 0.1220  | 2.3216 | 1332 | 0.958 | 27-51                |
| HKW     | 3LMNO    | T   | 0.0064  | 3.0620 | 426  | 0.993 | 34-77                |
| RJR     | 3LMNO    | F   | 0.0520  | 2.6612 | 104  | 0.978 | 32-84                |
| RJR     | 3LMNO    | M   | 0.0210  | 2.8778 | 120  | 0.949 | 33-83                |
| RJR     | 3LMNO    | T   | 0.0239  | 2.8322 | 281  | 0.961 | 32-84                |

TABLE VII: COD, DIV. 3L, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUL     | SEP     | OCT     | 3rd Q.  | 4th Q.  | YEAR    | LENGTH<br>GROUP |
|---------------------|---------|---------|---------|---------|---------|---------|-----------------|
| 27                  |         | 2.0     | 3.4     | 2.0     | 3.4     | 2.9     | 27              |
| 30                  |         | 12.4    | 23.6    | 12.4    | 23.6    | 19.2    | 30              |
| 33                  |         | 66.8    | 163.7   | 66.4    | 163.7   | 125.7   | 33              |
| 36                  |         | 168.4   | 213.1   | 167.3   | 213.1   | 195.3   | 36              |
| 39                  |         | 266.6   | 300.1   | 264.8   | 300.1   | 286.4   | 39              |
| 42                  | 11.4    | 142.5   | 155.3   | 141.6   | 155.3   | 150.0   | 42              |
| 45                  | 22.7    | 79.4    | 102.8   | 79.0    | 102.8   | 93.5    | 45              |
| 48                  | 105.1   | 86.9    | 25.2    | 87.1    | 25.2    | 49.3    | 48              |
| 51                  | 41.2    | 36.5    | 8.0     | 36.5    | 8.0     | 19.1    | 51              |
| 54                  | 14.2    | 80.3    | 2.3     | 79.9    | 2.3     | 32.5    | 54              |
| 57                  | 120.7   | 21.9    | 2.4     | 22.6    | 2.4     | 10.3    | 57              |
| 60                  | 29.8    | 17.8    |         | 17.9    |         | 7.0     | 60              |
| 63                  | 69.6    | 12.1    |         | 12.4    |         | 4.8     | 63              |
| 66                  | 41.2    | 3.0     |         | 3.3     |         | 1.3     | 66              |
| 69                  | 142.0   | 3.3     |         | 4.2     |         | 1.6     | 69              |
| 72                  | 32.7    |         |         | 0.2     |         | 0.1     | 72              |
| 75                  | 22.7    |         |         | 0.1     |         | 0.1     | 75              |
| 78                  | 41.2    |         |         | 0.3     |         | 0.1     | 78              |
| 81                  | 22.7    |         |         | 0.1     |         | 0.1     | 81              |
| 84                  | 78.1    |         |         | 0.5     |         | 0.2     | 84              |
| 87                  | 29.8    |         |         | 0.2     |         | 0.1     | 87              |
| 90                  | 71.0    |         |         | 0.5     |         | 0.2     | 90              |
| 93                  | 45.4    |         |         | 0.3     |         | 0.1     | 93              |
| 96                  | 21.3    |         |         | 0.1     |         | 0.1     | 96              |
| 99                  | 29.8    |         |         | 0.2     |         | 0.1     | 99              |
| 102                 | 7.1     |         |         | 0.05    |         | 0.02    | 102             |
| TOTAL               | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |                 |
| No. SAMPLES         | 2       | 7       | 5       | 9       | 5       | 14      |                 |
| SAMPLING WEIGHT(kg) | 459     | 1441    | 523     | 1901    | 523     | 2424    |                 |
| No. F.MEASURED      | 100     | 1007    | 589     | 1107    | 589     | 1696    |                 |
| MEAN LENGTH(cm)     | 71.1    | 44.0    | 40.1    | 44.2    | 40.1    | 41.7    |                 |
| MEAN WEIGHT (g)     | 3691    | 794     | 565     | 812     | 565     | 662     |                 |
| DEPTH RANGE (m)     | 357/486 | 296/367 | 281/357 | 296/486 | 281/357 | 281/486 |                 |

TABLE VIII: COD, DIV. 3M, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | MAY     | JUN     | JUL     | SEP     | OCT     | 2nd Q.  | 3rd Q.  | 4th Q.  | YEAR    | LENGTH<br>GROUP |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------|
| 15                  |         |         | 2.8     |         |         |         | 2.4     |         | 0.9     | 15              |
| 18                  |         |         | 7.1     |         |         |         | 6.3     |         | 2.3     | 18              |
| 21                  |         |         | 16.5    |         | 2.0     |         | 14.6    | 2.0     | 5.6     | 21              |
| 24                  |         | 0.9     | 14.6    |         | 4.1     | 0.8     | 12.9    | 4.1     | 5.6     | 24              |
| 27                  |         | 2.6     | 12.5    |         | 51.3    | 2.3     | 11.1    | 51.3    | 10.1    | 27              |
| 30                  |         | 4.6     | 19.8    |         | 130.6   | 3.9     | 17.6    | 130.6   | 20.7    | 30              |
| 33                  |         | 14.7    | 33.2    | 2.1     | 64.5    | 12.7    | 29.7    | 64.5    | 23.8    | 33              |
| 36                  | 5.0     | 21.9    | 30.9    | 10.8    | 78.9    | 19.6    | 28.7    | 78.9    | 28.4    | 36              |
| 39                  | 7.6     | 35.7    | 47.5    | 98.5    | 61.5    | 31.9    | 53.2    | 61.5    | 42.5    | 39              |
| 42                  | 12.4    | 55.2    | 116.8   | 200.0   | 49.9    | 49.4    | 126.1   | 49.9    | 77.9    | 42              |
| 45                  | 9.4     | 89.8    | 102.6   | 124.4   | 84.9    | 78.8    | 105.1   | 84.9    | 89.1    | 45              |
| 48                  | 74.5    | 117.9   | 72.1    | 168.1   | 75.6    | 112.0   | 82.9    | 75.6    | 97.8    | 48              |
| 51                  | 217.8   | 172.9   | 119.2   | 79.3    | 91.1    | 179.0   | 114.7   | 91.1    | 147.0   | 51              |
| 54                  | 245.1   | 217.9   | 197.0   | 82.5    | 100.9   | 221.6   | 184.2   | 100.9   | 196.5   | 54              |
| 57                  | 119.0   | 77.6    | 75.4    | 35.6    | 58.1    | 83.3    | 70.9    | 58.1    | 76.4    | 57              |
| 60                  | 28.9    | 36.6    | 28.8    | 44.5    | 12.9    | 35.6    | 30.6    | 12.9    | 31.6    | 60              |
| 63                  | 94.2    | 35.4    | 15.4    | 60.9    | 35.5    | 43.4    | 20.5    | 35.5    | 34.2    | 63              |
| 66                  | 81.2    | 26.9    | 21.5    | 30.9    | 23.0    | 34.3    | 22.6    | 23.0    | 28.9    | 66              |
| 69                  | 50.3    | 17.0    | 13.2    | 20.5    | 22.4    | 21.6    | 14.0    | 22.4    | 18.8    | 69              |
| 72                  | 14.6    | 14.3    | 8.6     | 8.4     | 6.8     | 14.3    | 8.5     | 6.8     | 11.5    | 72              |
| 75                  |         | 4.8     | 3.5     | 2.1     | 1.0     | 4.1     | 3.3     | 1.0     | 3.5     | 75              |
| 78                  | 11.6    | 9.1     | 6.2     | 4.3     | 11.8    | 9.4     | 6.0     | 11.8    | 8.4     | 78              |
| 81                  | 6.0     | 13.6    | 13.0    | 14.3    | 13.2    | 12.6    | 13.2    | 13.2    | 12.9    | 81              |
| 84                  | 14.3    | 7.0     | 7.5     | 6.3     | 8.2     | 8.0     | 7.4     | 8.2     | 7.8     | 84              |
| 87                  | 3.9     | 7.2     | 5.9     | 3.3     | 5.8     | 6.7     | 5.6     | 5.8     | 6.2     | 87              |
| 90                  | 1.0     | 8.8     | 6.5     | 3.0     | 5.4     | 7.7     | 6.1     | 5.4     | 6.9     | 90              |
| 93                  | 2.1     | 4.8     | 1.2     |         |         | 4.5     | 1.1     |         | 2.8     | 93              |
| 96                  | 1.0     | 1.6     |         |         | 0.8     | 1.5     |         | 0.8     | 0.9     | 96              |
| 99                  |         | 0.8     | 0.5     |         |         | 0.7     | 0.5     |         | 0.5     | 99              |
| 102                 |         | 0.4     | 0.3     |         |         | 0.3     | 0.2     |         | 0.3     | 102             |
| 105                 |         | 0.2     |         |         |         | 0.1     |         |         | 0.1     | 105             |
| TOTAL               | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |                 |
| No. SAMPLES         | 4       | 28      | 12      | 4       | 8       | 32      | 16      | 8       | 56      |                 |
| SAMPLING WEIGHT(kg) | 1174    | 7566    | 4361    | 1015    | 1854    | 8739    | 5376    | 1854    | 15969   |                 |
| No. F.MEASURED      | 713     | 5082    | 3263    | 593     | 1367    | 5795    | 3856    | 1367    | 11018   |                 |
| MEAN LENGTH(cm)     | 58.5    | 54.7    | 50.7    | 51.7    | 47.6    | 55.2    | 50.8    | 47.6    | 52.9    |                 |
| MEAN WEIGHT (g)     | 1849    | 1601    | 1336    | 1336    | 1187    | 1634    | 1336    | 1187    | 1482    |                 |
| DEPTH RANGE (m)     | 365/473 | 230/483 | 219/450 | 256/411 | 211/451 | 230/483 | 219/450 | 211/451 | 211/483 |                 |

