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Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Fishing Effort Regimes in European Waters Part 1 (STECF-12-09)

Edited by Hans-Joachim Rätz & Nikolaos Mitrakis
2012

This report was reviewed by the STECF during its 40th plenary meeting held from 9-13 July 2012, Copenhagen, Denmark.

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Joint Research Centre

European Commission
Joint Research Centre
Institute for the Protection and Security of the Citizen

Contact information

STECF secretariat
Address: TP 051, 21027 Ispra (VA), Italy
E-mail: stecf-secretariat@jrc.ec.europa.eu
Tel.: 0039 0332 789343
Fax: 0039 0332 789658

https://stecf.jrc.ec.europa.eu/home
http://ipsc.jrc.ec.europa.eu/
http://www.jrc.ec.europa.eu/

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EVALUATION OF FISHING EFFORT REGIMES IN EUROPEAN WATERS PART 1 (STECF-12-09)

THIS REPORT WAS REVIEWED DURING THE PLENARY MEETING HELD IN COPENHAGEN, DENMARK 9-13 JULY 2012

Request to the STECF

STECF is requested to review the report of the **EWG-12-06** held from June 11 – 15, 2012 in Lisbon, evaluate the findings and make any appropriate comments and recommendations.

Introduction

The report of the Expert Working Group on Evaluation of fishing effort regimes in Eurpean Waters Part 1 (EWG -12-06) was reviewed by the STECF during its 40th plenary meeting held from 9-13 July 2012, Copenhagen, Denmark. The following observations, conclusions and recommendations represent the outcomes of that review.

STECF COMMENTS, OBSERVATIONS, CONCLUSIONS, RECOMMENDATIONS

STECF notes that EWG 12-06 has extensively addressed the ToR regarding the fishing effort regime evaluations in the

- Eastern and Western Baltic,
- the Kattegat,
- the Skagerrak, North Sea, European waters in ICES Div.2 and the Eastern Channel,
- to the West of Scotland,
- Irish Sea,
- Celtic Sea,
- Atlantic waters off the Iberian Peninsula,
- Western Channel,
- and the Bay of Biscay.

The specific Western Waters and Deep Sea effort regime evaluations have been deferred to the follow-up meeting STECF EWG 12-12, 24-28 September 2012, Barza d'Ispra, Italy. The major outstanding task is the estimation and delivery of CPUE and LPUE by Member State. This omission will also be accomplished during the follow-up meeting of the working group.

STECF notes that its tasks have been supported by the DCF fishing effort data call in 2012. STECF notes a general improvement in data completeness and quality as well as better compliance with deadlines regarding Member States' data provisions. However, STECF notes that EWG 12-06 once again suffered from incomplete and erroneous data submissions and re-submission from Member States or no submission of data. Details about the DCF data call definitions, data quality in 2012 and significant shortfalls as identified by JRC and the experts contributing to the working group are summarized in section 4 of the EWG 12-06 report.

STECF notes that its evaluations related to the evaluation of the effects of the sub-articles 13.2.a-d of the Multiannual Cod Plan, in particular the presentation of fisheries specific fishing effort, landings and discards as well as estimations of partial fishing mortalities have been supported by data called by DG Mare from Member States and provided to the EWG 12-06 during the course of the meeting. Such specific data formats were defined by STECF during its spring plenary in 2012. While Denmark, France, Germany, and Ireland submitted relevant information on the application of specific provisions of article 13 2.a-d, UK provided only figures of fishing effort by area and gear and only for the TAC year 2011, which is not fully compatible with the calendar year and thus was not used by the STECF.

STECF notes that fisheries parameters, such as landings, discard estimates and fishing effort have been aggregated at levels consistent with the fisheries definitions in various regulations, i.e. annual TAC and Quota regulations and the stock specific multiannual management plans defined in the ToR.

STECF notes that all resulting fisheries parameters of various fishing effort regimes, including the ones elaborated for the outstanding Western Waters and Deep Sea regime evaluations, are downloadable at the requested aggregation in the format of digital appendixes to the present report at the working group's web page: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06.

STECF notes that EWG 12-06 has partly addressed the provision and evaluation of spatio-temporal catchability patterns. STECF will further address this point at its follow-up meeting EWG 12-12 in an attempt to provide an appropriate spatial resolution at which both annual commercial catch rate including discards and survey catch rate information and an appropriate procedure to estimate patterns of catchability indices.

