

## Scientific, Technical and Economic Committee for Fisheries (STECF)

**Opinion by written procedure** 

Report of the SGMOS-09-05 Working Group Fishing Effort Regime in the Baltic

28 SEPTEMBER – 2 OCTOBER 2009, ISPRA, ITALY

Prepared in draft by SGMOS-09-04: 25 – 30 May 2009,

LISBON, PORTUGAL

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## SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

## STECF COMMENTS ON THE REPORT OF THE SGMOS-09-05 WORKING GROUP REPORT

#### 28 SEPTEMBER – 2 OCTOBER 2009, ISPRA, ITALY

PREPARED IN DRAFT BY SGMOS-09-04: 25 - 30 May 2009, LISBON, PORTUGAL

#### STECF UNDERTOOK THE REVIEW BY WRITTEN PROCEDURE IN MARCH 2010

#### 1. BACKGROUND:

STECF is requested to review the report of the **SGMOS-09-05** of September 28 September - 2 October, 2009 (Ispra) meeting, evaluate the findings and make any appropriate comments and recommendations.

The working group was requested for:

1- an assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes in relation to the management plan for Baltic cod (Regulation (EC) No 1098/2007).

#### 2. TERMS OF REFERENCE:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

*Areas covered by the R(EC) No 1098/2007 (Baltic Sea)* 

- (i) ICES division 22 to 24,
- (ii) ICES divisions 25 to 28, by distinguishing areas 27 and 28.2
- (iii) ICES divisions 29 to 32,

The data should also be broken down by

Member State;

regulated gear types designed in **R(EC)** No 1098/2007;

unregulated gear types catching cod in fishing areas (i), (ii) and (iii);

for the following parameters:

- a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned
- b. Catches (landings and discards provided separately) of cod in the Baltic Sea by weight and by numbers at age.
- c. Catches (landings and discards provided separately) of non-cod in the Baltic Sea by species, by weight and by numbers at age
- d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod in the Baltic Sea (such data shall be issued by Member state, fishing area (i), (ii) and (iii) and fishing gear concerned in accordance with Art. 3 of **R(EC)** No 2187/2005).
- 2. If relevant data are available, to comment on the quality of estimations on total catches and discards.
- 3. To assess the fishing effort and catches (landings and discards) of cod in the Baltic Sea and associated species corresponding to vessels of length overall smaller than 10 metres in each

fishery, by gear and by Member State according to sampling plans implemented to estimate these parameters.

4. To describe, as far as possible, the spatial distribution of the fishing effort deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine to what extent fishing effort has moved from long distance to coastal areas since the implementation of first fishing effort regime for the first time in such areas.

#### 3. STECF COMMENTS

- STECF notes that the work of the SGMOS 09-05 WG is primarily to collate and summarise data provided by member states. In this respect the output and utility of its work is heavily dependent on timely submission of accurate material and the WG is only able to provide output which reflects the quality of the data submitted. STECF also notes that, while the SGMOS 09-05 WG makes every effort to accommodate updates and revisions from member states, it is not always possible to capture all of these in the WG reports, especially if such revisions are received too close to or during the WG meeting.
- STECF notes that in common with previous effort evaluation exercises undertaken by STECF-SGMOS (covering other geographical areas), the data submission from member states for the analysis covered in this report was often absent, late or inconsistent.
- The SGMOS 09-05 WG made good progress with the data submitted but was hampered by the lack of adequate fishing effort information from some nations, and incomplete information from a number of nations. The most significant shortfall was effort data from Poland.
- STECF notes that availability of discard data is limited and the extent to which it is representative of the discarding practices throughout the different fleets is a cause for concern. This implies that estimates of catch and CPUE indices may be misleading and this should be borne in mind when drawing inferences from such data.
- On the basis of the partial effort data supplied, it appears that during 2002-2008 the overall effort including all regulated and unregulated gears measured in kW\*days in the Baltic has reduced by about 16%. Given that there were marked reductions in Area A (one of the regions particularly important for cod) and in view of the shift from all regulated gears to unregulated pelagic gears it seems likely that fishing effort on cod has decreased, although the magnitude of the decrease cannot be reliably quantified at present.
- Owing to incomplete information on special conditions, it is not possible to quantify the extent to which the Bacoma trawl has been adopted.

- Landings and discards of cod are estimated to have declined markedly since 2003.
- There are regional differences in the importance of different gears for the capture of cod. In areas A and B otter trawls are ranked highest whereas in other areas gillnets are important.
- From the data submitted by Member States, under 10m vessels account for about 13% of landings of cod in 2008. However this is clearly an underestimate, since only a few countries supplied data.
- Interpretation of spatial information on effort is confounded by the restricted number of countries supplying appropriate information. Existing evidence suggests there has been a westward shift in effort since 2003.
- STECF recommends that the effort figures contained in the report should be treated as
  preliminary and incomplete and that every attempt should be made by the Commission
  and Member State authorities to encourage a more complete submission in 2010 and
  future years.

#### 4. STECF CONCLUSIONS AND RECOMMENDATIONS

Taking the above observations into account, STECF concludes that the SGMOS 09-05 Report represents the best possible interpretation of the catch and effort data submitted by Member States on Baltic Sea Fisheries. STECF endorses the findings in the report with the following reservations:

- 1. Availability of data on discards is limited and may not be wholly representative of discarding practices occurring in Member States' fleets. Catch estimates and indices of CPUE may therefore be misleading.
- 2. The fishing effort data and summaries contained in the report should be treated as preliminary and incomplete.
- 3. STECF recommends that every attempt should be made by the Commission and Member State authorities to encourage a more complete submission in 2010 and future years.

#### 1. APPENDIX I STECF/SGMOS-09-05 WORKING GROUP REPORT

# STECF/SGMOS-09-05 WORKING GROUP REPORT ON ASSESSMENT OF FISHING EFFORT REGIME IN THE BALTIC ISPRA, 28 SEPTEMBER - 2 OCTOBER 2009 PREPARED IN DRAFT BY SGMOS-09-04: 25 – 30 MAY, LISBON, PORTUGAL

This report does not necessarily reflect the view of the European Commission and in no way anticipates the Commission's future policy in this area

#### 2. SUMMARY

#### **General remarks**

## Review of Baltic Sea catch and effort in the context of the management plan for Baltic cod Council Reg 1098 2007

- STECF SGMOS made good progress with the available data but was hampered by the lack of adequate fishing effort information from some nations, and incomplete information from a number of nations.
- The most significant shortfall was effort data from Poland.
- The limited availability of discard data and concerns over the extent to which it is representative means that estimates of catch and CPUE require to be used cautiously.
- On the basis of the partial effort data supplied, the overall effort in the Baltic has reduced by about 16%. Given that there were marked reductions in Area A (one of the regions particularly important for cod) and in view of the shift from regulated gears to unregulated pelagic gears it seems likely that effort on cod has decreased.
- Owing to incomplete information on special conditions, it is not possible to quantify the extent to which the Bacoma trawl has been adopted.
- Landings and discards of cod are estimated to have declined markedly since 2003.
- There are regional differences in the importance of different gears for the capture of cod. In areas A and B otter trawls are ranked highest whereas in other areas gillnets are important.
- Under 10m vessels account for about 13% of landings of cod but this is an underestimate since only a few countries supplied data.
- Interpretation of spatial information on effort is confounded by the restricted number of countries supplying material. Existing evidence suggests there has been a westward shift in effort since 2003.

#### 3. Introduction

The STECF sub-group on "fishing effort management" held its first annual meeting in Lisbon in Portugal, 21-25 May 2009 (SGMOS-09-04). A follow-up meeting (SGMOS 09-05) was called to order in Ispra, Italy, 28 September – 2 October 2009. A progress report from the first meeting was presented at the June STECF plenary. This report summarises data presented and the discussions and results of both meetings.

#### 3.1. Terms of Reference

By 16<sup>th</sup> March 2009 (19<sup>th</sup> March including corrigendum) the DG Fish of the EU-Commission asked STECF to evaluate the current effort regime in the Baltic in the context of the cod management plan. Following TORs should be answered:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

Areas covered by the R(EC) No 1098/2007 (Baltic Sea)

- (i) ICES division 22 to 24,
- (ii) ICES divisions 25 to 28, by distinguishing areas 27 and 28.2
- (iii) ICES divisions 29 to 32,

The data should also be broken down by

```
Member State; regulated gear types designed in R(EC) No 1098/2007; unregulated gear types catching cod in fishing areas (i), (ii) and (iii);
```

for the following parameters:

- a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned
- b. Catches (landings and discards provided separately) of cod in the Baltic Sea by weight and by numbers at age.
- c. Catches (landings and discards provided separately) of non-cod in the Baltic Sea by species, by weight and by numbers at age
- d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod in the Baltic Sea (such data shall be issued by Member state, fishing area (i), (ii) and (iii) and fishing gear concerned in accordance with Art. 3 of **R(EC)** No 2187/2005).
- 2. If relevant data are available, to comment on the quality of estimations on total catches and discards.
- 3. To assess the fishing effort and catches (landings and discards) of cod in the Baltic Sea and associated species corresponding to vessels of length overall smaller than 10 metres in each

fishery, by gear and by Member State according to sampling plans implemented to estimate these parameters.

4. To describe, as far as possible, the spatial distribution of the fishing effort deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine to what extent fishing effort has moved from long distance to coastal areas since the implementation of first fishing effort regime for the first time in such areas.

#### 3.2. Participants

In 2007, STECF and its subgroups adopted a new working style with opportunities for stakeholders to be involved as observers to improve transparency in scientific evaluations. The stakeholder involvement was in accordance with the protocol for STECF meetings observers, Brussels, 20 September 2006.

Experience during the first meeting again showed that representatives of stakeholder organisations and interest groups were very interested in the data and evaluation of the basic information regarding the trends in fleet specific information although there were none present with specific interest in the Baltic Sea. Contributions took the form of constructive questions and clarifying comments mainly focussed on recent experience of fishing activity by different fleets.

Participants of the meeting are grouped by STECF members, invited experts, JRC experts, stakeholder, and EU-Commission representatives and are listed in Annex 2.

#### 3.3. History of technical measures and effort restrictions in the Baltic

Up until 1994 the minimum mesh size (MMS) for the cod fishery in the Baltic was 105 mm. The international Baltic fishery commission (IBSFC) decided in 1994 to increase the mesh size to 120 mm diamond mesh and to increase the minimal landing size of cod from 33 to 35 cm

During 2002 following the results from the BACOMA project (Improving Technical Management in Baltic Cod Fishery) a 120 mm Bacoma panel in a 105 mm codend was allowed at the same time the MMS in the diamond mesh increased from 120 to 130 mm.

In 2003 the 130 mm diamond mesh was prohibited allowing only trawls equipped with a 110 mm Bacoma (a decrease from 120mm). The MLS of cod was also increased from 35cm to 38 cm.

In 2006 another gear type was introduced for cod directed trawl fisheries in the Baltic sea in addition to the Bacoma 110 mm was allowed – this was the so called T90 (110mm).

#### Stop days and effort system

From 1995 and onwards there has been a three month summer closure (1 June to 31 August) for all cod fishery in the Baltic sea. From 2006 there has been an effort system in place for the Baltic sea. During 2006 and 2007 there were additional stop days in addition to the summer closure period. From 2008 the terminology changed and the term 'allowed days at sea' was introduced, the summer closure period was however retained.

The text table below shows the number of days at sea allowed for trawls, Danish seines, gill nets, entangling nets or trammel nets with mesh size >=90mm and longlines

Area	2006 (closed days)	2007 (closed days)	2008 (days at sea)
22-24	92	117	223
25-28	119*	183*	178**

<sup>\*</sup>There was no stop days in areas 28-32 during 2006-2007

#### 3.4. Description of the current management plan for Baltic cod

The EC agreed on a management plan for cod in the Baltic Sea in September 2007 (EC 1098/2007). For Western Baltic cod (SD 22-24) the final aim of this plan is to reach and maintain a fishing mortality rate at 0.6 for ages 3-6. For Eastern Baltic cod (SD 25-32) the target fishing mortality was set at 0.3 for ages 4-7. This should be reached through an annual reduction of fishing mortality (F) by 10% in relation to the fishing mortality estimated for the preceding year. However, the plan sets a maximum change of 15% of the TAC between consecutive years as an overarching rule, unless the fishing mortality is estimated to be higher than 1 for Western Baltic cod and higher than 0.6 for Eastern Baltic cod. In these latter cases the TAC shall be set in correspondence to the reduction of fishing mortality by 10%. Alongside the reductions in F, the plan also specifies a 10% reduction in total fishing days at sea per year until the target F has been reached. This rule applies to trawls, Danish seines, gill nets, entangling nets or trammel nets with mesh size >=90mm and longlines. In addition, fishing with the aforementioned gears and net types is totally forbidden from 1st to 30th April in SD 22-24 and from 1st July to 31st August in SD 25-28. However, by way of derogation, fishing vessels with an overall length of less than 12 metres are permitted to use up to five days per month divided into periods of at least two consecutive days from the maximum number of days absent from port during the closed periods. The plan is complemented with a number of additional closed areas and as another effort restriction, the maximum fleet capacity measured in kw is limited to the reference value calculated for 2005 for each member state. ICES has evaluated the management plan in 2009 and considers it to be in accordance with the precautionary approach.

<sup>\*\*</sup> during 2008, there were no stop days in areas 29-32

#### 3.5. Available TACs for Baltic cod by member state

Currently, TACs for cod in the western Baltic are mainly shared between Denmark (43% of total TAC), Germany (21%), Sweden (16%) and Poland (12%) according to Council Regulation (EC) 1322/2008 (Figure 3.5.1). Highest TAC shares for Eastern Baltic cod (Figure 5.5.2) belong to Poland (26%), Sweden (23%), Denmark (23%) and Germany (9%). The remaining TACs are shared between Estonia, Latvia, Lithuania and Finland.

Species:	Cod Gadus morhua	Zone: EC waters of subdivisions 22-24 COD/3B23; COD/3C22; COD/3D24.
Denmark	7 130	·
Germany	3 487	
Estonia	158	
Latvia	590	
Lithuania	383	
Poland	1 908	
Finland	140	
Sweden	2 541	
EC	16 337	
TAC	16 337	Analytical TAC.  Article 3 of Regulation (EC) No 847/96 does not apply.  Article 4 of Regulation (EC) No 847/96 does not apply.  Article 5(2) of Regulation (EC) No 847/96 applies.

Figure 3.5.1: TACs available to members states for western Baltic cod (SD 22-24) in 2009 as listed in council regulation (EC) 1322/2008.

Species:	Cod Gadus morhua	Zone: EC waters of subdivisions 25-32 COD/3D25.; COD/3D26.; COD/3D27.; COD/3D28.; COD/3D30.; COD/3D31.; COD/3D32.
Denmark	10 241	
Germany	4 074	
Estonia	998	
Latvia	3 808	
Lithuania	2 509	
Poland	11 791	
Finland	784	
Sweden	10 375	
EC	44 580	
TAC	Not relevant	Analytical TAC.  Article 3 of Regulation (EC) No 847/96 does not apply.  Article 4 of Regulation (EC) No 847/96 does not apply.  Article 5(2) of Regulation (EC) No 847/96 applies.

Figure 3.5.2: TACs available to member states for Eastern Baltic Cod (SD 25-32) in 2009 as listed in council regulation (EC) 1322/2008.

#### 3.6. Report notations

To identify the categories assessed for effort and catch this working group adopts terminology that matches definitions made in the management plan for Baltic cod (R(EC) 1098/2007). This means that all trawls, Danish seines, gill nets, entangling nets or trammel nets with mesh size >=90mm and longlines were assumed to be regulated gears (Table 3.6.1). Remaining gear and mesh size combinations were taken to be unregulated gears (Table 3.6.2).

However, the definition in the cod management plan is not consistent with regulation R(EC) No 2187/2005). According to the latter regulation it is only permissible to fish for cod with mesh size  $\geq$ 105mm using otter trawls, Danish seines or similar gears. When using static gears mesh size has to be above 110mm. In TOR 1d it is explicitly asked to calculate Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod in the Baltic Sea by member state, fishing area and fishing gear concerned in accordance with Art. 3 of R(EC) No 2187/2005. Therefore, for this specific TOR a distinction in gear categories was made to take account of regulated mobile gears above 105mm and regulated static gears above 110mm.

Sub-Areas were defined according to R(EC) 1098/2007. This means that Subdivision 22-24 is declared as fishing area "A", Subdivision 25-28 as "B" and Subdivision 29-32 as "C". In addition, effort trends and catch compositions were also analysed for Subdivision 27 and 28.2 separately and presented alongside the analyses for the whole of area "B". For full definitions of these areas refer to Regulation (EC) No. 1098/2007.

Table. 3.6.1 Regulated gear types, mesh sizes and special conditions as defined in Reg. (EC) No. 1098/2007.

Gear	Mesh Size	SPECON
OTTER	>=90mm	none
OTTER	>=90mm	BACOMA
Danish Seine	>=90mm	none
Danish Seine	>=90mm	BACOMA
Pelagic Trawl	>=90mm	none
Pelagic Trawl	>=90mm	BACOMA
Pelagic Seine	>=90mm	none
Pelagic Seine	>=90mm	BACOMA
Gill net	>=90mm	none
Trammel net	>=90mm	none
BEAM	>=90mm	none
Longlines		

Table 3.6.2 Unregulated gear types, mesh sizes and special conditions as defined in Reg. (EC) No. 1098/2007.

Gear	Mesh Size	SPECON
OTTER	<90mm	none
Danish Seine	<90mm	none
Pelagic Trawl	<90mm	none
Pelagic Seine	<90mm	none
Gill net	<90mm	none
Trammel net	<90mm	none
Beam Trawl	<90mm	none
DREDGE	all	none
POTS	all	none

#### 3.7. Data call

On 16th and 19th March 2009 the Commission's DG Mare invited the relevant institutes to electronically submit fleet specific catch and effort data. The data call can be found in Annex 1.

#### 3.8. Data policy, formats and availability

Originally, the catch and effort data base structures used by STECF-SGMOS (former title) and were developed by the ICES Study Group on the Development of Fishery-based Forecasts (ICES CM 2004/ACFM:11, 41 pp.) with amendments required for the review of fishery regulations. The format of the fleet specific data calls from 16 and 19 May 2009 on catches including discards and effort is given in Annex 1 of this report.

#### 3.8.1. Data policy

Experts reported on national data policies for the national fleet specific landings, discards and effort data and generally supported the continued use of the data by STECF-SGMOS but with required permission for any use by other scientific or non-scientific groups. This implies that national experts need to be contacted for their consent before granting access to the data. However, Denmark and Portugal reserves the right of the deletion of the national data on request.

JRC requests to be informed about applications for data access and any notifications.

#### 3.8.2. Nominal fleet specific effort data 2000-2008

Member states should have delivered data in the format outlined in the data calls from 16 and 19 March 2009 (see Annex 1). In the following section the focus is on deviations from the data calls (Table 3.8.2.1).

A full set of data was provided by Finland, Germany, Latvia and Sweden. Denmark provided no information on special conditions, i.e. no vessels fishing with BACOMA-trawls could be identified based on available logbook data. Denmark also updated data after the meeting and full details of methodologies used will be provided in 2010. Estonia provided no information on mesh size and special conditions; this makes a distinction between regulated and unregulated gears impossible. In addition, only vessels above 15m were taken into account in the calculations and data were provided for 2006-2008 only. Lithuania provided data for 2005 – 2008. For these years, however, the data set was complete. Poland delivered no effort data.

Table 3.8.2.1. Overview of 2000-2008 effort data reports provided by EU member states with and without special conditions.

Country Effort data 2000-2008						
Denmark	no special conditions (data updated after meeting)					
Estonia	only 2006-2008, no specon, no mesh size, only > 15m					
Finland	kwdays, GT days, number of vessels					
Germany	kwdays, GT days, number of vessels					
Latvia	kwdays, GT days, number of vessels					
Lithuania	only 2005-2008					
Poland	no data					
Sweden	kwdays, GT days, number of vessels					

#### 3.8.3. Effective fleet specific effort data by rectangle 2003-2008

Member states should have delivered data in the format outlined in the data calls from 16 and 19 March 2009 (see Annex 1). In the following section the focus is on deviations from these data calls (Table 3.8.3.1).

A full set of data was provided by Denmark, Germany and Latvia. Estonia delivered data for 2007 only and details on mesh size and special conditions are lacking. Finland only delivered cod specific effort data. Lithuania, Poland and Sweden did not deliver spatial disaggregated effort data.

Table 3.8.3.1. Overview of 2003-2008 spatial effort data reports provided by EU member states.

Country	Effort data 2003-2008
Denmark	hours by rectangle
Estonia	only 2007, no specon, no mesh size, only > 15m
Finland	hours by rectangle, only cod specific effort
Germany	hours by rectangle
Latvia	hours by rectangle
Lithuania	none
Poland	none
Sweden	none

#### 3.8.4. Fleet specific landing and discard data 2003-2008

Member states should have delivered data in the format outlined in the data calls from 16 and 19 March 2009 (see Annex 1). In the following section the focus is on deviations from these data calls (Table 3.8.4.1).

A full set of data on age disaggregated landings and discards were provided by Latvia and Germany only. For Denmark information on special conditions is missing. Estonia delivered no discard data and information on landings for 2006-2008 only without information on mesh sizes. Finland provided landings and discard data but this was not age disaggregated. Lithuania, Poland and Sweden delivered catch data for cod only. Lithuania provided data for 2005 – 2008 only. Given the available data it was decided to focus on cod catches only in this report. Consequently TOR 1c could not be adequately addressed in this report.

In addition, according to the experts, none of the national data bases includes unallocated landings. Assignment of special conditions is based on best expert knowledge and data availability.

Some Member States did not provide essential quality parameters of the data. Consequently, STECF-SGMOS is in a poor situation regarding the description of the quality of the fleet specific estimates of discards and age disaggregated catches, mainly due to lack of requested information (no. of discard samples, fish measured and aged). Therefore, TOR 2 was not addressed.

Table 3.8.4.1: Overview of 2003-2008 landings data reports provided by EU member states.

Country	landings data 2003-2008
Denmark	landings, age composition, no specon
Estonia	only years 2006-2008, no mesh size
Finland	landings, no age composition
Germany	landings, age composition
Latvia	landings, age composition
Lithuania	only 2005-2008, no specon, only cod
Poland	landings, age composition only cod
Sweden	landings, age composition only cod

Table 3.8.4.2: Overview of 2003-2008 discard data reports provided by EU member states.

Country	<b>Discard data 2003-2008</b>
Denmark	discards, age composition, no specon
Estonia	none
Finland	discards, no age composition
Germany	discards, age composition
Latvia	discards, age composition
Lithuania	only 2005-2008, no specon, only cod
Poland	discard, age composition only cod
Sweden	discard, age composition only cod

#### 3.8.5. Fleet specific landing and effort data 2003-2008 of small boats (<10m)

*Denmark:* Under 10m data were provided by Denmark. Owing to data updates after the meeting, full details of submitted data will be provided in 2010

*Germany:* Germany provided aggregated data regarding the fleet of vessels <10m. The data cover landings by area and species. However, no mesh size information is available from the landings declarations given in the years 2004-2008. The data are evaluated in section 6.7.

Sweden: Effort and landing data for vessels less than 10m were made available by Sweden in the same format as for larger vessels. Vessels <10 m that are using trawl and demersal seines are obliged to use the same logbook as larger vessels. Vessels <10m using other gears are using the "coastal fishing journal" which predominantly follows the same structure as the standard logbook. Sweden reported landings for vessels (<10m) for 2003-2008.

#### 3.9. Estimation of fleet specific international landings and discards

The estimation of fleet specific international landings and discards is based on linking the information about fleet specific discards and catch and discards at age among countries and replacing poor or lacking values with aggregated information from other countries.

Reported data by country are aggregated by fleet properties and raised to the officially reported landings or discards in the SGDFF 2004 (ICES 2004) format. Fleet definitions are based on area, year, quarter, gear, mesh size groups, special conditions as defined in Council Reg. 41/2007 Annexes 2A-C and national fisheries (metiers) definitions.

The data management and estimation procedures follow the simple raising strategies outlined below:

Data management:

The fleets are classified to their management areas, years, quarters and effort regulated gear groups disregarding the countries and fisheries (metiers).

Estimation of discard rates by fleet (DR):

Let the following notation be: D=discards, L= landings, snf = sampled national fleet, unf = unsampled or poorly sampled national fleet.

A poorly sampled fleet is defined as such when  $SOP_{snf} < 0.75$  or  $SOP_{snf} > 1.25$ 

The available landings and discards are aggregated (summed) by fleets and mean discard rates are calculated:

$$DR = \frac{\sum_{snf} D_{snf}}{\sum_{snf} (L_{snf} + D_{snf})}$$
 with  $D_{snf} \ge 0$  and with  $L_{snf} + D_{snf} > 0$  otherwise 0

(means no catch)

Fleet specific discard amounts are calculated when no discard information is available by

$$D_{unf} = \frac{L_{unf} .DR}{(1 - DR)}$$
 when  $D_{unf}$  is null (empty)

Fleets without any discards information remain as such.