TABLE IX: COD, DIV. 3N, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH GROUP        | JUN     | JUL     | AUG     | SEP     | 2nd Q.  | 3rd Q.  | YEAR    | LENGTH GROUP |
|---------------------|---------|---------|---------|---------|---------|---------|---------|--------------|
| 24                  | 1.5     |         |         | 5.4     | 1.5     | 4.2     | 3.0     | 24           |
| 27                  | 7.0     | 7.2     |         | 10.2    | 7.0     | 8.6     | 7.8     | 27           |
| 30                  | 25.3    | 14.5    | 20.9    | 45.9    | 25.3    | 40.0    | 33.0    | 30           |
| 33                  | 75.7    | 36.2    | 20.9    | 108.0   | 75.7    | 90.5    | 83.5    | 33           |
| 36                  | 207.0   | 123.2   | 104.1   | 173.6   | 207.0   | 160.1   | 182.4   | 36           |
| 39                  | 200.4   | 318.8   | 297.7   | 287.2   | 200.4   | 291.0   | 248.0   | 39           |
| 42                  | 231.8   | 253.6   | 205.4   | 153.1   | 231.8   | 168.0   | 198.3   | 42           |
| 45                  | 125.9   | 130.4   | 165.4   | 68.3    | 125.9   | 86.5    | 105.2   | 45           |
| 48                  | 56.9    | 50.7    | 133.2   | 31.0    | 56.9    | 46.7    | 51.6    | 48           |
| 51                  | 13.6    | 29.0    | 24.4    | 47.6    | 13.6    | 42.9    | 29.0    | 51           |
| 54                  | 28.3    | 21.7    | 17.5    | 34.4    | 28.3    | 31.1    | 29.7    | 54           |
| 57                  | 11.9    | 7.2     | 7.0     | 23.0    | 11.9    | 19.6    | 15.9    | 57           |
| 60                  | 9.8     |         | 3.5     | 8.8     | 9.8     | 7.4     | 8.5     | 60           |
| 63                  | 1.6     | 7.2     |         | 2.2     | 1.6     | 2.3     | 2.0     | 63           |
| 66                  | 1.6     |         |         | 0.5     | 1.6     | 0.4     | 1.0     | 66           |
| 69                  | 1.6     |         |         | 0.5     | 1.6     | 0.4     | 1.0     | 69           |
| 72                  |         |         |         | 0.2     |         | 0.2     | 0.1     | 72           |
| TOTAL               | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |              |
| No. SAMPLES         | 4       | 1       | 2       | 13      | 4       | 16      | 20      |              |
| SAMPLING WEIGHT(kg) | 757     | 146     | 295     | 2723    | 757     | 3164    | 3920    |              |
| No. F.MEASURED      | 747     | 138     | 287     | 1966    | 747     | 2391    | 3138    |              |
| MEAN LENGTH(cm)     | 42.2    | 42.7    | 43.4    | 41.6    | 42.2    | 42.0    | 42.1    |              |
| MEAN WEIGHT (g)     | 837     | 850     | 894     | 819     | 837     | 832     | 834     |              |
| DEPTH RANGE (m)     | 101/428 | 382/528 | 326/368 | 269/448 | 101/428 | 269/528 | 101/528 |              |

TABLE X: COD, DIV. 3O, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH GROUP        | AUG     | SEP     | 3rd Q.<br>= YEAR | LENGTH GROUP |
|---------------------|---------|---------|------------------|--------------|
| 24                  |         | 4.7     | 3.5              | 24           |
| 27                  | 4.8     | 3.0     | 3.5              | 27           |
| 30                  | 21.1    | 14.2    | 16.1             | 30           |
| 33                  | 55.5    | 53.4    | 54.0             | 33           |
| 36                  | 106.4   | 90.0    | 94.3             | 36           |
| 39                  | 348.8   | 251.9   | 277.5            | 39           |
| 42                  | 235.6   | 140.2   | 165.4            | 42           |
| 45                  | 50.9    | 215.2   | 171.8            | 45           |
| 48                  | 49.1    | 70.6    | 64.9             | 48           |
| 51                  | 39.0    | 65.2    | 58.3             | 51           |
| 54                  | 41.0    | 34.6    | 36.3             | 54           |
| 57                  | 18.1    | 27.1    | 24.7             | 57           |
| 60                  | 16.5    | 14.8    | 15.3             | 60           |
| 63                  |         | 4.5     | 3.3              | 63           |
| 66                  | 6.6     | 6.7     | 6.7              | 66           |
| 69                  | 3.3     | 0.9     | 1.5              | 69           |
| 72                  |         | 2.3     | 1.7              | 72           |
| 75                  | 3.3     |         | 0.9              | 75           |
| 78                  |         | 0.6     | 0.4              | 78           |
| TOTAL               | 1000    | 1000    | 1000             |              |
| No. SAMPLES         | 2       | 9       | 11               |              |
| SAMPLING WEIGHT(kg) | 346     | 1435    | 1781             |              |
| No. F.MEASURED      | 250     | 1096    | 1346             |              |
| MEAN LENGTH(cm)     | 43.2    | 44.5    | 44.2             |              |
| MEAN WEIGHT (g)     | 921     | 1011    | 987              |              |
| DEPTH RANGE (m)     | 389/441 | 178/450 | 178/450          |              |



TABLE XI: REDFISH (*S. mentella*), DIV. 3L, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUL     | SEP     | OCT     | 3rd Q.  | 4th Q.  | YEAR    | LENGTH<br>GROUP |
|---------------------|---------|---------|---------|---------|---------|---------|-----------------|
| 11                  |         |         | 0.8     |         | 0.8     | 0.3     | 11              |
| 12                  |         |         | 0.9     |         | 0.9     | 0.3     | 12              |
| 13                  |         | 1.0     | 3.6     | 1.0     | 3.6     | 2.0     | 13              |
| 14                  |         | 3.1     | 4.9     | 3.1     | 4.9     | 3.7     | 14              |
| 15                  |         | 2.9     | 11.8    | 2.9     | 11.8    | 6.2     | 15              |
| 16                  |         | 7.2     | 8.8     | 7.2     | 8.8     | 7.8     | 16              |
| 17                  |         | 11.7    | 18.4    | 11.6    | 18.4    | 14.2    | 17              |
| 18                  |         | 15.6    | 12.3    | 15.4    | 12.3    | 14.2    | 18              |
| 19                  | 3.8     | 33.0    | 29.4    | 32.8    | 29.4    | 31.5    | 19              |
| 20                  | 2.3     | 50.8    | 65.9    | 50.4    | 65.9    | 56.2    | 20              |
| 21                  | 6.1     | 103.5   | 98.7    | 102.6   | 98.7    | 101.2   | 21              |
| 22                  | 6.9     | 137.9   | 162.3   | 136.8   | 162.3   | 146.4   | 22              |
| 23                  | 6.1     | 100.1   | 116.7   | 99.3    | 116.7   | 105.9   | 23              |
| 24                  | 1.5     | 44.7    | 59.2    | 44.4    | 59.2    | 50.0    | 24              |
| 25                  | 12.2    | 40.7    | 30.8    | 40.4    | 30.8    | 36.8    | 25              |
| 26                  | 13.0    | 25.8    | 21.2    | 25.6    | 21.2    | 24.0    | 26              |
| 27                  | 9.9     | 28.2    | 36.2    | 28.0    | 36.2    | 31.1    | 27              |
| 28                  | 34.4    | 31.0    | 28.9    | 31.1    | 28.9    | 30.3    | 28              |
| 29                  | 33.6    | 27.4    | 28.6    | 27.5    | 28.6    | 27.9    | 29              |
| 30                  | 36.7    | 54.0    | 42.1    | 53.9    | 42.1    | 49.4    | 30              |
| 31                  | 62.0    | 58.7    | 41.2    | 58.8    | 41.2    | 52.2    | 31              |
| 32                  | 91.8    | 61.3    | 52.9    | 61.6    | 52.9    | 58.3    | 32              |
| 33                  | 127.7   | 78.0    | 61.2    | 78.4    | 61.2    | 72.0    | 33              |
| 34                  | 131.4   | 36.1    | 27.6    | 36.9    | 27.6    | 33.4    | 34              |
| 35                  | 120.6   | 18.4    | 21.1    | 19.3    | 21.1    | 20.0    | 35              |
| 36                  | 106.0   | 11.1    | 3.4     | 11.9    | 3.4     | 8.7     | 36              |
| 37                  | 58.8    | 5.0     | 3.3     | 5.4     | 3.3     | 4.6     | 37              |
| 38                  | 68.8    | 7.7     | 5.9     | 8.3     | 5.9     | 7.4     | 38              |
| 39                  | 19.1    | 1.3     | 0.9     | 1.4     | 0.9     | 1.2     | 39              |
| 40                  | 26.0    | 2.5     | 0.9     | 2.7     | 0.9     | 2.0     | 40              |
| 41                  | 14.5    | 1.0     |         | 1.2     |         | 0.7     | 41              |
| 42                  | 5.4     |         |         | 0.05    |         | 0.03    | 42              |
| 43                  |         |         |         |         |         |         | 43              |
| 44                  | 1.5     |         |         | 0.01    |         | 0.01    | 44              |
| TOTAL               | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |                 |
|                     |         |         |         |         |         |         |                 |
| No. SAMPLES         | 2       | 7       | 5       | 9       | 5       | 14      |                 |
| SAMPLING WEIGHT(kg) | 312     | 705     | 444     | 1017    | 444     | 1461    |                 |
| No. F.MEASURED      | 523     | 2538    | 1579    | 3061    | 1579    | 4640    |                 |
| MEAN LENGTH(cm)     | 34.1    | 26.5    | 25.5    | 26.5    | 25.5    | 26.1    |                 |
| MEAN WEIGHT (g)     | 541     | 283     | 256     | 285     | 256     | 274     |                 |
| DEPTH RANGE (m)     | 393/486 | 308/361 | 281/357 | 308/486 | 281/357 | 281/486 |                 |