STECF notes that the exhaustive long list of species in the DCF data call to support fishing effort regime evaluations is not entirely appropriate and has initiated a review in order to improve the effectiveness of future DCF data calls. STECF notes that EWG 12-06 will continue its considerations at its follow-up meeting EWG 12-12 and provide an updated list of species to be proposed in future DCF data calls. STECF further notes that the revision of the species list should consider the needs of future requests regarding ecosystem approach to fisheries management.

Major findings regarding effort regime evaluations as derived by STECF EWG 12-06 are summarized below.

Effort regime evaluation for the Baltic (Area 22-24, 25-28, and 29-32)

STECF notes that fisheries-specific effort and catch (landings and discards) figures by Member States have been updated up to and including 2011. These data are provided for both the Western and Eastern Baltic management areas as requested but are constrained by data submissions in response to the 2012 DCF data call.

STECF notes that the task to estimate the uptake of allowed fishing effort could not be accomplished due to the fact that the available data are not inadequate for such purposes. The maximum effort available is defined in days at sea per vessel multiplied with the number of vessels using regulated gears, while the DCF data definition is in units of kW days at sea per fishery. STECF notes that if a fishing effort regime in the Baltic is to be maintained, an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness is required.

In area A (Sub-divisions 22-24), the decreasing trend in gear groups regulated by fishing effort appears to have stabilised at a low level in 2011. Contrarily, the decreasing trend in the observed effort of unregulated gear groups continued in 2011. In area B (Subdivisions 25-28.2), the fishing effort of regulated and non-regulated has slightly increased in 2011 from a low level. Area C (Sub-divisions 29-32) is considered not important for the management of cod fisheries.

The contribution of non-regulated gears to cod catches appears generally low. STECF further notes that the contribution of discards is also estimated to range below 10%.

STECF notes the relatively strong correlation between overall fishing mortality on cod and overall fishing effort measured in kWdays at sea. Fisheries specific partial fishing mortalities on cod are also correlated with fleet-specific effort in kW days at Sea. The good overall correlation between F and fishing effort indicates that the control of fishing effort could be a useful auxiliary measure to catch constraints and technical measures to manage fishing mortality.

Effort regime evaluation for the Kattegat (Area 3an)

STECF notes that all Member States fishing in this area have reported their effort data for 2011, including mesh size range category and derogations and the overall confidence in the results is high. All countries submitted effort data only for 2011, it was thus not possible to look at annual trends in effort.

Fisheries in the Kattegat are almost exclusively conducted by Denmark and Sweden (86% and 13% of the total regulated effort in 2011 respectively) predominantly using trawls and primarily in the gear class TR2. Beam trawls are forbidden.

There are two derogations in place in Kattegat for TR2, CPart13 and CPart11. Since 2010, all Danish fishing activities were performed under the cod plan's provision in article 13.2.c, while all German fishing in gear category TR2 since 2010 fell under the article 13.2.b. Only Sweden reported under the derogation article 11 in gear category TR2, achieving the <1.5% cod catch by using a sorting grid. This represented 61% of the Swedish TR2 effort in Kattegat 2011 and 16% of the total TR2 effort in the area. Both derogations IIA83b (R (EC) 40/2008) and the CPart11 identify the Swedish sorting grid and are considered non-effort (unregulated) gears and are therefore not included in the effort regulated TR2 gear category in the tables and figures below (R (EC) No 1342/2008). The effort deployed by passive gears (GN1, GT and LL1) is relatively small, with a stable share of around 5% of the total regulated effort since 2005. The effort deployed by unregulated gear categories (including effort under the derogation CPart11) was 27% of the total effort in 2011.

According the ranked regulated gear groups' contributions to cod catch and landings in 2011, only the TR2 is estimated to exceed the level of the cumulative 20%.

STECF notes that information on fully documented fisheries FDF was only provided by Sweden and only for 2010. FDF fishing effort and catches appear negligible.

In order to evaluate the how representative the cod discard estimates for each regulated gear group are likely to be, Table 5.4.1 below lists for each regulated gear group, the proportion of cod landed that was not sampled for discards.

Table 5.4.1. Proportion of cod landed by regulated gear group that was not sampled for discards.

