



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

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Opinion by written procedure

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**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

Edited by Nick Bailey & Hans-Joachim Rätz

EUR 24305 EN - 2010

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JRC 57572

EUR 24305 EN
ISBN 978-92-79-15354-9
ISSN 1018-5593
DOI 10.2788/80511

Luxembourg: Office for Official Publications of the European Communities

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Printed in Italy

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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 16th March 2009 (19th 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 ≥ 90 mm and longlines

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

*There was no stop days in areas 28-32 during 2006-2007

** during 2008, there were no stop days in areas 29-32

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 ≥ 90 mm 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.

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 <i>Gadus morhua</i> | 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 <i>Gadus morhua</i> | Zone: | EC waters of subdivisions 25-32 COD/3D25.; COD/3D26.; COD/3D27.; COD/3D28.; COD/3D29.; 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 ≥ 90 mm 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 ≥ 105 mm 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 | Discard data 2003-2008 |
|----------------|--------------------------------------|
| 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 SGDFP 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:

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

(means no catch)

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

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

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 $SOP_{snf} \geq 0.75$ and $SOP_{snf} \leq 1.25$.

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

$$N_{unf,i} = \frac{\sum_{snf} (N_{snf,i}) \cdot L_{unf}}{\sum_{snf} L_{snf}}$$

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

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 $SOP_{snf} \geq 0.75$ and $SOP_{snf} \leq 1.25$ 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

$$N_{unf,i} = \frac{\sum_{snf} (N_{snf,i}) \cdot D_{unf}}{\sum_{snf} D_{snf}}$$

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

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 as 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) métiers*

In this report métier definitions were made in line with the current cod management plan for the Baltic. However, métier 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 could 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 $\geq 105\text{mm}$ 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 | 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 | none | 10568767 | 10960257 | 8429080 | 8888007 | 6741005 | 6756477 | 3858024 | 2827559 | 2713019 | -0.68 |
| r-PEL_TRAWL | BACOMA | | | | | | 17899 | 272262 | 310584 | 92062 | |
| none | 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 continued

| | | | | | | | | | | | | | |
|-------------|-------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| B | BEAM | none | DEN | 11990 | | | | | | | | | |
| | DEM_SEINE | none | SWE | 4851 | | | | | | | | 588 | |
| | DREDGE | none | DEN | 1374 | | | | | | | | 1326 | |
| | GILL | none | DEN | 35621 | 36844 | 30966 | 11028 | 28229 | 6283 | 1886 | 1896 | 4770 | -0.85 |
| | | | EST | | | | | | | 89972 | 61937 | 31416 | |
| | | | FIN | 79943 | 86070 | 70325 | 106508 | 129717 | 69254 | 34674 | 51678 | 29346 | -0.58 |
| | none | none | SWE | 14998 | 6292 | 1328 | 565 | 453 | 2621 | 2472 | 2517 | 1838 | 0.38 |
| | | | DEN | 11327 | 13065 | 6394 | 4298 | 1951 | 5749 | 5681 | 2096 | 812 | -0.87 |
| | | | SWE | 219 | 1882 | 5660 | 5651 | 8264 | 9240 | 10517 | 11269 | 6236 | 0.10 |
| | OTTER | none | DEN | 561592 | 400162 | 294954 | 445925 | 318128 | 261104 | 164526 | 130141 | 96627 | -0.67 |
| | | | EST | | | | | | | 7052 | 11050 | | |
| | | | GER | | 2652 | | 67270 | | 7208 | | 5145 | 23223 | |
| | | | LAT | | | | 51919 | 44821 | 34091 | 42156 | 14806 | | |
| | | | SWE | 355167 | 236251 | 297974 | 237157 | 421901 | 498564 | 458637 | 410681 | 403477 | 0.35 |
| | PEL_SEINE | none | SWE | 13069 | 4706 | 8306 | 1176 | 2499 | | | 3528 | -0.58 | |
| | PEL_TRAWL | none | DEN | 1187029 | 715011 | 901494 | 518796 | 421779 | 694817 | 421616 | 716616 | 765500 | -0.15 |
| | | | EST | | | | | | | 60776 | 118378 | 98815 | |
| | | | FIN | 51729 | 71078 | 81862 | 49757 | 43626 | 50353 | 25725 | 33075 | 116538 | 0.42 |
| | | | GER | | | 41794 | 202554 | 439233 | 273116 | 272149 | 326914 | 293399 | 6.02 |
| | | | LAT | | | | 1710328 | 1691043 | 1604324 | 1329424 | 1516043 | 1349236 | |
| | POTS | none | SWE | 31275 | 7020 | 17127 | | | 3883 | 3709 | 570 | 5053 | -0.70 |
| | | | r-BEAM | none | DEN | 1430 | | | | | | | |
| | r-DEM_SEINE | BACOMA | GER | | | | | | | 11756 | 6225 | 7782 | |
| | | | DEN | 1973 | 2736 | 192 | 729 | 880 | 13631 | 9781 | 4380 | | -1.00 |
| | r-GILL | none | DEN | 327070 | 324467 | 234112 | 308655 | 285039 | 203266 | 149914 | 106096 | 106707 | -0.54 |
| | | | FIN | | | 3029 | 3029 | 2097 | 17677 | 10823 | 12154 | 3000 | -0.01 |
| | | | GER | 20807 | 9636 | 11804 | 11696 | 8290 | 41189 | 14209 | 11824 | 5048 | -0.57 |
| | | | LAT | | | | 1528152 | 1530437 | 759804 | 655281 | 617637 | 564001 | |
| | | | LIT | | | | | | 93187 | 55397 | 90686 | 128949 | |
| | r-LONGLINE | none | DEN | 2079315 | 1767488 | 1337671 | 1333558 | 1048403 | 861520 | 729248 | 547360 | 577986 | -0.57 |
| | | | FIN | 158769 | 221203 | 197610 | 248280 | 139745 | 126440 | 90135 | 56202 | 30613 | -0.85 |
| | | | GER | 663 | 442 | 1752 | 3150 | 6932 | 9199 | 24788 | 13146 | 23175 | 9.03 |
| | | | LAT | | | | 10248 | 11771 | 16799 | 9881 | 11920 | 17580 | |
| LIT | | | | | | | | 264 | 59543 | 35332 | 34991 | | |
| r-OTTER | BACOMA | GER | 128340 | 226565 | 216535 | 234808 | 268869 | 249028 | 229356 | 110218 | 124625 | -0.42 | |
| | | LAT | | | 65754 | 77228 | 58238 | 52185 | 74970 | 66150 | 38955 | -0.41 | |
| | | LIT | | | | | | | 163096 | 80177 | 189211 | | |
| | | SWE | 1762680 | 1708261 | 1088596 | 962890 | 1638558 | 1445748 | 1468745 | 1029553 | 1092873 | 0.00 | |
| | | none | DEN | 1309446 | 1364856 | 1161467 | 1489450 | 1015899 | 1156616 | 1280154 | 581971 | 641184 | -0.45 |
| r-PEL_TRAWL | BACOMA | FIN | 132133 | 121041 | 3641 | 8684 | | | | | 5515 | 0.51 | |
| | | GER | 166017 | 208345 | 223082 | 334236 | 213199 | 280775 | | | 1987 | -0.99 | |
| | | LAT | | | | 502973 | 410511 | 330478 | | | | | |
| | | LIT | 1006985 | 970195 | 892491 | 1082134 | 297533 | 257715 | 173238 | 104651 | 63146 | -0.93 | |
| | | SWE | | | | | | | 127086 | 70379 | 16691 | | |
| r-TRAMMEL | none | DEN | 142169 | 170472 | 89028 | 68859 | 51827 | 44047 | 96113 | 31102 | 1010 | -0.99 | |
| | | GER | 198637 | 288971 | 125480 | | 182107 | 143688 | | | | -1.00 | |
| | | LAT | | | | 5947 | 114489 | 10972 | | | | | |
| | | LIT | | | | | | | 1100 | 89918 | 85447 | 61407 | |
| | | SWE | 822823 | 1484305 | 402706 | | 139065 | 118458 | 409475 | 178434 | 36859 | -0.91 | |
| TRAMMEL | none | SWE | | | | 3278 | 2064 | 792 | 199 | 1104 | 2.25 | | |
| GILL | none | EST | | | | | | | 664 | | | | |
| | | FIN | 1184 | 2456 | 2582 | 1729 | 6341 | 3817 | 2052 | 3664 | 402 | -0.84 | |
| | | SWE | | | | | 34666 | 160998 | 133105 | 130527 | 112330 | | |
| OTTER | none | SWE | | | | 2541 | 1544 | 1544 | 1801 | 1801 | | | |
| PEL_TRAWL | none | DEN | 37426 | 3050 | 6995 | 8350 | | 1879 | 14065 | 4564 | 5549 | -0.21 | |
| | | GER | | | | 7688 | | 1540 | | | 3675 | | |
| POTS | none | FIN | 50154 | 42328 | 19682 | 15067 | 37216 | 6428 | 18960 | 52871 | 156824 | 6.97 | |
| | | GER | | 41107 | 31001 | 158642 | 50044 | 119124 | | | 20957 | -0.32 | |
| | | LAT | | | 6620 | 16845 | 73352 | 77497 | 27064 | 81547 | 69053 | 9.43 | |
| | | SWE | 998051 | 915441 | 613535 | 658046 | 1501494 | 2069574 | 1156480 | 1713739 | 1864025 | 2.04 | |
| r-GILL | none | SWE | 40727 | 13911 | 12265 | 17816 | 15455 | 3581 | 3529 | 8721 | 3132 | -0.74 | |
| r-LONGLINE | none | SWE | 194122 | 212449 | 200465 | 208219 | 154716 | 23429 | 34706 | 36847 | 29251 | -0.85 | |
| r-OTTER | BACOMA | SWE | | | | | | | | | 80 | | |
| TRAMMEL | none | FIN | | 1015 | 3530 | 88320 | | | | | 2160 | -1.00 | |
| | | GER | 216131 | 211701 | 215094 | 218426 | 242433 | 229988 | 266733 | 244914 | 232510 | 0.08 | |
| | | SWE | | | | | 618 | 2997 | 4244 | 2938 | 3482 | | |
| (blank) | (blank) | (blank) | (blank) | | | | | | | | | | |
| Grand Total | | | | 34190444 | 34536370 | 27605990 | 31241486 | 32235266 | 30140862 | 27152594 | 24609643 | 23259134 | -0.16 |

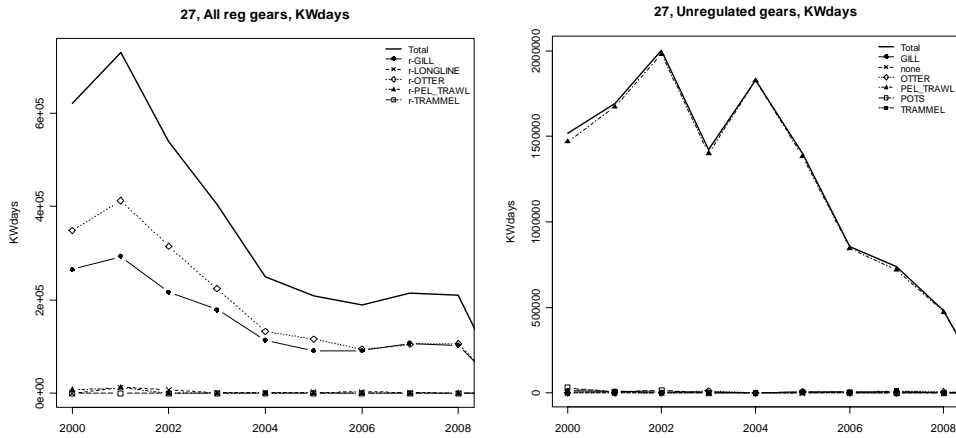


Figure 4.2.1. Area 27 Baltic: Trend in nominal effort by gear types, 2000-2008 (Kw *days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