TABLE XII: REDFISH (*S. mentella*), DIV. 3M, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | MAY     | JUN     | JUL     | SEP     | OCT     | 2nd Q.  | 3rd Q.  | 4th Q.  | YEAR    | LENGTH<br>GROUP |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------|
| 8                   |         | 0.1     | 0.1     |         |         | 0.05    | 0.1     |         | 0.1     | 8               |
| 9                   |         | 0.5     |         |         |         | 0.4     |         |         | 0.3     | 9               |
| 10                  |         | 0.1     | 0.1     |         |         | 0.1     | 0.1     |         | 0.1     | 10              |
| 11                  | 0.4     | 0.7     | 0.4     |         |         | 0.7     | 0.4     |         | 0.6     | 11              |
| 12                  |         | 2.2     | 0.1     |         | 0.3     | 2.0     | 0.1     | 0.3     | 1.5     | 12              |
| 13                  | 2.2     | 2.9     | 1.1     |         | 0.1     | 2.9     | 1.0     | 0.1     | 2.3     | 13              |
| 14                  | 5.8     | 5.1     | 3.2     |         | 0.7     | 5.1     | 2.9     | 0.7     | 4.4     | 14              |
| 15                  | 8.8     | 7.3     | 2.6     |         | 1.8     | 7.5     | 2.4     | 1.8     | 5.9     | 15              |
| 16                  | 12.4    | 9.5     | 3.1     | 2.9     | 5.4     | 9.7     | 3.1     | 5.4     | 7.8     | 16              |
| 17                  | 17.6    | 10.1    | 9.3     | 4.8     | 7.8     | 10.8    | 9.0     | 7.8     | 10.2    | 17              |
| 18                  | 27.3    | 15.2    | 9.8     | 2.2     | 11.9    | 16.3    | 9.2     | 11.9    | 14.2    | 18              |
| 19                  | 31.4    | 26.0    | 21.5    | 13.6    | 14.8    | 26.5    | 21.0    | 14.8    | 24.7    | 19              |
| 20                  | 53.8    | 47.4    | 42.4    | 26.2    | 22.5    | 47.9    | 41.2    | 22.5    | 45.4    | 20              |
| 21                  | 87.1    | 62.7    | 74.3    | 56.9    | 39.6    | 64.9    | 73.0    | 39.6    | 66.3    | 21              |
| 22                  | 153.6   | 98.1    | 114.2   | 103.1   | 71.0    | 103.1   | 113.3   | 71.0    | 104.9   | 22              |
| 23                  | 170.1   | 88.3    | 96.0    | 77.9    | 75.7    | 95.6    | 94.6    | 75.7    | 94.8    | 23              |
| 24                  | 95.2    | 44.5    | 39.7    | 34.1    | 34.3    | 49.0    | 39.3    | 34.3    | 46.0    | 24              |
| 25                  | 49.4    | 32.1    | 29.1    | 47.9    | 30.2    | 33.7    | 30.5    | 30.2    | 32.7    | 25              |
| 26                  | 42.4    | 31.9    | 20.9    | 42.9    | 26.8    | 32.9    | 22.5    | 26.8    | 29.9    | 26              |
| 27                  | 20.7    | 24.1    | 19.0    | 39.6    | 21.3    | 23.8    | 20.5    | 21.3    | 22.9    | 27              |
| 28                  | 33.1    | 34.7    | 26.6    | 47.1    | 34.8    | 34.5    | 28.1    | 34.8    | 32.8    | 28              |
| 29                  | 19.0    | 37.9    | 37.7    | 51.9    | 33.7    | 36.2    | 38.8    | 33.7    | 36.8    | 29              |
| 30                  | 24.8    | 66.0    | 53.8    | 80.1    | 54.0    | 62.3    | 55.7    | 54.0    | 60.3    | 30              |
| 31                  | 35.0    | 75.8    | 82.5    | 69.4    | 78.0    | 72.1    | 81.5    | 78.0    | 74.8    | 31              |
| 32                  | 51.3    | 90.6    | 106.1   | 74.8    | 102.7   | 87.1    | 103.8   | 102.7   | 92.0    | 32              |
| 33                  | 30.9    | 84.2    | 85.0    | 92.3    | 90.5    | 79.4    | 85.5    | 90.5    | 81.4    | 33              |
| 34                  | 11.4    | 37.4    | 46.6    | 54.0    | 58.3    | 35.1    | 47.2    | 58.3    | 39.0    | 34              |
| 35                  | 9.1     | 21.6    | 22.0    | 25.6    | 55.6    | 20.5    | 22.3    | 55.6    | 22.0    | 35              |
| 36                  | 3.7     | 13.9    | 13.5    | 15.3    | 31.4    | 13.0    | 13.6    | 31.4    | 13.7    | 36              |
| 37                  | 1.2     | 6.3     | 7.2     | 5.5     | 27.2    | 5.8     | 7.1     | 27.2    | 6.8     | 37              |
| 38                  | 1.0     | 8.7     | 12.2    | 15.3    | 34.3    | 8.0     | 12.4    | 34.3    | 10.0    | 38              |
| 39                  |         | 3.9     | 4.5     | 4.6     | 11.8    | 3.5     | 4.5     | 11.8    | 4.0     | 39              |
| 40                  | 0.6     | 5.5     | 5.6     | 5.5     | 14.5    | 5.0     | 5.6     | 14.5    | 5.5     | 40              |
| 41                  | 0.6     | 2.9     | 6.3     | 5.1     | 5.4     | 2.7     | 6.2     | 5.4     | 3.7     | 41              |
| 42                  |         | 1.3     | 2.1     | 1.3     | 3.8     | 1.2     | 2.1     | 3.8     | 1.5     | 42              |
| 43                  |         | 0.2     | 0.4     |         |         | 0.2     | 0.4     |         | 0.2     | 43              |
| 44                  |         | 0.4     | 0.9     |         |         | 0.4     | 0.8     |         | 0.5     | 44              |
| TOTAL               | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |                 |
| No. SAMPLES         | 4       | 28      | 12      | 4       | 7       | 32      | 16      | 7       | 55      |                 |
| SAMPLING WEIGHT(kg) | 464     | 3344    | 1870    | 371     | 645     | 3807    | 2241    | 645     | 6694    |                 |
| No. F.MEASURED      | 1384    | 11396   | 5619    | 1326    | 1843    | 12780   | 6945    | 1843    | 21568   |                 |
| MEAN LENGTH(cm)     | 24.7    | 27.4    | 27.8    | 28.5    | 29.7    | 27.1    | 27.9    | 29.7    | 27.4    |                 |
| MEAN WEIGHT (g)     | 233     | 326     | 341     | 354     | 410     | 318     | 342     | 410     | 327     |                 |
| DEPTH RANGE (m)     | 255/479 | 230/502 | 237/780 | 267/408 | 211/481 | 230/502 | 237/780 | 211/481 | 211/780 |                 |