Estimation of landings in numbers and mean weight at age for non or poorly sampled national fleets

Let *i* be the age reference

Landings in numbers  $(N_{snf,i})$  and mean weight at age  $(W_{snf,i})$  are aggregated by sampled fleets when  $SOP_{snf} \ge 0.75$  and  $SOP_{snf} \le 1.25$ .

Raising of numbers and mean weights at ages 0-11 to non or poorly sampled fleets by

$$N_{unf,i} = rac{\displaystyle\sum_{snf} (N_{snf,i}).L_{unf}}{\displaystyle\sum_{snf} L_{snf}}$$

$$W_{unf,i} = mean(W_{snf,i})$$

The mean weights are unweighted and an appropriate weighing procedure, i.e. number of fish measured, should be explored.

Fleets without any landings at age information remain as such.

Estimation of discards in numbers and mean weight at age for non or poor sampled fleets Discards in numbers ( $N_{snf,i}$ ) and mean weight at age ( $W_{snf,i}$ ) are aggregated by sampled fleets when  $SOP_{snf} \ge 0.75$  and  $SOP_{snf} \le 1.25$  along the same procedure as for the landings.

Raising of numbers and mean weights at ages 0-11 to non or poorly sampled fleets by

$$N_{unf,i} = rac{\displaystyle\sum_{snf}(N_{snf,i}).D_{unf}}{\displaystyle\sum_{snf}D_{snf}}$$

$$W_{unf,i} = mean(W_{snf,i})$$

The mean weights are unweighted and an appropriate weighing procedure, i.e. number of fish measured, should be explored.

Fleets without any landings at age information remain as such.

An example of this raising procedure is given in Table 15.2.3.2 under the header "Discards", the values between parenthesis are the estimated values.

Catch at age estimation including discards

Catches by fleets are estimated as the sum of landings and discards. Missing discards are ignored.

Catches at ages 0-20 in numbers are estimated as the sum of landings at age in numbers and discards at age in numbers. Missing discards are ignored.

Mean weights at ages 0-20 are estimated at weighted means (according to ratios of landings at age and discards at age to catches at age).

Finally, all fleets' catches and catches at ages in numbers and mean weights are aggregated finally over management areas, years and effort regulated gear groups.

Fleets without any information on discards or landings at age and discards at age remain unchanged and need to be raised separately on an agreed basis in case that they constitute significant landings.

The STECF-SGMOS notes that sampling of catch at sea including discards is expensive and difficult. This means that sampling coverage tends to be rather limited, and estimates of discards are subject to high uncertainty. This is true of all the discard data used here, and in some cases the discard estimates presented represent the first attempt to use the discard data from some fisheries in an advisory context. Where the coverage is considered adequate to estimate the overall catch compositions of specific fleets these are presented, but they are intended only to provide an approximate indication of fleet catch compositions. In cases where there are little data, the estimated discard rates may be biased and imprecise (Stratoudakis *et al.*, 1999). The mean weights are estimated as unweighted means. This results in a biased estimate. An appropriate weighing procedure, i.e. number of fish measured, should be explored.

STECF-SGMOS further notes that the approach of discard estimation applied is generally consistent with the method used in the discard estimates published by the FAO (Kelleher, 2004). However, the group also notes that the design of a discard sampling scheme might differ depending on whether the objective was to estimate total discards, or discard for specific fleets. In the current context estimates from sampling schemes designed for the former purpose are being used for the latter purpose which again means the estimates should only be used with caution. Where this is the case, comparisons are made between the estimates of total discards used for assessment purposes, and the fleet-specific estimates used here.

With regard to age composition data, STECF-SGMOS notes that the analyses presented here are intended to quantify the catch compositions of the various fleets and gears of interest. For this purpose it is the species compositions and the estimated landings and discards that are of primary importance, with the age compositions being only of secondary importance. Applying the age compositions to the national catches by fleet and gear is a complex process not least because it typically involves considerable filling-in to account for categories which do not correspond to those within national sampling schemes. It would make any future data compilation and analyses much more efficient if age composition data were not required. While there is clearly a trade-off between efficiency on one hand and providing additional information on the other, the group notes that in the current context the age composition data

add little information. As a result it proposes that any future data requests and analyses should be restricted to age-aggregated information.

#### 3.10. Treatment of CPUE data

STECF-SGMOS notes that CPUE series are often interpreted and used as stock abundance indicator. However, STECF-SGMOS emphasises that the presented trends in CPUE by fleets are subject to selective fishing strategies (area, gear, mesh size etc.) and thus maybe biased. On the other hand, CPUE derived from targeted fisheries may provide very useful information on stock abundance trends. Furthermore, it must be taken into consideration that the majority of the CPUE trends represent only overall weights in the landings (LPUE) without discards or with poorly estimated discards. Ideally, the CPUE should be based on age disaggregated abundance rather than overall weights and reflect technological creep when trends over longer periods are evaluated. Time constraints prevented STECF-SGMOS from estimations of CPUE trends by age and full evaluations of these. STECF-SGMOS recommends that CPUE in units of numbers at age/(kw\*days) be estimated and compared with the recent assessment results provided by ICES.

STECF-SGMOS presents CPUE by derogations in units of g/(kW\*days) Where discard estimates are not available, the trends in LPUE (landings per unit of effort) are given in the same units. STECF wishes to stress again that great care should be used in the interpretation of these data owing to the incomplete nature of information on discarded fish.

#### 3.11. Summary of effort and landings by 'unregulated' gears

This report also includes a detailed analysis of effort and catches from gear types not regulated in the cod management plan R(EC) 1098/2007. A definition of regulated and unregulated gear types can be found in section 5.6.

#### 3.12. Presentation of under 10m information

This STECF-SGMOS report provides an overview of landings data provided by the experts regarding their national fisheries of vessels <10m, which are not obliged to report their landings through logbooks but rather do landings declarations. In this report an attempt is made to compile available information for each sub-area into overall figures. Since not all countries were able to fulfil this part of the data call, the aggregate estimates for each region must be considered as minimum estimates. Nevertheless, they begin to give an idea of the scale of landings contributed by these smaller classes of vessel.

#### 3.13. Presentation of spatial information on effective effort

STECF-SGMOS notes that minimum geographic resolution in the available logbook information on landings and effective effort is by ICES rectangle and considers analyses to only be possible at that resolution at the present time. The effective effort values of certain nations were given in days fished which were then converted to trawled hours by applying a factor of 24. STECF-SGMOS notes that attention should only be paid to major changes in the

geographical distribution patterns given the imprecision of the created data set. A full set of figures is available on the website but a selection of key gears is included in this report.

#### 3.14. Effort management categories and Data Collection Framework (DCF) metiers

In this report metier definitions were made in line with the current cod management plan for the Baltic. However, metier definitions also exist from the DCF regulations. At present these represent two rather different systems for classifying fishing activity.

From the above descriptions, it is clear that the DCF matrix represents a much more detailed approach to describing fishing activity than the effort management categorisation in the cod management plan. In particular, the DCF approach involves more detailed information on gear type and also on catch composition (in relation to the different target assemblages). In contrast, the effort management categories include only information corresponding to DCF level three (gear group) and level six (mesh size & selective devices). As a result, an effort management category may include both multiple gear types and multiple target assemblages. The latter information is more critical, given that the intention of effort management is to protect specific components of the target assemblages.

In order to identify the correspondence between effort management categories and DCF métiers, it will be necessary to review the effort management categories and identify cases where these may involve multiple gear types and/or multiple target assemblages. A future review should also identify cases where special conditions associated with a particular grouping involve a difference in gear selectivity characteristics or target assemblage. This was beyond the scope of the present meeting.

## 4. REVIEW OF THE EFFORT REGIME IN THE CONTEXT OF THE COD MANAGEMENT PLAN (REGULATION 1098/2007)

#### 4.1. General remarks

This is the first report for the Baltic. Therefore, results have to be treated with caution.

In general, the data situation for the Baltic is rather poor. In particular, the fact that no effort data were submitted by Poland reduces the validity of the analyses considerably. Poland contributes considerably to cod catches in the Baltic (see under 3.5). Also, information from Estonia coul only be used to a very limited extent since information on mesh sizes was not provided. Therefore, all effort and catches from Estonia appear under unregulated gears even if in reality regulated gears were used. In addition, Lithuania provided data for 2005 – 2008 only and this could provide misleading trends in effort and catch over time.

STECF-SGMOS notes that assignment of special conditions is based on best expert knowledge and data availability. Data errors may exist taking into consideration the very large size of data bases involved. Specific technical or gear configurations defined in the special conditions are often not registered in the logbook databases, i.e. BACOMA and T90. STECF-SGMOS notes that it was not possible to distinguish between trawls equipped with special condition BACOMA or T90 for all member states. In addition, it had to be often assumed that all Otter Trawls, Danish seines or similar gears with mesh size >= 105mm are BACOMA trawls from 2006 onwards (e.g., German data) in accordance with regulation 2187/2005. Denmark provided no information on the usage of BACOMA trawls at all. Therefore, analyses on the usage of BACOMA trawls have to be seen preliminary and have to be interpreted with care.

Several countries only delivered catch data for cod and not for other species. Therefore, it was decided to focus on cod catches by gear category, sub-area and member state in this report. Catches from other species (i.e. herring and sprat) were not analysed.

## 4.2. Trends in nominal effort 2000-2008 by gear category, sub-area and member state

Table 4.2.1 lists the trends in effort for gear categories defined in the cod management plan R(EC) 1098/2007 in kW\*days for the whole Baltic. Table 4.2.2 lists the trends in effort by gear category, sub-area and member state. Table 4.2.3 lists effort trends by gear category and sub-area. Since this is the first year data were provided for the Baltic, no comparison with previous submissions can be made. Figures 4.2.1 - 4.2.9 show effort trends in regulated and unregulated gear categories by sub-area.

In accordance with the TOR respective tables by gear-category, sub-area and member states in GT\*days (gross tonnage) and number of vessels are available on the web. STECF-SGMOS emphasises that the number of vessels need to be interpreted with care and cannot be added across gear categories as the individual vessels may have been engaged in more than one of the defined fleets and thus could be multiple counted.

Note that in the tables of Section 6.2 the category 'none none' contains a combination of the effort information for gears which were not covered by the data call and effort information for vessels which recorded no gear type or mesh size.

Although there are marked reductions in effort measured in kw-days especially for regulated gears in accordance with R(EC) 1097/2007, the total effort deployed in the Baltic in 2008 was only 16% lower compared to 2002 (Table 4.2.1). The reductions for regulated gear types were largely compensated by increases in effort for unregulated gear types (i.e. pelagic trawls <90mm mesh size)). A reduction in total effort could be observed for sub-area A (Table 4.2.3 and Figures 4.2.5 – 4.2.6). Since most cod catches stem from sub-area A and B (see section 4.3), the decrease in total effort in sub-area A and the shift from regulated to unregulated gear types mainly used in the pelagic fisheries most likely decreased the fishing pressure on Baltic cod.

The usage of BACOMA-trawls increased over the years (see figures 4.2.2; 4.2.3; 4.2.5; 4.2.7; 4.2.9). However, as already mentioned several member states were not able to identify vessels fishing with BACOMA-trawls from logbook data. Therefore, the increase in the usage of BACOMA-trawls is most likely underestimated substantially.

Table 4.2.1 Trend in nominal effort (kW\*days at sea) by gear categories according to R(EC) 1098/2007, 2000-2008. Data qualities are summarised in Section 5.8.2 and Table 5.8.2.1. An "r" in front of the gear type indicates regulated gears. Gear types without an "r" are non-regulated gears (see also section 3.6). **Data from Poland were not available for inclusion. Relative change from 2002 to 2008.** 

REG GEAR COD	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	rel change
BEAM	none	11990		184	129			1266	881	18779	101.06
DEM_SEINE	none	5135	315	544	273	560	128	1441		588	0.08
DREDGE	none	99673	104105	89576	58965	78384	72955	98780	110931	45088	-0.50
GILL	none	409940	400556	412861	365549	478614	552359	530287	563153	481562	0.17
none	none	95925	103339	84391	61231	50334	71332	62295	87600	80387	-0.05
OTTER	none	1922959	1852679	1439460	1538748	1817492	1803906	1563424	1214557	1056777	-0.27
PEL_SEINE	none	61969	39706	8306	1176	2499				3528	-0.58
PEL_TRAWL	none	11278766	10363555	9882013	11968032	14337196	12869136	11208659	11661573	11231001	0.14
POTS	none	122544	46353	68544	42613	26619	31518	28548	37903	21580	-0.69
r-BEAM	none		412	5401	2422		368			3867	-0.28
r-DEM_SEINE	BACOMA							35178	41376	46182	
	none	461293	615110	476985	366839	403285	272673	260424	242696	181090	-0.62
r-GILL	none	4908279	4901249	3861237	5675455	5017183	4270865	3634697	3164162	3160380	-0.18
r-LONGLINE	none	382496	628165	560722	641792	619168	670735	629102	357962	324225	-0.42
r-OTTER	BACOMA	2315742	2221912	1407424	1268373	1928260	2092374	4175215	3487150	3474581	1.47
	none	10568767	10960257	8429080	8888007	6741005	6756477	3858024	2827559	2713019	-0.68
r-PEL_TRAWL	BACOMA						17899	272262	310584	92062	
	none	1281383	2027367	641423	105274	505501	350848	536288	215404	41042	-0.94
r-TRAMMEL	none	248153	260132	233504	245851	223283	297432	240708	257607	270291	0.16
TRAMMEL	none	15430	11158	4335	10757	5883	9857	15996	28545	13105	2.02
Grand Total		34190444	34536370	27605990	31241486	32235266	30140862	27152594	24609643	23259134	-0.16

Table 4.2.2 Trend in nominal effort (kW\*days at sea) by gear categories according to R(EC) 1098/2007, sub-area and Member State for 2000-2008. Data qualities are summarised in Section 3.8.2 and Table 3.8.2.1. An "r" in front of the gear type indicates regulated gears (see section 3.6). Gear types without an "r" are non-regulated gears. **Data from Poland were not available for inclusion. Relative change from 2002 to 2008.** 

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	rel change
27	GILL	none	FIN	5630	3144	2350	5920	775	1800	1257	2734		-1.00
			SWE	7902	5667	1082	418	453	2621	2472	1763	809	-0.25
	none OTTER	none none	SWE GER			60	12493		6768		404 735	5145	-1.00
	PEL_TRAWL	none	FIN		13194	1103	8429	507	2940	4410	700	5515	4.00
	_		GER			2206	77952	87507	64842	62517	35296	30879	13.00
	DOTO		SWE	1469375	1659436	1979155	1314138	1738077	1315867	778168	685247	436098	-0.78
	POTS r-GILL	none	SWE FIN	31275	6451	17127 466	699		3883 5118	3584 762	570 230		-1.00 -1.00
	I-GILL	TIOTIC	GER	1168		400	033		3110	102	230		-1.00
			SWE	263741	292677	216657	178545	114033	85235	90832	107085	102557	-0.53
	r-LONGLINE	none	SWE		12623	7533	1512	1954	2599	3315	1448	406	-0.95
	r-OTTER	BACOMA	FIN SWE	176804	167604	108775	46052	1324 34533	1236	4024		458	-1.00
		none	FIN	170004	107004	100773	6624	34333	1230	4024		400	-1.00
			SWE	171814	245213	206289	171947	96988	114781	90956	105317	106409	-0.48
	r-PEL_TRAWL	none	SWE	8137	12067								
	r-TRAMMEL TRAMMEL	none none	SWE	4434	4336	1702	202 3709	199 900	1059	4127	146 11281	3555	1.09
28.2	GILL	none	EST	7707	4000	1702	3703	300	1000	166	11201	5555	1.03
			FIN	338		1524	2760	4724	6761	1257	8636		-1.00
	OTTED		SWE			128				004	004		-1.00
	OTTER	none	EST SWE	9240	7392	18240	31264	172423	161400	221 162005	221 132309	141559	6.76
	PEL_TRAWL	none	EST	02.10	7002	10210	01201	172120	101100	102000	438	111000	0.70
			FIN			1103	441	507	9925	4410		27575	24.00
I	DOTS	nono	SWE	1156260	1463350	1128929	1797373	1909024	1404586	1402903	1123713	965603	-0.14
I	POTS r-GILL	none none	SWE FIN		254	233			4906	466			-1.00
I			SWE	242883	203798	148787	87406	54897	72903	49050	42810	49264	-0.67
I	r-LONGLINE	none	FIN						762	466		920	
I	r-OTTER	BACOMA	SWE FIN	2210	7705	5433	884 441	229	3155	4599		1988	-0.63
I	I-OITEK	BACOIVIA	SWE	39543	3780		441 4355		837		837		
I		none	FIN	4413	3.00		736		557		507		
I			SWE	76482	73589	60509	6180	1236	13332				-1.00
I	r-PEL_TRAWL r-TRAMMEL	none none	SWE	3232	6464				132	265	1959	3604	
A	REAM BEAM	none	DEN				129		132	176	1959	3604	
	DEAW	Hone	GER			184	123			1090	881	18779	101.06
	DEM_SEINE	none	DEN	284	315		126	560	128	1441			
	DREDGE		GER	00672	104105	544	E7E01	70204	E0007	75044	07074	22422	-1.00
	DREDGE	none	DEN GER	99673	104105	89576	57591	78384	58087 14868	75344 23436	97071 13860	32422 11340	-0.64
	GILL	none	DEN	28259	53485	52632	26583	23963	30432	7984	7048	7629	-0.86
			EST							22850	12969	29966	
			FIN	5841		699			834	1132			-1.00
	none	none	GER DEN	230224 82972	206598 85478	249245 62493	210038 49442	249293 36283	266938 35269	228344 39057	277784 57186	263056 53601	0.06 -0.14
	none	TIONE	SWE	1407	2914	9784	1840	1295	19530	5496	14844	17937	0.83
	OTTER	none	DEN	879036	1110118	593851	400256	562265	498863	435548	263863	177834	-0.70
	DEL DEINE		GER	80498	93054	227446	276426	297954	332489	279214	241042	199688	-0.12
	PEL_SEINE PEL_TRAWL	none	SWE DEN	48900 426280	35000 425550	182698	257829	270683	292150	302602	165929	181808	0.00
	I LL_IIVAWL	Hone	EST	420200	420000	102030	201023	270000	232100	302002	1058	101000	0.00
			FIN		3971	18292	14155	7277	5880		735		-1.00
			GER	110818	57221 1153487	205763	256483	253823	250186	263650	298004 319279	318514	0.55
	POTS	none	SWE DEN	1494769 2116	1699	694288 1011	589941	625253 580	430443 779	378616 1592	319279	329848 95	-0.52 -0.91
			GER	9419	9376	12123	12893	6388	9185	14527	20302	11308	-0.07
			SWE	7732	7331	8891	11904	4196	10207	1607	4531	1992	-0.78
	r-BEAM	none	DEN		440	2071	566		260			3867	0.02
	r-DEM_SEINE	BACOMA	GER GER		412	3971	442		368	23422	35151	38400	-0.03
	. DEM_OEME	none	DEN	455390	612374	476793	366110	392845	257130	250643	238316	181090	-0.62
I			GER					8604	1912				
1	r-GILL		SWE	3930	705070	E44400	497506	400000	620400	400770	277000	202112	0.00
1	I-GILL	none	DEN FIN	597210	705070	511429 3029	49/506	492826	639488	462778	377866	399448	-0.22 -1.00
			GER	723991	781400	728025	786543	665478	752992	729093	750396	689997	-0.05
			LAT				148767	162879	172982	185325	30941	15028	
			LIT	457972	604264	AGEEOO	E00447	406224	19111	32901	126620	400444	0.05
	r-LONGLINE	none	SWE DEN	457972 22764	604264 81231	465530 41523	582447 57519	496224 58033	511894 40420	431752 90751	426638 49110	489144 11148	0.05 -0.73
			FIN		51251	. 1023		6930	2490	982	.5110	1247	-0.73
I			GER	67962	68781	72967	78859	81113	102521	77830	63909	61717	-0.15
1		Ī	LIT	4700	0645	17000	6500	42500	12533	27456	16677	12255	0.24
I	r-OTTER	BACOMA	FIN	1788	9615	17369 22506	6532 10591	43592 3089	104525	37456 61005	16677 33075	13255 24990	-0.24 0.11
I		J. IOOWIA	GER			22000	.5551	3003		1396480	1453434	1155745	0.11
I			LAT						_	1320	19588		
			LIT	220745	24000=	101700	100010	100510	57602	84342	200270	225001	4.0-
		none	SWE DEN	336715 4249523	342267 4555012	121793 3260673	166816 2952354	192518 2667927	192263 2657655	314465 1980720	388070 1739445	325201 1620660	1.67 -0.50
			FIN	26883	38363								
			GER	2908474	2973126	2208752	1907138	1759972	1671214	42769	23067	30793	-0.99
			LAT	200460	107004	102550	2860	25207	18516	22454	20101	10015	0.04
	r-PEL_TRAWL	BACOMA	SWE GER	300466	197801	193552	115945	35307	25407	23454 19794	28194 30856	10815 3443	-0.94
			LIT						16799	0			
		none	DEN	41294	48812	19041	15917	11156	14220	26062	5868	2453	-0.87
I			GER	22822	5310	4483	14551	3975	17039	440		700	-1.00
	r-TRAMMEL	none	SWE DEN	42269 197994	10966 207855	685 179407	203190	2882 176461	2424 236136	4198 191191	195965	720 215180	0.05 0.20
			GER	13435	15814	13493	10392	21308	27285	28412	35977	22434	0.66
I			SWE	36724	36301	40604	28587	22578	32909	20376	21330	24178	-0.40
I	TRAMMEL	none	DEN	2586	2426	716	2596	921	2405	466	265	528	-0.26
I			GER SWE	3976		215				294			-1.00
i.		•				2.0							

Table 4.2.2 continued

В	BEAM	none	DEN	11990								
	DEM_SEINE	none	SWE	4851			147					588
I	DREDGE	none	DEN	25004	20044	20000	1374	20000	0000	4000	4000	1326
I	GILL	none	DEN EST	35621	36844	30966	11028	28229	6283	1886 89972	1896 61937	4770 31416
			FIN	79943	86070	70325	106508	129717	69254	34674	51678	29346
			SWE	14998	6292	1328	565	453	2621	2472	2517	1838
	none	none	DEN	11327	13065	6394	4298	1951	5749	5681	2096	812
			SWE	219	1882	5660	5651	8264	9240	10517	11269	6236
	OTTER	none	DEN EST	561592	400162	294954	445925	318128	261104	164526 7052	130141 11050	96627
			GER		2652		67270		7208	7032	5145	23223
			LAT		2002		51919	44821	34091	42156	14806	20220
			SWE	355167	236251	297974	237157	421901	498564	458637	410681	403477
	PEL_SEINE	none	SWE	13069	4706	8306	1176	2499				3528
	PEL_TRAWL	none	DEN EST	1187029	715011	901494	518796	421779	694817	421616 60776	716616 118378	765500 98815
			FIN	51729	71078	81862	49757	43626	50353	25725	33075	116538
			GER	01120	7.1070	41794	202554	439233	273116	272149	326914	293399
			LAT				1710328	1691043	1604324	1329424	1516043	1349236
			SWE	4334301	3802381	3972488	4321256	5186567	4197084	4694512	4472529	4199858
	POTS r-BEAM	none	SWE	31275	7020	17127	1414		3883	3709	570	5053
	r-DEM SEINE	none BACOMA	DEN GER			1430	1414			11756	6225	7782
	i bein_oeiiie	none	DEN	1973	2736	192	729	880	13631	9781	4380	7.702
			GER					956				
	r-GILL	none	DEN	327070	324467	234112	308655	285039	203266	149914	106096	106707
	1		FIN GER	20807	9636	3029 11804	3029 11696	2097 8290	17677	10823	12154	3000
			LAT	20807	9636	11804	1528152	1530437	41189 759804	14209 655281	11824 617637	5048 564001
	1		LIT	1			1020102	1000407	93187	55397	90686	128949
1		<u> </u>	SWE	2079315	1767488	1337671	1333558	1048403	861520	729248	547360	577986
	r-LONGLINE	none	DEN	158769	221203	197610	248280	139745	126440	90135	56202	30613
			FIN	000	440	4750	3150	6932	9199	24788	13146	23175
			GER LAT	663	442	1752	10248	11771	16799	9881	11920	17580 2480
			LIT						264	59543	35332	34991
			SWE	128340	226565	216535	234808	268869	249028	229356	110218	124625
	r-OTTER	BACOMA	FIN			65754	77228	58238	52185	74970	66150	38955
			GER							163096	80177	189211
			LAT LIT						040500	414009	245422	262938
			SWE	1762680	1708261	1088596	962890	1638558	342503 1445748	192759 1468745	170844 1029553	382050 1092873
		none	DEN	1309446	1364856	1161467	1489450	1015899	1156616	1280154	581971	641184
			FIN	132133	121041	3641	8684					5515
			GER	166017	208345	223082	334236	213199	280775			1987
			LAT SWE	4000005	070405	000404	502973	410511	330478	173238	404054	604.46
	r-PEL_TRAWL	BACOMA	GER	1006985	970195	892491	1082134	297533	257715	173238	104651 70379	63146 16691
	I I LL_IIIOWL	DAGGIVIA	LAT							35464	123902	10521
			LIT						1100	89918	85447	61407
	1	none	DEN	142169	170472	89028	68859	51827	44047	96113	31102	1010
	1		GER	198637	288971	125480	F0.47	182107	143688			
			LAT SWE	822823	1484305	402706	5947	114489 139065	10972 118458	409475	178434	36859
l	r-TRAMMEL	none	DEN	022023	1404303	402700	3278	2064	792	199	110434	1104
1			SWE	<u> </u>	162		202	673	178	265	2230	3791
	TRAMMEL	none	SWE	4434	4396	1702	4452	3444	3396	6865	14061	5540
С	GILL	none	EST		0.455	0555	476-	00 1 :	004=	664	005:	400
			FIN	1184	2456	2582	1729	6341	3817	2052	3664	402
ĺ	none	none	SWE SWE					34666 2541	160998 1544	133105 1544	130527 1801	112330 1801
1	OTTER	none	DEN	37426	3050	6995	8350	2041	1879	14065	4564	5549
ĺ			GER				7688		1540			3675
ĺ	PEL_TRAWL	none	DEN	50154	42328	19682	15067	37216	6428	18960	52871	156824
1	1	1	FIN	1	41107	31001 6620	158642 16845	50044 73352	119124 77497	27064	81547	20957 69053
				1		0020	10845	73352 184	11491	4677	81547 162	956
			GER LAT					104				300
			LAT	998051	915441	613535	658046	1501494	2069574	1156480	1713739	1864025
	POTS	none	LAT SWE FIN	998051	915441 311	613535	658046	1501494	2069574	1156480	1713739	1864025
			LAT SWE FIN SWE	998051 40727		613535 12265	17816	15455	3581	3529	8721	1864025 3132
	POTS r-GILL	none	LAT SWE FIN SWE FIN	40727	311 13911	12265	17816 233	15455 1864	3581 6164	3529 2160	8721 5592	3132
	r-GILL	none	LAT SWE FIN SWE FIN SWE		311		17816	15455	3581	3529	8721	3132 29251
		none	LAT SWE FIN SWE FIN SWE SWE	40727	311 13911	12265	17816 233	15455 1864	3581 6164	3529 2160	8721 5592	3132 29251 80
	r-GILL r-LONGLINE	none	LAT SWE FIN SWE FIN SWE	40727	311 13911	12265	17816 233	15455 1864	3581 6164	3529 2160	8721 5592	3132 29251
	r-GILL r-LONGLINE r-OTTER	none none BACOMA none	LAT SWE FIN SWE FIN SWE SWE SWE FIN SWE	40727	311 13911 212449	12265 200465	17816 233 208219	15455 1864 154716 242433	3581 6164 23429 229988	3529 2160 34706 266733	8721 5592 36847 244914	3132 29251 80 2160 232510
(blank)	r-GILL r-LONGLINE	none none BACOMA	LAT SWE FIN SWE FIN SWE SWE SWE FIN	40727 194122	311 13911 212449 1015	12265 200465 3530	17816 233 208219 88320	15455 1864 154716	3581 6164 23429	3529 2160 34706	8721 5592 36847	3132 29251 80 2160