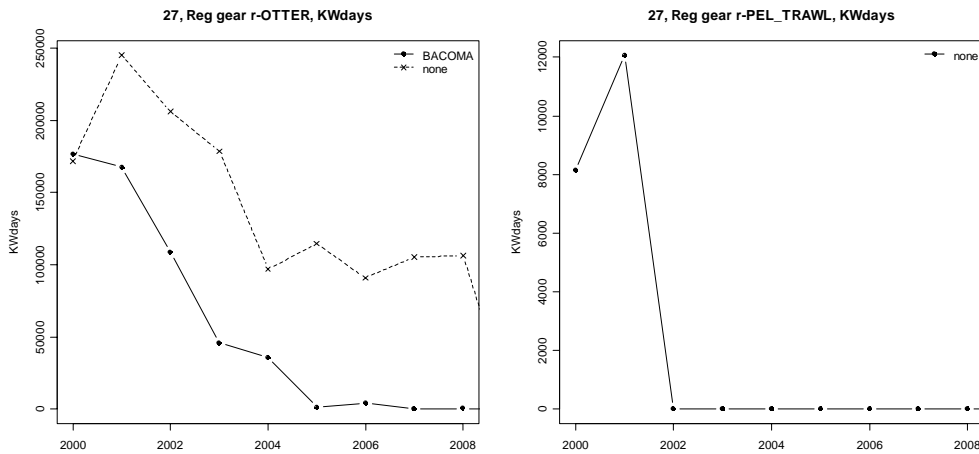


Figure 4.2.2. Area 27 Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw *days at sea). **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

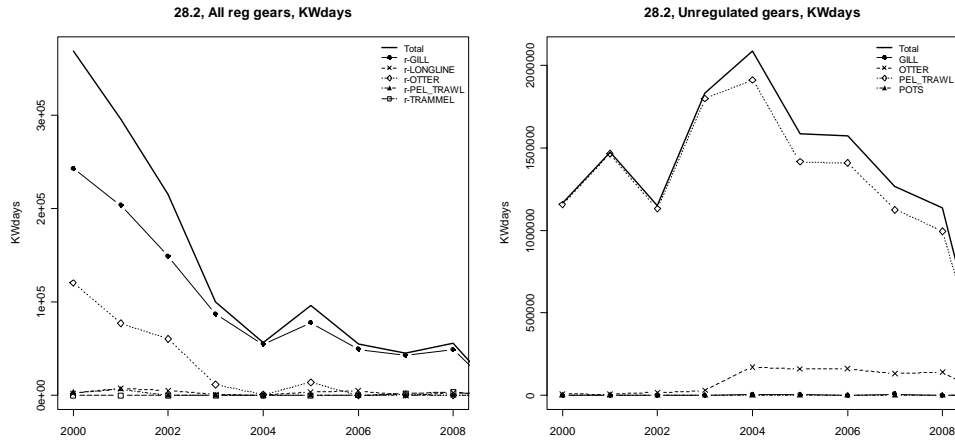


Figure 4.2.3. Area 28.2 Baltic: Trend in nominal effort by gear types, 2000-2008 (Kw *days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

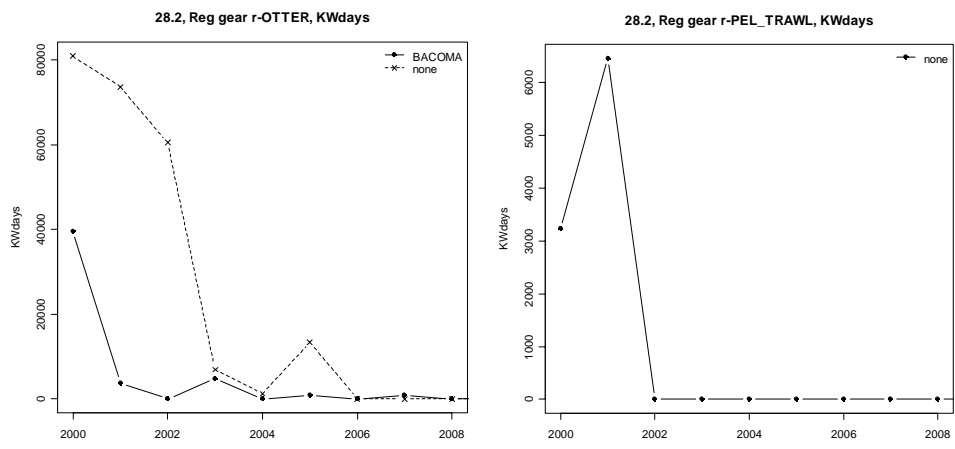


Figure 4.2.4. Area 28.2 Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw *days at sea). **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

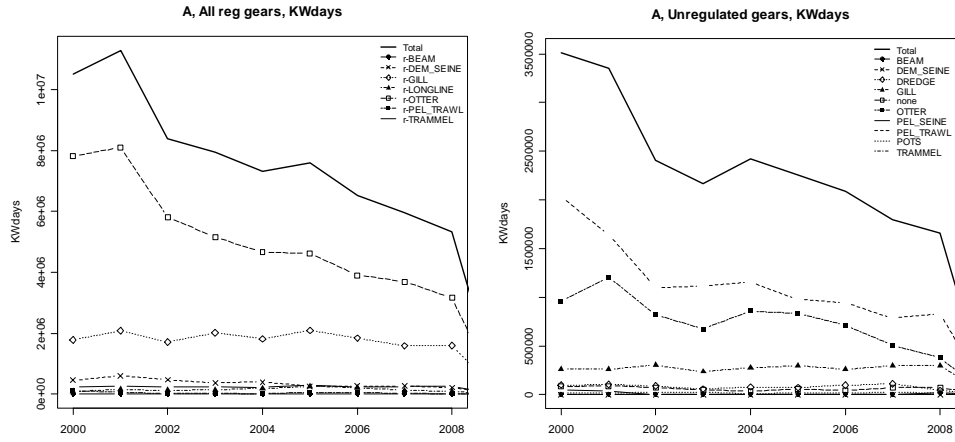


Figure 4.2.5. Area A Baltic: Trend in nominal effort by gear types 2000-2008 (Kw *days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

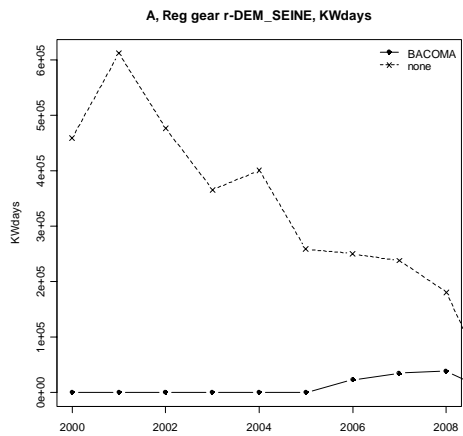
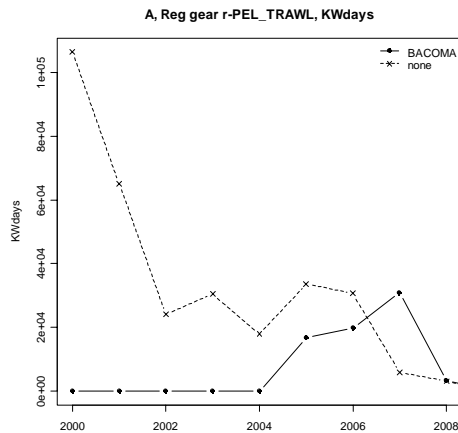
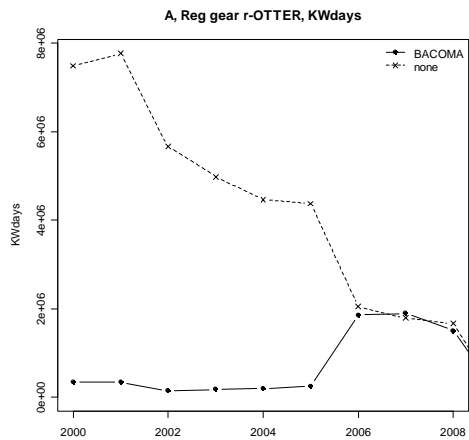


Figure 4.2.6. Area A Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw *days at sea). **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

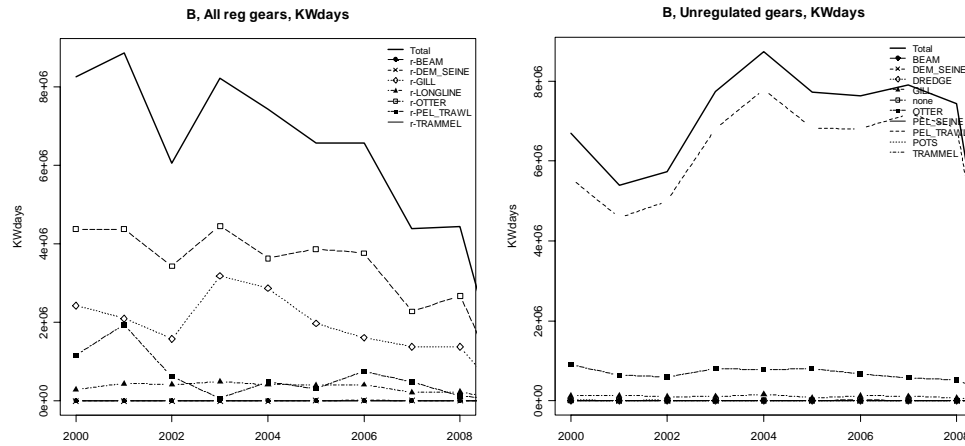


Figure 4.2.7. Area B Baltic: Trend in nominal effort by gear types 2000-2008 (Kw *days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