ANNEX	REG_AREA	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3a	GN1	COD								0.99	0.04
IIa	3a	GT1	COD								0.48	0.89
IIa	3a	LL1	COD									
IIa	3a	TR1	COD	0.57	0.62	0.70	0.65	0.62	0.79	0.95	0.78	0.00
IIa	3a	TR2	COD	0.23	0.10	0.01	0.01	0.00	0.03	0.03	0.09	0.01
IIa	3a	TR3	COD									0.00

The estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and recipient regulated gear groups are given in Table 5.4.2.

Table 5.4.2. Effort transfer factors between donor and recipient regulated gear groups Red cells indicate imprecise values due to lack of adequate discard information. Yellow cells indicate sufficient sampling and green cells good sampling information.

Kattegat									
	donor gear	receiving gear							
		GN1	GT1	LL1	TR1	TR2	TR3		CPUE
3a	GN1		1	1	0.529	0.822	1		74
3a	GT1	0.108		1	0.057	0.089	1		8
3a	LL1	0	0		0	0	1		0
3a	TR1	1	1	1		1	1		140
3a	TR2	1	1	1	0.643		1		90
3a	TR3	0	0	1	0	0			0

STECF notes that the correlations between the summed partial harvest rates for catch, landings and discards of cod of the major fisheries and their estimated fishing efforts are highly significant. The partial harvest rates of the dominating Danish and Swedish TR2 fisheries also closely correlated with their specific effort estimates in kW days at sea. Only the Danish gill netters are lacking such correlation. The good overall correlation between F and fishing effort indicates that the control of fishing effort could be a useful auxiliary measure to catch constraints and technical measures to manage fishing mortality.

STECF notes that there are no indications that the Danish TR2 fishery operating exclusively under Article 13.2.c since 2010 has contributed to the estimated reduction in harvest rate of cod since 2007.

Effort regime evaluation for the Skagerrak, North Sea including 2EU and Eastern Channel (Area 3b)

STECF notes that in this area, a substantial part of the effort is deployed by Non-European fleets (primarily Norway). Norwegian effort is not reported in the EWG report but Norwegian partial fishing mortality is accounted for in the sections dealing with fishery-specific partial fishing mortalities. Norwegian fishing effort is reported to ICES (ICES, 2012).

Catch and effort data including special conditions in force since 2009 (CPart11 and CPart13) have been provided by all Member States that have significant fishing activity in this area. As such, the data reported by national administrations are considered to represent a complete account of fishing effort by regulated gears in the area.

Overall in 2011, regulated gears represented 69% of the total effort in area 3b. The main gears in management area 3b are demersal trawls/seines and beam trawls (51% and 42% of total 2011 regulated effort respectively). Nominal effort by both of these gear types has decreased since 2003.

STECF notes that only TR1 and TR2 gears exceed the maximum permissible levels of fishing effort in kW days at sea. The other gears remain at or significantly below their permitted maximum levels.

According to the data submitted, the ranked regulated gear groups' contributions to cod catch and landings in 2011, only the TR1 and TR2 are estimated to exceed the level of the cumulative 20%.

STECF notes that in 2011, fully documented fisheries FDF still represent only a small proportion of the total effort (4.9%), but FDF effort is increasing in all countries operating FDFs. Cod catches were recorded in fisheries using TR1, TR2, GN1 and Pots, but most catches (95.3% of total FDF cod catches) were whilst vessels were using the TR1 gear. In total, 25% of cod catches by EU vessels were taken during FDF trials; 41%, 35%, 30% and 20% of English, Scottish Danish and Dutch cod catches respectively.

In order to evaluate the representativeness of the discard estimates, Table 5.4.3 below lists the relative amount of cod landings by regulated gear group without discard sampling in relation to the total landings of that gear group.

Table 5.4.3. Relative amount of cod landings by regulated gear group without discard sampling in relation to the total landings of that gear group

ANNEX	REG_AREA	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3b	BT1	COD	0.99			0.17		0.13			0.88
IIa	3b	BT2	COD	1.00	0.81	0.78	0.19	0.08	0.19	0.76	0.07	0.07
IIa	3b	GN1	COD	0.99	1.00	0.99			1.00	1.00	0.93	0.11
IIa	3b	GT1	COD					1.00	1.00	1.00	0.96	0.67
IIa	3b	LL1	COD									0.59
IIa	3b	TR1	COD	0.13	0.17	0.23	0.32	0.22	0.25	0.26	0.23	0.11
IIa	3b	TR2	COD	0.46	0.40	0.35	0.35	0.49	0.46	0.52	0.49	0.46
IIa	3b	TR3	COD		0.96	1.00					1.00	1.00

The estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and recipient regulated gear groups are given in Table 5.4.4.