Table 4.2.3. Trend in nominal effort (Kw \*days at sea) by gear categories and sub-area 2000-2008. Data qualities are summarised in Section 3.8.2 and Table 3.8.2.1. An "r" in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an "r" are non-regulated gears. Data from Poland are not included. **Relative change from 2002 to 2008.** 

	REG GEAR COD		2000	2001	2002	2003	2004	2005	2006	2007		rel change
27	none	none none	13532	8811	3432 60	6338	1228	4421	3729	4497 404	809	-0.76 -1.00
	OTTER	none			60	12493		6768		735	5145	-1.00
	PEL_TRAWL	none	1469375	1672630	1982464	1400519	1826091	1383649	845095	720543	472492	-0.76
	POTS	none	31275	6451	17127			3883	3584	570		-1.00
	r-GILL	none	264909	292677	217123	179244	114033	90353	91594	107315	102557	-0.53
	r-LONGLINE	none		12623	7533	1512	1954	2599	3315	1448	406	-0.95
	r-OTTER	BACOMA	176804	167604	108775	46052	35857	1236	4024	405047	458	-1.00
	r-PEL_TRAWL	none none	171814 8137	245213 12067	206289	178571	96988	114781	90956	105317	106409	-0.48
	r-TRAMMEL	none	0137	12007		202	199			146		
	TRAMMEL	none	4434	4336	1702	3709	900	1059	4127	11281	3555	1.09
28.2	GILL	none	338		1652	2760	4724	6761	1423	8636		-1.00
	OTTER	none	9240	7392	18240	31264	172423	161400	162226	132530	141559	6.76
	PEL_TRAWL	none	1156260	1463350	1130032	1797814	1909531	1414511	1407313	1124151	993178	-0.12
	POTS r-GILL	none none	242883	254 203798	149020	87406	54897	77809	49516	42810	49264	-0.67
	r-LONGLINE	none	2210	7705	5433	884	229	3917	5065	42010	2908	-0.46
	r-OTTER	BACOMA	39543	3780	0.00	4796	LLU	837	0000	837	2000	0.10
		none	80895	73589	60509	6916	1236	13332				-1.00
	r-PEL_TRAWL	none	3232	6464	-							l
	r-TRAMMEL	none			45.	4.5		132	265	1959	3604	
A	BEAM DEM SEINE	none	284	315	184 544	129 126	560	128	1266 1441	881	18779	101.06 -1.00
	DEM_SEINE DREDGE	none none	99673	104105	89576	57591	78384	72955	98780	110931	43762	-1.00 -0.51
	GILL	none	264324	260083	302576	236621	273256	298204	260310	297801	300651	-0.01
	none	none	84379	88392	72277	51282	37578	54799	44553	72030	71538	-0.01
	OTTER	none	959534	1203172	821297	676682	860219	831352	714762	504905	377522	-0.54
ĺ	PEL_SEINE	none	48900	35000								l .
	PEL_TRAWL	none	2031867	1640229	1101041	1118408	1157036	978659	944868	785005	830170	-0.25 -0.39
	POTS r-BEAM	none none	19267	18406 412	22025 3971	24797 1008	11164	20171 368	17726	28042	13395 3867	-0.39
	r-DEM_SEINE	BACOMA		412	3371	1000		300	23422	35151	38400	-0.03
		none	459320	612374	476793	366110	401449	259042	250643	238316	181090	-0.62
	r-GILL	none	1779173	2090734	1708013	2015263	1817407	2096467	1841849	1585841	1593617	-0.07
	r-LONGLINE	none	92514	159627	131859	142910	189668	262489	207019	129696	87367	-0.34
	r-OTTER	BACOMA	336715	342267	144299	177407	195607	249865	1857612	1894167	1505936	9.44
	r-PEL_TRAWL	none BACOMA	7485346	7764302	5662977	4978297	4463206	4372792 16799	2046943 19794	1790706 30856	1662268 3443	-0.71
	I-FEL_INAVIL	none	106385	65088	24209	30468	18013	33683	30700	5868	3173	-0.87
	r-TRAMMEL	none	248153	259970	233504	242169	220347	296330	239979	253272	261792	0.12
	TRAMMEL	none	6562	2426	931	2596	921	2405	760	265	528	-0.43
В	BEAM	none	11990									
	DEM_SEINE	none	4851			147					588	
	DREDGE	none	130562	129206	102619	1374 118101	158399	78158	129004	118028	1326 67370	-0.34
	GILL none	none none	11546	14947	12054	9949	10215	14989	16198	13365	7048	-0.34
	OTTER	none	916759	639065	592928	802271	784850	800967	672371	571823	523327	-0.12
	PEL_SEINE	none	13069	4706	8306	1176	2499				3528	-0.58
	PEL_TRAWL	none	5573059	4588470	4997638	6802691	7782248	6819694	6804202	7183555	6823346	0.37
	POTS	none	31275	7020	17127			3883	3709	570	5053	-0.70
	r-BEAM	none			1430	1414			14750	6005	7700	-1.00
ĺ	r-DEM_SEINE	BACOMA none	1973	2736	192	729	1836	13631	11756 9781	6225 4380	7782	-1.00
	r-GILL	none	2427192	2101591	1586616	3185090	2874266	1976643	1614872	1385757	1385691	-0.13
	r-LONGLINE	none	287772	448210	415897	496486	427317	401730	413703	226818	233464	-0.44
	r-OTTER	BACOMA	1762680	1708261	1154350	1040118	1696796	1840436	2313579	1592146	1966027	0.70
		none	2614581	2664437	2280681	3417477	1937142	2025584	1453392	686622	711832	-0.69
	r-PEL_TRAWL	BACOMA	4460000	1040740	64704	74000	407400	1100	252468	279728	88619	
	r-TRAMMEL	none none	1163629	1943748 162	617214	74806 3480	487488 2737	317165 970	505588 464	209536 2230	37869 4895	-0.94
	TRAMMEL	none	4434	4396	1702	4452	3444	3396	6865	14061	5540	2.25
С	GILL	none	1184	2456	2582	1729	41007	164815	135821	134191	112732	42.66
	none	none					2541	1544	1544	1801	1801	
	OTTER	none	37426	3050	6995	16038		3419	14065	4564	9224	0.32
	PEL_TRAWL	none	1048205	998876	670838	848600	1662290	2272623	1207181	1848319	2111815	2.15
	POTS	none	40727	14222 212449	12265	17816 208452	15455	3581	3529	8721	3132	-0.74 -0.85
	r-GILL r-LONGLINE	none	194122	212449	200465	206452	156580	29593	36866	42439	29251	-0.85
	r-OTTER	none BACOMA									2160	1
	[	none	216131	212716	218624	306746	242433	229988	266733	244914	232510	0.06
	TRAMMEL	none					618	2997	4244	2938	3482	]
(blank)	(blank)	(blank)										l
Grand Total			34190444	34536370	27605990	31241486	32235266	30140862	27152594	24609643	23259134	-0.16

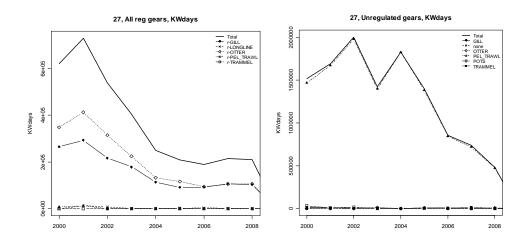


Figure 4.2.1. Area 27 Baltic: Trend in nominal effort by gear types, 2000-2008 (Kw \*days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.** 

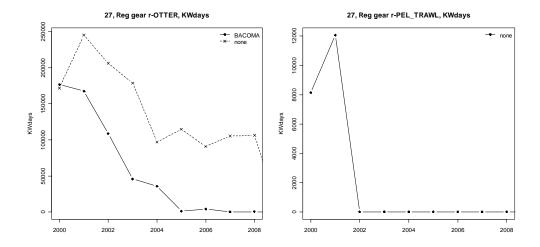


Figure 4.2.2. Area 27 Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw \*days at sea). Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.

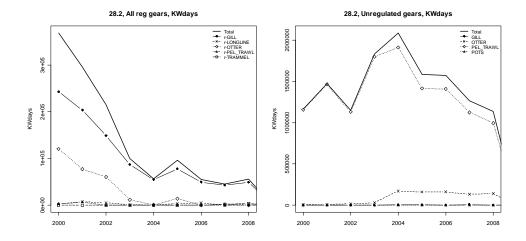


Figure 4.2.3. Area 28.2 Baltic: Trend in nominal effort by gear types, 2000-2008 (Kw \*days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.** 

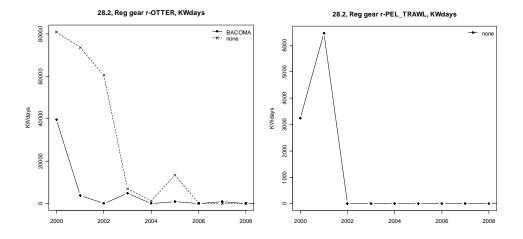


Figure 4.2.4. Area 28.2 Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw \*days at sea). Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.

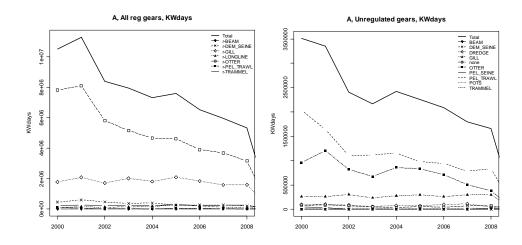


Figure 4.2.5. Area A Baltic: Trend in nominal effort by gear types 2000-2008 (Kw \*days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.** 

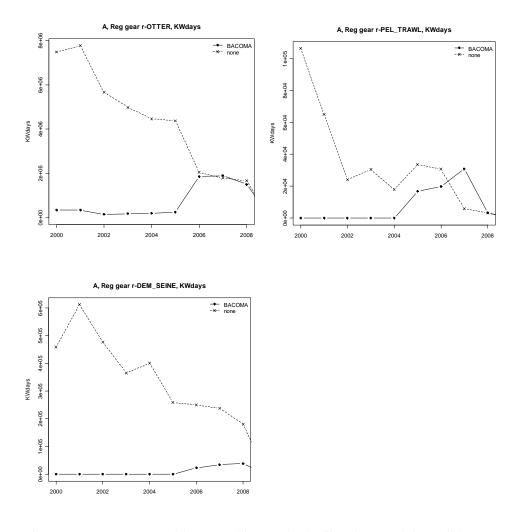


Figure 4.2.6. Area A Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw \*days at sea). Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.

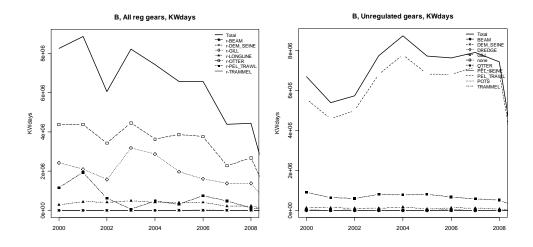


Figure 4.2.7. Area B Baltic: Trend in nominal effort by gear types 2000-2008 (Kw \*days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.** 

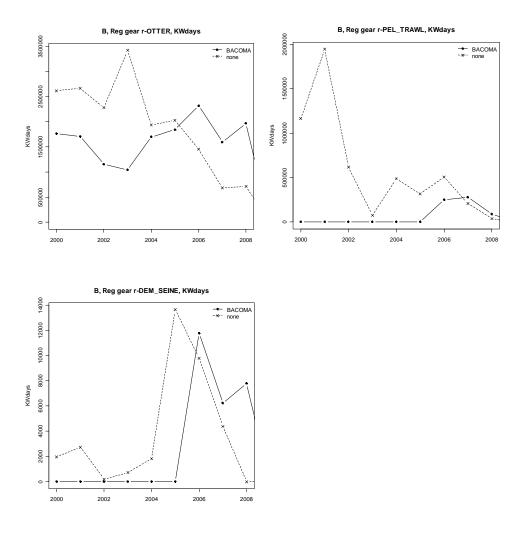


Figure 4.2.8. Area B Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw \*days at sea). Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.

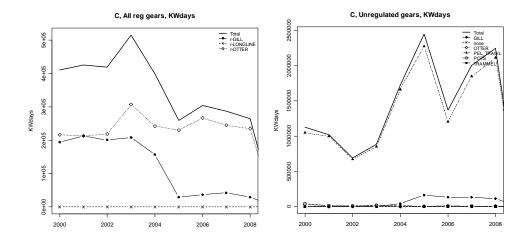


Figure 4.2.9. Area C Baltic: Trend in nominal effort by gear types 2000-2008 (Kw \*days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.** 

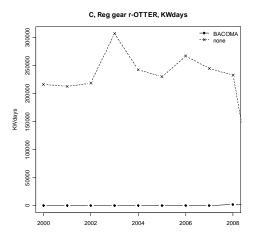


Figure 4.2.10. Area C Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw \*days at sea). Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.

## 4.3. Trends in Baltic cod catch estimates in weight and numbers at age by gear category, sub-area and member state 2003 - 2008

The following tables list the landings and discards for cod by gear category, sub-area and member state (Table 4.3.1) as well as aggregated over member states (Table 4.3.2). Discard rates per year, gear category and sub-area can be found in table 4.3.3. A detailed list of catches and discard estimates by age can be found in Table 4.3.4. Figures on landings and discards for the most important gear categories catching cod were also provided (Figure 4.3.1). A full set of figures for all gear categories will be made available on the web.

The overall problem highlighted in this section is the poor quality of discard data as already outlined in section 3.9.

The overall landings of Baltic cod in 2008 were 17.7% lower compared to 2003 (Table 4.3.2). Discards in 2008 were estimated to be 47.3% lower compared to 2003 but the poor quality of the discard estimates and provision make this observation unreliable.

Most cod landings stem from sub-areas A and B. Sub-areas 27, 28.2 and C only play a very limited role according to available data (Landings 2008 A+B = 47713 tonnes; Landings 2008 27+28.2+C = 78 tonnes).

Discard rates for cod are also highest for sub-areas A and B (Table 4.3.3). This probably reflects on the one hand the distribution of the cod stock, but also a lower availability of discard estimates from sub-areas 27, 28.2 and C. Discard rates were in general higher for otter trawls, demersal seines and pelagic trawls (up to 23% in sub-area A, however, <15% from 2005 onwards) compared to gillnets (<5%). Unfortunately a comparison between BACOMA trawls and non-BACOMA trawls was not possible due to the inability to distinguish between vessels equipped with BACOMA trawls and vessels not equipped with BACOMA-trawls especially for the years before 2005. Such a comparison would have been helpful but relies on the submission of detailed information form all member states.

A ranking of gear categories according to cod catches in the different sub-areas can be found in section 4.5.

Table 4.3.1: Landings (t) and discards (t) for cod 2003-2008 by gear category, sub-area and member state. Data qualities are summarised in Section 3.8.4 and Table 3.8.4.1. An "r" in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an "r" are non-regulated gears.

				Data											
REG_AREA	REG_GEAR	SPECON	COUNTRY	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D	2008 L	2008 D
27	GILL	none	FIN	7.9355	0					0.4248	0				
27	GILL	none	SWE					0.014	0			0.002	0		
27	OTTER OTTER	none	GER SWE	0.3	0			0.004							
27 27	PEL TRAWL	none none	FIN	1.5812	0			0.004 2.301	0	0.9145	0				
27	PEL_TRAWL	none	SWE	1.4	0	1.35	0	0.3	0	0.5145	Ü	0.74	0		
27	r-GILL	none	SWE	245.127	0	81.1825	0	20.2694	0	41.3345	0	52.651	0	52.8005	0
27	r-LONGLINE	none	SWE	0.215	0	5.677	0	0.731	0	0.041	0	0.366	0	3.226	0
27	r-OTTER	BACOMA	FIN			4.012	0								
27	r-OTTER	BACOMA	SWE	122.424	0	170.916	0	4.31	0	13.1	0			0.049	0
27	r-OTTER	none	SWE	376.482	0	74.103	0	1.244	0	2.53	0	2.295	0		
27	r-TRAMMEL	none	SWE			0.006	0								
27	TRAMMEL	none	SWE					0.027	0						
28.2	GILL	none	EST							0.01	0				
28.2	GILL	none	FIN			4.8616	0			4.44624	0	1.95644	0.13		
28.2	OTTER	none	EST							0.085	0	0.627	0		
28.2 28.2	OTTER PEL TRAWL	none none	SWE EST			0.055	0	0.13	0	0.98	0	0	0		
28.2	PEL_TRAWL	none	FIN					3.894	0	0.1652	0	U	U		
28.2	PEL TRAWL	none	SWE	0.17	0	0.03	0	1.252	0	0.1032	U	0.5	0		
28.2	r-GILL	none	SWE	36.702	0	13.538	0	36.716	0	18.063	0	3.732	0	7.21	0
28.2	r-LONGLINE	none	FIN	30.702		13.330		0.76818	0	10.003		3.732		7.21	
28.2	r-LONGLINE	none	SWE			0.002	0	3010	-	0.45	0				
28.2	r-OTTER	BACOMA	FIN	0.236	0		-								
28.2	r-OTTER	BACOMA	SWE	1.99	0			2	0			4	0		
28.2	r-OTTER	none	SWE	11.79	0	0.042	0	0.7	0						
28.2	r-TRAMMEL	none	SWE					0.025	0	0.222	0	0.375	0	0.82	0
A	DEM_SEINE	none	DEN			0.00236	0			6.35902	0				
A	DREDGE	none	DEN	1.57782857	0										
A	GILL	none	DEN	66.46527	0	34.566802	0	42.0391831	0	4.195195	0	16.4351415	0	0.34574	0
A	GILL	none	EST							78.412	0	51.672	0	112.344	0
A	GILL	none	FIN							0.21476	0				
A	GILL	none	GER	7.339	0	0.164	0	1.335	0	0.939	0	0.326	0	0.304	0
A	GILL	none	SWE	0.1795	0	0.013 25.79952	0	0.5505	0	0.419 10.80408	0	0.561	0	0.065	0
A	none none	none none	DEN SWE	27.88252 0.008	0	0.104	0	15.50048 14.852	0	4.42	0	12.399676 25.23	0	5.103854 14.8045	0
A .	OTTER	none	DEN	95,6667047	0	62.4623957	0	110.621335	0	120.235889	0	46.77461	0	21.748698	0
Α	OTTER	none	GER	59.267	0	24.603	0	81.919	0	63.116	0	39.123	0	57.33	0
A	OTTER	none	SWE	10.52	0	0.91	0	0.06	0	0.975	0	0.45	0	37.33	ŭ
A	PEL_TRAWL	none	DEN	26.82789	0	25.702642	0	77.5152805	0	86.631352	0	42.654876	0	26.22078	0
A	PEL_TRAWL	none	EST		•		-		-		-	9.872	0		-
A	PEL_TRAWL	none	FIN	2.37062	0	8.3544	0	2.22548	0						
A	PEL_TRAWL	none	GER	25.503	0	21.585	0.253	68.641	0	77.912	0	49.678	0	46.671	0
A	PEL_TRAWL	none	SWE	65.71	0	60.38	1	70.934	0	53.235	0	30.863	0	26.802	0
A	POTS	none	DEN							4.46748	0	1.92222	0	0.08968	0
A	POTS	none	GER			2.54	0	0.035	0	0.705	0	0.017	0	0.094	0
A	POTS	none	SWE	0.695	0	0.121	0					0.0315	0	0.062	0
A	r-BEAM	none	DEN	2.16016803	0										
A	r-BEAM	none	GER	0.592	0			0.889	0					9.28	0
A	r-DEM_SEINE		GER	4470.07254	402 455200	4077.054.4	110 10100	754065307	CO 4020704	54.655	0 4033000	142.862 997.51274	0	250.269	0
A	r-DEM_SEINE		DEN GER	1170.87254	103.155386	1077.9514	118.19466	754.065297	68.1939784	1189.06659	89.4833989	997.51274	91.0012472	972.762787	2.14242431
A A	r-DEM_SEINE r-GILL	none none	DEN	1235.52296	19	6.139 1179.27774	12	38.778 1185.27836	5 43	1079.72866	0	929.227301	0	898.245692	0
Δ	r-GILL r-GILL	none	GER	1165.405	17.848	669.754	12.133	702.922	43 25	980.66	0.177	929.227301	0	1005.08	0
A	r-GILL	none	LAT	124.169	17.040	158.253	12.155	405.708	19.2	579.865	1	89.703	0	29.666	0
А	r-GILL	none	POL	535.09	8	361.8762	8	462.945	18	453.4696	0	912.7186	0	660.4437	0
A	r-GILL	none	SWE	896.366	14.4564867	795.506	8.6518032	760.33	29.9266974	714.987	0	752.453	0	725.0308	0
A	r-LONGLINE	none	DEN	184.495019	2	172.332024	2	99.2206266	4	72.098	0	101.95613	0	5.95192	0
Α	r-LONGLINE	none	FIN			14.80546	0							1.4396	0.025
Α	r-LONGLINE	none	GER	16.507	0	25.987	2	51.814	3	16.9	0	13.202	0	11.981	0
Α	r-LONGLINE	none	POL	3.66	0	32.9117	2	257.143	14	128.4118	0	265.2172	0	74.3626	0
Α	r-LONGLINE	none	SWE	23.995	0.32285973	108.047	6.46919668	176.4054	6.26128716	92.388	0	52.537	0	52.833	0
Α	r-OTTER	BACOMA	FIN	57.20522	0	3.5931	0			242.0534	0	220.11012	0	157.98076	0
Α	r-OTTER	BACOMA	GER							4923.29	412.635	4898.392	508.875	3124.47	301.716
Α	r-OTTER	BACOMA	LAT							0.853	0	172.839	21		
A		BACOMA	POL	27.64	0	132.6601	13	312.14	0.67526538		16	1180.7703	104	610.6844	46
A	r-OTTER	BACOMA	SWE	577.409	0	670.378	36.4642154	572.751	2	1163.5348	66.860497	1426.635	194	1228.098	52.8640096
	r-OTTER	none	DEN	6188.66105	1086.75402	5973.35852		5360.22875	1183.53936		794.29045	5300.45422			446.986236
A	- OTTES	none none	GER	4004.233	1321.706	3981.663	533.196	4704.233	1146.397	24.711	4	8.85	0	18.203	1
A A	r-OTTER		LAT	2.258 281.429	0 77	04 04 4	11 2160522	57.284	13	E2 000	1.96379024	07.006	11	20 712	0.00670003
A A A	r-OTTER				11	84.814	11.2168523	61.607	14	53.088 77.32	0	97.906 186.993	11 0	28.713 4.751	0.88679902
A A A	r-OTTER r-OTTER	none	SWE	201.123										4./51	
A A A A	r-OTTER r-OTTER r-PEL_TRAWI	none BACOMA	GER		0	10 2157	0					12 2462	Λ	15 1006	Λ .
A A A A A	r-OTTER r-OTTER r-PEL_TRAWI r-PEL_TRAWI	none BACOMA BACOMA	GER POL	1.95812164	0	10.2157	0	61.001 36.5829192	0.32363636	41.3096 45.35389	0	12.3463 18.483166	0	15.1906 7.27706	0
A A A A A	r-OTTER r-OTTER r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI	none BACOMA BACOMA none	GER POL DEN	1.95812164 34.9666239	1	12.330292	0	36.5829192	0	45.35389	0	12.3463 18.483166	0	15.1906 7.27706	0
A A A A A A	r-OTTER r-OTTER r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI	none BACOMA BACOMA none none	GER POL DEN GER	1.95812164		12.330292 11.584	0	36.5829192 36.084	0	45.35389 0.022	0			7.27706	0
A A A A A	r-OTTER r-OTTER r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI	none BACOMA BACOMA none none	GER POL DEN GER SWE	1.95812164 34.9666239 49.896	1 1.229	12.330292 11.584 8.29	0 0 0.13400266	36.5829192 36.084 4.6	0 0 0	45.35389 0.022 7.332	0 0 0.16540732	18.483166	0	7.27706 1.9	0.06359542
A A A A A A A A	r-OTTER r-OTTER r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI	none BACOMA BACOMA none none	GER POL DEN GER	1.95812164 34.9666239	1	12.330292 11.584	0	36.5829192 36.084	0	45.35389 0.022	0			7.27706	0
A A A A A A A A A A	r-OTTER r-OTTER r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-PEL_TRAWI r-TRAMMEL r-TRAMMEL	none BACOMA BACOMA none none none	GER POL DEN GER SWE DEN	1.95812164 34.9666239 49.896 270.398416	1 1.229 4	12.330292 11.584 8.29 238.40779	0 0 0.13400266 3	36.5829192 36.084 4.6 310.14648	0 0 0	45.35389 0.022 7.332 352.09017	0 0 0.16540732 0	18.483166 324.925672	0	7.27706 1.9 297.986146	0 0.06359542 0