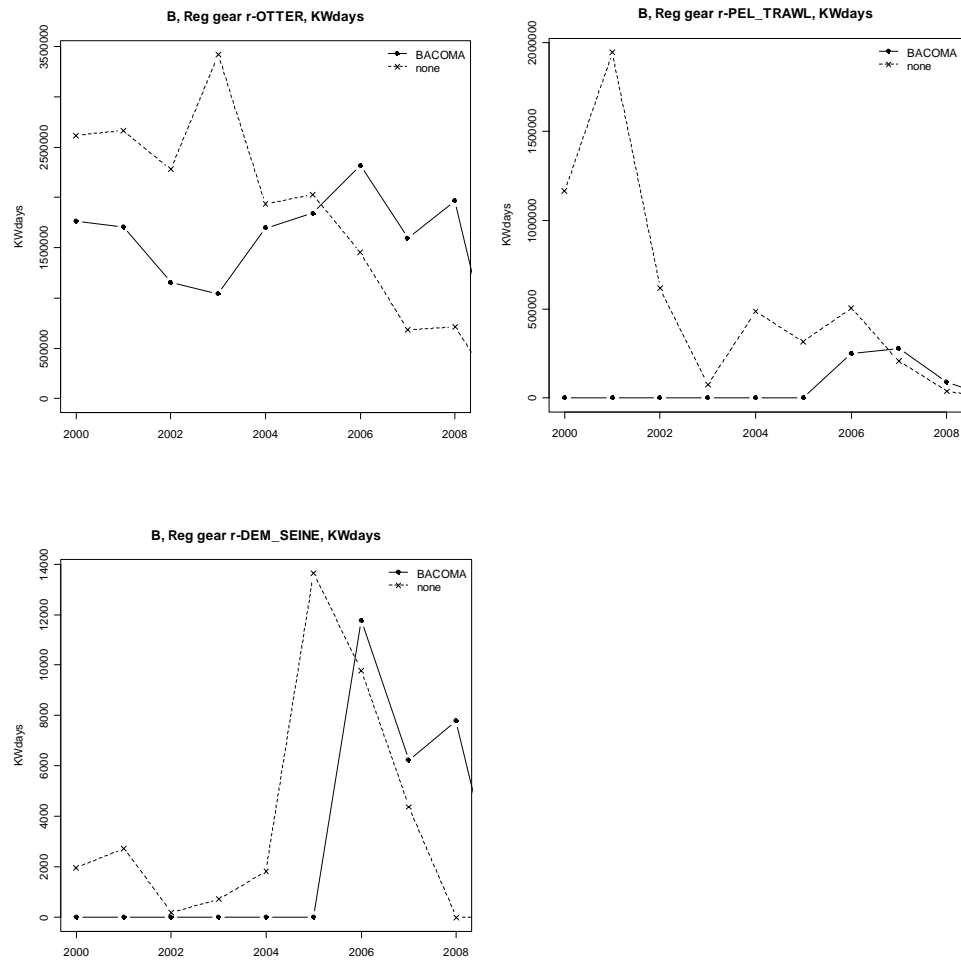


Figure 4.2.8. Area B Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw *days at sea). **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

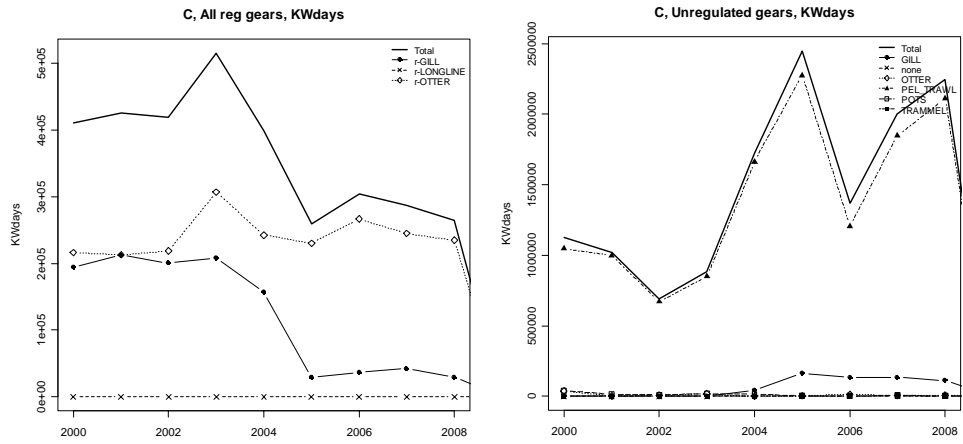


Figure 4.2.9. Area C Baltic: Trend in nominal effort by gear types 2000-2008 (Kw *days at sea). Left: Regulated gears. Right Unregulated gears. **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

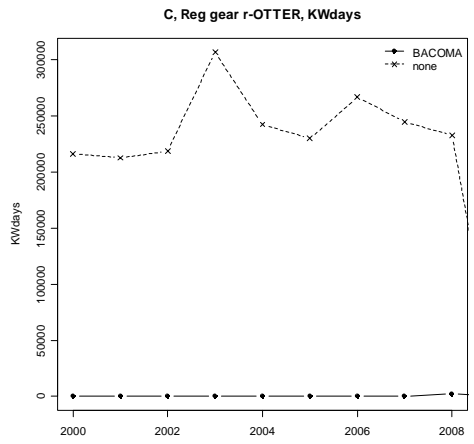


Figure 4.2.10. Area C Baltic: Trend in nominal effort by special conditions, 2000-2008 (Kw *days at sea). **Note that these figures are without data from Poland and with limited data from Estonia and Lithuania.**

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 from 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 4.3.2: 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.

| REG_AREA | REG_GEAR | SPECOM | Data | | | | | | | | | | | |
|----------|-------------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | | 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 | 0 |
| 27 | r-LONGLINE | none | 0.215 | 0 | 5.677 | 0 | 0.731 | 0 | 0.041 | 0 | 0.366 | 0 | 3.226 | 0 |
| 27 | r-OTTER | BACOMA | 122.424 | 0 | 174.928 | 0 | 4.31 | 0 | 13.1 | 0 | | | 0.049 | 0 |
| 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 | 0 |
| 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 | 0 |
| A | DEM_SEINE | none | | | 0.00236 | 0 | | | 6.35902 | 0 | | | | |
| A | DREDGE | none | 1.577829 | 0 | | | | | | | | | | |
| A | GILL | none | 73.98377 | 0 | 34.7438 | 0 | 43.92468 | 0 | 84.17996 | 0 | 68.99414 | 0 | 113.0587 | 0 |
| A | none | none | 27.89052 | 0 | 25.90352 | 0 | 30.35248 | 0 | 15.22408 | 0 | 37.62968 | 0 | 19.90835 | 0 |
| A | OTTER | none | 165.4537 | 0 | 87.9754 | 0 | 192.6003 | 0 | 184.3269 | 0 | 86.34761 | 0 | 79.0787 | 0 |
| A | PEL_TRAWL | none | 120.4115 | 0 | 116.022 | 1.253 | 219.3158 | 0 | 217.7784 | 0 | 133.0679 | 0 | 99.69378 | 0 |
| A | POTS | none | 0.695 | 0 | 2.661 | 0 | 0.035 | 0 | 5.17248 | 0 | 1.97072 | 0 | 0.24568 | 0 |
| A | r-BEAM | none | 2.752168 | 0 | | | 0.889 | 0 | | | | | 9.28 | 0 |
| A | r-DEM_SEINE | BACOMA | | | | | | | 54.655 | 0 | 142.862 | 0 | 250.269 | 0 |
| A | 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 |
| A | r-GILL | none | 3956.553 | 60.30449 | 3164.667 | 41.7848 | 3517.183 | 135.1267 | 3808.71 | 1.177 | 3675.743 | 0 | 3318.466 | 0 |
| A | 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 |
| A | 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 | 0 |
| 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 | 0 |
| A | TRAMMEL | none | 0.54752 | 0 | 0.34574 | 0 | 5.2746 | 0 | | | | | 0.86612 | 0 |
| B | DREDGE | none | 6.918171 | 0 | | | | | | | | | 5.81622 | 0 |
| B | 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 |
| B | none | none | 7.03798 | 0 | 7.54146 | 0 | 20.23402 | 0 | 6.72028 | 0 | 5.502 | 0 | 3.566 | 0 |
| B | OTTER | none | 63.87902 | 0 | 92.83041 | 0 | 94.70474 | 0 | 72.72864 | 5.365572 | 87.07952 | 0 | 18.9712 | 0 |
| B | PEL_TRAWL | none | 122.8858 | 0 | 253.3308 | 0 | 290.0245 | 0 | 372.3742 | 0 | 854.1988 | 0 | 845.261 | 0 |
| B | POTS | none | | | | | | | | | | | 1.0424 | 0 |
| B | r-BEAM | none | 10.39385 | 0 | | | | | | | | | | |
| B | r-DEM_SEINE | BACOMA | | | | | | | 66.313 | 0 | 57.855 | 0 | 93.945 | 0 |
| B | r-DEM_SEINE | none | 7.214668 | 0 | 0.91819 | 0 | 196.4466 | 0 | 82.07507 | 0 | 44.81994 | 0 | | |
| B | 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 | 174.3058 |
| B | r-LONGLINE | none | 2851.895 | 112.91 | 3383.6 | 38.87204 | 2827.664 | 69.46684 | 3531.783 | 0 | 1924.787 | 0 | 1496.787 | 132.1995 |
| B | r-OTTER | BACOMA | 11796.01 | 668.676 | 11940.92 | 316.8 | 9523.735 | 690.4414 | 14515.22 | 2072.651 | 11272.99 | 1609.355 | 14152.64 | 800.8157 |
| B | r-OTTER | none | 11351.06 | 1064.018 | 7118.352 | 557.7076 | 10479.32 | 814.9337 | 9095.651 | 949.6302 | 6556.264 | 523.8381 | 8378.801 | 546.7755 |
| B | 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 |
| B | r-PEL_TRAWL | none | 209.2181 | 0 | 2812.768 | 59.88383 | 1101.517 | 41.715 | 2191.499 | 387.699 | 1581.44 | 310.9972 | 175.9523 | 32.21247 |
| B | r-TRAMMEL | none | 11.28788 | 0 | 7.44118 | 0.000115 | 0.05096 | 0.000693 | 2.1513 | 0 | 0.375 | 0 | 21.50598 | 0 |
| B | TRAMMEL | none | 0.148 | 0 | 0.272 | 0 | 0.027 | 0 | | | | | | |
| C | GILL | none | | | | | 2.32262 | 0 | 0.014 | 0 | | | 0.64074 | 0.004 |
| C | OTTER | none | | | | | 0.29 | 0 | 3.97 | 0 | | | | |
| C | PEL_TRAWL | none | 0.157386 | 0 | | | | | | | | | | |
| C | r-GILL | none | 3.609 | 0 | 2.335 | 0 | 2.278 | 0 | 3.015 | 0 | 6.206 | 0 | 6.4576 | 0 |
| C | r-LONGLINE | none | | | | | | | | | | | 0.015 | 0 |
| C | r-OTTER | BACOMA | | | | | | | | | | | 0.78 | 0 |
| Total | | | 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 |
| A | DEM_SEINE | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | DREDGE | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | GILL | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | none | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | OTTER | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | PEL_TRAWL | none | 0 | 0.01079967 | 0 | 0 | 0 | 0 |
| A | POTS | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | r-BEAM | none | 0 | 0 | 0 | 0 | 0 | 0 |
| A | r-DEM_SEINE | BACOMA | 0 | 0 | 0 | 0 | 0 | 0 |
| A | r-DEM_SEINE | none | 0.088101294 | 0.10902657 | 0.09231834 | 0.075255162 | 0.09122816 | 0.00220241 |
| A | r-GILL | none | 0.015241673 | 0.01320354 | 0.03841901 | 0.000309028 | 0 | 0 |
| A | r-LONGLINE | none | 0.010158707 | 0.03521544 | 0.04663373 | 0 | 0 | 0.00017057 |
| A | r-OTTER | BACOMA | 0 | 0.06132197 | 0.00302327 | 0.076146947 | 0.10481094 | 0.07821944 |
| A | r-OTTER | none | 0.237239611 | 0.16646274 | 0.23144994 | 0.145739026 | 0.11559081 | 0.10589922 |
| A | r-PEL_TRAWL | BACOMA | 0 | 0 | 0.00530543 | 0 | 0 | 0 |
| A | r-PEL_TRAWL | none | 0.02626598 | 0.00416102 | 0 | 0.003138189 | 0 | 0.00692982 |
| A | r-TRAMMEL | none | 0.01528071 | 0.01249938 | 0.03811532 | 0 | 0 | 0 |
| A | TRAMMEL | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | DREDGE | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | GILL | none | 0.000870443 | 0.0015407 | 0.00010484 | 0.000244164 | 0.00959558 | 0.00934295 |
| B | none | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | OTTER | none | 0 | 0 | 0 | 0.073775219 | 0 | 0 |
| B | PEL_TRAWL | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | POTS | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | r-BEAM | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | r-DEM_SEINE | BACOMA | 0 | 0 | 0 | 0 | 0 | 0 |
| B | r-DEM_SEINE | none | 0 | 0 | 0 | 0 | 0 | 0 |
| B | r-GILL | none | 0.028394681 | 0.03782893 | 0.02902935 | 0.03560408 | 0.05761525 | 0.02472911 |
| B | r-LONGLINE | none | 0.039591232 | 0.01148837 | 0.02456687 | 0 | 0 | 0.08832218 |
| B | r-OTTER | BACOMA | 0.056686606 | 0.02653062 | 0.07249691 | 0.142791614 | 0.14276209 | 0.0565842 |
| B | r-OTTER | none | 0.093737304 | 0.07834785 | 0.07776592 | 0.104404867 | 0.07989888 | 0.06525701 |
| B | r-PEL_TRAWL | BACOMA | 0 | 0.00893064 | 0.02417049 | 0.010429064 | 0.0392251 | 0.04138418 |
| B | r-PEL_TRAWL | none | 0 | 0.02129 | 0.03787049 | 0.176910402 | 0.19665449 | 0.18307502 |
| B | r-TRAMMEL | none | 0 | 1.551E-05 | 0.01360055 | 0 | 0 | 0 |
| B | TRAMMEL | none | 0 | 0 | 0 | 0 | 0 | 0 |
| C | GILL | none | 0 | 0 | 0 | 0 | 0 | 0.00624278 |
| C | OTTER | none | 0 | 0 | 0 | 0 | 0 | 0 |
| C | PEL_TRAWL | none | 0 | 0 | 0 | 0 | 0 | 0 |
| C | r-GILL | none | 0 | 0 | 0 | 0 | 0 | 0 |
| C | r-LONGLINE | none | 0 | 0 | 0 | 0 | 0 | 0 |
| C | r-OTTER | BACOMA | 0 | 0 | 0 | 0 | 0 | 0 |