Table 5.4.4. Effort transfer factors between donor and recipient regulated gear groups Red cells indicate imprecise values due to lack of adequate discard information. Yellow cells indicate sufficient sampling and green cells good sampling information.

Skagerrak, North Sea, 2EU and Eastern Channel											
	donor gear	receiving gear									
		BT1	BT2	GN1	GT1	LL1	TR1	TR2	TR3		CPUE
3b	BT1		1	0.197	1	0.599	0.19	0.693	1		190
3b	BT2	0.3		0.059	0.445	0.18	0.057	0.208	1		57
3b	GN1	1	1		1	1	0.964	1	1		964
3b	GT1	0.674	1	0.133		0.404	0.128	0.467	1		128
3b	LL1	1	1	0.329	1		0.317	1	1		317
3b	TR1	1	1	1	1	1		1	1		1000
3b	TR2	1	1	0.284	1	0.864	0.274		1		274
3b	TR3	0.053	0.175	0.01	0.078	0.032	0.01	0.036			10

STECF presents partial fishing mortalities for cod by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discards volumes in relation to the estimated total catch for the year available. It can be concluded from the estimated F in 2012 that the stock is subject to overfishing and that the annual F reductions are not following the plan. Discard mortality is generally high but has been reduced significantly since 2010.

STECF notes that the correlations between the summed partial Fs for catches of cod for the major fisheries and the sum of the reported fishing effort for those fisheries are highly significant. However, separate correlations between the partial Fs based on landings or partial Fs based on discards from the major fisheries with the reported effort for those fisheries are not significant. The partial Fs of some major fisheries are also not significantly correlated with their fishing effort, which requires further investigation. The good overall correlation between F and fishing effort indicates that the control of fishing effort could be a useful auxiliary measure to catch constraints and technical measures to manage fishing mortality.

STECF notes that there are no indications of a reduction in partial F for landings from the Danish TR1 fisheries and the Scottish TR1 fisheries operating under the provisions of article 13.2.b and c of the cod plan. However, the partial F for discards of the Scottish TR1 fishery and the Danish TR1 have decreased between 2010 and 2011 by 22 and 33% , respectively. The partial fishing mortality on cod of German TR1 fisheries and French TR1 fisheries operating under the provision of article 13.2.b are either negligible or have reduced substantially.

Partial Fs of major fisheries for haddock 3an, saithe 3an 4 and 6, as well as plaice and sole in 4 are also provided in the report.

STECF notes that discard information is often scarce and is inadequate to provide 2011 discard estimates for those specific fisheries that had additional quota allocations. The landings and discard of cod in 2011 by regulated gears by country and area are given in Table 5.4.5.

Landings and discard of cod in 2011 by regulated gears by country and area.

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	2EU & 4	UK (incl SCO)	TR1	11145.244	1402.372	0.112

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	4	DNK	TR1	2789.625	225.694	0.075

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	3an	DNK	TR2	938.181	480.905	0.339

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	3an & 4	DNK	GN	2252.196	unknown	unknown

Effort regime evaluation for the West of Scotland

STECF notes that the so-called management line to the West of Scotland, which delimits the cod recovery zone at its western boundary, prevents a full review of the fishing effort regime, as the requested data are not available at the required spatial resolution to allocate catches and effort exclusively to the cod recovery zone.

The fishery West of Scotland is primarily an otter trawl fishery; beam trawls and static gears are hardly used. Spanish data for 2011 was again not provided in the 2012 data call and therefore could not be considered in the catch and effort analyses for the whole time series.

In terms of kWdays the overall nominal effort (kW days at sea) in ICES division VIa displays a decrease of 43% since 2003. Reported effort of regulated gears in 2011 was 16% lower than in 2010. Without Spanish data the trend in longline (LL1) effort is uncertain but it is still the most important gear type after TR gears in this area.

The most important gear group in terms of cod catch and landings is TR1 accounting for on average (average of the years 2003-2011) 86% of the annual VIa cod total catch by weight. The second most important gear category is TR2. The overall discard rate of cod (by weight) has increased after 2003. The rate of discarding in the TR1 gears has been between 70% and 90% over the period 2008-2011. Catches of cod by TR2 'none' have been negligible since 2009. No information is available for *Nephrops* discards for all gear categories and for all the other species for the non-trawl gears. Cod CPUE values (kg/kW day) have increased considerably for the TR1 gear group since 2005.