Table 4.3.1 continued

В	DREDGE	none	DEN	6.91817143	0									5.81622	0
В	GILL	none	DEN	24.4083	0	47.17994	0	1.24372	0	0.72098	0	2.84498	0	6.87232	0
В	GILL	none	EST							265.736	0	228.814	2	144.705	1
В	GILL	none	FIN	552.30962	0.502	477.25572	0.808	94.1286	0.01	61.19126	0.08	47.63424	0.68	143.83256	1.76
В	GILL	none	SWE					0.014	0			0.002	0		
В	none	none	DEN	5.32298	0	2.35646	0	16.80202	0	2.70928	0				
В	none	none	SWE	1.715	0	5.185	0	3.432	0	4.011	0	5.502	0	3.566	0
В	OTTER	none	DEN	47.9910169	0	68.4344059	0	73.1837415	0	33.1755427	4	9.66302	0	2.5842	0
В	OTTER	none	EST							24.799	0	61.891	0		
В	OTTER	none	GER	0.5	0									0.2	0
В	OTTER	none	LAT	4.964	0										
В	OTTER	none	SWE	10.424	0	24.396	0	21.521	0	14.7541	1.36557153	15.5255	0	16.187	0
В	PEL_TRAWL	none	DEN	33.591897	0	34.8856616	0	94.8410655	0	21.79696	0	23.990344	0	5.74542	0
В	PEL_TRAWL	none	EST							239.389	0	485.678	0	581.504	0
В	PEL_TRAWL	none	FIN	15.74592	0	34.44066	0	20.79042	0	9.9002	0	23.58348	0	25.24256	0
В	PEL_TRAWL	none	GER	8.306	0	4.901	0					0.15	0		
В	PEL_TRAWL	none	LAT	36.594	0	74.3945	0	78.058	0	65.108	0	220.695	0	153.929	0
В	PEL_TRAWL	none	SWE	28.648	0	104.709	0	96.335	0	36.18	0	100.102	0	78.84	0
В	POTS	none	SWE											1.0424	0
В	r-BEAM	none	DEN	10.393852	0										
В	r-DEM_SEINE		GER	7.2446600		0.202400:0		100 110000		66.313	0	57.855	0	93.945	0
В	r-DEM_SEINE		DEN	7.2146683	0	0.29219048	0	196.446629	0	82.0750733	0	44.81994	0		
В	r-DEM_SEINE		GER	4044004	27	0.626	0	F00 46740	42	121 121:0	42	455 00000	27	100 507 10	- 12
В	r-GILL	none	DEN	1014.99111	27	782.761152	27	509.16718	12	434.43116	13	455.83282	27	496.50742	12
В	r-GILL r-GILL	none none	FIN GER	54.745	2	20.347	1	143.521	5	12.663	1	0.7375 1.551	0	9.82468 8.14	0
В	1														
В	r-GILL	none	LAT	3317.149	120.2	3453.459	182.6	2257.062	70.7	1911.082	69.122	1759.199	138.67	2003.121	67.01
В	r-GILL	none	LIT	5430 47675	440	5545 2000	208	2046 454	442 000425	626.263837	31.389		8.32968123	93.35	1.867
В	r-GILL	none	POL	5129.17675	143	5515.3898		3916.154	113.686135	3971.8108	136.481088	2249.2075	99.0757389		55.4287707
В	r-GILL	none	SWE	3117.3335	66.5212268	2102.8067	30.6095439	1287.4479	34.1391774	1076.3143	35	889.927	49	1318.3533	38
В	r-LONGLINE	none	DEN FIN	444.150925	17	372.652156	5 0.09	300.019393	9	241.53538 9.98398	0	117.25188	0	87.61618	6
В	r-LONGLINE	none				23.1103		2.42608	0		0	17.35544	0	3.6934	0
В	r-LONGLINE r-LONGLINE	none none	GER POL	1706.63291	68	0.017 2154.6126	0 24	1.355 1855.248	40.9083025	0.037 2655.663	0	1437.2589	0	0.07 956.906	0 103.199475
D	1		SWE												
В	r-LONGLINE r-OTTER	none BACOMA	FIN	701.111 534.97778	27.9100312	833.208 323.56898	9.78203683	668.6155 162.03406	19.5585374	624.5635 346.41614	0	352.921 542.91446	0	448.5013 466.50356	23 0
D D	r-OTTER	BACOMA	GER	554.97776	U	323.30696	U	102.03400	U	1214.044	178	596.354	95	1960.412	108.309
D D	r-OTTER	BACOMA	LAT							1771.256	53.819	1136.445	29.036	1714.336	69.524
D D	r-OTTER	BACOMA	POL	0270 10071	535.775974	E402 74E1	91.7171451	5316.279	63.265309	6289.7209	514.199118	3401.6271	303.627628	4467.9504	150.004108
D	r-OTTER	BACOMA	SWE	2990.849	132.9	6213.604	225.082871	4045.422	627.176045	4893.7795	1326.63308	5595.648	1181.69181	5543.4375	472.978622
D	r-OTTER	none	DEN	5907.22898	379.705605	4337.26275	368.314808	4321.93903	381.664368	6956.3497		5272.27564	367.558002	6480.20219	413.764812
R	r-OTTER	none	FIN	3507.22656	373.703003	4337.20273	300.314000	4321.33303	301.004300	0530.3457	/13./05200	32/2.2/304	307.336002	20.15676	0
D	r-OTTER	none	GER	1290.246	84.271	1067.465	86.396	1588.295	105					25.56	2
R	r-OTTER	none	LAT	874.7365	45.3	796,593	48.4	1126.161	63					23.30	4
R	r-OTTER	none	LIT	0/4./303	73.3	130.333	70.7	2987.804	193.302	1679.21202	112.608	771.996	50.389	1605.16	104.95627
B	r-OTTER	none	SWE	3278.846	554,740923	917.031	54.5967713	455.118	71.9673321	460.089	123.252997	511.992	105.891123	247.7223	26.0544361
R	r-PEL TRAWI		GER	3270.040	554.740523	317.031	5-4.5507713	133.110	, 1.50, 5521	729.7	8	870.076	80.335	259.58	10.934
B	r-PEL_TRAWI		LAT	1						139.569	1	751.129	28	31.967	10.934
B	r-PEL TRAWI		POL	354,746261	0	1508.3474	13.4705133	585.639	14.1551792	1373.2261	14.3871242	1510.5981	14.5103019	176.582	7.43913303
B	r-PEL TRAWI		DEN	167.762096	0	404.429188	4	196,790401	8	595.54718	113	355.837732	74	13.97828	2
B	r-PEL TRAWI	none	GER	107.702030	v	1565.951	22.602	578.286	21.715	555.54710	113	555.057732	,-	13.37020	-
B	r-PEL_TRAWI	none	LAT	41.456	0	348.395	8	5.853	0						
B	r-PEL_TRAWI	none	SWE	-12.430	,	493.993	25.2818267	320.588	12	1595.952	274.699001	1225.602	236.997226	161.974	30.2124671
В	r-TRAMMEL	none	DEN	11.28788	0	7.43518	0	0.02596	0	1,9293	0		_30.337.220	20.66298	0
В	r-TRAMMEL	none	SWE	1	-	0.006	0.00011541	0.025	0.00069308	0.222	0	0.375	0	0.843	0
В	TRAMMEL	none	SWE	0.148	0	0.272	0.00011341	0.027	0.00003300	U.LLL		0.575		0.013	
c	GILL	none	EST				-			0.014	0				
c	GILL	none	FIN	1				1.19062	0	2.324	-			0.64074	0.004
c	GILL	none	SWE	1				1.132	0					2.2.07.4	2.00
c	OTTER	none	SWE					0.29	0	3.97	0				
c	PEL TRAWL	none	DEN	0.15738649	0				-	2.27					
c	r-GILL	none	SWE	3,609	0	2.335	0	2.278	0	3.015	0	6.206	0	6.4576	0
C	r-LONGLINE	none	SWE	3.003		2.333		2.2.70	•	3.013		0.200		0.015	0
1-	r-OTTER	BACOMA	SWE											0.78	0
C															

Table 4.3.2: Landings (t) and discards (t) for cod 2003-2008 by gear category and sub-area. Data qualities are summarised in Section 3.8.4 and Table 3.8.4.1 and 3.9. An "r" in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an "r" are non-regulated gears.

			Data											
REG_AREA	REG_GEAR	SPECON	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D	2008 L	2008 D
27	GILL	none	7.9355	0			0.014	0	0.4248	0	0.002	0		
27	OTTER	none	0.3	0			0.004	0						
27	PEL_TRAWL	none	2.9812	0	1.35	0	2.601	0	0.9145	0	0.74	0		
27	r-GILL	none	245.127	0	81.1825	0	20.2694	0	41.3345	0	52.651	0	52.8005	(
27	r-LONGLINE	none	0.215	0	5.677	0	0.731	0	0.041	0	0.366	0	3.226	(
27	r-OTTER	BACOMA	122.424	0	174.928	0	4.31	0	13.1	0			0.049	(
27	r-OTTER	none	376.482	0	74.103	0	1.244	0	2.53	0	2.295	0		
27	r-TRAMMEL	none			0.006	0								
27	TRAMMEL	none					0.027	0						
28.2	GILL	none			4.8616	0			4.45624	0	1.95644	0.13		
28.2	OTTER	none			0.055	0	0.13	0	1.065	0	0.627	0		
28.2	PEL_TRAWL	none	0.17	0	0.03	0	5.146	0	0.1652	0	0.5	0		
28.2	r-GILL	none	36.702	0	13.538	0	36.716	0	18.063	0	3.732	0	7.21	(
28.2	r-LONGLINE	none			0.002	0	0.76818	0	0.45	0				
28.2	r-OTTER	BACOMA	2.226	0			2	0			4	0		
28.2	r-OTTER	none	11.79	0	0.042	0	0.7	0						
28.2	r-TRAMMEL	none					0.025	0	0.222	0	0.375	0	0.82	(
A	DEM_SEINE	none			0.00236	0			6.35902	0				
Α	DREDGE	none	1.577829	0										
Α	GILL	none	73.98377	0	34.7438	0	43.92468	0	84.17996	0	68.99414	0	113.0587	(
Α	none	none	27.89052	0	25.90352	0	30.35248	0	15.22408	0	37.62968	0	19.90835	(
Α	OTTER	none	165.4537	0	87.9754	0	192.6003	0	184.3269	0	86.34761	0	79.0787	(
A	PEL_TRAWL	none	120.4115	0	116.022	1.253	219.3158	0	217.7784	0	133.0679	0	99.69378	(
Α	POTS	none	0.695	0	2.661	0	0.035	0	5.17248	0	1.97072	0	0.24568	(
Α	r-BEAM	none	2.752168	0			0.889	0					9.28	(
Α	r-DEM_SEINE	BACOMA							54.655	0	142.862	0	250.269	(
Α	r-DEM_SEINE	none	1170.873	103.1554	1084.09	118.1947	792.8433	73.19398	1189.067	89.4834	997.5127	91.00125	972.7628	2.142424
Α	r-GILL	none	3956.553	60.30449	3164.667	41.7848	3517.183	135.1267	3808.71	1.177	3675.743	0	3318.466	(
Α	r-LONGLINE	none	228.657	2.32286	354.0832	12.4692	584.583	27.26129	309.7978	0	432.9123	0	146.5681	0.025
A	r-OTTER	BACOMA	662.2542	0	806.6312	49.46422	884.891	2.675265	6507.096	495.4955	7898.746	827.875	5121.233	400.58
Α	r-OTTER	none	10476.58	2485.46	10039.84	1671.259	10183.35	2356.936	5491.009	800.2542	5407.21	625.0238	4238.681	448.873
A	r-PEL_TRAWL	BACOMA	1.958122	0	10.2157	0	61.001	0.323636	118.6296	0	199.3393	0	19.9416	(
A	r-PEL_TRAWL	none	84.86262	2.229	32.20429	0.134003	77.26692	0	52.70789	0.165407	18.48317	0	9.17706	0.063595
A	r-TRAMMEL	none	281.6194	4.303345	240.8028	3.009886	318.1025	12.12458	354.0407	0	342.5747	0	307.1421	(
A	TRAMMEL	none	0.54752	0	0.34574	0	5.2746	0					0.86612	(
В	DREDGE	none	6.918171	0									5.81622	(
В	GILL	none	576.7179	0.502	524.4357	0.808	95.38632	0.01	327.6482	0.08	279.2952	2.68	295.4099	2.76
В	none	none	7.03798	0	7.54146	0	20.23402	0	6.72028	0	5.502	0		(
В	OTTER	none	63.87902	0	92.83041	0	94.70474	0	72.72864	5.365572	87.07952	0	18.9712	(
В	PEL_TRAWL	none	122.8858	0	253.3308	0	290.0245	0	372.3742	0	854.1988	0		(
В	POTS	none											1.0424	(
В	r-BEAM	none	10.39385	0										
В	r-DEM_SEINE	BACOMA							66.313	0	57.855	0	93.945	(
В	r-DEM_SEINE	none	7.214668	0	0.91819	0	196.4466	0		0	44.81994	0		
В	r-GILL	none	12633.4	358.7212	11874.76	449.2095	8113.352	235.5253	8032.565	285.9921	5590.107	322.0754	7048.606	
В	r-LONGLINE	none	2851.895	112.91	3383.6	38.87204	2827.664	69.46684	3531.783	0	1924.787	0		132.1995
В	r-OTTER	BACOMA	11796.01	668.676	11940.92	316.8	9523.735	690.4414	14515.22	2072.651	11272.99	1609.355		800.8157
В	r-OTTER	none	11351.06	1064.018	7118.352		10479.32	814.9337	9095.651	949.6302	6556.264		8378.801	546.7755
В	r-PEL_TRAWL	BACOMA	354.7463	0	1508.347	13.47051	585.639	14.15518	2242.495	23.38712	3131.803	122.8453	468.129	19.37313
В	r-PEL_TRAWL	none	209.2181	0	2812.768	59.88383	1101.517	41.715	2191.499	387.699	1581.44	310.9972		32.21247
В	r-TRAMMEL	none	11.28788	0	7.44118	0.000115	0.05096	0.000693	2.1513	0	0.375	0	21.50598	(
В	TRAMMEL	none	0.148	0	0.272	0	0.027	0						
С	GILL	none					2.32262	0	0.014	0			0.64074	0.004
С	OTTER	none					0.29	0	3.97	0				
С	PEL_TRAWL	none	0.157386	0										
С	r-GILL	none	3.609	0	2.335	0	2.278	0	3.015	0	6.206	0	6.4576	(
С	r-LONGLINE	none											0.015	(
С	r-OTTER	BACOMA											0.78	(
Totalt			58069.6	4862.602	55883.81	3334.32	50319.29	4473.89	59027.74	5111.381	50903.36	4435.822	47784.8	2560.13

Table 4.3.3: Discard rates for cod 2003-2008 by gear category and sub-area. Data qualities are summarised in Section 3.8.4 and Table 3.8.4.1 and 3.9. An "r" in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an "r" are non-regulated gears.

REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	2008
27	GILL	none	0	0	0	0	0	0
27	OTTER	none	0	0	0	0	0	0
27	PEL_TRAWL	none	0	0	0	0	0	0
27	r-GILL	none	0	0	0	0	0	0
27	r-LONGLINE	none	0	0	0	0	0	0
27	r-OTTER	BACOMA	0	0	0	0	0	0
27	r-OTTER	none	0	0	0	0	0	0
27	r-TRAMMEL	none	0	0	0	0	0	0
27	TRAMMEL	none	0	0	0	0	0	0
28.2	GILL	none	0	0	0	0	0.06644722	0
28.2	OTTER	none	0	0	0	0	0	0
28.2	PEL_TRAWL	none	0	0	0	0	0	0
28.2	r-GILL	none	0	0	0	0	0	0
28.2	r-LONGLINE	none	0	0	0	0	0	0
28.2	r-OTTER	BACOMA	0	0	0	0	0	0
28.2	r-OTTER	none	0	0	0	0	0	0
28.2	r-TRAMMEL	none	0	0	0	0	0	0
А	DEM_SEINE	none	0	0	0	0	0	0
А	DREDGE	none	0	0	0	0	0	0
А	GILL	none	0	0	0	0	0	0
Α	none	none	0	0	0	0	0	0
Α	OTTER	none	0	0	0	0	0	0
Α	PEL_TRAWL	none	0	0.01079967	0	0	0	0
А	POTS	none	0	0	0	0	0	0
А	r-BEAM	none	0	0	0	0	0	0
А	r-DEM_SEINE	BACOMA	0	0	0	0	0	0
А	r-DEM_SEINE	none	0.088101294	0.10902657	0.09231834	0.075255162	0.09122816	0.00220241
Α	r-GILL	none	0.015241673	0.01320354	0.03841901	0.000309028	0	0
Α	r-LONGLINE	none	0.010158707	0.03521544	0.04663373	0	0	0.00017057
Α	r-OTTER	BACOMA	0	0.06132197	0.00302327	0.076146947	0.10481094	0.07821944
Α	r-OTTER	none	0.237239611	0.16646274	0.23144994	0.145739026	0.11559081	0.10589922
Α	r-PEL TRAWL	BACOMA	0	0	0.00530543	0	0	0
Α	r-PEL_TRAWL	none	0.02626598	0.00416102	0	0.003138189	0	0.00692982
А	r-TRAMMEL	none	0.01528071	0.01249938	0.03811532	0	0	0
А	TRAMMEL	none	0	0	0	0	0	0
В	DREDGE	none	0	0	0	0	0	0
В	GILL	none	0.000870443	0.0015407	0.00010484	0.000244164	0.00959558	0.00934295
В	none	none	0	0	0	0	0	0
В	OTTER	none	0	0	0	0.073775219	0	0
В	PEL TRAWL	none	0	0	0	0	0	0
В	POTS	none	0	0	0	0	0	0
В	r-BEAM	none	0	0	0	0	0	0
В	r-DEM_SEINE	BACOMA	0	0	0	0	0	0
В	r-DEM SEINE	none	0	0	0	0	0	0
В	r-GILL	none	0.028394681	0.03782893	0.02902935	0.03560408	0.05761525	0.02472911
В	r-LONGLINE	none	0.039591232	0.01148837	0.02456687	0	0	0.08832218
В	r-OTTER	BACOMA	0.056686606	0.02653062	0.07249691	0.142791614	0.14276209	0.0565842
В	r-OTTER	none	0.093737304		0.07776592			0.06525701
В	r-PEL_TRAWL	BACOMA	0.033737304	0.00893064		0.010429064	0.0392251	0.04138418
В	r-PEL TRAWL	none	0	0.02129	0.03787049	0.176910402		0.18307502
В	r-TRAMMEL	none	0	1.551E-05	0.01360055	0.170310402	0.13003443	0
В	TRAMMEL	none	0	0	0.01300033	0	0	0
C	GILL	none	0	0	0	0	0	0.00624278
c	OTTER	none	0	0	0	0	0	0.00024278
C	PEL_TRAWL	none	0	0	0	0	0	0
С	r-GILL	none	0	0	0	0	0	0
С	r-LONGLINE	none	0	0	0	0	0	0
C	r-OTTER	BACOMA	0	0	0	0	0	0
	I OTTEN	PUCCINIA	U	U	U	U	U	U

Table 4.3.4: Cod landings (L) and discards (D) at ages 1-9 ('000) by gear category and subarea 2003-2008. An "r" in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an "r" are non-regulated gears. Data on age distribution were available for sub-areas A and B only.