Table 4.3.4: continued

| | | | | | | | | | | | | | | | | |
|-----|---|-------------|------|-----|---|----------|---------|----------|---------|----------|---------|---------|--------|---------|---------|---------|
| Bal | B | DREDGE | none | COD | 1 | | | | | | | | | | | |
| Bal | B | DREDGE | none | COD | 2 | 1.245 | | | | | | | | 0.1 | | |
| Bal | B | DREDGE | none | COD | 3 | 6.891 | | | | | | | | 0.952 | | |
| Bal | B | DREDGE | none | COD | 4 | 0.889 | | | | | | | | 1.931 | | |
| Bal | B | DREDGE | none | COD | 5 | 0.126 | | | | | | | | 2.688 | | |
| Bal | B | DREDGE | none | COD | 6 | | | | | | | | | 1.002 | | |
| Bal | B | DREDGE | none | COD | 7 | | | | | | | | | 0.113 | | |
| Bal | B | DREDGE | none | COD | 8 | | | | | | | | | 0.007 | | |
| Bal | B | DREDGE | none | COD | 9 | | | | | | | | | 0.006 | | |
| Bal | B | GILL | none | COD | 1 | | | | | | | | | | | |
| Bal | B | GILL | none | COD | 2 | 13.278 | 23.831 | 6.132 | 4.027 | | | | | 2.448 | | |
| Bal | B | GILL | none | COD | 3 | 170.578 | 159.457 | 30.322 | 35.957 | 9.482 | | | | 56.923 | | |
| Bal | B | GILL | none | COD | 4 | 104.439 | 154.714 | 29.849 | 17.121 | 51.105 | | | | 88.171 | | |
| Bal | B | GILL | none | COD | 5 | 30.216 | 26.633 | 5.184 | 3.952 | 33.937 | | | | 64.619 | | |
| Bal | B | GILL | none | COD | 6 | 3.705 | 6.439 | 0.532 | 0.594 | 3.8 | | | | 37.993 | | |
| Bal | B | GILL | none | COD | 7 | 0.783 | 2.62 | 0.132 | 0.055 | 0.259 | | | | 7.314 | | |
| Bal | B | GILL | none | COD | 8 | | 0.527 | 0.016 | 0.017 | 0.11 | | | | 0.521 | | |
| Bal | B | GILL | none | COD | 9 | | 0.133 | 0.006 | 0.007 | 0.004 | | | | 0.006 | | |
| Bal | B | none | none | COD | 1 | | | | | | | | | | | |
| Bal | B | none | none | COD | 2 | 2.788 | 0.507 | 2.061 | 0.461 | | | | | | | |
| Bal | B | none | none | COD | 3 | 2.871 | 1.728 | 8.641 | 2.53 | | | | | | | |
| Bal | B | none | none | COD | 4 | 0.54 | 1.33 | 8.82 | 0.891 | | | | | | | |
| Bal | B | none | none | COD | 5 | 0.14 | 0.406 | 1.533 | 0.176 | | | | | | | |
| Bal | B | none | none | COD | 6 | 0.043 | 0.363 | 0.168 | 0.027 | | | | | | | |
| Bal | B | none | none | COD | 7 | 0.01 | 0.181 | 0.054 | 0.005 | | | | | | | |
| Bal | B | none | none | COD | 8 | 0.002 | 0.019 | 0.007 | 0.001 | | | | | | | |
| Bal | B | none | none | COD | 9 | | 0 | 0.003 | 0.001 | | | | | | | |
| Bal | B | OTTER | none | COD | 1 | | | | | 0.002 | | | | | | |
| Bal | B | OTTER | none | COD | 2 | 4.33 | 5.399 | 12.157 | 9.455 | 1.431 | 1.517 | | | 0.206 | | |
| Bal | B | OTTER | none | COD | 3 | 46.638 | 41.655 | 35.263 | 47.389 | 2.343 | 15.311 | | | 2.801 | | |
| Bal | B | OTTER | none | COD | 4 | 14.24 | 30.614 | 37.325 | 14.555 | 0.02 | 45.56 | | | 4.504 | | |
| Bal | B | OTTER | none | COD | 5 | 2.08 | 4.146 | 8.401 | 3.191 | | 20.327 | | | 4.719 | | |
| Bal | B | OTTER | none | COD | 6 | 0.673 | 1.589 | 1.709 | 0.795 | | 2.436 | | | 1.919 | | |
| Bal | B | OTTER | none | COD | 7 | 0.227 | 0.664 | 0.714 | 0.292 | | 0.32 | | | 0.303 | | |
| Bal | B | OTTER | none | COD | 8 | 0.017 | 0.103 | 0.107 | 0.077 | | 0.404 | | | 0.052 | | |
| Bal | B | OTTER | none | COD | 9 | | 0.019 | 0.042 | 0.041 | | 0.037 | | | 0.012 | | |
| Bal | B | PEL_TRAWL | none | COD | 1 | | | | | | | | | | | |
| Bal | B | PEL_TRAWL | none | COD | 2 | 16.994 | 20.906 | 38 | 55.305 | | 3.126 | | | 8.885 | | |
| Bal | B | PEL_TRAWL | none | COD | 3 | 65.161 | 117.881 | 111.581 | 307.451 | | 86.103 | | | 202.519 | | |
| Bal | B | PEL_TRAWL | none | COD | 4 | 25.388 | 83.61 | 108.654 | 93.715 | | 422.562 | | | 313.275 | | |
| Bal | B | PEL_TRAWL | none | COD | 5 | 7.467 | 10.359 | 21.99 | 16.472 | | 273.424 | | | 237.397 | | |
| Bal | B | PEL_TRAWL | none | COD | 6 | 2.031 | 3.884 | 4.834 | 3.257 | | 35.315 | | | 129.568 | | |
| Bal | B | PEL_TRAWL | none | COD | 7 | 0.691 | 1.611 | 2.085 | 0.909 | | 4.92 | | | 23.974 | | |
| Bal | B | PEL_TRAWL | none | COD | 8 | 0.072 | 0.245 | 0.331 | 0.241 | | 2.898 | | | 2.214 | | |
| Bal | B | PEL_TRAWL | none | COD | 9 | | 0.045 | 0.113 | 0.127 | | 0.492 | | | 0.26 | | |
| Bal | B | r-BEAM | none | COD | 1 | | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 2 | 0.608 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 3 | 10.002 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 4 | 2.015 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 5 | 0.358 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 6 | 0.108 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 7 | 0.041 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 8 | 0.007 | | | | | | | | | | |
| Bal | B | r-BEAM | none | COD | 9 | | | | | | | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 1 | | | | | | | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 2 | 4.258 | 0.014 | 94.999 | 9.889 | | 0.001 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 3 | 3.38 | 0.177 | 68.817 | 56.552 | | 4.431 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 4 | 0.364 | 0.096 | 29.636 | 20.222 | | 24.796 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 5 | 0.056 | 0.008 | 8.426 | 4.248 | | 14.834 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 6 | 0.004 | 0.004 | 1.248 | 0.852 | | 1.918 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 7 | 0.001 | 0.002 | 0.374 | 0.197 | | 0.291 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 8 | 0 | 0.001 | 0.072 | 0.049 | | 0.144 | | | | | |
| Bal | B | r-DEM_SEINE | none | COD | 9 | | 0 | 0.019 | 0.016 | | 0.016 | | | | | |
| Bal | B | r-GILL | none | COD | 1 | 18.172 | 639.037 | 4.713 | 224.387 | | | | 0.338 | | | |
| Bal | B | r-GILL | none | COD | 2 | 573.797 | 491.796 | 260.16 | 636.002 | 1909.048 | 210.536 | 371.175 | 48.014 | 0.622 | 180.001 | |
| Bal | B | r-GILL | none | COD | 3 | 5257.035 | 445.906 | 3921.093 | 345.085 | 2663.936 | 31.346 | 1762.94 | 10.831 | 472.1 | 9.423 | 656.584 |
| Bal | B | r-GILL | none | COD | 4 | 3879.454 | 21.568 | 4765.184 | 29.696 | 1565.612 | 3.92 | 807.544 | 3.791 | 813.11 | 2.014 | 613.216 |
| Bal | B | r-GILL | none | COD | 5 | 1199.211 | 0.949 | 1204.965 | 1.828 | 333.208 | 0.109 | 303 | 0.271 | 296.429 | 0.721 | 330.278 |