In order to evaluate the representativeness of the discard estimates, Table 5.4.6 below lists the relative amount of cod landings by regulated gear group without discard sampling in relation to the total landings of that gear group.

Table 5.4.6. Relative amount of cod landings by regulated gear group without discard sampling in relation to the total landings of that gear group

ANNEX	REG_AREA	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3d	BT1	COD									
IIa	3d	BT2	COD									
IIa	3d	GN1	COD									
IIa	3d	LL1	COD									
IIa	3d	TR1	COD	0.25	0.29	0.29	0.29	0.26	0.29	0.45	0.03	0.21
IIa	3d	TR2	COD	0.04	0.09	0.07	0.45	0.12	0.26	0.11	0.96	0.09
IIa	3d	TR3	COD									

The estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and recipient regulated gear groups are given in Table 5.4.7.

Table 5.4.7. Effort transfer factors between donor and recipient regulated gear groups Red cells indicate imprecise values due to lack of adequate discard information. Yellow cells indicate sufficient sampling and green cells good sampling information.

West of Scotland									
	donor gear	receiving gear							
		BT1	BT2	GN1	LL1	TR1	TR2		CPUE
3d	BT1		1	0.1	1	0.006	0.077		1
3d	BT2	1		0.1	1	0.006	0.077		1
3d	GN1	1	1		1	0.058	0.769		10
3d	LL1	1	1	0.1		0.006	0.077		1
3d	TR1	1	1	1	1		1		171
3d	TR2	1	1	1	1	0.076			13

Fishing effort deployed and respective catches taken under the FDF scheme have been received and are presented in the EWG Report.

The EWG report also presents partial fishing mortalities by major fisheries and Member States based on the estimated fishing mortalities estimated by ICES (2012). STECF notes that the partial Fs for landings and summed partial Fs for discards (summed over all fisheries) are not significantly correlated with the reported fishing effort.

The discard partial F on cod for the Scottish TR1 gear group working under Article 13.2.b and c are currently high and accounts for the majority of the overall fishing mortality on cod. Furthermore, there are no indications that the partial F on cod is decreasing in the Scottish TR2 fishery working under the provisions of the Article 13.2.b and c. The lack of a significant correlation between F and effort for these major contributors to cod catches in VIa indicates that controlling kWdays at sea may not be an appropriate auxiliary measure to landings constraints and technical measures to control, fishing mortality on cod in division VIa.

Effort regime evaluation for the Irish Sea

STECF notes that the TR2 category (70-99mm mesh sizes) dominates the total fishing effort deployed, and effort had been relatively stable between 2003 and 2008. An effort reduction occurred in 2009, coinciding with the introduction of the current cod plan. Since 2009, effort has remained at the reduced level. The majority of TR2 effort is now carried out under Article 13 of Coun. Reg. 1342/2008 (CPart13; ~80-99% of TR2 effort). A small amount of effort previously incorporated in CPart13 became exempt from the cod plan effort restrictions under Article 11 of the regulation (CPart11) in 2010 (3%), doubling in 2011 to 6%.

STECF notes that cod landings 2009-2011 from VIIa have continued to follow the declining trend which began in 2009. In relation to overall landings by species, *Nephrops* dominate Irish Sea landings and have been above 9,000 t since 2007, peaking in 2008 and 2011 with over 10,000 t reported landed. Discard information available within the Irish Sea is incomplete. Discard data are not available for all species and/or years within each gear grouping. TR2 and BT2 have the most complete data particularly in more recent years, for species like cod, haddock, hake, plaice, rays, and whiting. Over the majority of the period, the TR1 gear grouping landed the greatest proportion of cod (~40%), however this changed in 2011 when the proportion dropped to 35%, to just below TR2. This placed TR2 as the top ranked gear in 2011 although demonstrating little change to 2010 proportions.

In order to evaluate the representativeness of the discard estimates, Table 5.4.8 lists the relative amount of cod landings by regulated gear group without discard sampling in relation to the total landings of that gear group.

Table 5.4.8. Relative amount of cod landings by regulated gear group without discard sampling in relation to the total landings of that gear group.