ANNEX	REG_AREA	REG_GEAR	SPECON	SPECIES	AGE		03_L	2003_D	2004_L	2004_D	) 2	005_L	2005_D	2006_L	2006_D	2007_L	2007_D	2008_L	2008_D
Bal Bal	A A	DEM_SEINE DEM_SEINE	none none	COD		1 2								0.50 1.99	-				
Bal	A	DEM_SEINE	none	COD		3								2.72					
Bal	A	DEM_SEINE	none	COD		4								0.28					
Bal	A	DEM_SEINE	none	COD		5								0.05					
Bal	A	DEM_SEINE	none	COD		6								0.02					
Bal	A	DEM_SEINE	none	COD		7								0.01	11				
Bal	A	DEM_SEINE	none	COD		8								0.00					
Bal	A	DEM_SEINE	none	COD		9								0.00	02				
Bal	A	DREDGE	none	COD		1	0.2												
Bal Bal	A	DREDGE DREDGE	none none	COD		2	1.74												
Bal	A A	DREDGE	none	COD		3 4	0.20	2											
Bal	A	DREDGE	none	COD		5													
Bal	A	DREDGE	none	COD		6													
Bal	A	DREDGE	none	COD		7													
Bal	A	DREDGE	none	COD		8													
Bal	A	DREDGE	none	COD		9													
Bal	A	GILL	none	COD		1	2.45		0.84			0.981		0.07		0.32		0.00	
Bal	A	GILL	none	COD		2	16.90		3.90			12.429		11.49		12.39		4.29	
Bal	A	GILL	none	COD		3	15.10		13.21			5.791		48.29		12.29		8.56	
Bal Bal	A A	GILL	none	COD		4 5	6.84 2.00		2.75 0.82			7.579 1.523		2.31		14.98 3.84		6.50 5.91	
Bal	A	GILL	none none	COD		6	1.04		0.82			0.722		0.15		0.76		3.47	
Bal	A	GILL	none	COD		7	0.31		0.08			0.722		0.02		0.10		1.14	
Bal	A	GILL	none	COD		8	0.03			0		0.099		0.02		0.10		0.5	
Bal	A	GILL	none	COD		9	0.03			•		0.001		0.00		0.02		0.5	-
Bal	A	none	none	COD		1	3.10	8	0.96	9		1.435		0.42		0.15		0.09	9
Bal	A	none	none	COD		2	15.02	3	6.02	8		18.876	5	4.26	54	11.22	5	3.40	4
Bal	A	none	none	COD		3	5.60	1	15.32	9		4.399	9	8.41	16	9.72	7	5.08	4
Bal	A	none	none	COD		4	1.45	-	1.30			3.566		0.52		11.32		3.18	
Bal	A	none	none	COD		5	0.32		0.24			0.97		0.1		1.66		2.16	
Bal	A	none	none	COD		6	0.19		0.04			0.266		0.02		0.18		1.21	
Bal	A	none	none	COD		7	0.05		0.01			0.101		0.00		0.0		0.2	
Bal Bal	A	none	none	COD		8 9	0.00	1	0.00	1		0.033		0.00		0.01		0.08	
Bal	A A	none OTTER	none none	COD		1	22.64	1	9.00	6		0.001 6.863		0.00		0.00		0.01	0
Bal	A	OTTER	none	COD		2	96.30		22.69			119.301		15.90		13.52		1.40	
Bal	A	OTTER	none	COD		3	41.59		42.18			30.113		132.29		15.33		6.15	
Bal	A	OTTER	none	COD		4	8.83		5.16			29.357		6.20		23.		4.66	
Bal	A	OTTER	none	COD		5	1.30	8	1.27			6.167	,	5.19	99	4.46		2.55	3
Bal	A	OTTER	none	COD		6	0.70	3	0.2	8		1.678	3	0.7	76	1.32	3	1.08	7
Bal	A	OTTER	none	COD		7	0.19		0.15			0.32		0.15		0.14		0.21	
Bal	A	OTTER	none	COD		8	0.00	6		0		0.167		0.14		0.09		0.15	
Bal	A	OTTER	none	COD		9						0.009		0.01		0.05		0.00	
Bal	A	PEL_TRAWL	none	COD		1	7.37		4.31		482	17.49		1.11		0.07		0.7	
Bal Bal	A A	PEL_TRAWL PEL_TRAWL	none none	COD		2	58.14 37.80		22.45 43.02		097	103.949		22.12 135.49		10.54 16.43		6.76 18.12	
Bal	A	PEL_TRAWL	none	COD		4	9.19		5.54			25.413		8.01		35.57		14.76	
Bal	A	PEL TRAWL	none	COD		5	1.7		1.48			5.977		5.67		7.37		10.0	
Bal	A	PEL TRAWL	none	COD		6	0.93		0.3			2.672		1.05		2.08		5.01	
Bal	A	PEL_TRAWL	none	COD		7	0.43	8	0.25	6		0.558		0		0.27		1.41	
Bal	A	PEL_TRAWL	none	COD		8	0.04	8		0		0.365	5	0.25	54	0.17	4	0.47	9
Bal	A	PEL_TRAWL	none	COD		9						0.013	3	0.04	12	0.09	1		
Bal	A	POTS	none	COD		1										0.0		0.00	
Bal	A	POTS	none	COD		2								0.18		0.53		0.01	
Bal	A	POTS	none	COD		3								3.22		0.60		0.02	
Bal Bal	A	POTS	none	COD		4								0.18		0.46		0.01	
Bal	A A	POTS POTS	none none	COD		5 6								0.10		0.09		0.00	
Bal	A	POTS	none	COD		7								0.00		0.00		0.00	
Bal	A	POTS	none	COD		8								0.0			0		0
Bal	A	POTS	none	COD		9								0.00			0		0
Bal	A	r-BEAM	none	COD		1													
Bal	A	r-BEAM	none	COD		2	1.32	8											
Bal	A	r-BEAM	none	COD		3	1.66												
Bal	A	r-BEAM	none	COD		4	0.28												
Bal	A	r-BEAM	none	COD		5	0.02												
Bal	A	r-BEAM	none	COD		6	0.01												
Bal Bal	A A	r-BEAM r-BEAM	none none	COD		7 8	0.00												
Bal	A	r-BEAM	none	COD		9	0.00	1											
Dui		I DEMIN	HOHE	000		J													

Table 4.3.4: continued

Bal	Α	r-DEM_SEINE	none	COD	141.204	66.76	95.06	46.595	52.578	53.282	31.536	25.94	6.223	37.77	8.138	7.82
Bal	Α	r-DEM_SEINE	none	COD	624.584	188.94	284.44	226.002	606.478	127.706	189.124	163.77	284.843	164.45	102.221	1.58
Bal	Α	r-DEM_SEINE	none	COD	362.685	62.46	664.941	82.039	124.543	43.642	898.078	66.55	289.028	64.84	353.327	0.21
Bal	A	r-DEM_SEINE	none	COD	76.437	7.25	41.701	9.316	110.138	5.126	44.929	8.04	308.714	7.72	232.363	0.02
Bal	A	r-DEM_SEINE	none	COD	8.071	0.81	7.214	1.182	14.917	0.723	15.465	1.25	61.053	1.15	129.239	
Bal	A	r-DEM_SEINE	none	COD	4.277	0.07	0.977	0.081	3.341	0.04	2.563	0.04	10.348	0.03	49.197	
Bal	A	r-DEM_SEINE	none	COD	7 1.084	0.01	0.526	0.01	0.546		0.796		1.523		12.656	
Bal	A	r-DEM_SEINE r-DEM_SEINE	none	COD	0.101		0.001		0.266		0.389		0.535		1.741	
Bal	A	-	none	COD		16 122	40.02	20.000	0.01	122 771	0.16		0.278		0.152	
Bal Bal	A A	r-GILL r-GILL	none	COD	270.563 2 1377.584	16.133 74.204	40.92 381.4	36.869 12.454	42.171 1199.87	123.771 168.825	22.472 602.789	0.38	2.858 196.979		1.483 207.979	
Bal	A	r-GILL	none none	COD	1198.591		1168.109	5.983	613.18	13.24	1699.12	0.30	523.545		482.161	
Bal	A	r-GILL	none	COD	350.169	1.423	376.82	0.65	422.625	0.519	187.89		674.805		286.136	
Bal	A	r-GILL	none	COD	68.84	0.026	56.842	0.02	118.566	0.515	99.246		111.222		216.418	
Bal	A	r-GILL	none	COD	31.413	0.049	13.17	0.02	29.022		18.128		34.11		64.3	
Bal	A	r-GILL	none	COD	7 7.906		3.588		10.173		4.071		7.185		20.376	
Bal	A	r-GILL	none	COD	3 0.636		0.518		4.452		0.854		1.37		10.396	
Bal	Α	r-GILL	none	COD	0.154				0.157		0.431		0.491		0.454	
Bal	Α	r-LONGLINE	none	COD	3.303	0.066	5.06	20.213	2.324	34.107	0.11		0.377		0.038	
Bal	Α	r-LONGLINE	none	COD	74.177	3.115	66.206	7.146	231.168	40.341	35.914		41.474		44.627	
Bal	Α	r-LONGLINE	none	COD	104.458	1.977	178.556	3.179	227.154	4.036	156.475		99.043		53.118	
Bal	Α	r-LONGLINE	none	COD	27.182	0.013	45.246	0.066	113.22	0.278	19.661		94.076		18.993	
Bal	Α	r-LONGLINE	none	COD	3.772	0	4.645	0.001	36.533		9.537		22.499		13.662	
Bal	Α	r-LONGLINE	none	COD	1.809	0	1.189		3.556		2.272		6.168		1.537	
Bal	Α	r-LONGLINE	none	COD	7 0.417		0.319		1.369		0.472		1.429		0.349	
Bal	Α	r-LONGLINE	none	COD	0.025		0.045		0.379		0.437		0.723		0.185	
Bal	A	r-LONGLINE	none	COD	0.004				0.012		0.026		0.32		0.013	
Bal	Α	r-OTTER	BACOMA	COD	l			51.078	16.309		4.574	169.723	18.951	60.806		58.88
Bal	Α	r-OTTER	BACOMA	COD	2 204.272		30.837	23.106	539.593		2910.055		1223.969	621.778	908.42	385.298
Bal	A	r-OTTER	BACOMA	COD	259.165		179.43	1.772	186.935		4140.104	498.027	3599.99		1536.533	252.905
Bal	A	r-OTTER	BACOMA	COD	30.956		81.871	0.007	54.112		378.295		2557.604	3.752	806.71	40.948
Bal	A	r-OTTER	BACOMA	COD	3.356		9.107		15.139		92.93		154.535		686.449	2.658
Bal	A	r-OTTER	BACOMA	COD	0.41		1.443		1.625		26.236		39.797		41.978	
Bal Bal	A A	r-OTTER r-OTTER	BACOMA BACOMA	COD	7 0.137 3				0.378 0.317		3.452 1.911		15.764 2.221		5.945 3.778	
	A	1-UTTEN	DACUIVIA	COD							1.711				3.770	
Dal.	Λ	r.OTTED	DACOMA	COD			0.102								0.914	
Bal Ral	Α Δ	r-OTTER	BACOMA	COD	9	2013 878	0.103	1280 23	0.006	2028 542	0.417	375 27	0.897	336 602	0.814	2//6 331
Bal	Α	r-OTTER	none	COD	9 L 859.034	2013.878	591.86	1280.23	0.006 304.142	2028.542	0.417 97.983	375.27 1420 555	0.897 34.797	336.602 1105.279	46.379	246.331 829.618
		r-OTTER r-OTTER	none none	COD	9 1 859.034 2 5208.922	4855.533	591.86 2599.144	3058.873	0.006 304.142 6019.579	3828.348	0.417 97.983 852.839	1420.555	0.897 34.797 1292.966	1105.279	46.379 553.35	829.618
Bal Bal Bal	A A A	r-OTTER r-OTTER r-OTTER	none	COD COD	9 L 859.034 2 5208.922 3 3211.994	4855.533 1288.578	591.86 2599.144 5886.999	3058.873 896.221	0.006 304.142 6019.579 1604.827	3828.348 1084.322	0.417 97.983 852.839 3859.029	1420.555 510.329	0.897 34.797 1292.966 1296.076	1105.279 407.489	46.379 553.35 1130.251	829.618 299.909
Bal Bal	A A	r-OTTER r-OTTER r-OTTER r-OTTER	none none none	COD	859.034 2 5208.922 3 3211.994 4 763.953	4855.533	591.86 2599.144	3058.873	0.006 304.142 6019.579	3828.348	0.417 97.983 852.839	1420.555 510.329	0.897 34.797 1292.966	1105.279	46.379 553.35	829.618
Bal Bal Bal Bal	A A A	r-OTTER r-OTTER r-OTTER	none none none	COD COD COD	859.034 5208.922 3211.994 763.953 125.801	4855.533 1288.578 131.622	591.86 2599.144 5886.999 579.79	3058.873 896.221 102.696	0.006 304.142 6019.579 1604.827 1473.85	3828.348 1084.322 168.372	0.417 97.983 852.839 3859.029 207.131	1420.555 510.329 68.366	0.897 34.797 1292.966 1296.076 1558.456	1105.279 407.489 57.599	46.379 553.35 1130.251 760.103	829.618 299.909 45.31
Bal Bal Bal Bal Bal	A A A A	r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER	none none none none	COD COD COD COD	859.034 5208.922 3211.994 763.953 125.801	4855.533 1288.578 131.622 12.385	591.86 2599.144 5886.999 579.79 111.302	3058.873 896.221 102.696 13.403	0.006 304.142 6019.579 1604.827 1473.85 320.323	3828.348 1084.322 168.372 28.858	0.417 97.983 852.839 3859.029 207.131 131.987	1420.555 510.329 68.366 10.381	0.897 34.797 1292.966 1296.076 1558.456 281.643	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885	829.618 299.909 45.31 7.241
Bal Bal Bal Bal Bal	A A A A	r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER	none none none none none	COD COD COD COD COD	859.034 5208.922 33211.994 763.953 125.801 70.675	4855.533 1288.578 131.622 12.385 0.639	591.86 2599.144 5886.999 579.79 111.302 23.632	3058.873 896.221 102.696 13.403 0.55	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281	3828.348 1084.322 168.372 28.858 2.466	0.417 97.983 852.839 3859.029 207.131 131.987 20.154	1420.555 510.329 68.366 10.381	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074	829.618 299.909 45.31 7.241 0.51
Bal Bal Bal Bal Bal Bal	A A A A A	r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER r-OTTER	none none none none none none none	COD COD COD COD COD COD	859.034 5208.922 3211.994 763.953 125.801 70.675 71.906	4855.533 1288.578 131.622 12.385 0.639 0.205	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577	3058.873 896.221 102.696 13.403 0.55 0.145	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104	1420.555 510.329 68.366 10.381 0.691	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324	829.618 299.909 45.31 7.241 0.51 0.14
Bal Bal Bal Bal Bal Bal Bal	A A A A A	FOTTER	none none none none none none none none	COD	8 859.034 2 5208.922 3 3211.994 4 763.953 5 125.801 5 70.675 7 21.906 8 0.972	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565	3058.873 896.221 102.696 13.403 0.55 0.145 2.476	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178	1420.555 510.329 68.366 10.381 0.691 0.001	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01	829.618 299.909 45.31 7.241 0.51 0.14 0.01
Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A	FOTTER	none none none none none none none none	COD	8 859.034 2 5208.922 8 3211.994 4 763.953 5 125.801 6 70.675 7 21.906 8 0.972 9 21.628 2 51.007	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A	FOTTER FELTRAWL FPELTRAWL	none none none none none none none none	COD	8 859.034 2 5208.922 3 3211.994 4 763.953 5 125.801 5 70.675 7 21.906 8 0.972 9 21.628 2 51.007 8 8.516	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135	1420.555 510.329 68.366 10.381 0.691 0.001	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695	829.618 299.909 45.31 7.241 0.51 0.14 0.01
Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A	FOTTER FO	none none none none none none none none	COD	8 859.034 2 5208.922 3 3211.994 4 763.953 5 125.801 6 70.675 7 21.906 8 0.972 9 21.628 2 51.007 8 8.516 1 1.967	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A A	FOTTER FOTER FO	none none none none none none none none	COD	9	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A	FOTTER FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL	none none none none none none none none	COD	859.034 2 5208.922 3 3211.994 4 763.953 5 125.801 7 0.675 7 21.906 8 0.972 9 2 21.628 2 51.007 3 8.516 4 1.967 5 0.133 6 0.054	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186 0.219	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A	FOTTER FELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL FPELTRAWL	none none none none none none none none	COD	3	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.568 4.686 7.209 1.369 0.154 0.036	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733 0.211	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 0.219 0.023	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402 0.113	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bai Bai Bai Bai Bai Bai Bai Bai Bai Bai	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL	none none none none none none none none	COD	8 859.034 2 5208.922 3 3211.994 4 763.953 5 725.801 5 70.675 7 21.906 8 0.972 9 1 21.628 2 51.007 8 8.516 4 1.967 5 0.033 6 0.033 6 0.043	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028	591.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.036 0.007	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.506 14.618 11.314 3.042 0.733 0.211	3828.348 1084.322 168.372 28.858 2.466 0.049	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186 0.219 0.023	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bai Bai Bai Bai Bai Bai Bai Bai Bai Bai	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL	none none none none none none none none	COD	8 859.034 2 5208.922 3 3211.994 1 763.953 5 125.801 6 70.675 7 21.906 8 0.972 9 2 1.628 2 51.007 8 8.516 1 1.967 5 0.054 7 0.004	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626	\$91.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.007 0	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733 0.211 0.082	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 852.839 3859.029 207.131 131.987 4.104 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016 0.009	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186 0.219 0.023	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 0.191 0.01 1.5 1.695 1.115 0.0402 0.113 0.055	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FPELTRAWL	none none none none none none none none	COD	8 859.034 2 5208.922 3 3211.994 1 763.953 5 125.801 5 70.675 7 21.906 3 0.972 9 1 2 21.628 2 51.007 3 8.516 4 1.967 5 0.133 6 0.054 7 0.004 8 6.706	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626	\$91.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.036 0.036 0.036	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733 0.211 0.082 0.001	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 852.839 3855.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016 0.009 0.002	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 0.219 0.023 0.007 0.003	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402 0.113 0.055	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FO	none none none none none none none none	COD	8 859.034 1 859.034 2 5208.922 3 3211.994 4 763.953 5 125.801 6 70.675 7 21.906 8 0.972 9 21.628 2 51.007 8 8.516 4 0.054 7 0.004 8 9 0.054 7 0.004 8 43.138	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626	\$91.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 0.154 0.036 0.007 0 0 3.335 12.41	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733 0.211 0.082 0.0001 0.872 27.411	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 855.939 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016 0.009 0.002 1.314	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 0.219 0.023 0.007 0.003 7.852	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402 0.113 0.055	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bai Bai Bai Bai Bai Bai Bai Bai Bai Bai	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL FRAMMEL FTRAMMEL	none none none none none none none none	COD	8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626	\$91.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.007 0 0 3.335 12.41	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733 0.211 0.082 0.001 0.872 27.411	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 852.839 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016 0.009 0.002 1.314 14.777 110.968	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.906 1295.096 1295.096 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186 0.219 0.023 0.007 0.003 0.133 7.852 13.413	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402 0.113 0.055	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FELTRAWL	none none none none none none none none	COD	8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104	\$91.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.036 0.007 0 0 3.335 12.41 47.983 20.895	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 11.521 0.252 14.618 11.314 3.042 0.001 0.823 0.001 0.823 4.741 11.942 0.001 0.822 0.001	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 852.839 3859.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016 0.009 0.002 1.314 14.77 110.968 18.611	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1295.076 1292.066 1295.076 1558.456 281.643 75.696 7.314 0.346 5.203 4.939 5.486 1.186 0.219 0.023 0.007 0.003 0.133 7.341 62.801	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.011 1.5 1.695 1.115 1.006 0.402 0.113 0.055 0.236 4.583 15.181 20.799	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bai Bai Bai Bai Bai Bai Bai Bai Bai Bai	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL FRAMMEL FTRAMMEL	none none none none none none none none	COD	8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626	\$91.86 2599.144 5886.999 579.79 111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.007 0 0 3.335 12.41	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 53.526 14.618 11.314 3.042 0.733 0.211 0.082 0.001 0.872 27.411	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 852.839 207.131 131.987 20.154 4.104 1.177 0.448 2.178 19.163 32.135 1.849 0.757 0.106 0.016 0.009 0.002 1.314 14.777 110.968	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.906 1295.096 1295.096 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186 0.219 0.023 0.007 0.003 0.133 7.852 13.413	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 0.01 1.5 1.695 1.115 1.056 0.402 0.113 0.055	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FOEL TRAWL FOEL TRAWMEL FOEL TRAWMEL FOEL TRAWMEL FOEL TRAWMEL FOEL TRAWMEL FOEL TRAWMEL	none none none none none none none none	COD	8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	\$91.86 2599.144 5886.999 579.79 1111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.369 0.154 0.036 0.007 0 0 3.335 12.41 47.983 20.895 10.452	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 d019.579 d1473.85 d19.579 d1573.85 d19.579 d1573.85	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 852.839 207.131 131.987 20.154 4.104 4.104 1.107 0.448 2.178 19.163 32.135 0.057 0.016 0.016 0.016 0.016 11.144 14.777 110.968	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1296.076 1558.456 281.643 75.696 7.314 3.282 1.341 0.346 5.203 4.939 5.486 1.186 0.219 0.023 0.007 0.003 0.133 7.852 13.413 62.801 19.977	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 760.103 473.885 193.074 48.324 23.012 0.191 1.5 1.695 1.115 1.056 0.402 0.113 0.055 0.236 4.583 15.181 20.799 27.119	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal Bal Bal Bal Bal Bal Bal Bal Bal Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL FRETAWN FRE	none none none none none none none none	COD	89,033   89,033   81,035   8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 5886.999 1111.302 23.632 13.577 0.296 0.031 1.565 4.686 7.209 1.3699 0.036 0.037 0.036 0.037 4.036 0.037 0.037 0.036 0.037 0.	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 33.526 14.618 11.314 0.082 0.733 0.211 0.082 0.733 0.211 19.248 47.968 47.968	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 88.59.029 207.131 131.987 20.154 4.104 1.177 0.448 2.178 32.135 1.849 0.757 0.016 0.009 0.002 1.187 1	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1292.966 1558.456 281.643 75.696 1.341 0.346 0.219 0.023 0.007 0.003 0.007 0.003 7.852 13.413 62.801 10.166	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 1130.251 123.074 48.324 23.012 0.01 1.5 1.695 1.115 0.056 0.402 0.113 0.055 0.236 4.583 15.181 20.799 13.726	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL FRET TRAWL	none none none none none none none none	COD	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 5599.144 5886.999 111.302 23.632 13.577 0.296 0.031 1.565 4.686 0.036 0.154 4.036 0.3335 12.41 47.983 20.895 10.452 2.481 2.481	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 0.006 0.007	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 4.104 1.177 0.448 19.163 32.135 1.849 0.057 0.016 0.016 0.016 0.016 0.016 1.4777 110.968 18.611 12.3024 4.498 0.996	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34,797 125,606 1256,656 1558,456 1558,456 1558,456 1558,456 1558,456 1558,456 1558,456 1558,456 1058,456	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 130.261 1473.885 193.074 48.324 0.191 0.01 1.55 1.695 1.115 1.056 0.402 0.013 0.055 0.236 4.583 15.181 20.799 27.119 3.726 3.818	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FOTTER FPELTRAWL FRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL FTRAMMEL	none none none none none none none none	COD	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 5599.144 5886.999 111.302 23.632 13.577 0.296 0.031 1.565 4.686 0.036 0.154 4.036 0.3335 12.41 47.983 20.895 10.452 2.481 2.481	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 605.827 1473.85 320.323 93.4531 11.521 0.252 0.983 3.042 0.733 0.211 0.082 0.733 0.211 1.244 17.968 13.061 13.064 13.061 14.188	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.816.43 3.282 1.384 1.384 1.384 1.186 0.023 0.007 0.003 0.003 7.852 13.413 19.977 10.166	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 1130.25	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FOTER FOEL TRAWL FPEL TRAWL FTRAMMEL	none none none none none none none none	COD	8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 2599.144 5886.999 111.302 23.632 0.296 0.031 13.577 0.296 0.031 0.036 0.007 0 0 3.335 12.41 47.983 20.895 10.452 2.481 0.056	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 606.827 1473.85 320.323 99.281 34.531 11.521 1.522 14.618 13.344 0.733 3.042 0.733 3.042 0.082 0.001 0.872 27.411 8.596 13.061 8.596 12.429 1.441 0.015 2.429 1.441 0.015	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.816.43 3.282 1.384 1.384 1.384 1.186 0.023 0.007 0.003 0.003 7.852 13.413 19.977 10.166	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 130.251 130.261 130.262	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FPEL TRAWL FRAMMEL FTRAMMEL	none none none none none none none none	COD	8	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 2599.144 585.99.79 111.302 23.632 13.577 0.296 0.031 1.565 7.209 1.369 0.154 0.007 0 0 3.335 12.41 47.983 10.452 2.481 0.975 0.05	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 16015.79 1604.827 1473.85 320.323 399.281 34.531 11.521 0.983 353.526 14.618 3.042 47.968 47.968 47.968 19.248 47.968 19.248 47.968 19.248 47.968 19.248 19.	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.816.43 3.282 1.384 1.384 1.384 1.186 0.023 0.007 0.003 0.003 7.852 13.413 19.977 10.166	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 130.251 130.262	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FO	none none none none none none none none	COD	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 2599.149 586.997 111.302 23.632 111.302 0.031 1.565 4.686 7.209 0.31 1.695 0.007 0 0 3.335 10.452 0.055 0.055 0.055 0.055	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 61604.827 1473.85 320.323 399.281 34.531 11.521 0.098 353.526 0.093 353.526 0.001 0.082 0.001 0.082 0.001 13.041 19.248 8.596 2.429 1.441 0.032 1.441 1.541 1	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.816.43 3.282 1.384 1.384 1.384 1.186 0.023 0.007 0.003 0.003 7.852 13.413 19.977 10.166	1105.279 407.489 57.599 9.596	46.379 553.35 117 60.103 473.885 193.074 23.012 0.191 0.01 1.15 1.695 1.105 0.402 0.113 0.0555 0.402 27.119 27.119 3.818 3.33 0.046	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FPELTRAWL FRAMMEL FTRAMMEL	none none none none none none none none	COD	8   859.034   85	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 5599.144 5886.999 111.302 23.632 13.577 0.296 0.031 13.577 0.036 7.209 0.036 0.007 0 0.3333 20.895 10.452 2.4811 0.095 0.095 0.055	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 304.102 1015.779 10604.827 1473.85 320.323 329.323 34.531 11.521 0.252 0.093 30.042 0.093 30.042 0.001 0.877 27.411 19.248 47.968 2.429 1.441 0.015 0.023 0.021 1.818 0.0494	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.81.643 3.282 1.341 0.346 5.203 0.007 0.003 0.003 7.852 13.413 19.977 10.166 1.191	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 130.251 130.275 0.191 0.011 1.5 1.695 0.402 0.113 0.055 0.236 4.583 3.313 0.046	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FPELTRAWL FTEAMMEL FTRAMMEL	none none none none none none none none	COD	859,034   859,	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 586.999 111.302 23.632 23.632 113.577 0.296 0.031 1.565 7.209 1.369 0.036 0.007 0 0.3.335 12.41 0.975 5 0.056 0.095	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 16019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 35.5.26 0.983 33.042 0.071 0.082 0.082 0.081 11.314 0.082 0.091 19.248 47.411 19.248 13.061 8.596 2.429 14.441 0.015 0.237 1.441 0.015 0.237 1.441 0.015 0.237 0.025	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.81.643 3.282 1.341 0.346 5.203 0.007 0.003 0.003 7.852 13.413 19.977 10.166 1.191	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 130.251 130.261 130.261 130.261 130.261 130.261 130.261 130.261 130.261 130.262	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045 0.12
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FO	none none none none none none none none	COD	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 5599.144 5886.999 111.302 23.632 13.577 0.296 0.031 13.577 0.036 7.209 0.036 0.007 0 0.3333 20.895 10.452 2.4811 0.095 0.095 0.055	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 6019.579 1604.827 1473.85 320.323 399.281 34.531 11.521 0.025 0.	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.81.643 3.282 1.341 0.346 5.203 0.007 0.003 0.003 7.852 13.413 19.977 10.166 1.191	1105.279 407.489 57.599 9.596	46.379 553.35 117 60.103 473.885 193.074 23.012 0.191 0.15 1.695 1.115 1.695 0.402 0.113 0.055 0.402 0.236 4.583 15.181 20.799 21.372 3.818 3.33 0.046	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045
Bal	A A A A A A A A A A A A A A A A A A A	FOTTER FPELTRAWL FTEAMMEL FTRAMMEL	none none none none none none none none	COD	859,034   859,	4855.533 1288.578 131.622 12.385 0.639 0.205 4.028 3.324 0.626 0.938 5.042 2.29 0.104 0.002	591.86 586.999 111.302 23.632 23.632 113.577 0.296 0.031 1.565 7.209 1.369 0.036 0.007 0 0.3.335 12.41 0.975 5 0.056 0.095	3058.873 896.221 102.696 13.403 0.55 0.145 2.476 0.237 0.107 0.008 0	0.006 304.142 16019.579 1604.827 1473.85 320.323 99.281 34.531 11.521 0.252 0.983 35.5.26 0.983 33.042 0.071 0.082 0.082 0.081 11.314 0.082 0.091 19.248 47.411 19.248 13.061 8.596 2.429 14.441 0.015 0.237 1.441 0.015 0.237 1.441 0.015 0.237 0.025	3828.348 1084.322 168.372 28.858 2.466 0.049 4.835	0.417 97.983 8859.029 207.131 131.987 20.154 4.104 1.177 0.448 21.35 1.849 0.006 0.006 0.006 0.009 0.009 1.314 1.4.777 11.8681 12.8024 4.498 0.009 0.049	1420.555 510.329 68.366 10.381 0.691 0.01 0.004 0.158	0.897 34.797 1282.966.076 1558.456 281.643 2.81.643 3.282 1.341 0.346 5.203 0.007 0.003 0.003 7.852 13.413 19.977 10.166 1.191	1105.279 407.489 57.599 9.596	46.379 553.35 1130.251 130.251 130.261 130.261 130.261 130.261 130.261 130.261 130.261 130.261 130.262	829.618 299.909 45.31 7.241 0.51 0.14 0.01 0.045