Table 4.3.4: continued

| | | | | | | | | | | | | | | | | | |
|-----|---|-------------|--------|-----|---|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|---------|
| Bal | B | r-GILL | none | COD | 6 | 217.046 | 295.679 | 50.077 | 82.224 | 0.271 | 53.3 | 108.642 | | | | | |
| Bal | B | r-GILL | none | COD | 7 | 46.894 | 46.812 | 14.994 | 9.685 | | 11.692 | 22.759 | | | | | |
| Bal | B | r-GILL | none | COD | 8 | 4.808 | 7.429 | 3.215 | 2.636 | | 3.451 | 7.706 | | | | | |
| Bal | B | r-GILL | none | COD | 9 | 2.144 | 0.841 | 1.36 | 1.113 | | 0.897 | 1.303 | | | | | |
| Bal | B | r-LONGLINE | none | COD | 1 | | 1.834 | 32.01 | 1.607 | 6.097 | | | | | | | |
| Bal | B | r-LONGLINE | none | COD | 2 | 83.49 | 45.449 | 116.676 | 43.635 | 646.704 | 85.683 | 526.358 | 23.145 | 80.23 | | | |
| Bal | B | r-LONGLINE | none | COD | 3 | 1085.584 | 226.914 | 1037.697 | 38.905 | 1108.985 | 77.92 | 2014.193 | 768.679 | 331.614 | | | |
| Bal | B | r-LONGLINE | none | COD | 4 | 880.724 | 9.505 | 1385.274 | 4.319 | 737.397 | 9.081 | 483.418 | 878.355 | 309.591 | | | |
| Bal | B | r-LONGLINE | none | COD | 5 | 303.687 | 0.112 | 357.109 | 0.38 | 142.054 | 0.065 | 181.205 | 210.115 | 188.12 | | | |
| Bal | B | r-LONGLINE | none | COD | 6 | 66.89 | | 101.461 | 0.088 | 27.659 | | 35.239 | 41.449 | 41.239 | | | |
| Bal | B | r-LONGLINE | none | COD | 7 | 18.226 | | 19.706 | 0.088 | 10.188 | | 7.758 | 11.246 | 7.161 | | | |
| Bal | B | r-LONGLINE | none | COD | 8 | 1.838 | | 3.342 | | 1.945 | | 3.956 | 2.365 | 2.666 | | | |
| Bal | B | r-LONGLINE | none | COD | 9 | 0.355 | | 0.586 | | 0.733 | | 2.008 | 0.4 | 1.367 | | | |
| Bal | B | r-OTTER | BACOMA | COD | 1 | | 0.293 | 192.461 | | 1103.932 | | 91.216 | 477.656 | 68.814 | | | |
| Bal | B | r-OTTER | BACOMA | COD | 2 | 822.641 | 224.408 | 1162.922 | 430.835 | 3776.11 | 840.878 | 3525.149 | 2549.562 | 379.282 | 2230.908 | 1040.905 | 773.738 |
| Bal | B | 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 | B | 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 | B | 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 | B | r-OTTER | BACOMA | COD | 6 | 59.004 | 0.085 | 107.967 | 0.077 | 18.709 | | 98.372 | 109.705 | 214.977 | | | |
| Bal | B | r-OTTER | BACOMA | COD | 7 | 19.544 | | 26.325 | | 4.915 | | 12.799 | 50.134 | 12.05 | | | |
| Bal | B | r-OTTER | BACOMA | COD | 8 | 4.139 | | 9.022 | | 3.063 | | 9.456 | 9.69 | 42.361 | | | |
| Bal | B | r-OTTER | BACOMA | COD | 9 | 4.995 | | 1.348 | | 0.572 | | 2.888 | 2.276 | 0.669 | | | |
| Bal | B | r-OTTER | none | COD | 1 | | 225.397 | 98.59 | | 211.743 | | 56.849 | 69.994 | 46.815 | | | |
| Bal | B | r-OTTER | none | COD | 2 | 1224.637 | 1024.586 | 723.915 | 666.898 | 1031.544 | 807.794 | 1237.473 | 905.446 | 77.736 | 530.1 | 103.241 | 655.182 |
| Bal | B | r-OTTER | none | COD | 3 | 7547.921 | 1573.728 | 3629.288 | 626.956 | 3553.903 | 712.121 | 6020.388 | 1310.461 | 1214.993 | 700.416 | 1900.999 | 835.898 |
| Bal | B | r-OTTER | none | COD | 4 | 2659.86 | 201.387 | 2630.218 | 160.817 | 4705.392 | 195.71 | 2551.337 | 301.215 | 3907.33 | 170.159 | 3392.112 | 199.827 |
| Bal | B | r-OTTER | none | COD | 5 | 652.668 | 26.26 | 291.545 | 31.934 | 647.329 | 40.762 | 790.708 | 70.02 | 1848.685 | 32.751 | 2597.421 | 40.848 |
| Bal | B | r-OTTER | none | COD | 6 | 109.388 | 3.51 | 54.832 | 4.874 | 135.963 | 6.115 | 262.931 | 9.55 | 208.813 | 4.151 | 1055.089 | 5.19 |
| Bal | B | 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 | B | r-OTTER | none | COD | 8 | 4.667 | | 3.685 | | 5.105 | | 8.768 | 23.565 | 33.5 | | | |
| Bal | B | r-OTTER | none | COD | 9 | 1.931 | | 0.656 | | 2.705 | | 3.222 | 4.156 | 13.411 | | | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 1 | | | | | | | | | | | 1.518 | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 2 | | | | | | | | | | 44.344 | 12.163 | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 3 | | | | | | | | | | 154.43 | 16.798 | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 4 | | | | | | | | | | 111.913 | 3.099 | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 5 | | | | | | | | | | 21.694 | | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 6 | | | | | | | | | | 0.18 | | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 7 | | | | | | | | | | | | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 8 | | | | | | | | | | | | |
| Bal | B | r-PEL_TRAWL | BACOMA | COD | 9 | | | | | | | | | | | | |
| Bal | B | r-PEL_TRAWL | none | COD | 1 | | 1.991 | 2.832 | 1.989 | 62.578 | | 0.11 | 97.148 | | | | |
| Bal | B | 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 | B | r-PEL_TRAWL | none | COD | 3 | 153.791 | 1221.071 | 47.914 | 486.201 | | 1727.649 | 702.356 | 526.551 | 107.947 | 56.639 | 48.764 | |
| Bal | B | 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 | B | r-PEL_TRAWL | none | COD | 5 | 9.038 | 116.135 | 0.156 | 31.699 | | 184.784 | 216.648 | 0.149 | 38.618 | | | |
| Bal | B | r-PEL_TRAWL | none | COD | 6 | 1.84 | 16.857 | 0.01 | 3.746 | | 22.798 | 39.506 | 4.981 | | | | |
| Bal | B | r-PEL_TRAWL | none | COD | 7 | 0.504 | 8.497 | | 1.255 | | 2.262 | 13.013 | 0.316 | | | | |
| Bal | B | r-PEL_TRAWL | none | COD | 8 | 0.051 | 5.499 | | 0.254 | | 0.601 | 1.489 | 0.899 | | | | |
| Bal | B | r-PEL_TRAWL | none | COD | 9 | | 0.112 | | 0.061 | | 0.295 | 0.72 | 0.015 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 1 | | | | | 0 | | | | | | | |
| Bal | B | r-TRAMMEL | none | COD | 2 | 0.41 | 0.466 | | 0.001 | 0.001 | 0.248 | 0.058 | 0.569 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 3 | 6.699 | 4.788 | | 0.011 | 0 | 1.775 | 0.201 | 8.112 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 4 | 3.296 | 2.726 | | 0.007 | 0 | 0.592 | 0.031 | 8.592 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 5 | 0.482 | 0.184 | | 0.001 | 0 | 0.108 | 0.007 | 4.577 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 6 | 0.099 | 0.048 | | 0 | 0 | 0.02 | 0.001 | 1.619 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 7 | 0.03 | 0.02 | | 0 | 0 | 0.003 | 0 | 0.35 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 8 | 0 | 0.005 | | 0 | 0 | 0.001 | 0 | 0.051 | | | | |
| Bal | B | r-TRAMMEL | none | COD | 9 | | 0.001 | | 0 | 0 | 0 | 0 | 0.006 | | | | |

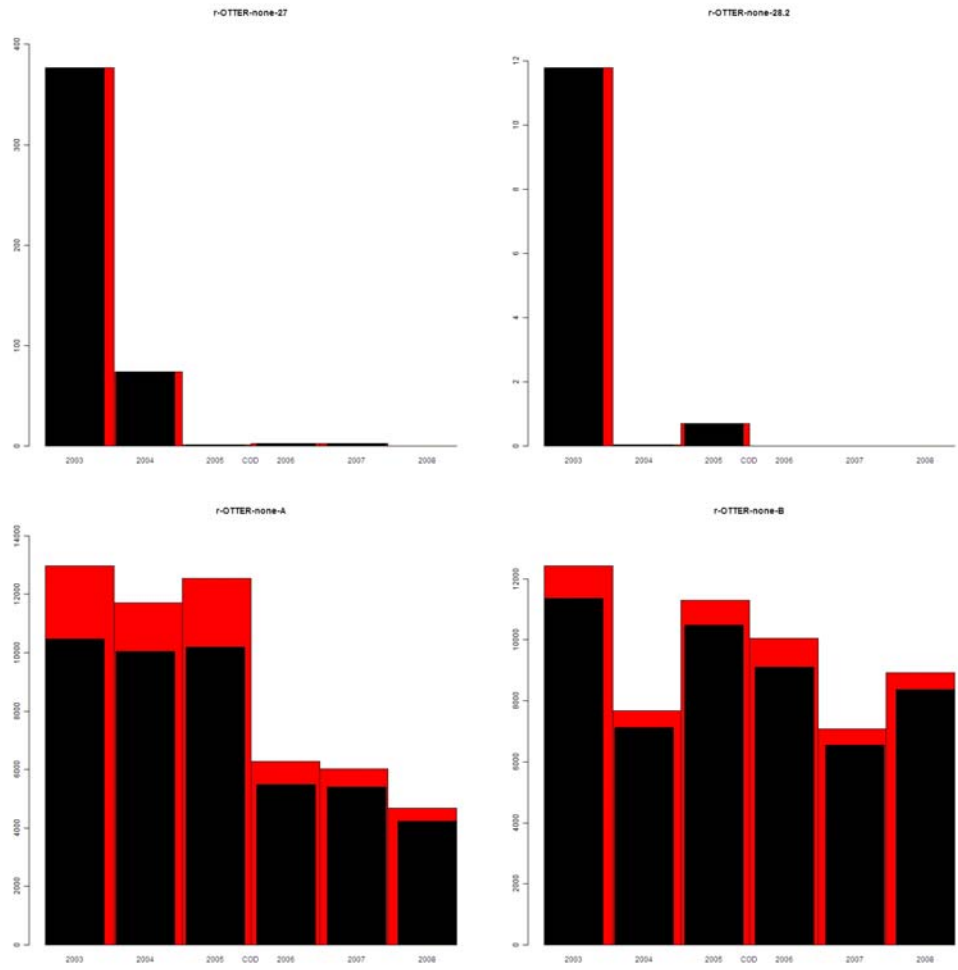


Figure 4.3.1 Catch and landings in tonnes of Baltic cod by sub-area and gear category 2003-2008. Black bars show landings, red bars catches (landings + discards). An “r” in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 3.6). Gear types without an “r”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