ANNEX	REG_AREA	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3c	BT2	COD			0.98		0.49	0.44	0.00	0.00	0.00
IIa	3c	GN1	COD									
IIa	3c	GT1	COD									
IIa	3c	LL1	COD									
IIa	3c	TR1	COD	0.91	0.81	0.97	1.00	0.82	1.00	0.96	0.96	0.65
IIa	3c	TR2	COD	0.47	0.61	0.64	0.61	0.46	0.65	0.56	0.25	0.37
IIa	3c	TR3	COD									

The estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and recipient regulated gear groups are given in Table 5.4.9.

Table 5.4.9. Effort transfer factors between donor and recipient regulated gear groups Red cells indicate imprecise values due to lack of adequate discard information. Yellow cells indicate sufficient sampling and green cells good sampling information.

Irish Sea									
	donor gear	receiving gear							
		BT2	GN1	GT1	LL1	TR1	TR2		CPUE
3c	BT2		0.016	0.081	1	0.078	0.725		50
3c	GN1	1		1	1	1	1		3094
3c	GT1	1	0.199		1	0.964	1		617
3c	LL1	0.02	0	0.002		0.002	0.014		1
3c	TR1	1	0.207	1	1		1		640
3c	TR2	1	0.022	0.112	1	0.108			69

STECF notes that there were no Fully Documented Fisheries (FDF) reported as operating within the Irish Sea.

STECF notes that the correlation between the summed partial Fs for landings from the major fisheries and their reported fishing effort is not statistically significant. The partial Fs of most Member State fisheries using regulated gears are not significantly correlated with reported effort for those fisheries.

The lack of significant relationships between F and effort for the greatest cod contributors to cod landings indicates that kWdays at sea may not be an appropriate auxiliary measure to landings constraints and technical measures. STECF EWG 12-06 notes that the lack of discard data for cod from the fisheries in VIIa prevents reliable conclusions to be made regarding fleet specific partial fishing mortalities and this should be taken into consideration when taking decisions on management.

Effort regime evaluation for the Celtic Sea

The trends in fisheries specific effort and catches is presented using the gear groupings defined in the multi-annual cod plan in order to allow managers to consider the data in the context of a possible extension of the cod plan to include the Celtic Sea. The Celtic Sea is defined into two management areas, i.e. ICES Divisions VIIbcefghjk and ICES Divisions VIIfg.

Trends in fishing effort for both the main regulated cod gears and non-regulated gears. Spanish data are not included as there were no data submitted. The demersal fisheries are dominated by the gears TR1, TR2 and BT2. Their effort measured in kWdays at sea remained stable during 2003-2007 and were reduced by about 20 % thereafter.

STECF notes that CPUE for cod cannot be reliably estimated because of a lack of representative discard estimates and while LPUE of cod increased significantly in 2011, this increase is likely to represent both an increase in the availability of cod in the area due to increased recruitment of the 2009 year-class and increased TAC in 2011.

Effort regime evaluation for Southern hake and Norway lobster

STECF notes that the analyses in the EWG 12-06 report are insufficient to fully address this ToR due to the unavailability of Spanish data. Spain failed to submit data for 2010 and 2011in response to the DCF data calls for fishing effort evaluations in 2011 and 2012. In addition, Portuguese discard data were resubmitted in 2012 in a format which is obviously consistent with DCF but inconsistent with the data formats and aggregation of the data calls. Therefore, Portuguese discard information previously provided, had to be deleted from the data bases and could no longer be used.

The EWG 12-06 report presents the available fishery-specific parameters aggregated according to the gear groupings in Annex IIB of the annual TAC and Quota Regulations (http://ec.europa.eu/fisheries/cfp/fishing_rules/tacs/index_en.htm).

STECF intends to complete the analyses during the follow-up meeting EWG 12-12, 24-28 September 2012, assuming that the information requested in the 2012 DCF data call is provided by the both the Spanish and Portuguese authorities.

STECF notes that the fishing effort regime is by units of days at sea per vessel. STECF notes that if a fishing effort regime Southern hake and Norway lobster is to be maintained, an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness is required.

Effort regime evaluation for the Western Channel

STECF notes the great majority of deployed fishing effort (kW days at sea) in the Western Channel is unregulated, while the two regulated gear groups, the beam trawls and the static nets, account for only a relatively small proportion of the overall deployed effort. The effort in kWdays at sea of gear groups regulated by fishing effort appears to be stable since 2009 after a major drop in 2008.