TABLE XIII: REDFISH (*S. mentella*), DIV. 3N, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN     | JUL     | AUG     | SEP     | 2nd Q.  | 3rd Q.  | YEAR    | LENGTH<br>GROUP |
|---------------------|---------|---------|---------|---------|---------|---------|---------|-----------------|
| 8                   | 1.5     |         |         |         | 1.5     |         | 0.2     | 8               |
| 9                   | 1.0     |         |         |         | 1.0     |         | 0.1     | 9               |
| 10                  | 0.9     | 2.5     |         |         | 0.9     | 0.02    | 0.1     | 10              |
| 11                  | 2.6     | 2.5     | 1.9     | 0.4     | 2.6     | 0.6     | 0.8     | 11              |
| 12                  | 6.0     | 7.4     | 3.7     | 2.2     | 6.0     | 2.4     | 2.8     | 12              |
| 13                  | 4.1     | 2.5     | 9.3     | 3.9     | 4.1     | 4.5     | 4.5     | 13              |
| 14                  | 7.5     | 9.9     | 14.9    | 6.2     | 7.5     | 7.3     | 7.3     | 14              |
| 15                  | 16.1    | 9.9     | 9.3     | 9.3     | 16.1    | 9.3     | 10.1    | 15              |
| 16                  | 11.0    | 5.0     | 16.8    | 11.8    | 11.0    | 12.3    | 12.2    | 16              |
| 17                  | 20.4    | 19.9    | 7.5     | 13.8    | 20.4    | 13.1    | 14.0    | 17              |
| 18                  | 37.7    | 29.8    | 24.4    | 24.7    | 37.7    | 24.7    | 26.2    | 18              |
| 19                  | 66.4    | 64.5    | 33.7    | 45.3    | 66.4    | 44.1    | 46.6    | 19              |
| 20                  | 107.8   | 64.5    | 106.5   | 92.3    | 107.8   | 93.8    | 95.4    | 20              |
| 21                  | 142.2   | 126.6   | 155.0   | 152.8   | 142.2   | 152.8   | 151.6   | 21              |
| 22                  | 179.9   | 181.1   | 224.2   | 205.0   | 179.9   | 207.1   | 204.0   | 22              |
| 23                  | 133.8   | 176.2   | 119.7   | 123.3   | 133.8   | 123.3   | 124.5   | 23              |
| 24                  | 79.5    | 72.0    | 44.9    | 63.9    | 79.5    | 61.7    | 63.7    | 24              |
| 25                  | 43.3    | 47.1    | 28.0    | 38.4    | 43.3    | 37.2    | 37.9    | 25              |
| 26                  | 19.0    | 34.7    | 35.4    | 25.7    | 19.0    | 26.9    | 26.0    | 26              |
| 27                  | 17.8    | 14.9    | 15.0    | 19.9    | 17.8    | 19.2    | 19.1    | 27              |
| 28                  | 19.5    | 32.3    | 20.5    | 19.6    | 19.5    | 19.9    | 19.8    | 28              |
| 29                  | 6.1     | 19.9    | 28.2    | 20.3    | 6.1     | 21.3    | 19.5    | 29              |
| 30                  | 16.1    | 22.3    | 41.3    | 27.0    | 16.1    | 28.6    | 27.2    | 30              |
| 31                  | 11.5    | 22.3    | 26.3    | 30.8    | 11.5    | 30.1    | 28.0    | 31              |
| 32                  | 20.2    | 9.9     | 20.6    | 21.2    | 20.2    | 21.0    | 20.9    | 32              |
| 33                  | 16.1    | 9.9     | 3.7     | 19.8    | 16.1    | 17.7    | 17.5    | 33              |
| 34                  | 5.5     |         | 5.6     | 9.2     | 5.5     | 8.7     | 8.3     | 34              |
| 35                  | 3.4     | 2.5     | 1.9     | 5.1     | 3.4     | 4.7     | 4.5     | 35              |
| 36                  | 0.2     | 5.0     |         | 3.4     | 0.2     | 3.0     | 2.6     | 36              |
| 37                  |         | 2.5     |         | 2.1     |         | 1.9     | 1.6     | 37              |
| 38                  | 1.8     |         | 1.9     | 2.5     | 1.8     | 2.4     | 2.4     | 38              |
| 39                  | 0.8     |         |         |         | 0.8     |         | 0.1     | 39              |
| 40                  |         | 2.5     |         | 0.2     |         | 0.2     | 0.2     | 40              |
| TOTAL               | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |                 |
| No. SAMPLES         | 4       | 1       | 2       | 13      | 4       | 16      | 20      |                 |
| SAMPLING WEIGHT(kg) | 391     | 94      | 118     | 995     | 391     | 1207    | 1598    |                 |
| No. F.MEASURED      | 1566    | 403     | 535     | 4100    | 1566    | 5038    | 6604    |                 |
| MEAN LENGTH(cm)     | 22.8    | 23.3    | 23.2    | 23.7    | 22.8    | 23.6    | 23.5    |                 |
| MEAN WEIGHT (g)     | 181     | 191     | 190     | 202     | 181     | 200     | 198     |                 |
| DEPTH RANGE (m)     | 253/493 | 382/528 | 318/352 | 249/412 | 253/493 | 249/528 | 249/528 |                 |

TABLE XIV: REDFISH (*S. mentella*), DIV. 3O, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | AUG     | SEP     | 3rd Q.<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------|---------|------------------|-----------------|
| 8                   | 1.7     |         | 0.3              | 8               |
| 9                   |         | 0.5     | 0.4              | 9               |
| 10                  | 3.1     |         | 0.5              | 10              |
| 11                  | 3.0     | 0.6     | 1.0              | 11              |
| 12                  | 11.1    | 1.1     | 2.8              | 12              |
| 13                  | 9.4     | 5.6     | 6.3              | 13              |
| 14                  | 18.3    | 7.5     | 9.4              | 14              |
| 15                  | 6.1     | 9.1     | 8.6              | 15              |
| 16                  | 25.9    | 12.9    | 15.1             | 16              |
| 17                  | 22.4    | 27.4    | 26.5             | 17              |
| 18                  | 43.2    | 34.8    | 36.3             | 18              |
| 19                  | 75.0    | 74.2    | 74.4             | 19              |
| 20                  | 131.1   | 125.7   | 126.6            | 20              |
| 21                  | 179.7   | 187.1   | 185.8            | 21              |
| 22                  | 214.5   | 230.6   | 227.8            | 22              |
| 23                  | 97.1    | 99.4    | 99.0             | 23              |
| 24                  | 67.0    | 39.6    | 44.3             | 24              |
| 25                  | 22.2    | 24.9    | 24.4             | 25              |
| 26                  | 19.4    | 18.9    | 19.0             | 26              |
| 27                  | 7.9     | 12.1    | 11.4             | 27              |
| 28                  | 12.9    | 13.8    | 13.6             | 28              |
| 29                  | 6.5     | 13.1    | 12.0             | 29              |
| 30                  | 12.7    | 11.9    | 12.0             | 30              |
| 31                  | 3.1     | 14.9    | 12.8             | 31              |
| 32                  | 1.7     | 12.8    | 10.9             | 32              |
| 33                  | 3.3     | 13.2    | 11.5             | 33              |
| 34                  |         | 4.1     | 3.4              | 34              |
| 35                  | 1.7     | 1.9     | 1.9              | 35              |
| 36                  |         | 1.2     | 1.0              | 36              |
| 37                  |         | 0.4     | 0.3              | 37              |
| 38                  |         | 0.8     | 0.7              | 38              |
| TOTAL               | 1000    | 1000    | 1000             |                 |
| No. SAMPLES         | 2       | 9       | 11               |                 |
| SAMPLING WEIGHT(kg) | 146     | 647     | 792              |                 |
| No. F.MEASURED      | 636     | 2831    | 3467             |                 |
| MEAN LENGTH(cm)     | 21.7    | 22.5    | 22.3             |                 |
| MEAN WEIGHT (g)     | 139     | 154     | 152              |                 |
| DEPTH RANGE (m)     | 280/442 | 178/520 | 178/520          |                 |

TABLE XV: AMERICAN PLAICE, DIV. 3M, 2012:  
length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN<br>=2nd Q. | JUL<br>=3rd Q. | YEAR    | LENGTH<br>GROUP |
|---------------------|----------------|----------------|---------|-----------------|
| 20                  |                | 2.3            | 2.2     | 20              |
| 22                  |                | 5.2            | 5.0     | 22              |
| 24                  |                | 8.0            | 7.7     | 24              |
| 26                  |                | 8.9            | 8.6     | 26              |
| 28                  |                | 23.6           | 22.6    | 28              |
| 30                  |                | 29.5           | 28.2    | 30              |
| 32                  | 15.1           | 101.2          | 97.5    | 32              |
| 34                  | 37.0           | 99.8           | 97.1    | 34              |
| 36                  | 79.3           | 102.8          | 101.8   | 36              |
| 38                  | 125.8          | 153.9          | 152.7   | 38              |
| 40                  | 122.5          | 131.5          | 131.1   | 40              |
| 42                  | 92.3           | 115.2          | 114.2   | 42              |
| 44                  | 72.4           | 124.1          | 121.9   | 44              |
| 46                  | 142.8          | 57.6           | 61.2    | 46              |
| 48                  | 112.1          | 15.5           | 19.6    | 48              |
| 50                  | 101.4          | 9.8            | 13.7    | 50              |
| 52                  | 34.9           | 5.9            | 7.2     | 52              |
| 54                  | 31.5           | 3.3            | 4.5     | 54              |
| 56                  | 26.3           | 1.9            | 2.9     | 56              |
| 58                  | 6.6            |                | 0.3     | 58              |
| TOTAL               | 1000           | 1000           | 1000    |                 |
| No. SAMPLES         | 5              | 9              | 14      |                 |
| SAMPLING WEIGHT(kg) | 171            | 486            | 657     |                 |
| No. F.MEASURED      | 185            | 1003           | 1188    |                 |
| MEAN LENGTH(cm)     | 44.7           | 39.3           | 39.6    |                 |
| MEAN WEIGHT (g)     | 882            | 571            | 584     |                 |
| DEPTH RANGE (m)     | 273/347        | 232/443        | 232/443 |                 |