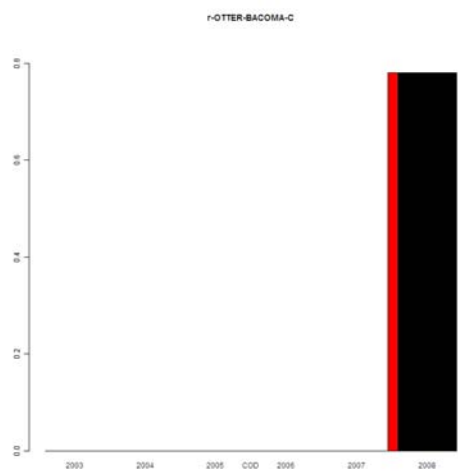
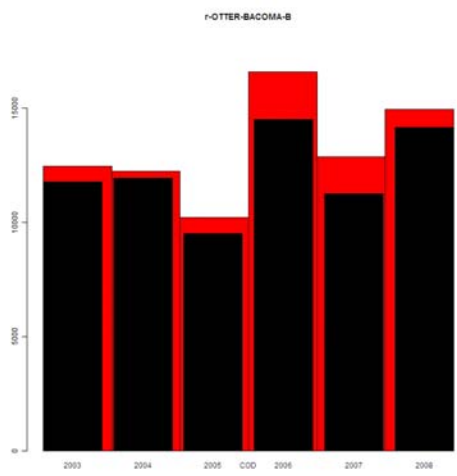
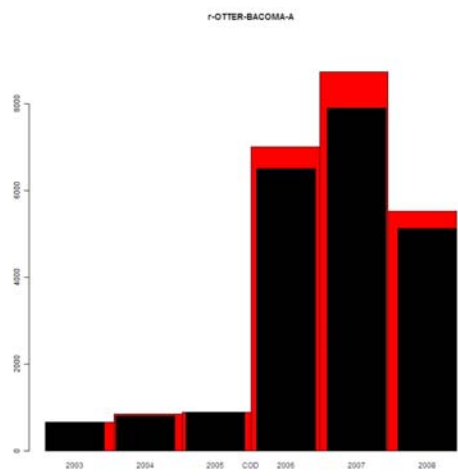
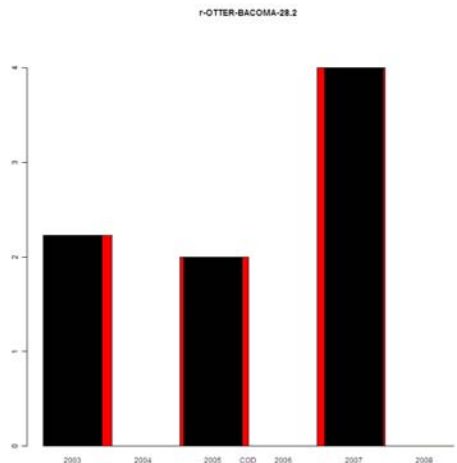
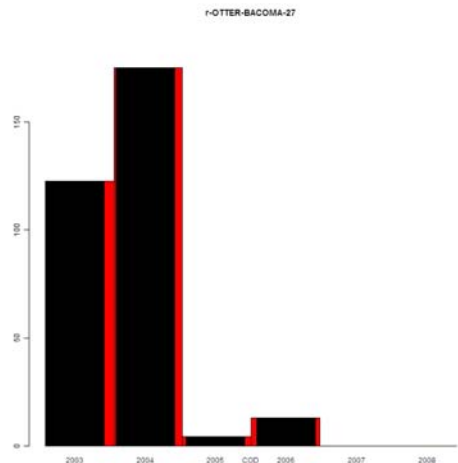


Figure 4.3.1 continued

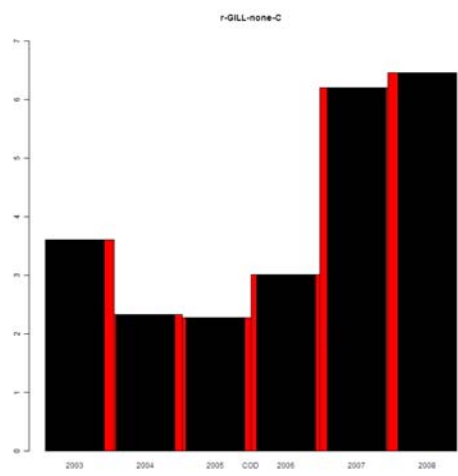
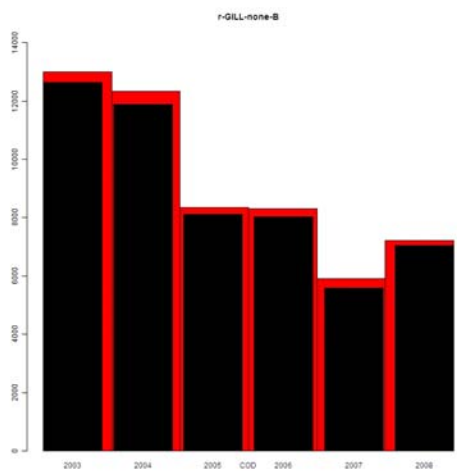
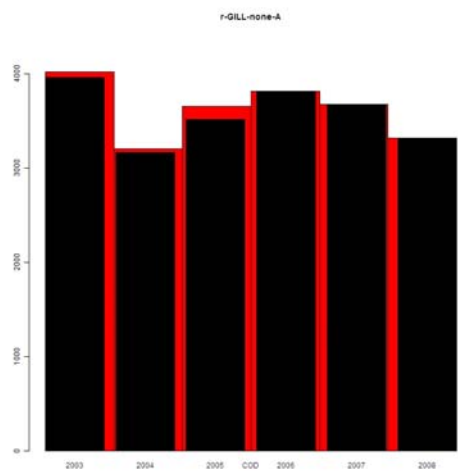
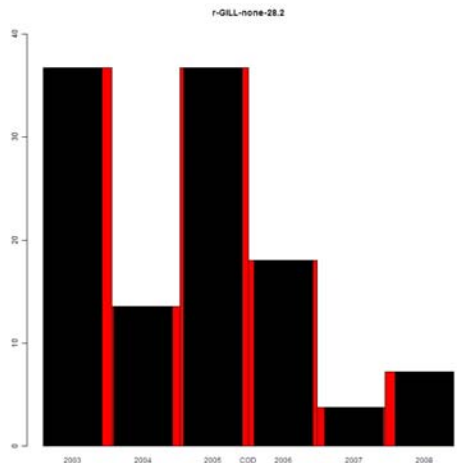
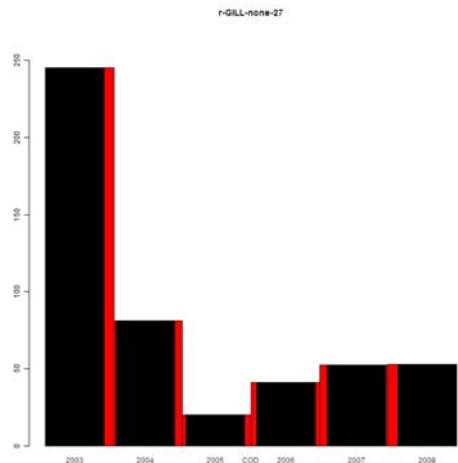


Figure 4.3.1 continued

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 ≥ 105 mm equipped with special condition BACOMA or T90. It is also permissible to fish with gill nets, entangling nets and trammel nets with mesh sizes ≥ 110 mm to < 156 mm and ≥ 156 mm. 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 sub-area A; B, C ,27; 28.2.

| ANNEX | SPECIES | REG AREA | REG GEAR | MESH SIZE | SPECON | CPUE 2003 | CPUE 2004 | CPUE 2005 | CPUE 2006 | CPUE 2007 | CPUE 2008 |
|-------|---------|----------|-------------------------|--------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| Bal | COD | A | Otter, Dem. seine etc.. | >=105 | Bacoma | 3743 | 4432 | 3559 | 3785 | 4640 | 3756 |
| Bal | COD | A | Otter, Dem. seine etc.. | >=105 | none | 2677 | 2682 | 2977 | 3440 | 3680 | 3258 |
| Bal | COD | A | 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 | A | Gill nets etc... | >=220 | none | 33 | 51 | 216 | 121 | 139 | 347 |
| Bal | COD | A | TRAMMEL | >=110 - <157 | none | 596 | 591 | 642 | 736 | 764 | 835 |
| Bal | COD | A | TRAMMEL | >=157 | none | 3836 | 3014 | 2690 | 4055 | 3644 | 2240 |
| Bal | COD | A | LONGLINE | none | none | 1616 | 1935 | 2332 | 1493 | 3339 | 1671 |
| Bal | COD | A | none | none | none | 166 | 114 | 222 | 298 | 194 | 236 |
| Bal | COD | B | Otter, Dem. seine etc.. | >=105 | Bacoma | 12351 | 8125 | 5882 | 7393 | 8600 | 7536 |
| Bal | COD | B | Otter, Dem. seine etc.. | >=105 | none | 3776 | 4662 | 5533 | 6439 | 9987 | 12204 |
| Bal | COD | B | Gill nets etc... | >=110 - <157 | none | 2245 | 1999 | 1535 | 2324 | 1894 | 1933 |
| Bal | COD | B | Gill nets etc... | >=157 | none | 162 | 37 | 19 | 6 | 110 | 398 |
| Bal | COD | B | Gill nets etc... | >=220 | none | 65 | 55 | 28 | 0 | 0 | 44 |
| Bal | COD | B | TRAMMEL | >=110 - <157 | none | 0 | 0 | 0 | 0 | 0 | 268 |
| Bal | COD | B | TRAMMEL | >=157 | none | 54455 | 14768 | | | | 18010 |
| Bal | COD | B | LONGLINE | none | none | 5972 | 8010 | 7209 | 8538 | 8483 | 6982 |
| Bal | COD | B | 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 | 0 | | | | |
| Bal | COD | 27 | LONGLINE | none | 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 | 75 | | | |
| 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 | 55 | 0 | 0 | 85 |
| Bal | COD | 28.2 | TRAMMEL | >=110 - <157 | none | 0 | 0 | 0 | 0 | 0 | 277 |
| Bal | COD | 28.2 | LONGLINE | none | none | | 0 | 255 | 0 | | |
| Bal | COD | 28.2 | none | none | none | | | 27 | 0 | 7 | |
| Bal | COD | C | Otter, Dem. seine etc.. | >=105 | Bacoma | | | | | | 463 |
| Bal | COD | C | Gill nets etc... | >=110 - <157 | none | 19 | 13 | 154 | 307 | 377 | 234 |
| Bal | COD | C | longline | none | none | | | | | | 0 |
| Bal | COD | C | 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 | A | Otter, Dem. seine etc.. | >=105 | Bacoma | 3743 | 4182 | 3548 | 3515 | 4204 | 3483 |
| Bal | COD | A | Otter, Dem. seine etc.. | >=105 | none | 2193 | 2310 | 2439 | 3036 | 3294 | 2957 |
| Bal | COD | A | Gill nets etc... | >=110 - <157 | none | 1412 | 1189 | 1042 | 1320 | 1476 | 1475 |
| Bal | COD | A | Gill nets etc... | >=157 | none | 1136 | 624 | 449 | 919 | 937 | 1126 |
| Bal | COD | A | Gill nets etc... | >=220 | none | 33 | 51 | 216 | 121 | 139 | 347 |
| Bal | COD | A | TRAMMEL | >=110 - <157 | none | 591 | 585 | 625 | 736 | 764 | 835 |
| Bal | COD | A | TRAMMEL | >=157 | none | 3836 | 3014 | 2690 | 4055 | 3644 | 2240 |
| Bal | COD | A | LONGLINE | none | none | 1602 | 1866 | 2225 | 1493 | 3339 | 1671 |
| Bal | COD | A | none | none | none | 166 | 113 | 222 | 298 | 194 | 236 |
| Bal | COD | B | Otter, Dem. seine etc.. | >=105 | Bacoma | 11681 | 7927 | 5489 | 6526 | 7701 | 7135 |
| Bal | COD | B | Otter, Dem. seine etc.. | >=105 | none | 3450 | 4384 | 5151 | 5775 | 9093 | 11429 |
| Bal | COD | B | Gill nets etc... | >=110 - <157 | none | 2198 | 1970 | 1511 | 2242 | 1846 | 1912 |
| Bal | COD | B | Gill nets etc... | >=157 | none | 162 | 37 | 19 | 6 | 110 | 398 |
| Bal | COD | B | Gill nets etc... | >=220 | none | 65 | 55 | 28 | 0 | 0 | 44 |
| Bal | COD | B | TRAMMEL | >=110 - <157 | none | 0 | 0 | 0 | 0 | 0 | 268 |
| Bal | COD | B | TRAMMEL | >=157 | none | 54455 | 14768 | | | | 18010 |
| Bal | COD | B | LONGLINE | none | none | 5744 | 7919 | 7037 | 8538 | 8483 | 6416 |
| Bal | COD | B | 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 | 0 | | | | |
| Bal | COD | 27 | LONGLINE | none | 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 | 75 | | | |
| 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 | 55 | 0 | 0 | 85 |
| Bal | COD | 28.2 | TRAMMEL | >=110 - <157 | none | 0 | 0 | 0 | 0 | 0 | 277 |
| Bal | COD | 28.2 | LONGLINE | none | none | | 0 | 255 | 0 | | |
| Bal | COD | 28.2 | none | none | none | | | 27 | 0 | 7 | |
| Bal | COD | C | Otter, Dem. seine etc.. | >=105 | Bacoma | | | | | | 463 |
| Bal | COD | C | Gill nets etc... | >=110 - <157 | none | 19 | 13 | 154 | 307 | 377 | 234 |
| Bal | COD | C | longline | none | none | | | | | | 0 |
| Bal | COD | C | 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 | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|-------------|----------|----------|----------|----------|----------|----------|
| Bal | A | COD | r-OTTER | 0.68 | 0.7 | 0.69 | 0.67 | 0.7 | 0.66 |
| Bal | A | COD | r-GILL | 0.2 | 0.18 | 0.19 | 0.19 | 0.18 | 0.21 |
| Bal | A | COD | r-DEM_SEINE | 0.06 | 0.07 | 0.04 | 0.07 | 0.06 | 0.08 |
| Bal | A | COD | r-TRAMMEL | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|-------------|----------|----------|----------|----------|----------|----------|
| Bal | B | COD | r-OTTER | 0.59 | 0.49 | 0.61 | 0.6 | 0.58 | 0.69 |
| Bal | B | COD | r-GILL | 0.31 | 0.3 | 0.24 | 0.19 | 0.17 | 0.21 |
| Bal | B | COD | r-LONGLINE | 0.07 | 0.08 | 0.08 | 0.08 | 0.06 | 0.05 |
| Bal | B | COD | r-PEL_TRAWL | 0.01 | 0.11 | 0.05 | 0.11 | 0.15 | 0.02 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|----------|----------|----------|----------|----------|----------|----------|
| Bal | C | COD | r-GILL | 1 | 1 | 0.5 | 0.43 | 1 | 0.75 |
| Bal | C | COD | GILL | | | 0.5 | 0 | | 0.12 |
| Bal | C | COD | r-OTTER | | | | | | 0.12 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|------------|----------|----------|----------|----------|----------|----------|
| Bal | 27 | COD | r-GILL | 0.32 | 0.24 | 0.67 | 0.71 | 0.95 | 0.95 |
| Bal | 27 | COD | r-LONGLINE | 0 | 0.02 | 0.03 | 0 | 0 | 0.05 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|-----------|----------|----------|----------|----------|----------|----------|
| Bal | 28.2 | COD | r-GILL | 0.73 | 0.74 | 0.8 | 0.78 | 0.36 | 0.88 |
| Bal | 28.2 | COD | r-TRAMMEL | | | 0 | 0 | 0 | 0.12 |