STECF notes that in 2011 sole landings were dominated by effort-regulated beam trawls (61%), non-effort regulated gears, (32%, mainly otter trawl gears), and static nets (7%). Hence, a relatively high percentage of sole is landed from gears that are not regulated by the effort regime of the slow management plan.

STECF notes that discard information in the Western Channel is scarce. The reported landings and estimated discards for sole by the regulated gear 3a (beam trawl) by UK in 2011 are given in Table 5.4.10.

Table 5.4.10. Reported UK landings and estimated discards for sole by the regulated gear 3a (beam trawl) in 2011.

ANNEX	SPECIES	Year	REG_AREA	COUNTRY	REG_GEAR	LANDINGS	DISCARDS	DISC RATE
IIc	SOL	2011	7e	ENG	3a	349.807	21.961	0.059

STECF notes that the correlations between the summed partial Fs for landings of the major fisheries and their estimated fishing efforts are highly significant for the period 2005-2011. The correlations exclude the years 2003 and 2004 as the DCF data do represent only about 50% of the landings officially reported to ICES. The partial Fs of Belgian and English fisheries using the regulated gear 3a are closely correlated with their respective effort estimates in kW days at sea. However for the French regulated fisheries (3a and 3b), which represent just about 10% of the sole landings, the correlations between partial F and effort (kWdays) are not statistically significant. Given that there is a significant correlation between F and effort for the majority of the fisheries that account for the majority of the fishing mortality on sole, STECF concludes that effective fisheries management for sole in ICES Division VIIe by fishing effort in units of kWdays at sea appears possible as an auxiliary measure to landings constraints and technical measures.

STECF notes that in 2011 the current fishing effort regime (days at sea per vessel) appears to not constrain the fisheries, which have only used between 10 and 79% of the days at sea available. STECF notes that if a fishing effort regime in the western channel is to be maintained, an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness is required

Effort regime evaluation for the Bay of Biscay

The EWG Report presents trends in fishing effort in kW days and landings by fisheries and Member State aggregated by major gear groups. Trends are also presented for the vessel groups that hold Bay of Biscay sole fishing permits (> 2 tons of sole per year) as defined in R (EC) No 388/2006.

STECF notes that all analyses and presented trends exclude Spanish data, as Spain did not respond to the 2012 DCF data call for fishing effort regime evaluations. Furthermore, the discard information is scarce and may be unrepresentative in some cases. Hence, the observed trends in fishing effort and landings are therefore biased and should be viewed as such.

STECF notes that the multiannual plan for the sustainable exploitation of the stock of sole in the Bay of Biscay (R (EC) 388/2006) stipulates maximum annual fishing capacity of the vessels holding the special fishing permit per Member State. STECF notes that the Belgian beam trawl fisheries have held Bay of Biscay sole fishing permits permit since 2006. 30%, 10% and 50% of French gill netters, trammel netters and otter trawlers respectively are reported to have been operating under Bay of Biscay sole fishing permits since 2010. STECF is therefore unable to fully evaluate the trend and uptake of the special fishing permit. The vessels holding the permits are indeed taking the great majority of sole landing in 2010 and 2011.

The analyses of partial fishing mortality by fishery will be addressed during the forthcoming STECF EWG 12-12, which will be held from 24-28 September 2012, Barza d'Ispra, Itlay.

REPORT TO THE STECF

EXPERT WORKING GROUP ON FISHING EFFORT REGIME EVALUATIONS PART 1 (EWG-12-06)

LISBON, 11-15 JUNE 2012

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

1 EXECUTIVE SUMMARY

STECF EWG 12-06 notes that it has extensively addressed the ToR regarding the fishing effort regime evaluations in the

- Eastern and Western Baltic,
- the Kattegat,
- the Skagerrak, North Sea, European waters in ICES Div.2 and the Eastern Channel,
- to the West of Scotland,
- Irish Sea,
- Celtic Sea,
- Atlantic waters off the Iberian Peninsula,
- Western Channel,
- and the Bay of Biscay.

The specific Western Waters and Deep Sea effort regime evaluations have been deferred to the follow-up meeting STECF EWG 12-12, 24-28 September 2012, Barza d'Ispra, Itlay. The major outstanding task is the estimation and delivery of CPUE and LPUE by Member State. This omission will also be accomplished during the follow-up meeting of the working group.