TABLE XVI: AMERICAN PLAICE, DIV. 3N, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN<br>=YEAR | LENGTH<br>GROUP |
|---------------------|--------------|-----------------|
| 14                  | 1.7          | 14              |
| 16                  | 11.1         | 16              |
| 18                  | 14.9         | 18              |
| 20                  | 40.2         | 20              |
| 22                  | 42.4         | 22              |
| 24                  | 92.4         | 24              |
| 26                  | 151.5        | 26              |
| 28                  | 191.5        | 28              |
| 30                  | 222.1        | 30              |
| 32                  | 134.3        | 32              |
| 34                  | 43.9         | 34              |
| 36                  | 21.6         | 36              |
| 38                  | 12.8         | 38              |
| 40                  | 8.6          | 40              |
| 42                  | 2.6          | 42              |
| 44                  | 5.7          | 44              |
| 46                  | 1.3          | 46              |
| 48                  |              | 48              |
| 50                  | 1.3          | 50              |
| TOTAL               | 1000         |                 |
| No. SAMPLES         | 4            |                 |
| SAMPLING WEIGHT(kg) | 416          |                 |
| No. F.MEASURED      | 1049         |                 |
| MEAN LENGTH(cm)     | 29.3         |                 |
| MEAN WEIGHT (g)     | 260          |                 |
| DEPTH RANGE (m)     | 101/400      |                 |

TABLE XVII: YELLOWTAIL FLOUNDER, DIV. 3N, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------------|-----------------|
| 12                  | 3.1           | 12              |
| 14                  | 3.9           | 14              |
| 16                  | 8.3           | 16              |
| 18                  | 19.1          | 18              |
| 20                  | 24.6          | 20              |
| 22                  | 64.4          | 22              |
| 24                  | 113.1         | 24              |
| 26                  | 236.1         | 26              |
| 28                  | 224.1         | 28              |
| 30                  | 171.8         | 30              |
| 32                  | 90.4          | 32              |
| 34                  | 20.4          | 34              |
| 36                  | 8.7           | 36              |
| 38                  | 7.9           | 38              |
| 40                  | 4.1           | 40              |
| TOTAL               | 1000          |                 |
| No. SAMPLES         | 3             |                 |
| SAMPLING WEIGHT(kg) | 223           |                 |
| No. F.MEASURED      | 685           |                 |
| MEAN LENGTH(cm)     | 28.1          |                 |
| MEAN WEIGHT (g)     | 194           |                 |
| DEPTH RANGE (m)     | 101/400       |                 |

TABLE XVIII: GREENLAND HALIBUT, DIV. 3L, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUL     | SEP      | OCT      | NOV       | 3rd Q.   | 4th Q.   | YEAR     | LENGTH<br>GROUP |
|---------------------|---------|----------|----------|-----------|----------|----------|----------|-----------------|
| 18                  |         | 0.4      |          |           | 0.4      |          | 0.01     | 18              |
| 20                  |         | 1.9      |          |           | 1.9      |          | 0.1      | 20              |
| 22                  |         | 3.8      | 0.9      |           | 3.8      | 0.4      | 0.5      | 22              |
| 24                  |         | 9.2      | 3.8      | 5.1       | 9.0      | 4.5      | 4.6      | 24              |
| 26                  |         | 18.0     | 10.2     | 9.9       | 17.7     | 10.0     | 10.2     | 26              |
| 28                  |         | 27.3     | 22.9     | 19.7      | 26.8     | 21.2     | 21.3     | 28              |
| 30                  |         | 30.8     | 35.5     | 50.3      | 30.2     | 43.6     | 43.2     | 30              |
| 32                  |         | 83.6     | 78.8     | 100.6     | 82.1     | 90.7     | 90.4     | 32              |
| 34                  | 9.7     | 125.8    | 117.6    | 159.9     | 123.7    | 140.7    | 140.2    | 34              |
| 36                  | 9.7     | 144.9    | 102.7    | 105.6     | 142.4    | 104.3    | 105.4    | 36              |
| 38                  | 29.1    | 82.7     | 72.0     | 43.5      | 81.8     | 56.4     | 57.1     | 38              |
| 40                  | 19.4    | 76.9     | 53.4     | 37.5      | 75.9     | 44.8     | 45.6     | 40              |
| 42                  | 97.1    | 73.4     | 52.7     | 49.9      | 73.8     | 51.1     | 51.8     | 42              |
| 44                  | 97.1    | 18.7     | 58.2     | 95.6      | 20.1     | 78.6     | 77.0     | 44              |
| 46                  | 135.9   | 93.8     | 70.6     | 63.0      | 94.5     | 66.5     | 67.3     | 46              |
| 48                  | 368.9   | 17.7     | 81.2     | 86.4      | 24.1     | 84.0     | 82.3     | 48              |
| 50                  | 58.3    | 86.8     | 73.0     | 38.4      | 86.3     | 54.1     | 55.0     | 50              |
| 52                  | 87.4    | 59.0     | 68.4     | 53.4      | 59.6     | 60.2     | 60.2     | 52              |
| 54                  | 29.1    | 17.4     | 61.2     | 48.4      | 17.6     | 54.2     | 53.1     | 54              |
| 56                  | 29.1    | 20.8     | 22.5     | 15.4      | 21.0     | 18.6     | 18.7     | 56              |
| 58                  | 9.7     | 6.9      | 7.9      | 6.7       | 7.0      | 7.2      | 7.2      | 58              |
| 60                  |         |          | 4.6      | 6.7       |          | 5.8      | 5.6      | 60              |
| 62                  | 9.7     |          | 1.4      | 2.7       | 0.2      | 2.1      | 2.0      | 62              |
| 64                  |         |          | 0.3      | 1.5       |          | 1.0      | 1.0      | 64              |
| 66                  |         |          |          |           |          |          |          | 66              |
| 68                  | 9.7     |          |          |           | 0.2      |          | 0.01     | 68              |
| TOTAL               | 1000    | 1000     | 1000     | 1000      | 1000     | 1000     | 1000     |                 |
| No. SAMPLES         | 1       | 6        | 18       | 3         | 7        | 21       | 28       |                 |
| SAMPLING WEIGHT(kg) | 111     | 461      | 2662     | 518       | 572      | 3180     | 3752     |                 |
| No. F.MEASURED      | 103     | 850      | 4620     | 926       | 953      | 5546     | 6499     |                 |
| MEAN LENGTH(cm)     | 48.4    | 40.9     | 42.7     | 41.6      | 41.0     | 42.1     | 42.1     |                 |
| MEAN WEIGHT (g)     | 870     | 531      | 621      | 570       | 537      | 594      | 592      |                 |
| DEPTH RANGE (m)     | 755/763 | 296/1244 | 919/1487 | 1103/1443 | 296/1244 | 919/1487 | 296/1487 |                 |

TABLE XIX: GREENLAND HALIBUT, DIV. 3M, 2012:

length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUL<br>=3rd Q. | OCT<br>=4th Q. | YEAR     | LENGTH<br>GROUP |
|---------------------|----------------|----------------|----------|-----------------|
| 24                  |                | 6.4            | 6.1      | 24              |
| 26                  |                | 29.1           | 27.9     | 26              |
| 28                  |                | 96.7           | 92.9     | 28              |
| 30                  |                | 46.8           | 45.0     | 30              |
| 32                  |                | 112.3          | 108.0    | 32              |
| 34                  | 2.2            | 92.3           | 88.8     | 34              |
| 36                  | 5.9            | 50.2           | 48.4     | 36              |
| 38                  | 21.7           | 49.4           | 48.3     | 38              |
| 40                  | 32.1           | 75.6           | 73.9     | 40              |
| 42                  | 29.3           | 85.3           | 83.1     | 42              |
| 44                  | 60.4           | 43.2           | 43.9     | 44              |
| 46                  | 138.4          | 28.5           | 32.8     | 46              |
| 48                  | 84.8           | 26.1           | 28.3     | 48              |
| 50                  | 188.6          | 24.5           | 30.8     | 50              |
| 52                  | 121.4          | 67.1           | 69.2     | 52              |
| 54                  | 145.3          | 79.2           | 81.8     | 54              |
| 56                  | 78.3           | 40.6           | 42.0     | 56              |
| 58                  | 23.4           | 22.2           | 22.3     | 58              |
| 60                  | 32.0           | 20.7           | 21.1     | 60              |
| 62                  | 12.7           | 2.3            | 2.7      | 62              |
| 64                  | 12.7           | 1.5            | 2.0      | 64              |
| 66                  | 3.7            |                | 0.1      | 66              |
| 68                  | 3.5            |                | 0.1      | 68              |
| 70                  | 3.7            |                | 0.1      | 70              |
| TOTAL               | 1000           | 1000           | 1000     |                 |
| No. SAMPLES         | 3              | 3              | 6        |                 |
| SAMPLING WEIGHT(kg) | 331            | 602            | 933      |                 |
| No. F.MEASURED      | 311            | 845            | 1156     |                 |
| MEAN LENGTH(cm)     | 51.3           | 41.5           | 41.9     |                 |
| MEAN WEIGHT (g)     | 1087           | 610            | 628      |                 |
| DEPTH RANGE (m)     | 355/780        | 836/1074       | 355/1074 |                 |

TABLE XX: GREENLAND HALIBUT, DIV. 3N, 2012:

length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------------|-----------------|
| 32                  | 5.5           | 32              |
| 34                  | 27.5          | 34              |
| 36                  | 11.0          | 36              |
| 38                  | 65.9          | 38              |
| 40                  | 109.9         | 40              |
| 42                  | 120.9         | 42              |
| 44                  | 241.8         | 44              |
| 46                  | 230.8         | 46              |
| 48                  | 98.9          | 48              |
| 50                  | 27.5          | 50              |
| 52                  | 11.0          | 52              |
| 54                  |               | 54              |
| 56                  | 27.5          | 56              |
| 58                  | 5.5           | 58              |
| 60                  | 5.5           | 60              |
| 62                  | 5.5           | 62              |
| 64                  |               | 64              |
| 66                  | 5.5           | 66              |
| TOTAL               | 1000          |                 |
| No. SAMPLES         | 1             |                 |
| SAMPLING WEIGHT(kg) | 159           |                 |
| No. F.MEASURED      | 182           |                 |
| MEAN LENGTH(cm)     | 45.3          |                 |
| MEAN WEIGHT (g)     | 690           |                 |
| DEPTH RANGE (m)     | 325/761       |                 |