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

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|-------------|----------|----------|----------|----------|----------|----------|
| Bal | A | COD | r-OTTER | 0.65 | 0.68 | 0.65 | 0.65 | 0.68 | 0.64 |
| Bal | A | COD | r-GILL | 0.23 | 0.2 | 0.21 | 0.21 | 0.19 | 0.23 |
| Bal | A | COD | r-DEM_SEINE | 0.07 | 0.07 | 0.05 | 0.07 | 0.06 | 0.08 |
| Bal | A | COD | r-TRAMMEL | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|------------|----------|----------|----------|----------|----------|----------|
| Bal | B | COD | r-OTTER | 0.58 | 0.48 | 0.6 | 0.58 | 0.57 | 0.68 |
| Bal | B | COD | r-GILL | 0.32 | 0.3 | 0.24 | 0.2 | 0.18 | 0.21 |
| Bal | B | COD | r-LONGLINE | 0.07 | 0.09 | 0.08 | 0.08 | 0.06 | 0.05 |
| Bal | B | COD | PEL_TRAWL | 0 | 0.01 | 0.01 | 0.01 | 0.03 | 0.03 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|----------|----------|----------|----------|----------|----------|----------|
| Bal | C | COD | r-GILL | 1 | 1 | 0.5 | 0.43 | 1 | 0.75 |
| Bal | C | COD | GILL | | | 0.5 | 0 | | 0.12 |
| Bal | C | COD | r-OTTER | | | | | | 0.12 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|------------|----------|----------|----------|----------|----------|----------|
| Bal | 27 | COD | r-GILL | 0.32 | 0.24 | 0.67 | 0.71 | 0.95 | 0.95 |
| Bal | 27 | COD | r-LONGLINE | 0 | 0.02 | 0.03 | 0 | 0 | 0.05 |

| ANNEX | REG_AREA | SPECIES | REG_GEAR | 2003 Rel | 2004 Rel | 2005 Rel | 2006 Rel | 2007 Rel | 2008 Rel |
|-------|----------|---------|-----------|----------|----------|----------|----------|----------|----------|
| Bal | 28.2 | COD | r-GILL | 0.73 | 0.74 | 0.8 | 0.78 | 0.36 | 0.88 |
| Bal | 28.2 | COD | r-TRAMMEL | | | 0 | 0 | 0 | 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 |
| 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.

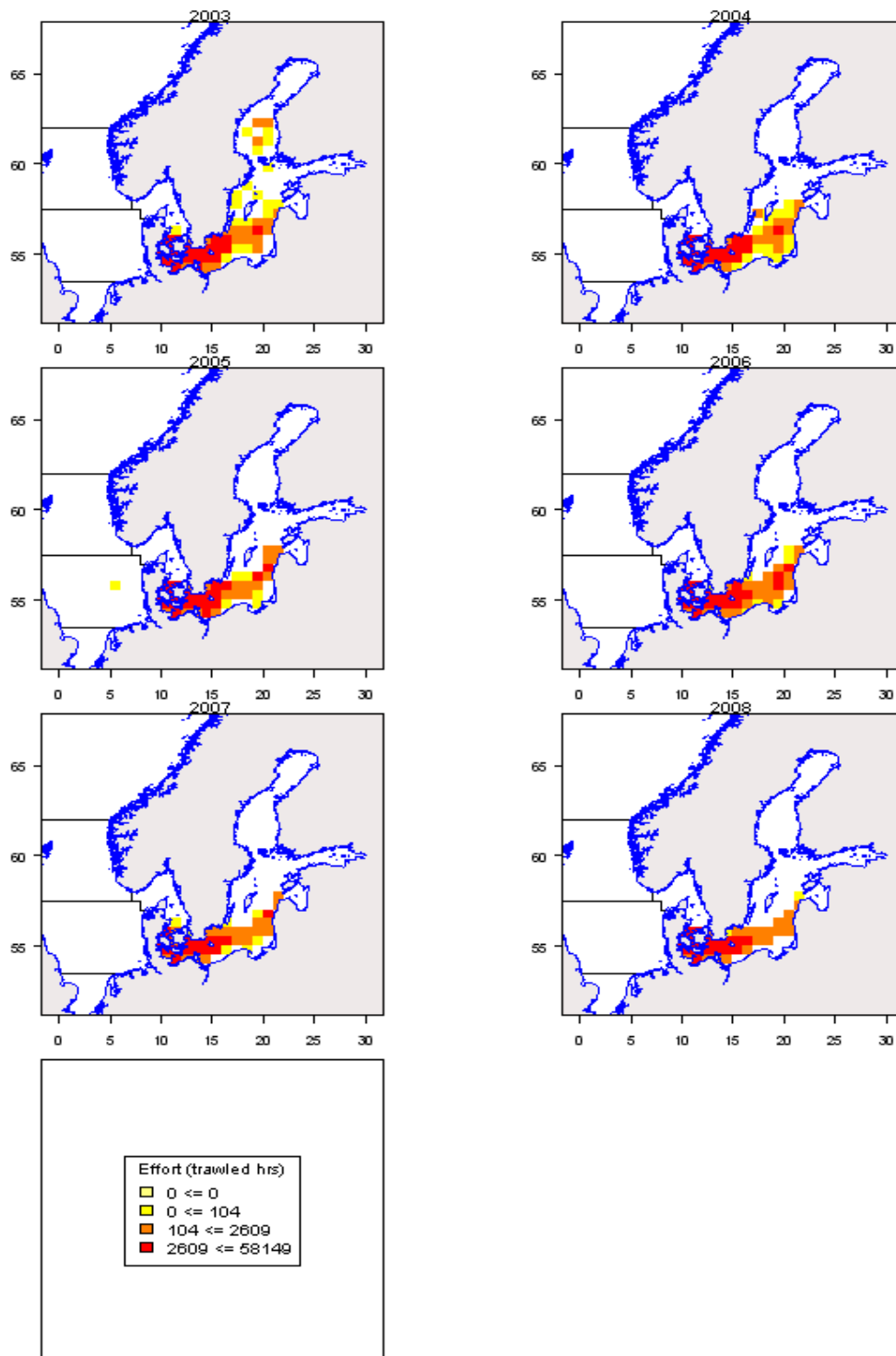


Figure. 4.7.1 Spatial distribution of effective effort (trawled hours) r-OTTER 2003-2008. There was no data reported on the spatial distribution of effort from Sweden, Poland and Lithuania and only a limited amount of data reported from Estonia and Finland.