Table 4.3.4: continued

Bal	В	DREDGE	none	COD	1												
Bal	В	DREDGE	none	COD	2		1.245										0.1
Bal	В	DREDGE	none	COD	3		6.891										0.952
Bal Bal	B B	DREDGE DREDGE	none	COD	4 5		0.889										1.931 2.688
Bal	В	DREDGE	none none	COD	6		0.126										1.002
Bal	В	DREDGE	none	COD	7												0.113
Bal	В	DREDGE	none	COD	8												0.113
Bal	В	DREDGE	none	COD	9												0.007
Bal	В	GILL	none	COD	1												0.000
Bal	В	GILL	none	COD	2	1	13.278		23.831		6.132		4.027				2.448
Bal	В	GILL	none	COD	3		70.578		159.457		30.322		35.957		9.482		56.923
Bal	В	GILL	none	COD	4	10	04.439		154.714		29.849		17.121		51.105		88.171
Bal	В	GILL	none	COD	5	3	30.216		26.633		5.184		3.952		33.937		64.619
Bal	В	GILL	none	COD	6		3.705		6.439		0.532		0.594		3.8		37.993
Bal	В	GILL	none	COD	7		0.783		2.62		0.132		0.055		0.259		7.314
Bal	В	GILL	none	COD	8				0.527		0.016		0.017		0.11		0.521
Bal	В	GILL	none	COD	9				0.133		0.006		0.007		0.004		0.006
Bal	В	none	none	COD	1												
Bal	В	none	none	COD	2		2.788		0.507		2.061		0.461				
Bal	В	none	none	COD	3		2.871		1.728		8.641		2.53				
Bal	В	none	none	COD	4		0.54		1.33		8.82		0.891				
Bal	В	none	none	COD	5		0.14		0.406		1.533		0.176				
Bal	B B	none	none	COD	6 7		0.043		0.363		0.168		0.027				
Bal Bal	В	none none	none	COD	8		0.01		0.181 0.019		0.054		0.005 0.001				
Bal	В	none	none none	COD	9		0.002		0.019		0.007		0.001				
Bal	В	OTTER	none	COD	1				U		0.003		0.001	0.002			
Bal	В	OTTER	none	COD	2		4.33		5.399		12.157		9.455	1.431	1.517		0.206
Bal	В	OTTER	none	COD	3	4	46.638		41.655		35.263		47.389	2.343	15.311		2.801
Bal	В	OTTER	none	COD	4		14.24		30.614		37.325		14.555	0.02	45.56		4.504
Bal	В	OTTER	none	COD	5		2.08		4.146		8.401		3.191		20.327		4.719
Bal	В	OTTER	none	COD	6		0.673		1.589		1.709		0.795		2.436		1.919
Bal	В	OTTER	none	COD	7		0.227		0.664		0.714		0.292		0.32		0.303
Bal	В	OTTER	none	COD	8		0.017		0.103		0.107		0.077		0.404		0.052
Bal	В	OTTER	none	COD	9				0.019		0.042		0.041		0.037		0.012
Bal	В	PEL_TRAWL	none	COD	1												
Bal	В	PEL_TRAWL	none	COD	2		16.994		20.906		38		55.305		3.126		8.885
Bal	В	PEL_TRAWL	none	COD	3		55.161		117.881		111.581		307.451		86.103		202.519
Bal	В	PEL_TRAWL	none	COD	4		25.388		83.61		108.654		93.715		422.562		313.275
Bal	В	PEL_TRAWL	none	COD	5		7.467		10.359		21.99		16.472		273.424		237.397
Bal	В	PEL_TRAWL	none	COD	6		2.031		3.884		4.834		3.257		35.315		129.568
Bal Bal	B B	PEL_TRAWL PEL_TRAWL	none none	COD	7		0.691		1.611 0.245		2.085 0.331		0.909 0.241		4.92 2.898		23.974 2.214
Bal	В	PEL_TRAWL	none	COD	9		0.072		0.243		0.331		0.127		0.492		0.26
Bal	В	r-BEAM	none	COD	1				0.043		0.113		0.127		0.432		0.20
Bal	В	r-BEAM	none	COD	2		0.608										
Bal	В	r-BEAM	none	COD	3		10.002										
Bal	В	r-BEAM	none	COD	4		2.015										
Bal	В	r-BEAM	none	COD	5		0.358										
Bal	В	r-BEAM	none	COD	6		0.108										
Bal	В	r-BEAM	none	COD	7		0.041										
Bal	В	r-BEAM	none	COD	8		0.007										
Bal	В	r-BEAM	none	COD	9												
Bal	В	r-DEM_SEINE	none	COD	1												
Bal	В	r-DEM_SEINE	none	COD	2		4.258		0.014		94.999		9.889		0.001		
Bal	В	r-DEM_SEINE	none	COD	3		3.38		0.177		68.817		56.552		4.431		
Bal	В	r-DEM_SEINE	none	COD	4		0.364		0.096		29.636		20.222		24.796		
Bal	В	r-DEM_SEINE	none	COD	5		0.056		0.008		8.426		4.248		14.834		
Bal	B B	r-DEM_SEINE r-DEM_SEINE	none	COD	6 7		0.004		0.004		1.248 0.374		0.852 0.197		1.918 0.291		
Bal	В		none				0.001		0.002		0.374		0.197		0.291		
Bal Bal	В	r-DEM_SEINE r-DEM_SEINE	none none	COD	8		U		0.001		0.072		0.049		0.144		
Bal	В	r-GILL	none	COD	1			18.172	U	639.037	4.713	224.387	0.010		0.010	0.338	
Bal	В	r-GILL	none	COD	2		73.797	491.796	260.16		1909.048	210.536	371.175		48.014		180.001
Bal	В	r-GILL	none	COD			57.035		3921.093		2663.936	31.346	1762.94	10.831	472.1	9.423	656.584
Bal	В	r-GILL	none	COD	4		79.454		4765.184		1565.612	3.92	807.544	3.791	813.11	2.014	613.216
Bal	В	r-GILL	none	COD	5		99.211		1204.965	1.828	333.208	0.109	303	0.271	296.429	0.721	

Table 4.3.4: continued

Bal	В	r-GILL	none	COD	6	217.046		295.679		50.077		82.224	0.271	53.3		108.642	
Bal	В	r-GILL	none	COD	7	46.894		46.812		14.994		9.685		11.692		22.759	
Bal	В	r-GILL	none	COD	8	4.808		7.429		3.215		2.636		3.451		7.706	
Bal	В	r-GILL	none	COD	9	2.144		0.841		1.36		1.113		0.897		1.303	
Bal	В	r-LONGLINE	none	COD	1		1.834		32.01	1.607	6.097						
Bal	В	r-LONGLINE	none	COD	2	83.49	45.449	116.676	43.635	646.704	85.683	526.358		23.145		80.23	
Bal	В	r-LONGLINE	none	COD	3	1085.584	226.914	1037.697	38.905	1108.985		2014.193		768.679		331.614	
Bal	В	r-LONGLINE	none	COD	4	880.724		1385.274	4.319	737.397	9.081	483.418		878.355		309.591	
Bal	В	r-LONGLINE	none	COD	5	303.687	0.112	357.109	0.38	142.054	0.065	181.205		210.115		188.12	
Bal	В	r-LONGLINE	none	COD	6	66.89		101.461	0.088	27.659		35.239		41.449		41.239	
Bal	В	r-LONGLINE	none	COD	7	18.226		19.706	0.088	10.188		7.758		11.246		7.161	
Bal	В	r-LONGLINE	none	COD	8	1.838		3.342		1.945		3.956		2.365		2.666	
Bal	В	r-LONGLINE	none	COD	9	0.355		0.586		0.733		2.008		0.4		1.367	
Bal	В	r-OTTER	BACOMA	COD	1		0.293		192.461		1103.932		91.216		477.656		68.814
Bal	В	r-OTTER	BACOMA	COD	2	822.641		1162.922	430.835	3776.11		3525.149			2230.908	1040.905	773.738
Bal	В	r-OTTER	BACOMA	COD	3	7192.206	1105.348	6453.698	244.757	2807.276	9.636	10563.21	2942.256	6701.514	1220.666	4274.088	785.056
Bal	В	r-OTTER	BACOMA	COD	4	2025.12	78.732	5409.329	20.361	940.675	0.08	1510.982	22.197	4846.549	106.642	4532.91	131.006
Bal	В	r-OTTER	BACOMA	COD	5	364.45	1.059	592.999	0.566	121.99	0.019	573.155		428.293	3.025	2397.834	0.018
Bal	В	r-OTTER	BACOMA	COD	6	59.004	0.085	107.967	0.077	18.709		98.372		109.705		214.977	
Bal	В	r-OTTER	BACOMA	COD	7	19.544		26.325		4.915		12.799		50.134		12.05	
Bal	В	r-OTTER	BACOMA	COD	8	4.139		9.022		3.063		9.456		9.69		42.361	
Bal	В	r-OTTER	BACOMA	COD	9	4.995		1.348		0.572		2.888		2.276		0.669	
Bal	В	r-OTTER	none	COD	1		225.397		98.59		211.743		56.849		69.994		46.815
Bal	В	r-OTTER	none	COD	2	1224.637		723.915	666.898			1237.473	905.446	77.736	530.1	103.241	655.182
Bal	В	r-OTTER	none	COD	3		1573.728	3629.288	626.956	3553.903	712.121	6020.388	1310.461	1214.993		1900.999	835.898
Bal	В	r-OTTER	none	COD	4	2659.86	201.387	2630.218		4705.392		2551.337	301.215	3907.33		3392.112	199.827
Bal	В	r-OTTER	none	COD	5	652.668	26.26	291.545	31.934	647.329	40.762	790.708	70.02	1848.685		2597.421	40.848
Bal	В	r-OTTER	none	COD	6	109.388	3.51	54.832	4.874	135.963	6.115	262.931	9.55	208.813		1055.089	5.19
Bal	В	r-OTTER	none	COD	7	31.06	0.364	17.058	0.535	50.309	0.7	28.451	1.38	42.421	0.51	185.403	0.621
Bal	В	r-OTTER	none	COD	-	4.667		3.685		5.105		8.768		23.565		33.5	
Bal	В	r-OTTER	none	COD	9	1.931		0.656		2.705		3.222		4.156		13.411	4.540
Bal	В	r-PEL_TRAWL	BACOMA	COD	1 2											44.244	1.518
Bal Bal	B B	r-PEL_TRAWL	BACOMA	COD	3											44.344	12.163 16.798
Bal	В	r-PEL_TRAWL r-PEL_TRAWL	BACOMA BACOMA	COD	4											154.43 111.913	3.099
Bal	В	r-PEL_TRAWL	BACOMA	COD	5											21.694	3.099
Bal	В	r-PEL_TRAWL	BACOMA	COD	6											0.18	
Bal	В	r-PEL_TRAWL	BACOMA	COD	7											0.10	
Bal	В	r-PEL_TRAWL	BACOMA	COD	8												
Bal	В	r-PEL_TRAWL	BACOMA	COD	9												
Bal	В	r-PEL_TRAWL	none	COD	1			1.991	2.832	1.989	62.578		0.11		97.148		
Bal	В	r-PEL_TRAWL	none	COD	2	23.396		508.023	69.252	312.604	39.456	191.455	225.427	0.182	529.962	4.787	27.694
Bal	В	r-PEL_TRAWL	none	COD	3	153.791		1221.071	47.914	486.201	33.430	1727.649	702.356	526.551	107.947	56.639	48.764
Bal	В	r-PEL_TRAWL	none	COD	4	46.25		743.799	6.731	242.681		471.756	6.967	999.267	5.254	75.609	9.166
Bal	В	r-PEL TRAWL	none	COD	5	9.038		116.135	0.156	31.699		184.784		216.648	0.149	38.618	
Bal	В	r-PEL TRAWL	none	COD	6	1.84		16.857	0.01	3.746		22.798		39.506	0.213	4.981	
Bal	В	r-PEL TRAWL	none	COD	7	0.504		8.497		1.255		2.262		13.013		0.316	
Bal	В	r-PEL TRAWL	none	COD	. 8	0.051		5.499		0.254		0.601		1.489		0.899	
Bal	В	r-PEL TRAWL	none	COD	9	*****		0.112		0.061		0.295		0.72		0.015	
Bal	В	r-TRAMMEL	none	COD	1						0						
Bal	В	r-TRAMMEL	none	COD	2	0.41		0.466		0.001	0.001	0.248		0.058		0.569	
Bal	В	r-TRAMMEL	none	COD	3	6.699		4.788		0.011	0	1.775		0.201		8.112	
Bal	В	r-TRAMMEL	none	COD	4	3.296		2.726		0.007	0	0.592		0.031		8.592	
Bal	В	r-TRAMMEL	none	COD	5	0.482		0.184		0.001	0	0.108		0.007		4.577	
Bal	В	r-TRAMMEL	none	COD	6	0.099		0.048		0		0.02		0.001		1.619	
Bal	В	r-TRAMMEL	none	COD	7	0.03		0.02		0		0.003		0		0.35	
Bal	В	r-TRAMMEL	none	COD	8	0		0.005		0		0.001		0		0.051	
Bal	В	r-TRAMMEL	none	COD	9			0.001		0		0		0		0.006	

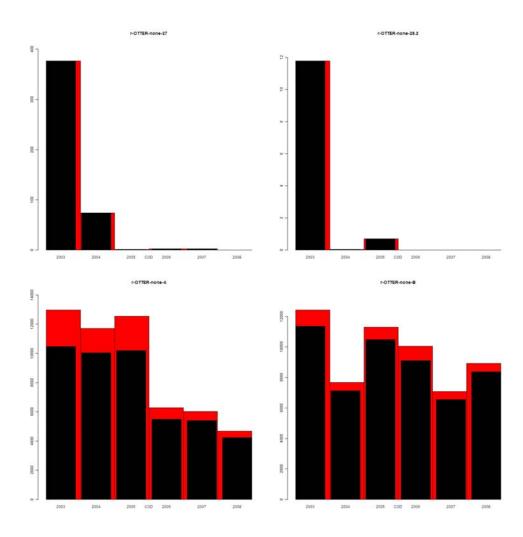


Figure 4.3.1 Catch and landings in tonnes of Baltic cod by sub-area and gear category 2003-2008. Black bars show landings, red bars catches (landings + discards). An "r" in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an "r" are non-regulated gears.

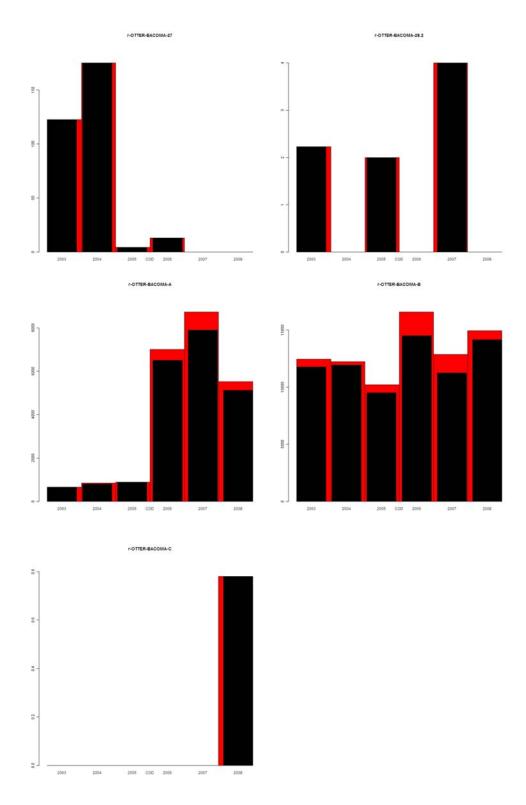


Figure 4.3.1 continued

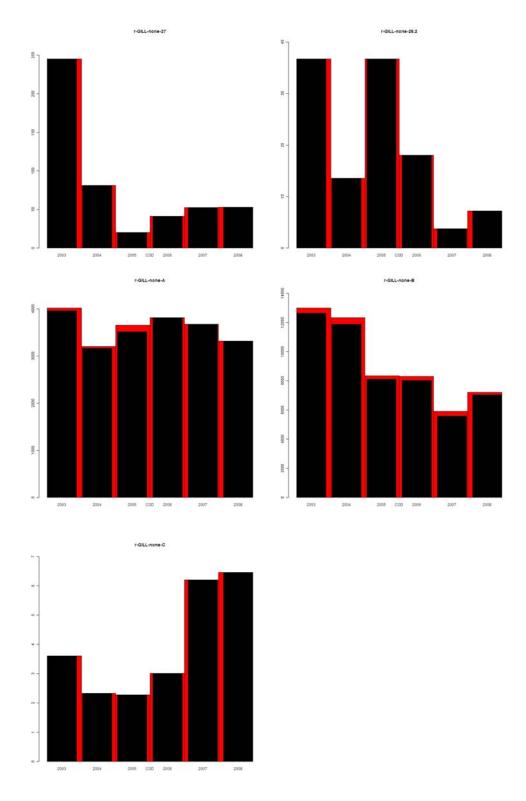


Figure 4.3.1 continued

## 4.4. Trends in CPUE and LPUE for Baltic cod by gear category in accordance with R(EC) 2187/2007 and sub-area.

## 4.4.1. General considerations regarding CPUE and LPUE estimates

STECF-SGMOS notes that CPUE and LPUE series are often interpreted and used as stock abundance indicator. However, STECF-SGMOS emphasises that the presented trends in CPUE or LPUE by fleets are subject to selective fishing strategies (area, gear, mesh size etc.) and thus maybe biased. On the other hand, CPUE and LPUE derived from targeted fisheries may provide very useful information on stock abundance trends. Furthermore, it must be taken into consideration that the majority of the CPUE trends represent only overall weights in the landings (LPUE) without discards or with poorly estimated discards. Ideally, the CPUE should be based on age disaggregated abundance rather than overall weights and reflect technological creep when trends over longer periods are evaluated. Time constraints prevented STECF-SGMOS from estimations of CPUE trends by age and full evaluations of these. STECF-SGMOS recommends that CPUE in units of numbers at age/(kw\*days) be estimated and compared with the recent assessment results provided by ICES.

STECF-SGMOS presents CPUE by derogations given units of g/(kW\*days) in the following sections by management area.

# 4.4.2. Trends in CPUE and LPUE for Baltic cod by gear categories in accordance with R(EC) 2187/2005 and sub-area

Since it was explicitly asked to analyse CPUE and LPUE time series of Baltic cod for gear categories which are in accordance with R(EC) 2187/2005 only, another classification of gear categories was used in this section compared to the rest of the report. According to R(EC) 2187/2005 it is only permissible to fish cod with trawls, Danish seines or similar gears with mesh size >=105mm equipped with special condition BACOMA or T90. It is also permissible to fish with gill nets, entangling nets and trammel nets with mesh sizes >= 110mm to <156mm and >=156mm. Since it was not possible to distinguish between BACOMA and non-BACOMA trawls, Danish seines or similar gears for several member states based on logbook data, non-BACOMA trawls, Danish seines and similar gears were taken into account in the calculations.

The following tables Table 4.4.2.1 and 4.4.2.2 provide detail. The CPUE figures in the table should only be considered indicative since estimated discard ratios are often based on poor data.

A general trend over the years was not obvious, although CPUEs and LPUEs showed a high inter-annual variability. CPUEs and LPUEs were in general higher for otter trawls, demersal seines and pelagic trawls compared to gill nets. CPUEs for cod were highest in sub-area B, followed by sub-area A.

Table 4.4.2.1 Baltic : Cod CPUE (g/KW\*days) by derogation and year, 2003-2008 for subarea A; B, C ,27; 28.2.

ANNEX	SPECIES	REG AREA	REG GEAR	MESH SIZE	SPECON	<b>CPUE 2003</b>	<b>CPUE 2004</b>	<b>CPUE 2005</b>	<b>CPUE 2006</b>	CPUE 2007	CPUE 2008
Bal	COD	Α	Otter, Dem. seine etc	>=105	Bacoma	3743	4432	3559	3785	4640	3756
Bal	COD	Α	Otter, Dem. seine etc	>=105	none	2677	2682	2977	3440	3680	3258
Bal	COD	Α	Gill nets etc	>=110 - <157	none	1434	1205	1081	1320	1476	1475
Bal	COD	A	Gill nets etc	>=157	none	1136	624	449	919	937	1126
Bal	COD	Α	Gill nets etc	>=220	none	33	51	216	121	139	347
Bal	COD	Α	TR AMME L	>=110 - <157	none	596	591	642	736	764	835
Bal	COD	A	TR AMME L	>=157	none	3836	3014	2690	4055	3644	2240
Bal	COD	A	LONGLINE		none	1616	1935	2332	1493	3339	1671
Bal	COD	A	none	none	none	166	114	222	298	194	236
Bal	COD	В	Otter, Dem. seine etc	>=105	Bacoma	12351	8125	5882	7393	8600	7536
Bal	COD	В	Otter, Dem. seine etc	>=105	none	3776	4662	5533	6439	9987	12204
Bal	COD	В	Gill nets etc	>=110 - <157	none	2245	1999	1535	2324	1894	1933
Bal	COD	В	Gill nets etc	>=157	none	162	37	19	6	110	398
Bal	COD	В	Gill nets etc	>=220	none	65	55	28	0	0	44
Bal	COD	В	TR AMME L	>=110 - <157	none		0	0	0	0	268
Bal	COD	В	TR AMME L	>=157	none	54455	14768				18010
Bal	COD	В	LONGLINE		none	5972	8010	7209	8538	8483	6982
Bal	COD	В	none	none	none	130	146	154	898	1304	2442
Bal	COD	27	Otter, Dem. seine etc	>=105	Bacoma	2649	4880	3236	3231		0
Bal	COD	27	Otter, Dem. seine etc	>=105	none	2111	691	9	33	19	
Bal	COD	27	Gill nets etc	>=110 - <157	none	1539	951	355	607	587	566
Bal	COD	27	Gill nets etc	>=220	none	0	0	0	0	0	0
Bal	COD	27	Trammel	110-156	none		0				
Bal	COD	27	LONGLINE		none	0	3071	385	0	0	7389
Bal	COD	27	none	none	none					17	
Bal	COD	28.2	Otter, Dem. seine etc	>=105	Bacoma	417		2389		4779	
Bal	COD	28.2	Otter, Dem. seine etc	>=105	none	1735					
Bal	COD	28.2	Gill nets etc	>=110 - <157	none	1028	911		906	157	201
Bal	COD	28.2	Gill nets etc	>=220	none	0	0	55	0	0	85
Bal	COD	28.2	TR AMME L	>=110 - <157	none			0	0	0	277
Bal	COD	28.2	LONGLINE		none		0	255	0		
Bal	COD	28.2	none		none			27	0	7	
Bal	COD	C	Otter, Dem. seine etc	>=105	Bacoma						463
Bal	COD	С	Gill nets etc	>=110 - <157	none	19	13	154	307	377	234
Bal	COD	С	longline		none						0
Bal	COD	С	none	none	none			0	60		

Table 4.4.2.2 Baltic: Cod LPUE (g/KW\*days) by derogation and year, 2003-2008 for Area A; B, C ,27; 28.2; C

ANNEX	SPECIES	REG AREA	REG GEAR	MESH SIZE	SPECON	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008
Bal	COD	Α	Otter, Dem. seine etc	>=105	Bacoma	3743	4182	3548	3515	4204	3483
Bal	COD	Α	Otter, Dem. seine etc	>=105	none	2193	2310	2439	3036	3294	2957
Bal	COD	Α	Gill nets etc	>=110 - <157	none	1412	1189	1042	1320	1476	1475
Bal	COD	Α	Gill nets etc	>=157	none	1136	624	449	919	937	1126
Bal	COD	Α	Gill nets etc	>=220	none	33	51	216	121	139	347
Bal	COD	Α	TRAMMEL	>=110 - <157	none	591	585	625	736	764	835
Bal	COD	Α	TR AMME L	>=157	none	3836	3014	2690	4055	3644	2240
Bal	COD	Α	LONGLINE		none	1602	1866	2225	1493	3339	1671
Bal	COD	Α	none	none	none	166	113	222	298	194	236
Bal	COD	В	Otter, Dem. seine etc	>=105	Bacoma	11681	7927	5489	6526	7701	7135
Bal	COD	В	Otter, Dem. seine etc	>=105	none	3450	4384	5151	5775	9093	11429
Bal	COD	В	Gill nets etc	>=110 - <157	none	2198	1970	1511	2242	1846	1912
Bal	COD	В	Gill nets etc	>=157	none	162	37	19	6	110	398
Bal	COD	В	Gill nets etc	>=220	none	65	55	28	0	0	44
Bal	COD	В	TRAMMEL	>=110 - <157	none		0	0	0	0	268
Bal	COD	В	TRAMMEL	>=157	none	54455	14768				18010
Bal	COD	В	LONGLINE		none	5744	7919	7037	8538	8483	6416
Bal	COD	В	none	none	none	130	146	154	898	1304	2442
Bal	COD	27	Otter, Dem. seine etc	>=105	Bacoma	2649	4880	3236	3231		0
Bal	COD	27	Otter, Dem. seine etc	>=105	none	2111	691	9	33	19	
Bal	COD	27	Gill nets etc	>=110 - <157	none	1539	951	355	607	587	566
Bal	COD	27	Gill nets etc	>=220	none	0	0	0	0	0	0
Bal	COD	27	Trammel	110-156	none		0				
Bal	COD	27	LONGLINE		none	0	3071	385	0	0	7389
Bal	COD	27	none	none	none					17	
Bal	COD	28.2	Otter, Dem. seine etc	>=105	Bacoma	417		2389		4779	
Bal	COD	28.2	Otter, Dem. seine etc	.>=105	none	1735	0				
Bal	COD	28.2	Gill nets etc	>=110 - <157	none	1028	911	1290	906	157	201
Bal	COD	28.2	Gill nets etc	>=220	none	0	0		0	0	85
Bal	COD	28.2	TRAMMEL	>=110 - <157	none			0	0	0	277
Bal	COD	28.2	LONGLINE		none		0	255	0		
Bal	COD	28.2	none		none			27	0	7	
Bal	COD	С	Otter, Dem. seine etc	>=105	Bacoma						463
Bal	COD	С	Gill nets etc	>=110 - <157	none	19	13	154	307	377	234
Bal	COD	С	longline		none						0
Bal	COD	С	none	none	none			0	60		

## 4.5. Ranked gear categories according to the proportional catches and landings of cod

Ranked gear categories according to catches and landings of cod by sub-area can be found in Tables 4.5.1 and 4.5.2.