TABLE XXI: ROUGHHEAD GRENADIER, DIV. 3L, 2012:

length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | SEP<br>=3rd Q. | OCT<br>=4th Q. | YEAR     | LENGTH<br>GROUP |
|---------------------|----------------|----------------|----------|-----------------|
| 8                   |                | 8.3            | 7.9      | 8               |
| 9                   | 5.3            | 24.2           | 23.4     | 9               |
| 10                  | 42.6           | 62.1           | 61.3     | 10              |
| 11                  | 154.3          | 144.9          | 145.3    | 11              |
| 12                  | 372.3          | 320.3          | 322.3    | 12              |
| 13                  | 106.4          | 181.2          | 178.3    | 13              |
| 14                  | 90.4           | 75.6           | 76.2     | 14              |
| 15                  | 37.2           | 39.2           | 39.1     | 15              |
| 16                  | 79.8           | 39.6           | 41.2     | 16              |
| 17                  | 16.0           | 22.5           | 22.2     | 17              |
| 18                  | 16.0           | 12.6           | 12.7     | 18              |
| 19                  |                | 10.0           | 9.6      | 19              |
| 20                  | 5.3            | 11.4           | 11.2     | 20              |
| 21                  | 5.3            | 12.0           | 11.8     | 21              |
| 22                  | 10.6           | 4.5            | 4.8      | 22              |
| 23                  | 5.3            | 10.4           | 10.2     | 23              |
| 24                  | 21.3           | 4.6            | 5.3      | 24              |
| 25                  | 10.6           | 5.9            | 6.1      | 25              |
| 26                  | 16.0           |                | 0.6      | 26              |
| 27                  | 5.3            | 4.2            | 4.2      | 27              |
| 28                  |                |                |          | 28              |
| 29                  |                |                |          | 29              |
| 30                  |                | 3.3            | 3.1      | 30              |
| 31                  |                | 3.3            | 3.1      | 31              |
| TOTAL               | 1000           | 1000           | 1000     |                 |
| No. SAMPLES         | 1              | 4              | 5        |                 |
| SAMPLING WEIGHT(kg) | 107            | 503            | 610      |                 |
| No. F.MEASURED      | 188            | 819            | 1007     |                 |
| MEAN LENGTH(cm)     | 14.1           | 13.7           | 13.7     |                 |
| MEAN WEIGHT (g)     | 291            | 260            | 262      |                 |
| DEPTH RANGE (m)     | 1200/1244      | 919/1254       | 919/1254 |                 |

TABLE XXII: ROUGHHEAD GRENADIER, DIV. 3N, 2012:

length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------------|-----------------|
| 8                   | 9.3           | 8               |
| 9                   | 18.7          | 9               |
| 10                  | 28.0          | 10              |
| 11                  | 28.0          | 11              |
| 12                  | 280.4         | 12              |
| 13                  | 243.0         | 13              |
| 14                  | 121.5         | 14              |
| 15                  | 28.0          | 15              |
| 16                  | 28.0          | 16              |
| 17                  | 46.7          | 17              |
| 18                  | 28.0          | 18              |
| 19                  | 18.7          | 19              |
| 20                  | 18.7          | 20              |
| 21                  | 28.0          | 21              |
| 22                  |               | 22              |
| 23                  | 46.7          | 23              |
| 24                  | 9.3           | 24              |
| 25                  |               | 25              |
| 26                  | 9.3           | 26              |
| 27                  |               | 27              |
| 28                  | 9.3           | 28              |
| TOTAL               | 1000          |                 |
| No. SAMPLES         | 1             |                 |
| SAMPLING WEIGHT(kg) | 67            |                 |
| No. F.MEASURED      | 107           |                 |
| MEAN LENGTH(cm)     | 14.8          |                 |
| MEAN WEIGHT (g)     | 339           |                 |
| DEPTH RANGE (m)     | 325/761       |                 |



TABLE XXIII: WITCH FLOUNDER, DIV. 30, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | AUG     | SEP     | 3rd Q.<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------|---------|------------------|-----------------|
| 16                  | 17.5    | 5.5     | 7.4              | 16              |
| 18                  | 22.2    | 16.4    | 17.3             | 18              |
| 20                  | 50.8    | 14.5    | 20.1             | 20              |
| 22                  | 141.4   | 65.1    | 76.8             | 22              |
| 24                  | 151.0   | 77.9    | 89.2             | 24              |
| 26                  | 73.2    | 129.9   | 121.2            | 26              |
| 28                  | 111.3   | 138.6   | 134.4            | 28              |
| 30                  | 125.7   | 152.2   | 148.1            | 30              |
| 32                  | 138.3   | 125.0   | 127.0            | 32              |
| 34                  | 71.5    | 122.2   | 114.4            | 34              |
| 36                  | 60.4    | 64.6    | 63.9             | 36              |
| 38                  | 7.9     | 20.4    | 18.5             | 38              |
| 40                  | 7.9     | 20.5    | 18.6             | 40              |
| 42                  | 9.5     | 26.9    | 24.2             | 42              |
| 44                  | 3.2     | 15.4    | 13.5             | 44              |
| 46                  | 1.6     | 3.3     | 3.0              | 46              |
| 48                  | 3.2     |         | 0.5              | 48              |
| 50                  | 3.2     | 0.8     | 1.2              | 50              |
| 52                  |         |         |                  | 52              |
| 54                  |         | 0.8     | 0.7              | 54              |
| TOTAL               | 1000    | 1000    | 1000             |                 |
|                     |         |         |                  |                 |
| No. SAMPLES         | 2       | 7       | 9                |                 |
| SAMPLING WEIGHT(kg) | 103     | 289     | 393              |                 |
| No. F.MEASURED      | 419     | 1127    | 1546             |                 |
| MEAN LENGTH(cm)     | 28.8    | 30.9    | 30.6             |                 |
| MEAN WEIGHT (g)     | 316     | 368     | 360              |                 |
| DEPTH RANGE (m)     | 280/442 | 178/520 | 178/520          |                 |

TABLE XXIV: THORNY SKATE, DIV. 3M, 2012: length composition (0/000) of the 130mm trawl catches.

| LENGTH<br>GROUP     | JUN<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------------|-----------------|
| 46                  | 19.3          | 46              |
| 48                  | 55.4          | 48              |
| 50                  | 30.6          | 50              |
| 52                  | 58.8          | 52              |
| 54                  | 38.5          | 54              |
| 56                  | 105.2         | 56              |
| 58                  | 55.4          | 58              |
| 60                  | 61.1          | 60              |
| 62                  | 114.2         | 62              |
| 64                  | 86.0          | 64              |
| 66                  |               | 66              |
| 68                  | 53.2          | 68              |
| 70                  | 19.3          | 70              |
| 72                  | 116.5         | 72              |
| 74                  | 24.9          | 74              |
| 76                  |               | 76              |
| 78                  | 53.2          | 78              |
| 80                  | 19.3          | 80              |
| 82                  | 47.5          | 82              |
| 84                  |               | 84              |
| 86                  | 11.3          | 86              |
| 88                  | 19.3          | 88              |
| 90                  | 11.3          | 90              |
| TOTAL               | 1000          |                 |
|                     |               |                 |
| No. SAMPLES         | 3             |                 |
| SAMPLING WEIGHT(kg) | 259           |                 |
| No. F.MEASURED      | 59            |                 |
| MEAN LENGTH(cm)     | 64.5          |                 |
| MEAN WEIGHT (g)     | 3634          |                 |
| DEPTH RANGE (m)     | 234/483       |                 |

TABLE XXV: WHITE HAKE, DIV. 30, 2012: length composition (0/000)  
of the 130mm trawl catches.