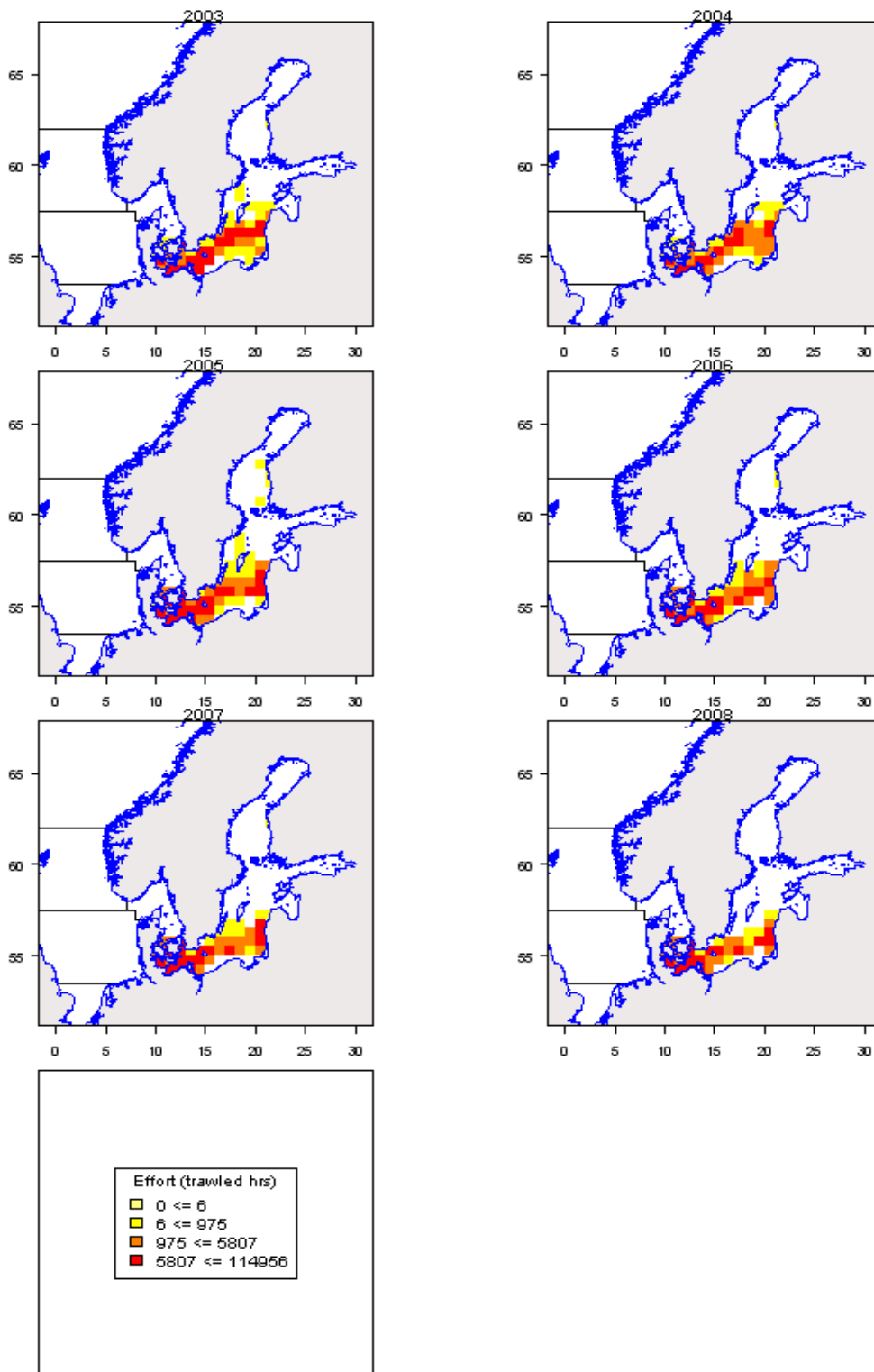



Figure. 4.7.2 Spatial distribution of effective effort (fishing hours) r-Gill 2003-2008. There was no data reported on the spatial distribution of effort from Sweden, Poland and Lithuania and only a limited amount of data reported from Estonia and Finland.

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

| | | | |
|---|--|---|-------------------|
|  | | EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES POLICY DEVELOPMENT AND CO-ORDINATION COMMON FISHERIES POLICY AND AQUACULTURE | |
| | | Brussels, 16.03.2009 D 02783 D(2009) | |
| MARE / C2 | | | |
| N° | D/2483 | | |
| DATE | 16.03.09 | | |
| ATTRIBUTION | | | |
| COPIE | FCC, KP, SL, JPP | | |
| INFO | | CIRC | 2 |
| FAX | | | |
| To: | Permanent Representations of all Member States to EU | | Telephone: |
| | | | Fax: |
| From: | Ernesto PENAS LADO | Telephone: | (32-2) 296 37 44 |
| | | Fax: | (32-2) 299 48 02 |
| Number of pages: | 3+16 | | |
| Subject: | 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:

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 with 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

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 métier, and area; this is free text with a maximum of 40 characters without space)
2. COUNTRY (this should be given according to the code list provided in Appendix 1)
3. YEAR (this should be given in four digits), like 2004
4. QUARTER (this should be given as one digit), like 1, 2, 3, or 4
5. GEAR (gear should be given according to the code list provided in Appendix 2, which follows the EU data regulation 1639/2001)
6. 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)
7. 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 identification)
8. AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 4)
9. SPECON to be specified in accordance with Appendix 5, text string of maximum 10 characters
10. 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" should be given)
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 that relate to discards only; a number should be given only if it relates to this fishery only; otherwise "-1" should be given)
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 given)
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 "-1")
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)
55. 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
102. Age 11 No. Landed (thousands)
103. Age 11 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
104. Age 11 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
105. Age 11 No. Discard (thousands)
106. Age 11 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
107. Age 11 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
108. Age 12 (years)=12
109. Age 12 No. Landed (thousands)
110. Age 12 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
111. Age 12 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
112. Age 12 No. Discard (thousands)
113. Age 12 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
114. Age 12 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
115. Age 13 (years)=13
116. Age 13 No. Landed (thousands)
117. Age 13 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
118. Age 13 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
119. Age 13 No. Discard (thousands)
120. Age 13 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
121. Age 13 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
122. Age 14 (years)=14
123. Age 14 No. Landed (thousands)
124. Age 14 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
125. Age 14 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
126. Age 14 No. Discard (thousands)
127. Age 14 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
128. Age 14 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
129. Age 15 (years)=15
130. Age 15 No. Landed (thousands)
131. Age 15 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)
132. Age 15 MEAN Length Landed (cm, precision in mm=1 digits after the comma)
133. Age 15 No. Discard (thousands)
134. Age 15 MEAN Weight Discard (kg, precision in gram=3 digits after the comma)
135. Age 15 MEAN Length Discard (cm, precision in mm=1 digits after the comma)
136. Age 16 (years)=16
137. Age 16 No. Landed (thousands)
138. Age 16 MEAN Weight Landed (kg, precision in gram=3 digits after the comma)

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

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 métier, and area; this is free text with a maximum of 40 characters without space)
2. COUNTRY (this should be given according to the code list provided in Appendix 1)
3. YEAR (this should be given in four digits)
4. QUARTER (this should be given as one digit)
5. VESSEL_LENGTH_CATEGORY (L < 10 m Loa ; 10 m Loa ≤ L < 15 m Loa ; 15 m Loa ≤ L)
6. 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)
7. 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)
8. 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)
9. AREA (the ICES division or sub-area should be given according to the code list provided in Appendix 4)
10. SPECON to be specified in accordance with Appendix 5, text string of maximum 10 characters
11. 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).
15. 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

1. ID (this is a unique identifier; e.g. the combination of country, year, quarter, gear, mesh size range, fishery or métier, and area; this is free text with a maximum of 40 characters without space)
2. COUNTRY (this should be given according to the code list provided in Appendix 1)
3. YEAR (this should be given in four digits)
4. QUARTER (this should be given as one digit)
5. VESSEL_LENGTH_CATEGORY (L < 10 m Loa ; 10 m Loa ≤ L < 15 m Loa ; 15 m Loa ≤ L)
6. 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).
7. 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)
8. 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)
9. 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, VII, 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 34.1.1, 34.1.2, 34.1.3 and 34.2. For the Annex IIA, IIB and IIC, please consider only ICES Divisions 2-10)
10. SPECON to be specified in accordance with Appendix 5, text string of maximum 10 characters
11. RECTANGLE (text, 4 letters like 44F6)
12. EFFECTIVE_EFFORT (hours fished, simple long numerical integer)

Appendix 1
Country coding

| 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/Hern) | 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 OF FISHING TECHNIQUES | | | Gear code |
|-----------------------------|--|---|-----------|
| Mobile gears | Beam trawls | | BEAM |
| | 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 | | LOGLINE |
| | Driftnets or Set gillnets (<i>except Trammel Nets</i>) | | 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 ¹ |
| | >=120 |
| Passive gears | 10-30 |
| | 31-49 |
| | 50-59 |
| | 60-69 |
| | 70-79 |
| | 80-89 |
| | 90-99 |
| | 100-109 |
| | 110-149 |
| | 110-156 ² |
| | 150-219 |
| | >=220 |

¹ To be used for mobile gears in the context the fishing effort management scheme applied in the Baltic Sea

² 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

Baltic Sea

22-24

25-28³

27

28.2

29-32

North Sea, Skagerrak, Kattegat and Eastern Channel

2 EU

3an

3as

4

7d

Northern Shelf

1 COAST⁴

1 RFMO⁵

2 COAST

2 RFMO

5a

5b EU⁶

5b COAST

5b RFMO

6a

6b EU

6b RFMO

7a⁷

12 RFMO

³ Areas 27 and 28.2 included.

⁴ COAST will refer to waters under jurisdiction of a non-EU coastal state.

⁵ RFMO will refer to waters where fisheries are managed through RFMOs.

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

⁷ ICES statistical rectangles of ICES division VIIa and corresponding to the BSA shall be included.

14a
14b COAST
14b RFMO
Southern Shelf
BSA⁸
7b⁹
7c EU
7c RFMO
7e
7f
7g¹⁰
7h¹¹
28E2
7j EU¹²
7j RFMO
7k EU
7k RFMO
8a
8b
8c
8d EU
8d RFMO
8e EU
8e RFMO
9a
9b EU
9b RFMO
10 EU

⁸ 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

⁹ ICES statistical rectangles of ICES division VIIb and corresponding to the BSA shall be included.

¹⁰ ICES statistical rectangles of ICES division VIIg and corresponding to the BSA shall be included.

¹¹ ICES statistical rectangles of ICES division VIIh and corresponding to the BSA shall be included.

¹² 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:

IIA83a

IIA83b

IIA83c

IIA83d

IIA83e

IIA83f

IIA83g

IIA83h

IIA83i

IIA83j

IIA83k

IIA83l

IIA83hj

Annex IIB:

IIB72ab

Annex IIC:

No special conditions

BALTIC Technical Conditions

Bacoma

T90

Appendix 6

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

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

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

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

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



EUROPEAN COMMISSION
 DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES
 POLICY-DEVELOPMENT AND CO-ORDINATION
 COMMON FISHERIES POLICY AND AQUACULTURE

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|-------------|-------------------|
| MARE / C2 | |
| N° | D/2975 |
| DATE | 19.03.09 |
| ATtribution | JL, KL |
| COPIE | KP, JPP |
| INFO | |
| | CIRC |

Brussels, 19.03.2009 D : 02975
 D(2009)

FAX

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Number of pages: 2

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 with the STECF secretariat, is described in the annex joined to this facsimile.

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 designaed as below :

⁸ 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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7. ANNEX-EXPERT DECLARATIONS

Declarations of invited experts are published on the STECF web site on <https://stecf.jrc.ec.europa.eu/home> together with the final report.

European Commission

EUR 24305 EN – Joint Research Centre – Institute for the Protection and Security of the Citizen

Title: Scientific, Technical and Economic Committee for Fisheries. Report of the SGMOS-09-05 Working Group on Fishing Effort Regime in the Baltic.

Author(s): Bailey N., Vanhee W., Davie S., Barratt K., Ulrich Rescan C., Silva C., González Herraiz I., Holmes S., Williamson K., Jardim E., Reeves S., Kempf A., Lövgren J., Coppin F., Vermand Y., Vérin Y., Stockhausen, B., Rätz H.-J.

Luxembourg: Office for Official Publications of the European Communities

2010 – 86 pp. – 21 x 29.7 cm

EUR – Scientific and Technical Research series – ISSN 1018-5593

ISBN 978-92-79-15354-9

DOI 10.2788/80511

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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LB-NA-24305-EN-N