There are large regional differences in the dominating gear that are responsible for the cod catches. In 2008 the otter trawl fishery was dominant in Area A and B with gillnet fishery as the second most important cod catching gear. In area C, 27 and 28.2, gillnets were the major gears although the total amount of cod catches was low compared to area A and B. The variation in the dominance of certain gear types between years is limited in Areas A and B. However, in areas C, 27 and 28.2 larger shifts occurred. Note that the ranking was made based on data for 2008 only. Gears not listed only had marginal catches of cod in 2008. According to available data, cod catches from unregulated gear types do not play a significant role.

Table 4.5.1 Ranked gear categories according to the proportional catches of cod 2003-2008

ANNEX Bal Bal Bal Bal	REG_AREA A A A A	SPECIES COD COD COD COD	REG_GEAR r-OTTER r-GILL r-DEM_SEINE r-TRAMMEL	2003 Rel	2004 Rel 0.68 0.2 0.06 0.01	2005 Rel 0.7 0.18 0.07 0.01	2006 Rel 0.69 0.19 0.04 0.02	2007 Rel 0.67 0.19 0.07 0.02	2008 Rel 0.7 0.18 0.06 0.02	0.66 0.21 0.08 0.02
ANNEX Bal Bal Bal Bal	REG_AREA B B B B	SPECIES COD COD COD COD	REG_GEAR r-OTTER r-GILL r-LONGLINE r-PEL_TRAWL	2003 Rel	2004 Rel 0.59 0.31 0.07 0.01	2005 Rel 0.49 0.3 0.08 0.11	<b>2006 Rel</b> 0.61 0.24 0.08 0.05	2007 Rel 0.6 0.19 0.08 0.11	2008 Rel 0.58 0.17 0.06 0.15	0.69 0.21 0.05 0.02
ANNEX Bal Bal Bal	REG_AREA C C C	SPECIES COD COD COD	REG_GEAR r-GILL GILL r-OTTER	2003 Rel	<b>2004</b> Rel 1	<b>2005</b> Rel 1	<b>2006 Rel</b> 0.5 0.5	<b>2007 Rel</b> 0.43 0	<b>2008 Rei</b> 1	0.75 0.12 0.12
ANNEX Bal Bal	REG_AREA 27 27	SPECIES COD COD	REG_GEAR r-GILL r-LONGLINE	2003 Rel	<b>2004 Rel</b> 0.32 0	<b>2005 Rel</b> 0.24 0.02	<b>2006 Rel</b> 0.67 0.03	<b>2007 Rel</b> 0.71 0	<b>2008 Rel</b> 0.95 0	0.95 0.05
ANNEX Bal Bal	<b>REG_AREA</b> 28.2 28.2	SPECIES COD COD	REG_GEAR r-GILL r-TRAMMEL	2003 Rel	<b>2004 Rel</b> 0.73	<b>2005 Rel</b> 0.74	<b>2006 Rel</b> 0.8 0	<b>2007 Rel</b> 0.78 0	<b>2008 Rel</b> 0.36 0	0.88 0.12

Table 4.5.2 Ranked gear Categories according to the proportional landings of cod 2003-2008

ANNEX Bal Bal Bal Bal	REG_AREA A A A A	SPECIES COD COD COD COD	REG_GEAR r-OTTER r-GILL r-DEM_SEINE r-TRAMMEL	2003 Rel	2004 Rel 0.65 0.23 0.07 0.02	2005 Rel 0.68 0.2 0.07 0.02	2006 Rel 0.65 0.21 0.05 0.02	2007 Rel 0.65 0.21 0.07 0.02	2008 Rel 0.68 0.19 0.06 0.02	0.64 0.23 0.08 0.02
ANNEX Bal Bal Bal Bal	REG_AREA B B B B	SPECIES COD COD COD COD	REG_GEAR r-OTTER r-GILL r-LONGLINE PEL_TRAWL	2003 Rel	2004 Rel 0.58 0.32 0.07 0	2005 Rel 0.48 0.3 0.09 0.01	2006 Rel 0.6 0.24 0.08 0.01	2007 Rel 0.58 0.2 0.09 0.01	2008 Rel 0.57 0.18 0.06 0.03	0.68 0.21 0.05 0.03
ANNEX Bal Bal Bal	REG_AREA C C C	SPECIES COD COD COD	REG_GEAR r-GILL GILL r-OTTER	2003 Rel	<b>2004 Rei</b> 1	<b>2005 Rei</b> 1	<b>2006 Rel</b> 0.5 0.5	<b>2007 Rel</b> 0.43 0	<b>2008 Rei</b> 1	0.75 0.12 0.12
ANNEX Bal Bal	REG_AREA 27 27	SPECIES COD COD	REG_GEAR r-GILL r-LONGLINE	2003 Rel	<b>2004 Rei</b> 0.32 0	<b>2005 Rel</b> 0.24 0.02	<b>2006 Rel</b> 0.67 0.03	<b>2007 Rel</b> 0.71 0	<b>2008 Rel</b> 0.95 0	0.95 0.05
ANNEX Bal Bal	REG_AREA 28.2 28.2	SPECIES COD COD	REG_GEAR r-GILL r-TRAMMEL	2003 Rel	2004 Rel 0.73	2005 Rel 0.74	2006 Rel 0.8 0	2007 Rel 0.78 0	2008 Rel 0.36 0	0.88 0.12

## 4.6. Information on landings from vessels under 10m

The vessels under 10m are responsible for around 13 % of the total cod landings in subdivisions 22-24 during 2008. Only 4 % of the total amount of cod landed in subdivisions 25-28 stem from vessels under 10m. These figures are underestimates of the amount since only Sweden, Denmark and Germany have delivered data for vessels under 10m.

Table 4.6.1 Landings of cod by vessels under 10m for 2003-2008.

(Only data from Germany, Denmark and Sweden)

SGDFF_AREA	GEAR	2002	2003	2004	2005	2006	2007	2008
22-24	DEM_SEINE				0	1	1	
	GILL		1914	1454	2976	2580	2544	2108
	LONGLINE		22	17	197	210	187	34
	none		2	2	53	8	17	9
	OTTER		42	19	52	132	86	37
	PEL_TRAWL				1	0	0	0
	POTS		10	12	294	94	200	69
	TRAMMEL		13	18	181	170	166	184
25-28	GILL		1043	909	1475	1239	1266	1282
	LONGLINE		318	421	888	590	430	461
	none		1	0	0	12	4	6
	OTTER		37		2	4	3	1
	POTS		23	13	12	13	12	14
	TRAMMEL		2	3	4	3	38	6
27	GILL		186	95	31	36	47	30
	LONGLINE		2	3	1			
	none					2		
	OTTER						0	
	POTS		0	0	0	1	1	1
	TRAMMEL		0		0	0		0
28.2	GILL		5	10	23	8	6	3
	LONGLINE			0				
	TRAMMEL					0	0	0
29-32	GILL		6	6	2	3	2	4
	OTTER			0				
	POTS		9					
Totalt			2198	1980	4884	3805	3767	3310

## 4.7. Spatial distribution patterns of effective effort

There was no data reported on the spatial distribution of effort from Sweden, Poland and Lithuania and only a limited amount of data reported from Estonia and Finland. Hence the confidence in these results is low. Only figures for the dominant gear groups in terms of the amount of landed cod (r-Otter and r-Gill) are presented below. A full set of figures, however, will be made available on the web.

STECF-SGMOS notes again that at the present time the minimum geographic resolution in the available logbook information on landings and effective effort is the ICES rectangle. The effective effort values of certain nations were given in days fished which were then converted to trawled hours by applying a factor of 24. STECF-SGMOS notes that only major changes in the geographical distribution patterns should be given attention given the imprecision of the created data set

According to available data, the spatial distribution of deployed effort showed a westward shift over the years. Especially in sub-area C there was almost no effort by the main gears catching cod after 2003. The highest effective fishing effort was observed in sub-area A, followed by sub-area B.

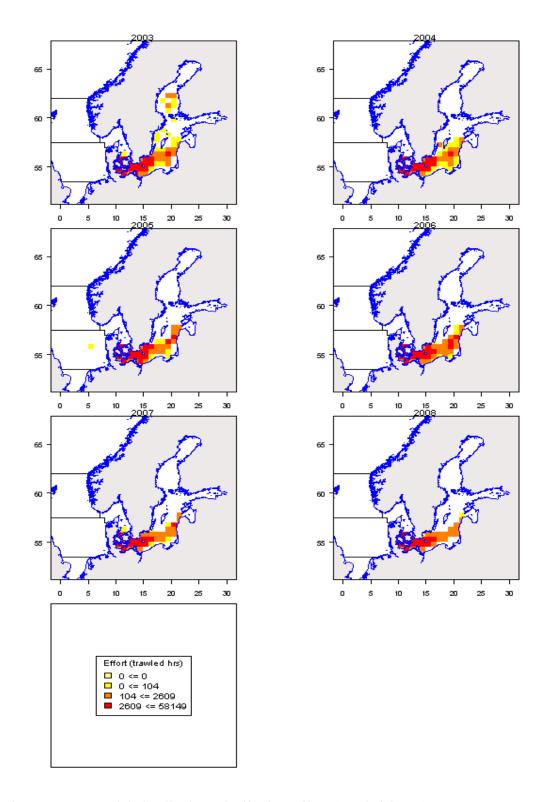


Figure. 4.7.1 Spatial distribution of effective effort (trawled hours) r-OTTER 2003-2008. There was no data reported on the spatial distribution of effort from Sweden, Poland and Lithuania and only a limited amount of data reported from Estonia and Finland.

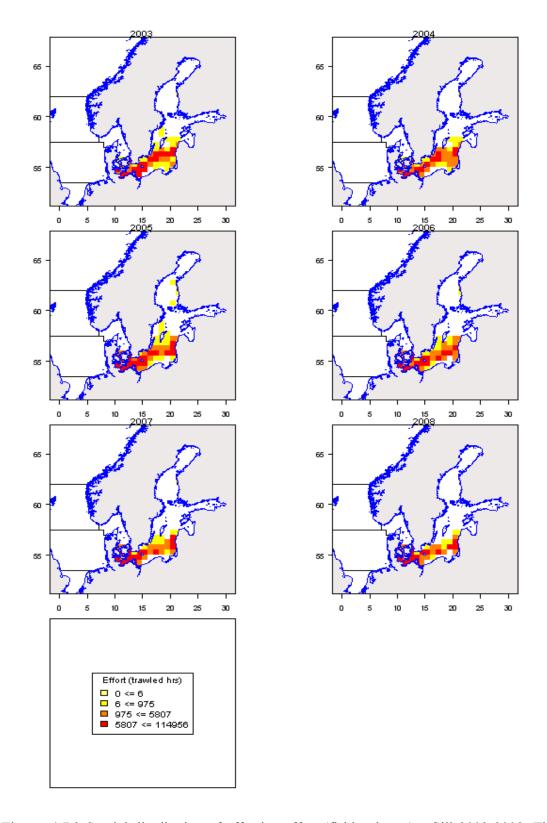
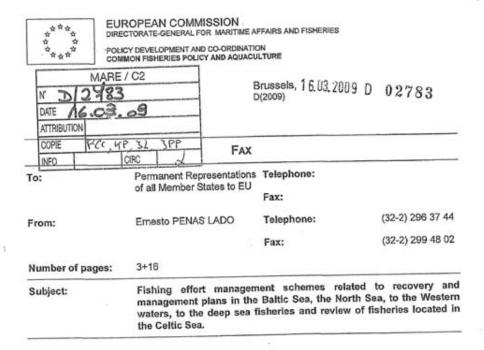


Figure. 4.7.2 Spatial distribution of effective effort (fishing hours) r-Gill 2003-2008. There was no data reported on the spatial distribution of effort from Sweden, Poland and Lithuania and only a limited amount of data reported from Estonia and Finland.

### 5. ANNEX 1: DATA CALLS FROM 16 AND 19 MARCH 2009.



#### Message:

Following a similar approach as that been implemented for the last four years, the Commission will consult the STECF/SG-MOS working group during its next meetings (04.05-08.05.2009 and 25.05-29.05.2009), on a review of fisheries regulated through fishing effort management schemes adopted in application of

- √ the long term plan for cod stocks [R(EC) No 1342/2008],
- ✓ the recovery plan for Southern hake and Norway lobster stocks in the Cantabrian Sea and Western Iberian peninsula [R(EC) No 2166/2005],
- ✓ the multi-annual plan for the North Sea plaice and sole stocks [R(EC) No 676/2007],
- ✓ and the multi-annual plan of Western Channel sole stock [R(EC) No 509/2007].

In addition to such plans, the Commission will also request STECF to take into account the fishing effort management schemes adopted in application of

the multi-annual plan for the cod stocks in the Baltic Sea [R(EC) No 198/2007].

Similarly to last year, the Commission will consult the SG-MOS working group on an analysis of fisheries located in the Celtic Sea which would be affected by a possible extend of the scope of the long term plan to the fishing area where this Celtic Sea cod stock is distributed.

Commission européenne, B-1049 Bruxelles / Europese Commissie, B-1049 Brussel - Belgium. Telephone: (32-2) 299 11 11.

In addition, within the current year the Commission will have to evaluate fishing effort regimes related both to:

- √ R(EC) No 2347/2002 (establishing specific access requirements and associated conditions applicable to fishing for deep sea stocks) and
- √ R(EC) No 1954/2003 (on the management of the fishing effort relating to certain Community fishing areas and resources – so called Western Waters regime).

The Commission will also entrust the SG-MOS working group with the evaluation of such fishing effort regimes. A specific meeting is already foreseen from 04.05 to 08.05.2009 to carry out such an evaluation.

These reviews and analysis will be based on data as collected according to R(EC) No 1639/2001 and to the R(EC) No 199/2008 establishing a Community framework for the collection and management of the data needed to conduct the common fisheries policy as well as other scientific information collected at national level which would allow Member States to fulfil obligations laid down in article 10 to the Treaty establishing the European Community. They will include:

- ✓ A synopsis of the biological status of the relevant resources;
- ✓ Details of historic effort deployed by all fishing vessels, even those of less than 10 m. Loa included, in each fishery, segregated by gear type and by Member State, for the 2000-2008 time period;
- Details of historic catches (landings and discards) made by all fishing vessels, those of less than 10 m. Loa included, in each fishery, segregated by age, by gear type and by Member State, for the 2003-2008 time period.

To enable the STECF/SG-MOS Working Group both to review such fishing effort management schemes and to analyse the fishing effort deployed in the Celtic Sea fisheries, Member States are invited to provide, as soon as possible and no later than 17 April 2009, data to the Commission and to the scientists who would attend the meeting.

These data should characterise landings and discards structured by age for the period 2003-2007 and effort for the period 200-2007. The format, which has been discussed wit the STECF secretariat, is described in the annex joined to this facsimile.

Such completed data sets should be sent to the Commission and addressed to Hans Joachim Raetz and to Patrick Daniel with the reference "SG-MOS 09-03/04 Fishing Effort" followed by the name of the Member State, through the following functional e-mail boxes:

#### MARE-A2@ec.europa.eu

#### Stecf-secretariat@jrc.it

And put at disposition of the STECF/SG-MOS Working Group by the intermediary of scientists who will form part of it.

In addition, STECF highlighted several times that it had been unable to comment on the quality of the fleet specific estimates of total catches and discards, mainly due to lack of requested data quality parameters, i.e. number of discards samples, fish measured and aged.

The Commission requests Member States to provide all available information on number of discards samples, fish measured and ages which were implemented during the time-series beforehand specified and either for each-metier-or for each stock covered by the current call for data.

Ernesto PENAS LADO

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#### Annex I.

Format adapted from the latest fleet specific fishing effort and catch data call issued by the European Commission, DG Mare.

Data reports can be provided in simple comma separated text files, Microsoft EXCEL or ACCESS formats. All missing values (empty data cells) must be indicated by a -1.

In contrast to last year's data formats, which were sequential, you are kindly requested to stick this year to a simple table format which makes im- and exporting much more easily.

A. All fishing effort management schemes - Mandatory Catch data for 2003-2008 aggregated (sum) by ID except for mean weight and length in landings and discards at age (arithmetic mean). Please ensure that data entries are fully consistent with coding given in Appendixes.

- 1. ID (this is a unique identifier; e.g. the combination of country, year, quarter, gear, mesh size range, fishery or metier, and area; this is free text with a maximum of 40 characters without space)
- COUNTRY (this should be given according to the code list provided in Appendix 1)
- YEAR (this should be given in four digits), like 2004
- QUARTER (this should be given as one digit), like 1, 2, 3, or 4
- GEAR (gear should be given according to the code list provided in Appendix 2, which follows the EU data regulation 1639/2001)
- MESH\_SIZE\_RANGE (the mesh size range should be given according to the code list provided in
- Appendix 3, which largely follows the Council regulation 850/98)
  FISHERY (species complex and gear) or métier (species complex, gear and vessel characteristics) (this is free text with a maximum of 40 characters without space; this specification may include e.g. target species, roundfish area or quarter) (a fishery can encompass, e.g. more than one mesh size range; in this case separate records have to be provided, e.g. one for each mesh size range, with the same fishery
- AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 4
- SPECON to be specified in accordance with Appendix 5, text string of maximum 10 characters
   SPECIES (the species should be given according to the code list provided in Appendix 6, which follows the Council Regulation EC 2287/2003)
- 11. LANDINGS (estimated landings in tonnes should be given; if age based information is present, this quantity should correspond to the sum of products)
- 12. DISCARDS (estimated discards in tonnes should be given; if age based information is present, this quantity should correspond to the sum of products)
- 13. NO\_SAMPLES\_LANDINGS (the number of TRIPS should be given that relate to landings only; a number should be given only if it relates to this fishery only; otherwise "-1" should be given)
- 14. NO\_LENGTH\_MEASUREMENTS\_LANDINGS (the number of length measurements should be given that relate to landings only; a number should be given only if it relates to this fishery only; otherwise "-1"
- 15. NO\_AGE\_MEASUREMENTS\_LANDINGS (the number of age measurements should be given that relate to landings only; a number should be given only if it relates to this fishery only; otherwise "-1" should be
- given)

  16. NO\_SAMPLES\_DISCARDS (the number of TRIPS should be given that relate to discards only; a number should be given only if it relates to this fishery only; otherwise "-1" should be given)

  17. NO\_LENGTH\_MEASUREMENTS\_DISCARDS (the number of length measurements should be given)

  18. NO\_LENGTH\_MEASUREMENTS\_DISCARDS (the number of length measurements should be given)
- that relate to discards only; a number should be given only if it relates to this fishery only; otherwise "-1"
- 18. NO\_AGE\_MEASUREMENTS\_DISCARDS (the number of age measurements should be given that relate to discards only; a number should be given only if it relates to this fishery only; otherwise "-1" should be
- 19. NO\_SAMPLES\_CATCH (the number of TRIPS should be given that relate to catches only; a number
- should be given only if it relates to this fishery only; otherwise "-1" should be given)

  20. NO\_LENGTH\_MEASUREMENTS\_CATCH (a number of length measurements should be given here if it relates to catch, i.e. landings and discards; a number should be given only if it relates to this fishery only; otherwise "-1" should be given)

- 21. NO\_AGE\_MEASUREMENTS\_CATCH (a number of age measurements should be given here if it relates to catch, i.e. landings and discards; a number should be given only if it relates to this fishery only; otherwise "-1" should be given)
- 22. MIN\_AGE (this is the minimum age in the data section; if minimum age and maximum age are both "-1", no age based data are given; otherwise age data must follow in the data section for each age in the age range MIN\_AGE to MAX\_AGE; minimum age and maximum age must either both be "-1" or both be not
- 23. MAX\_AGE (this is the true maximum age in the data section (no plus group is allowed); if minimum age and maximum age are both "-1", no age based data are given; otherwise age data must follow in the data section for each age in the age range MIN\_AGE to MAX\_AGE; minimum age and maximum age must either both be "-1" or both be not "-1")
- 24. Age 0 (years)=0
- 25. Age 0 No. Landed (thousands)
- 26. Age 0 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
- 27. Age 0 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 28. Age 0 No. Discard (thousands)
- 29. Age 0 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 30. Age 0 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
- 31. Age 1 (years)=1
- 32. Age 1 No. Landed (thousands)
- 33. Age 1 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
- 34. Age 1 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 35. Age 1 No. Discard (thousands)
- 36. Age 1 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 37. Age 1 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
- 38. Age 2 (years)=2
- 39. Age 2 No. Landed (thousands)
- 40. Age 2 MEAN Weight Landed (kg, precision in-gram=3 digits after the comma)
- 41. Age 2 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 42. Age 2 No. Discard (thousands)
- 43. Age 2 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 44. Age 2 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
- 45. Age 3 (years)=3
- 46. Age 3 No. Landed (thousands)
- 47. Age 3 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
- 48. Age 3 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 49. Age 3 No. Discard (thousands)
- 50. Age 3 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 51. Age 3 MEAN Length Discard (cm, precision in mm=1 digits after the comma).
- 52. Age 4 (years)=4
- 53. Age 4 No. Landed (thousands)
- 54. Age 4 MEAN Weight Landed (kg. precision in gram=3 digits after the comma)
- Age 4 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 56. Age 4 No. Discard (thousands)
- 57. Age 4 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 58. Age 4 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
- 59. Age 5 (years)=5
- 60. Age 5 No. Landed (thousands)
- 61. Age 5 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
- 62. Age 5 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 63. Age 5 No. Discard (thousands)
- 64. Age 5 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 65. Age 5 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
- 66. Age 6 (years)=6
- 67. Age 6 No. Landed (thousands)
- 68. Age 6 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
- 69. Age 6 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
- 70. Age 6 No. Discard (thousands)
- 71. Age 6 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
- 72. Age 6 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
- 73. Age 7 (years)=7
- 74. Age 7 No. Landed (thousands)
- 75. Age 7 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)

```
76. Age 7 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
77. Age 7 No. Discard (thousands)
78. Age 7 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
79. Age 7 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
80. Age 8 (years)=8
81. Age 8 No. Landed (thousands)
82. Age 8 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
83. Age 8 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
84. Age 8 No. Discard (thousands)
85. Age 8 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
86. Age 8 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
87. Age 9 (years)=9
88. Age 9 No. Landed (thousands)
89. Age 9 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
90. Age 9 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
91. Age 9-No. Discard (thousands)
92. Age 9 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
93. Age 9 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
94. Age 10 (years)=10
95. Age 10 No. Landed (thousands)
96. Age 10 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
97. Age 10 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
98. Age 10 No. Discard (thousands)
99. Age 10 MEAN Weight Discard (kg, precision in gram=3 digits after the comma) 100. Age 10 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
101.
        Age 11 (years)=11
        Age 11 No. Landed (thousands)
102
        Age 11 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
103.
        Age 11 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
104.
        Age 11 No. Discard (thousands)
105.
        Age 11 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
106.
        Age 11 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
107.
        Age 12 (years)=12
108
        Age 12 No. Landed (thousands)
109.
        Age 12 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
110.
        Age-12 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
111.
        Age 12 No. Discard (thousands)
 112
        Age 12 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
 113.
        Age 12 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
 114.
        Age 13 (years)=13
 115.
        Age 13 No. Landed (thousands)
 116.
        Age 13 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
 117.
        Age 13 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
 118
        Age 13 No. Discard (thousands)
 119
        Age 13 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
 120.
         Age 13 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
 121.
 122.
         Age 14 (years)=14
         Age 14 No. Landed (thousands)
 123.
         Age 14 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
 124.
         Age 14 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
 125.
         Age 14 No. Discard (thousands)
 126.
         Age 14 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
 127.
         Age 14 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
 128.
         Age 15 (years)=15
 129
         Age 15 No. Landed (thousands)
 130.
         Age 15 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
 131.
         Age 15 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
 132.
         Age 15 No. Discard (thousands)
 133.
         Age 15 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
 134.
         Age 15 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
 135.
         Age 16 (years)=16
 136.
         Age 16 No. Landed (thousands)
 137.
```