| LENGTH<br>GROUP     | AUG     | SEP     | 3rd Q.<br>= YEAR | LENGTH<br>GROUP |
|---------------------|---------|---------|------------------|-----------------|
| 25                  | 3.4     |         | 0.4              | 25              |
| 26                  |         | 3.0     | 2.6              | 26              |
| 27                  | 3.4     | 2.8     | 2.9              | 27              |
| 28                  |         | 0.5     | 0.4              | 28              |
| 29                  | 4.1     |         | 0.5              | 29              |
| 30                  | 8.1     |         | 1.0              | 30              |
| 31                  |         | 6.9     | 6.1              | 31              |
| 32                  | 8.1     | 0.5     | 1.4              | 32              |
| 33                  | 6.9     | 5.3     | 5.5              | 33              |
| 34                  | 7.5     | 1.0     | 1.8              | 34              |
| 35                  | 24.4    | 16.3    | 17.3             | 35              |
| 36                  | 49.7    | 18.1    | 21.9             | 36              |
| 37                  | 71.9    | 6.3     | 14.3             | 37              |
| 38                  | 31.3    | 20.8    | 22.0             | 38              |
| 39                  | 8.1     | 27.3    | 25.0             | 39              |
| 40                  | 35.9    | 15.5    | 18.0             | 40              |
| 41                  | 28.8    | 31.6    | 31.2             | 41              |
| 42                  | 11.0    | 50.9    | 46.0             | 42              |
| 43                  | 19.7    | 36.4    | 34.4             | 43              |
| 44                  | 45.4    | 64.8    | 62.4             | 44              |
| 45                  | 28.2    | 98.9    | 90.3             | 45              |
| 46                  | 11.0    | 63.2    | 56.8             | 46              |
| 47                  | 62.3    | 30.9    | 34.7             | 47              |
| 48                  | 39.1    | 59.7    | 57.2             | 48              |
| 49                  | 69.8    | 53.7    | 55.7             | 49              |
| 50                  | 24.7    | 52.8    | 49.4             | 50              |
| 51                  | 58.6    | 37.4    | 40.0             | 51              |
| 52                  | 50.1    | 43.2    | 44.1             | 52              |
| 53                  | 38.5    | 31.7    | 32.5             | 53              |
| 54                  | 52.6    | 22.6    | 26.2             | 54              |
| 55                  | 75.7    | 43.1    | 47.1             | 55              |
| 56                  | 63.8    | 32.0    | 35.9             | 56              |
| 57                  | 15.0    | 28.3    | 26.7             | 57              |
| 58                  | 8.1     | 17.4    | 16.3             | 58              |
| 59                  |         | 10.4    | 9.1              | 59              |
| 60                  | 3.4     | 15.6    | 14.1             | 60              |
| 61                  | 7.5     | 12.1    | 11.5             | 61              |
| 62                  | 8.1     | 11.4    | 11.0             | 62              |
| 63                  |         | 7.6     | 6.7              | 63              |
| 64                  | 7.5     | 2.7     | 3.3              | 64              |
| 65                  | 4.1     | 3.5     | 3.6              | 65              |
| 66                  |         | 2.7     | 2.4              | 66              |
| 67                  | 4.1     | 8.3     | 7.8              | 67              |
| 68                  |         | 3.0     | 2.6              | 68              |
| TOTAL               | 1000    | 1000    | 1000             |                 |
| No. SAMPLES         | 2       | 7       | 9                |                 |
| SAMPLING WEIGHT(kg) | 305     | 1002    | 1307             |                 |
| No. F.MEASURED      | 268     | 831     | 1099             |                 |
| MEAN LENGTH(cm)     | 47.5    | 48.5    | 48.4             |                 |
| MEAN WEIGHT (g)     | 942     | 989     | 983              |                 |
| DEPTH RANGE (m)     | 220/438 | 178/420 | 178/438          |                 |

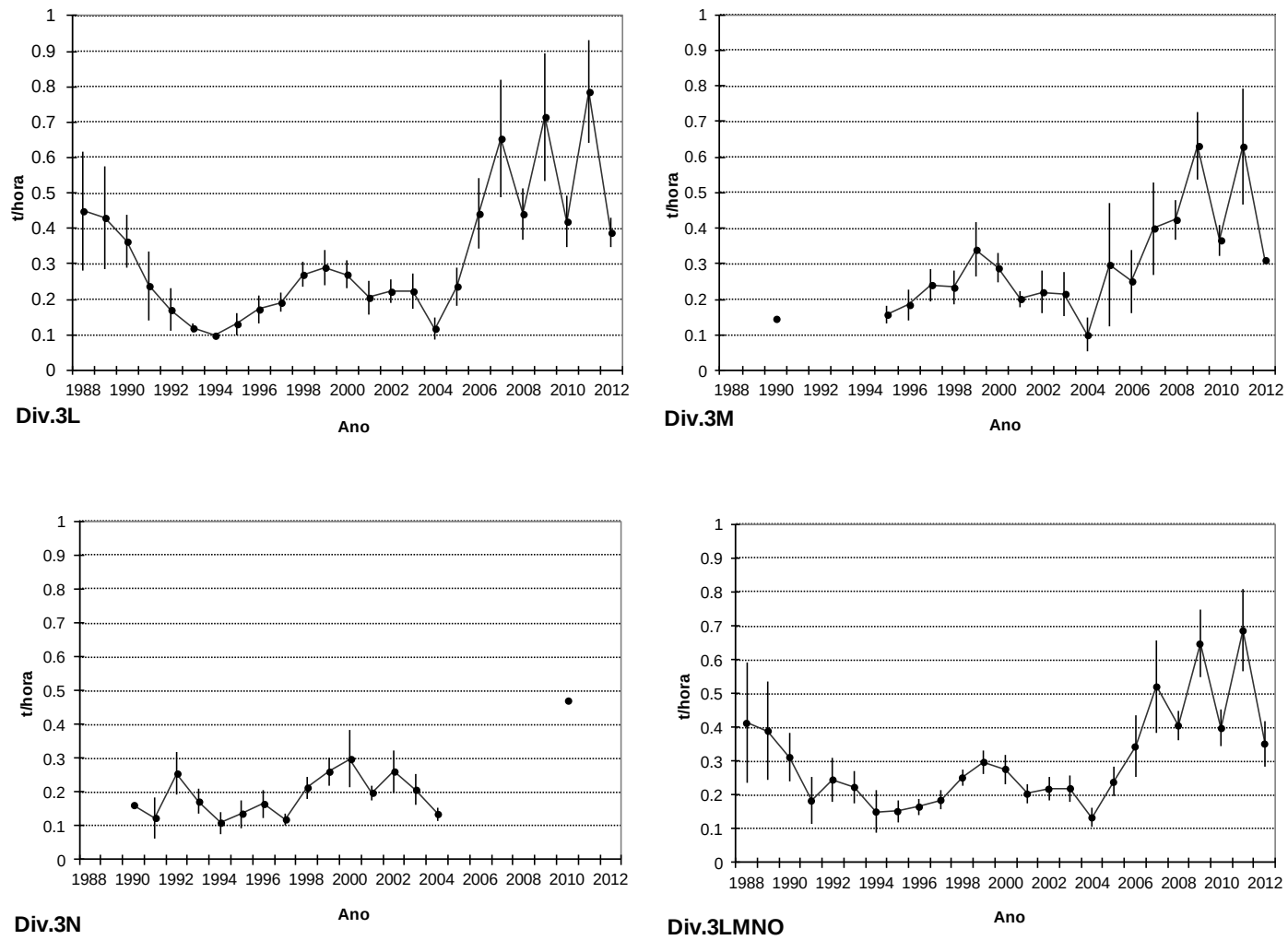


Fig. 1: Greenland halibut trawl catch rates by division, 1988 - 2012.

Fig. 2 - Annual length composition of Cod on Division 3L 130mm trawl fishery in 2012.

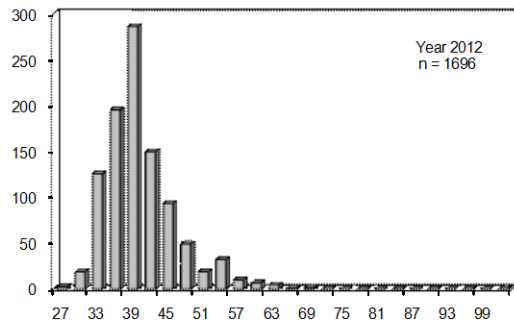


Fig. 3 - Annual length composition of Cod on Division 3M 130mm trawl fishery in 2012.

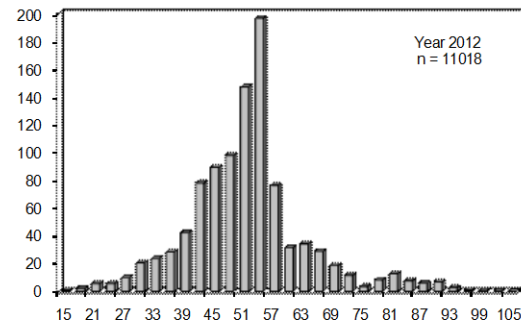


Fig. 4 - Annual length composition of Cod on Division 3N 130mm trawl fishery in 2012.

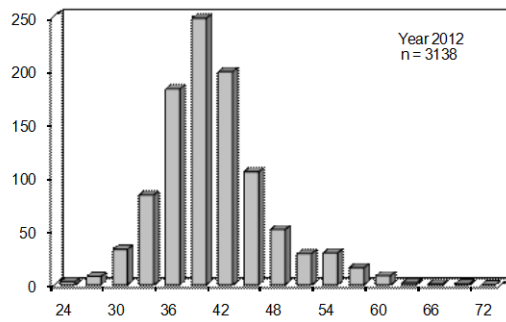


Fig. 5 - Annual length composition of Cod on Division 3O 130mm trawl fishery in 2012.

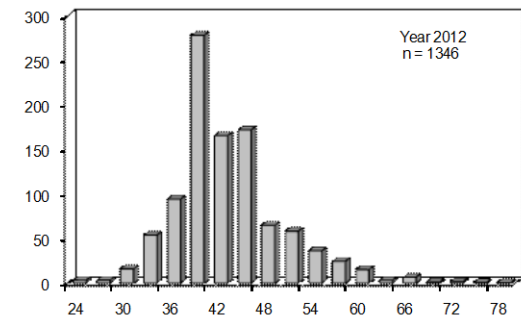


Fig. 6 - Annual length composition of Redfish (*S. mentella*) on Division 3L 130mm trawl fishery in 2012.

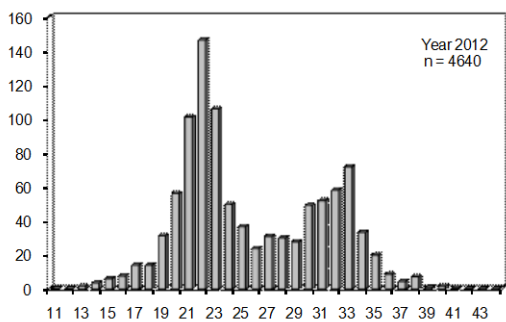


Fig. 7 - Annual length composition of Redfish (*S. mentella*) on Division 3M 130mm trawl fishery in 2012.

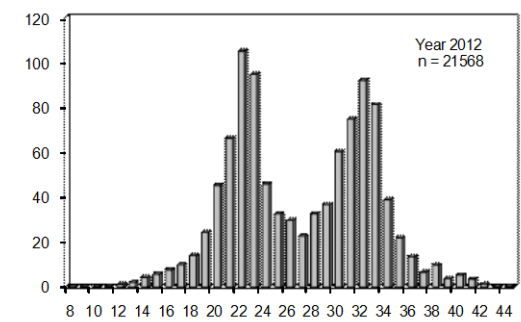


Fig. 8 - Annual length composition of Redfish (*S. mentella*) on Division 3N 130mm trawl fishery in 2012.

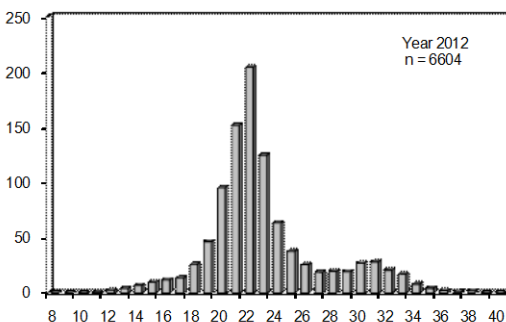


Fig. 9 - Annual length composition of Redfish (*S. mentella*) on Division 3O 130mm trawl fishery in 2012.

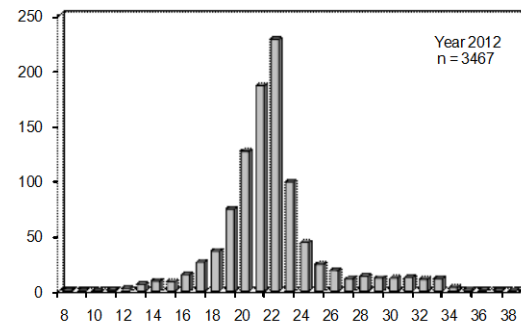


Fig. 10 - Annual length composition of American plaice on Division 3M 130mm trawl fishery in 2012.

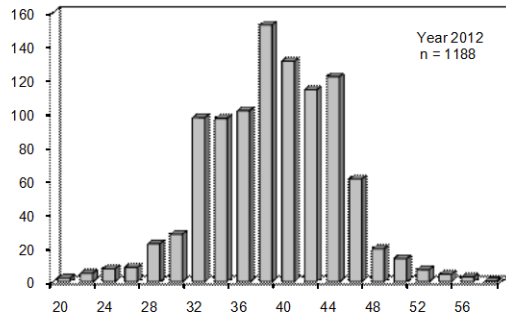


Fig. 11 - Annual length composition of American plaice on Division 3N 130mm trawl fishery in 2012.

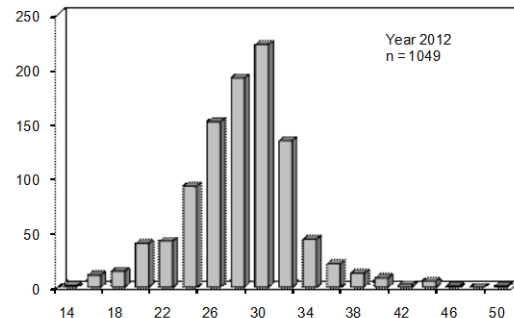


Fig. 12 - Annual length composition of Yellowtail flounder on Division 3N 130mm trawl fishery in 2012.

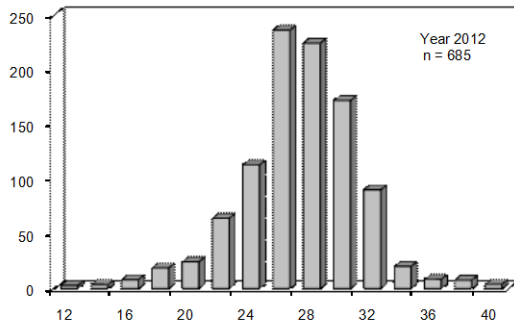


Fig. 13 - Annual length composition of Greenland halibut on Division 3L 130mm trawl fishery in 2012.

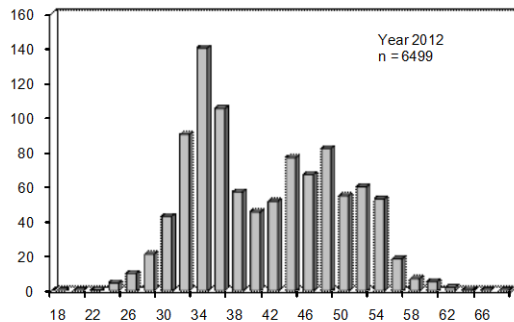


Fig. 14 - Annual length composition of Greenland halibut Division 3M 130mm trawl fishery in 2012.

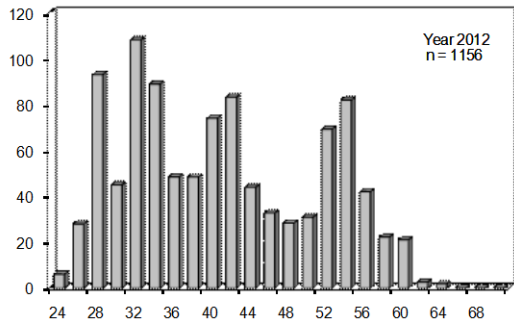


Fig. 15 - Annual length composition of Greenland halibut on Division 3N 130mm trawl fishery in 2012.

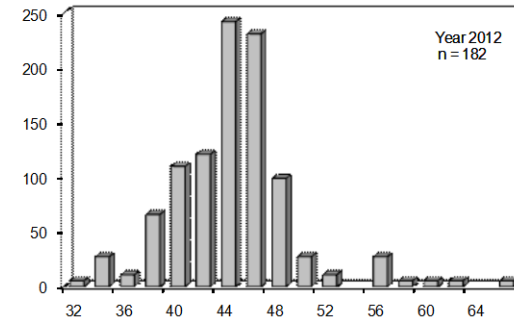


Fig. 16 - Annual length composition of Roughhead grenadier on Division 3L 130mm trawl fishery in 2012.

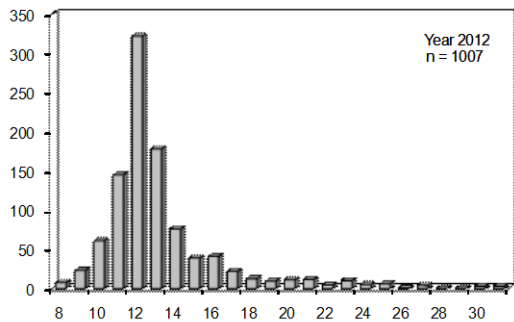
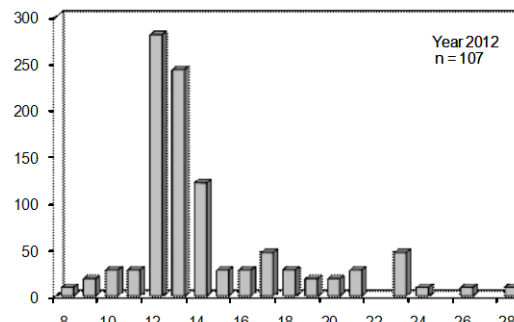
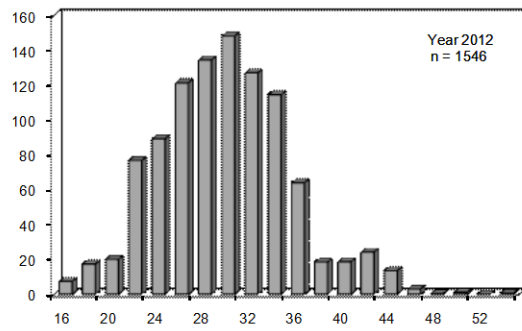


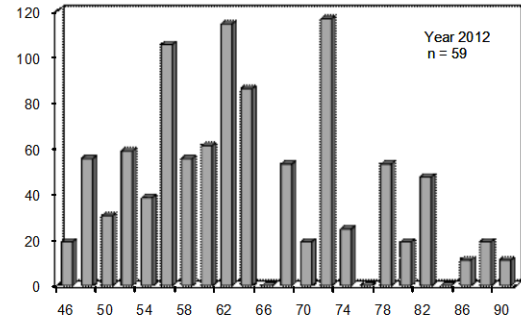
Fig. 17 - Annual length composition of Roughhead grenadier on Division 3N 130mm trawl fishery in 2012.



**Fig. 18- Annual length composition of Witch flounder on Division 3O 130mm trawl fishery in 2012.**



**Fig. 19 - Annual length composition of Thorny skate on Division 3M 130mm trawl fishery in 2012.**



**Fig. 20- Annual length composition of White hake on Division 3O 130mm trawl fishery in 2012.**