6

Age 16 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)

Age 16 MEAN Length Landed (cm, precision in mm=1 digits after the comma) 139 Age 16 No. Discard (thousands) 140. Age 16 MEAN Weight Discard (kg, precision in gram=3 digits after the comma) 141. Age 16 MEAN Length Discard (cm, precision in mm=1 digits after the comma) 142. Age 17 (years)=17 143. Age 17 No. Landed (thousands) Age 17 MEAN Weight Landed (kg, precision in gram=3 digits after the comma) 145. Age 17 MEAN Length Landed (cm, precision in mm=1 digits after the comma) 146. Age 17 No. Discard (thousands) 147 Age 17 MEAN Weight Discard (kg, precision in gram=3 digits after the comma) 148 Age 17 MEAN Length Discard (cm, precision in mm=1 digits after the comma) 149 150. Age 18 (years)=18 Age 18 No. Landed (thousands) 151. Age 18 MEAN Weight Landed (kg, precision in gram=3 digits after the comma) 152. Age 18 MEAN Length Landed (cm, precision in mm=1 digits after the comma) 153. Age 18 No. Discard (thousands) 154. Age 18 MEAN Weight Discard (kg, precision in gram=3 digits after the comma) 155. Age 18 MEAN Length Discard (cm, precision in mm=1 digits after the comma) 156. Age 19 (years)=19 157. Age 19 No. Landed (thousands) 158: Age 19 MEAN Weight Landed (kg, precision in gram=3 digits after the comma) 159 Age 19 MEAN Length Landed (cm, precision in mm=1 digits after the comma) 160 Age 19 No. Discard (thousands) 161. Age 19 MEAN Weight Discard (kg, precision in gram=3 digits after the comma) Age 19 MEAN Length Discard (cm, precision in mm=1 digits after the comma) 163. Age 20 (years)=20 164. Age 20 No. Landed (thousands) 165. Age 20 MEAN-Weight Landed (kg, precision in gram=3 digits after the comma) 166. Age 20 MEAN Length Landed (cm, precision in mm=1 digits after the comma) 167. Age 20 No. Discard (thousands) 168 Age 20 MEAN Weight Discard (kg, precision in gram=3 digits after the comma) 169. Age 20 MEAN Length Discard (cm, precision in mm=1 digits after the comma) 170.

## B. All fishing effort management schemes - Mandatory effort data for 2000-2008, aggregated (sum) by ID

- 1. ID (this is a unique identifier; e.g. the combination of country, year, quarter, gear, mesh size range, fishery or metier, and area; this is free text with a maximum of 40 characters without space)
- COUNTRY (this should be given according to the code list provided in Appendix 1)
- YEAR (this should be given in four digits)
- QUARTER (this should be given as one digit)
- VESSEL\_LENGTH\_CATEGORY ( L < 10 m Loa; 10 m Loa ≤ L < 15 m Loa; 15 m Loa ≤ L)
- GEAR (this identifies gear, and should be given according to the code list provided in Appendix 2, which follows largely the EU data regulation 1639/2001)
- MESH\_SIZE\_RANGE (the mesh size range should be given according to the code list provided in Appendix 3, which follows largely the Council regulation 850/98)
- FISHERY (species complex and gear) or métier (species complex, gear and vessel characteristics) (this is free text with a maximum of 40 characters without space; this specification may include e.g. target species, roundfish area or quarter)
- AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 4)
- SPECON to be specified in accordance with Appendix 5, text string of maximum 10 characters
   NOMINAL\_EFFORT (effort should be given in kW.days, i.e. engine power in kW times days at sea; if
- nominal effort is not available, "-1" should be given)

  12. EFFECTIVE\_EFFORT (optionally, gear specific effort can be given in other units, to be specified in the next field, than the nominal effort, if effective effort is not available "-1" should be given)
- 13. EFFORT\_UNIT (this field should state the unit of effort used for the optional effective effort in the field above; this is free text with a maximum of 40 characters without space; if no effective effort is given, "-1" should be given)
- 14. GT\_DAYS\_AT\_SEA (effort should be given in gross tonnage \* days at sea; if the number is not available, "-1" should be given).
- NO\_VESSELS (simple integer value of vessels, if the number is not available, "-1" should be given.

## C. Fishing effort management schemes linked to Annex IIA, B and IIC, to Western waters and to deep sea regulations - Specific effort data by rectangle for 2003-2008 in units of fishing hours

ID (this is a unique identifier, e.g. the combination of country, year, quarter, gear, mesh size range, fishery or metier, and area; this is free text with a maximum of 40 characters without space) COUNTRY (this should be given according to the code list provided in Appendix 1)

YEAR (this should be given in four digits) QUARTER (this should be given as one digit)

VESSEL\_LENGTH\_CATEGORY ( L < 10 m Loa ; 10 m Loa  $\leq$  L < 15 m Loa ; 15 m Loa  $\leq$  L ) GEAR (this identifies gear, and should be given according to the code list provided in Appendix 2, which follows largely the EU data regulation 1639/2001).
MESH\_SIZE\_RANGE (the mesh size range should be given according to the code list provided in

- Appendix 3, which follows largely the Council regulation 850/98)
  FISHERY (species complex and gear) or métier (species complex, gear and vessel characteristics) (this is free text with a maximum of 40 characters without space; this specification may include e.g. target species, roundfish area or quarter)
- AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 4).

  (For the Western Waters Regulation; please consider ICES and CECAF areas: V, VI, VIII, VIII, IX and X and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and CECAF divisions 34.1.1, 34.1.2 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and ICEAF divisions 34.1.1 and 34.2.0. For the Deep sea regulation, please consider ICES I-XIV and ICEAF divisions 34.1.1 and 34.2.0. For the Deep sea regulation, please consider ICES III and ICEAF divisions 34.1.1 and 34.2.0. For the Deep sea regulation, please consider ICES III and ICEAF divisions 34.1.1 and ICEAF divisions CECAF 34.1.1, 34.1.2, 34.1.3 and 34.2. For the Annex IIA, IIB and IIC, please consider only ICES Divisions
- 10. SPECON to be specified in accordance with Appendix 5, text string of maximum 10 characters

RECTANGLE (text, 4 letters like 44F6)
 EFFECTIVE\_EFFORT (hours fished, simple long numerical integer)

## Appendix 1

## Country coding

	CORE
COUNTRY	CODE
Belgium	BEL
Denmark	DEN
Estonia	EST
Finland	FIN.
France	, FRA
Germany	GER
Ireland	IRL '
Latvia	LAT
Lithuania	LIT
Netherlands	NED
Norway	NOR
Poland	POL
Portugal (mainland)	POR
Portugal (Azores)	PTA
Portugal (Madeira)	PTM
Spain (mainland)	SPN
Spain (Canaries islands)	SPC
Sweden	SWE
United Kingdom (Jersey)	GBJ
United Kingdom (Guernsey)	GBG
United Kingdom (Alderny/Sark/Herm)	GBC
United Kingdom (England and Wales)	ENG
United Kingdom (Isle of Man)	IOM
United Kingdom (Northern Ireland)	NIR
United Kingdom (Scotland)	sco
Other countries	OTH

## Appendix 2

## Gear coding

TYPES O	FISHING TECHNIQ	Gear code	
Viobile	Beam trawls	BEAM	
gears	Bottom trawls & demersal seines	Bottom otter trawls, Multi-rig otter trawls or Bottom pair trawls	OTTER
		Fly shooting seines, Anchored seines or Pair seines	DEM_SEINE
	Pelagic trawls & pelagic Seines	Midwater otter trawls or Midwater pair trawls	PEL_TRAWL
		Purse seines, Fly shooting seines or Anchored seines	PEL_SEINE
	Dredges		DREDGE
Passive gears	Drifting longlines or Set longlines	LONGLINE	
	Driftnets or Set gillnets (except	GILL	
	Trammel Nets	TRAMMEL	
	Pots & traps	POTS	

Appendix 3

Mesh size coding

Gear type	Mesh-size range	
Mobile gears	<16	
	16-31	
	32-54	
•	55-69	
	70-79	
	80-89	
	90-99	
	100-119	
	>=105 <sup>1</sup>	
	>=120	
Passive gears	10-30	
5754	31-49	
2.	50-59	
	60-69	
	70-79	
	80-89	
	90-99	
	100-109-	
	110-149	
5	110-156 <sup>2</sup>	
	150-219	
	>=220	

<sup>&</sup>lt;sup>1</sup> To be used for mobile gears in the context the fishing effort management scheme applied in the Baltic Sea

<sup>&</sup>lt;sup>2</sup> To be used for passive gears in the context the fishing effort management scheme applied in the Baltic Sea

## Appendix 4

## Area coding by WG, ICES statistical areas and IBSFC areas for Baltic

## 25-28<sup>3</sup> 27 28.2 29-32 North Sea, Skagerrak, Kattegat and Eastern Channel 2 EU 3an 3as 7d Northern Shelf 1 COAST4 1 RFMO5 2 COAST 2 RFMO 5a 5b EU<sup>6</sup> 5b COAST 5b RFMO 6a 6b EU 6b RFMO $7a^7$

12 RFMO

Baltic Sea 22-24

<sup>3</sup> Areas 27 and 28.2 included.

COAST will refer to waters under jurisdiction of a non-EU coastal state.

<sup>&</sup>lt;sup>5</sup> RFMO will refer to waters where fisheries are managed through RFMOs.

<sup>&</sup>lt;sup>6</sup> 5b EU will have to be considered as covering the following ICES statistical rectangles: 49D6, 49D7, 49D8, 49D9, 49E0, 49E1, 49E2, 49E3, 49E4, 50E5.

<sup>&</sup>lt;sup>7</sup> ICES statistical rectangles of ICES division VIIa and corresponding to the BSA shall be included.

14a

14b COAST

14b RFMO

Southern Shelf

BSA<sup>8</sup>

7b<sup>9</sup>

7c EU

7c RFMO

7e

7f

7g<sup>10</sup>

7h<sup>11</sup>

28E2

7j EU<sup>12</sup>

7j REMO

7k EU

7k RFMO

8a

8b

8c

8d EU

8d RFMO

8e EU

8e RFMO

9a

9b EU

9b RFMO

10 EU

BSA (Biological Sensitive Area) will have to be considered as covering the following ICES statistical rectangles: 35D8, 35D9, 35E0, 34D8, 34D9, 34E0, 33D8, 33D9, 33E0, 33E2, 32D8, 32D9, 32E0, 32E1, 32E2, 31D8, 31D9, 31E0, 31E1, 31E2, 30D9, 30E0, 30E1, 30E2, 29D9, 29E0, 29E1, 29E2, 28D9, 28E0, 28E1, 28E2, 27D9, 27E0, 27E1, 27D2, 26D9, 26E0, 26E1, 26E2

<sup>&</sup>lt;sup>9</sup> ICES statistical rectangles of ICES division VIIb and corresponding to the BSA shall be included.

<sup>&</sup>lt;sup>10</sup> ICES statistical rectangles of ICES division VIIg and corresponding to the BSA shall be included.

<sup>&</sup>lt;sup>11</sup> ICES statistical rectangles of ICES division VIIh and corresponding to the BSA shall be included.

<sup>&</sup>lt;sup>12</sup> ICES statistical rectangles of ICES division VIIj and corresponding to the BSA shall be included.

10 RFMO

CECAF

34.1.1 EU

34.1.1 COAST

34.1.2 EU

34.1.2 COAST

34.1.2 RFMO

34.1.3 COAST

34.1.3 RFMO

34.2.0 EU

34.2.0 COAST

34.2.0 RFMO

## Appendix 5

# Coding of special conditions for the derogations listed in Council Regulation 40/2008, Annexes IIA, IIB and IIC

Annex IIA:			20
IA83a			
IA83b			
IA83c			
IA83d			
IA83e			
IA83f			
IA83g			
IIA83h			
IIA83i			Di .
IIA83j	á		8
IIA83k			
IIA83I			
IIA83hj			*
Annex IIB:			
IIB72ab		55	
Annex IIC:			
No special conditions		16	
BALTIC Technical Conditions			
Bacoma			2.63

T90

Appendix 6

## Species coding according to Council Regulation (EC) No. 2298/2003

Common name	Alpha-3 code	Scientific name
1. Albacore	ALB	Thunnus alalunga
2. Alfonsinos	ALF	Beryx spp.
3. American plaice	PLA	Hippoglossoides platessoides
4. Anchovy	ANE	Engraulis encrasicolus
5. Anglerfish	ANF	Lophiidae
6. Antarctic icefish	ANI	Champsocephalus gunnari
7. Árctic skate	RJG	Raja hyperborea
8. Atlantic catfish	CAT	Anarhichas lupus
9. Atlantic halibut	HAL	Hippoglossus hippoglossus
10. Atlantic salmon	SAL	Salmo salar
11. Atlantic thornyhead	TJX	Trachyscorpia cristulata
12. Baird's slickhead	ALC	Alepocephalus bairdii
13. Basking shark	BSK	Cetorhinus maximus
14. Bigeye tuna	BET	Thunnus obesus
15. Birdbeak dogfish	DCA	Deania calcea
16. Blackbelly rosefish	BRF	Helicolenus dactylopterus
17. Black cardinal fish	EPI	Epigonus telescopus
18. Black dogfish	CFB	Centroscyllium fabricii
19. Black scabbardfish	BSF	Aphanopus carbo
20. Blackfin icefish	SSI	Chaenocephalus aceratus
21. Blackmouth catshark	SHO	Galeus melastomus
22. Blue antimora	ANT	Antimora rostrata
23.Blue ling	BLI	Molva dypterigia
24. Blue marlin	BUM	Makaira nigricans
25. Blue whiting	WHB	Micromesistius poutassou
26. Bluefin tuna	BFT	Thunnus thynnus
27. Blutnose sixgill shark	SBL	Hexanchus griseus
28. Capelin	CAP	Mallotus villosus
29. Cod	COD	Gadus morhua
30. Common mora	RIB	Mora moro
31. Common sole	SOL	Solea solea

32. Common shrimp	CSH	Crangon crangon
33. Crab	PAI .	Paralomis spp.
34.Dab	DAB	Limanda limanda
35. Deep-sea red crab	KEF	Chaceon affinis
36. Edible Crab	CRE	Cancer pagurus
37. Eelpouts	ELZ	Lycodes spp.
38. European conger	COE	Conger conger
39. European pearch	FPE ·	Perca fluviatilis
40. Flatfish, flounder	FLX	Pleuronectiformes, Platichthys flesus
41.Forkbeards	FOX	Phycis spp.
42. Frilled shark	HXC	Chlamydoselachus anguineus
43. Greater silver smelt	ARU	Argentina silus
44. Greenland halibut	GHL	Reinhardtius hippoglossoides
45. Grenadier	GRV	Macrourus spp.
46. Great Atlantic Scallop	SCE -	Pecten maximus
47. Great lantern shark	ETR	Etmopterus princeps
48. Greenland shark	GSK	Somniosus microcephalus
49. Grey rockcod	NOS	Lepidonotothen squamifrons
50. Gulper shark	GUP	Centrophorus granulosus
51.Haddock	HAD	Melanogrammus aeglefinus
52.Hake	HKE	Merluccius merluccius
53. Herring	HER	Clupea harengus
54. Horse mackerel	JAX	Trachurus spp.
55. Humped rockcod	NOG	Gobionotothen gibberifrons
56. Iceland catshark	APQ	Apristurus laurussonii
57. Kitefin shark	SCK	Dalatias licha
58. Knifetooth dogfish	SYR	Scymnodon rigens
59. Krill	KRI	Euphausia superba
60. Lantern fish	LAC	Lampanyctus achirus
61. Large-eyed rabbitfish	CYH	Hydrolagus mirabilis
62. Leafscale gulper shark	GUQ	Centrophorus squamosus
63.Lemon sole	LEM	Microstomus kitt
64.Ling	LIN	Molva molva
65. Lumpsucker	LUM .	Cyclopterus lumpus
66. Longnose velvet dogfish	CYP	Centroscymnus crepidater
67. Mackerel	MAC	Scomber scombrus

17

		20 14
68. Marbled rockcod	NOR	Notothenia rossii
69. Mediterranean slimehead	HPR	Hoplostethus mediterraneus
70. Megrims	LEZ	Lepidorhombus spp.
71. Mouse catshark	GAM	Galeus murinus
72. Northern prawn	PRA	Pandalus borealis
73. Norway lobster	NEP	Nephrops norvegicus
74. Norway pout	NOP .	Trisopterus esmarki
75. Norway redfish	SFV	Sebastes viviparus
76. Norwegian skate	JAD	Raja nidarosiensis
77. Orange roughy	ORY	Hoplostethus atlanticus
78. 'Penaeus' shrimps	PEN	Penaeus spp
79. Pike	FPI	Esox lucius
80. Pike pearch	FPP	Sander lucioperca
81.Plaice	PLE	Pleuronectes platessa
82. Polar cod	POC	Boreogadus saida
83. Pollack	POL	Pollachius pollachius
84. Porbeagle	POR	Lamna nasus
85. Portuguese dogfish	CYO	Centroscymnus coelolepis
86. Rabit fish	CMIO	Chimaera monstrosa
87.Rays	RAJ	Rajidae
88. Redfish	-RED	Sebastes spp.
89. Red Seabream	SBR	Pagellus bogaraveo
90. Risso's smooth-head	PHO	Alepocephalus rostratus
91. Roughead grenadier	RHG	Macrourus berglax
92. Roundnose grenadier	RNG	Coryphaenoides rupestris
93.Round ray	RJY	Raja fyllae
94. Sailfin roughshark	ÓXN	Oxynotus paradoxus
95. Saithe	POK	Pollachius virens
96. Sandeel	SAN	Ammodytidae
97. Scallop	KMV	Chlamys livida
98. Seabass	BSS	Dicentrarchus labrax
99. Short fin squid	SQI	Illex illecebrosus
100. Silver scabbardfish	SFS	Lepidopus caudatus
101. Skates	SRX	Rajidae
102. Smooth lantern shark	ETP	Etmopterus pusillus
103. Snow crab	PCR	Chionoecetes spp.

104. South Georgian icefish	SGI	Pseudochaenichthys georgianus
105. Spanish ling	SLI .	Molva macrophthalmus
106. Spinous spider crab	SCR	Maja squinado
107. Sprat	SPR	Sprattus sprattus
108. Spurdog	DGS	Squalus acanthias
109. Straightnose rabbitfish	RCT	Rhinochimaera atlantica
110. Swordfish	SWO	Xiphias gladius
111. Toothfish	TOP	Dissostichus eleginoides
112. Tope shark	GAG	Galeorhinus galeus
113. Turbot	TUR	Psetta maxima
114. Tusk-	USK	Brosme brosme
115. Unicorn icefish	LIC	Channichthys rhinoceratus
116. Velvet belly	ETX	Etmopterus spinax
117. White marlin	WHM	Tetrapturus alba
118. Whiting	WHG	Merlangius merlangus
119. Witch flounder	WIT	Glyptocephalus cynoglossus
120. Wreckfish	WRF	Polyprion americanus
121. Yellowfin tuna	YFT	Thunnus albacares
122. Yellowtail-flounder	YEL	Limanda ferruginea



### EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

POLICY-DEVELOPMENT AND CO-ORDINATION COMMON FISHERIES POLICY AND AQUACULTURE

N° DI DATE A	MARE 2945 9.03.	eg		Brussels, 1 9.0 D(2009)	13.2009 D	02975	
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To:			nent Represent Member States to	ations Telephone: EU Fax:		*	
From:		Ernes	to PENAS LADO	Telephone:		(32-2) 296 37 44	4
				Fax:		(32-2) 299 48 02	2
Number of	pages:	2					•

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Subject:

#### CORRIGENDUM

Fishing effort management schemes related to recovery and management plans in the Baltic Sea, the North Sea, to the Western waters, to the deep sea fisheries and review of fisheries located in the Celtic Sea.

#### Message:

On last Monday 16.03.2009, with the reference D(2009)02783, the DG Mare sent to all Member States permanent representations a call for data to be taken into account by the STECF during its next working group meetings on fishing effort management schemes.

Unfortunately, a mistake has slipped into the submitted version regarding time series to be build for catches data and fishing effort data.

Nevertheless, according to the document attached to this call (Annexe 1 and its appendices), periods of time to be taken into account should be the following

- 2003-2008 for landings and discards described in part A of the Annex 1
- 2000-2008 for fishing effort described in part B of the Annex 1 (except for data aggregated by ICES statistical rectangles - part C of the Annex 1 specifies the 2003-2008 time period)

And the wrong sentence included in the submitted version should have been written as below:

These data should characterise landings and discards structured by age for the period 2003-2008 and effort for the period 2000-2008. The format, which has been discussed wit the STECF secretariat, is described in the annex joined to this facsimile.

Commission européenne, B-1049 Bruxelles / Europese Commissie, B-1049 Brussel - Belgium. Telephone: (32-2) 299 11 11.

In addition, the note 8 of Appendix 4, which specifies ICES statistical rectangles covering the Biological Sensitive Area, also so called "Irish Box" in the context of the Western Waters regime, contains some mistakes as well and should be designed as below:

<sup>8</sup> BSA (Biological Sensitive Area) will have to be considered as covering the following ICES statistical rectangles: 35D8, 35D9, 35E0, 35E1, 34D8, 34D9, 34E0, 34E1, 33D8, 33D9, 33E0, 33E2, 32D8, 32D9, 32E0, 32E1, 32E2, 31D8, 31D9, 31E0, 31E1, 31E2, 30D9, 30E0, 30E1, 30E2, 29D9, 29E0, 29E1, 29E2, 28D9, 28E0, 28E1, 28E2.

I furthermore take advantage of this corrigendum to inform you that, according to the format designed in Annex 1 of the data call, the code "DEEP" could be used to fill the field "FISHERY" when fishing effort data and/or catch data would have to be related to deep-sea fisheries regulated through R(EC) No 2347/2002).

I thank you for your vigilance which helped correct these instructions and I hope it will answer your questions and clarify the situation.

Ernesto PENAS LADO

## 6. Annex 2: Participants

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STECF members							
Bailey, Nick	FRS Marine Lab. Victoria Road AB11 9DB Aberdeen, UK	+44(0)1224295 398	baileyn@marlab.ac.uk	X	X		
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Invited expert	s						
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Lövgren, Johan	FIV Sweden, PO Box 4, 45330, Lysekil, Sweden		johan.lovgren@fiskerive rket.se	X	X
Coppin, Frank	IFREMER 150, quai Gambetta, 62321, Boulogne sur mer, France	+33321995610	franck.coppin@ifremer.f r	X	
Vermand, Youen			$\frac{\text{Youen.Vermard@ifreme}}{\text{r.fr}}$		X
Vérin, Yves	IFREMER 150, quai Gambetta, 62321, Boulogne sur mer, France	+33321995608	Yves.Verin@ifremer.fr		X
JRC Experts				•	•
Rätz, Hans- Joachim	Joint Research Centre (IPSC), Maritime Affairs Unit Via E. Fermi, 2749, 21027 Ispra (Varese), Italy	+390332786073	hans- joachim.raetz@jrc.ec.eur opa.eu	X	X
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## 7. ANNEX-EXPERT DECLARATIONS

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#### **European Commission**

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#### **Abstract**

SGMOS-09-05 meeting was held on 28 September - 2 October 2009 in Barza d' Ispra (Italy). This Section of the report covers the Baltic Sea and provides fleet specific trends in catch (including discards), nominal effort and catch (landings) per unit of effort in order to advise on fleet specific impacts on stocks under multiannual management plans. STECF reviewed the report during its November 2009 plenary meeting and by written procedure in March 2010.

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