STECF EWG 12-06 tasks have been supported by the DCF fishing effort data call in 2012. STECF EWG 12-06 notes a general improvement in data completeness and quality as well as compliance with dead lines regarding Member States' data provisions. However, STECF EWG 12-06 suffered again from lack, delays, incompleteness and erroneous data submissions and re-submission. Details about the DCF data call definitions, data quality in 2012 and significant shortfalls as identified by JRC and the experts contributing to the working group are summarized in section 4.

STECF EWG 12-06 notes that it's evaluations related to the evaluation of the effects of the particular sub-articles 13.2.a-d of the Multiannual Cod Plan, in particular the presentation of fisheries specific fishing effort, landings and discards as well as estimations of partial fishing mortalities have been supported by data called by DG Mare from Member States and provided to STECF EWG 12-06 during the course of the meeting. Such specific data formats were defined by STECF during its spring plenary in 2012. While Denmark, France, Germany, and Ireland submitted relevant information on the application of specific provisions of article 13 2.a-d, UK did provided only figures of fishing effort by area and gear and only for the TAC year 2011, which is not fully compatible with the calendar year and thus was not used by the STECF EWG.

STECF EWG 12-06 notes that resulting aggregations of fisheries parameters, such as landings, discard estimates and fishing effort are consistent with the fisheries definitions in various regulations, i.e. annual TAC and Quota regulations and the stock specific multiannual management plans defined in the ToR.

STECF EWG 12-06 notes that all resulting fisheries parameters of various fishing effort regimes, including the ones defined for the outstanding Western Waters and Deep Sea regime evaluations, are downloadable at the requested aggregation in the format of digital Appendixes to the present report at the working group's web page: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06.

The STECF EWG 12-06 initiated considerations regarding the provision and evaluation of spatio-temporal catchability patterns. The EWG will continue its considerations at its follow-up meeting STECF EWG 12-12 regarding an appropriate spatial resolution at which both annual commercial catch rate including discards and survey catch rate information can be provided and the appropriate procedure to estimate patterns of catchability indices.

STECF EWG 12-06 notes that the exhaustive long list of species in the DCF data call to support fishing effort regime evaluations is inappropriate and initiated its review in order to improve the effectiveness of future DCF data calls. STECF EWG 12-06 will continue its considerations at its follow-up meeting STECF 12-12 and provide an updated list of species to be proposed in future DCF data calls.

Major findings regarding effort regime evaluations as derived by STECF EWG 12-06 are summarized in the following sections, specifically for each of the reviews undertaken.

Effort regime evaluation for the Baltic

STECF EWG 12-06 notes that fisheries specific effort and catch (landings and discards) figures by Member States have been updated until and including 2011 and illustrated for the Western as well as the Eastern Baltic management areas as requested and constrained by data submissions in response to the 2012 DCF data call.

STECF EWG 12-06 notes that the task to estimate the uptake of allowed fishing effort could not be accomplished due to the fact that the available data available are not compatible. The unit of maximum effort is defined by days at sea per vessel multiplied with the number of vessels using regulated gears while the DCF data definition is by fishery. STECF EWG 12-06 notes that if a fishing effort regime in the Baltic is to be maintained, it shall consider an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness.

In area A (Sub-divisions 22-24), the decreasing trend in gear groups regulated by fishing effort appears to be halted at a low level in 2012. Contrarily, the negative trend of gear groups not regulated by fishing effort continued in 2011. In area B (Subdivisions 25-28.2), the fishing effort of regulated and non-regulated has been slightly increasing from a low level in 2011. Area C (Sub-divisions 29-32) is considered not important for the management of cod fisheries.

The contribution of non-regulated gears to cod catches appears generally low, as the contribution of discards is also estimated to range below 10%.

The close correlations between fishing mortality and fishing effort measured in kWdays at sea as well as between partial fishing mortalities and the specific fishing effort by fisheries, emphasises the fact that effective fisheries management by fishing effort in units of kWdays at sea appears possible, also as an auxiliary measure to catch constraints and technical measures.

Effort regime evaluation for the Kattegat

STECF EWG 12-06 notes that all Member States fishing in this area have reported their effort data for 2011, including mesh size range category and derogations and the overall confidence in the results is high. All countries submitted effort data only for 2011, so there was no relative change from earlier submissions.

Fisheries in the Kattegat are almost exclusively conducted by Denmark and Sweden (86% and 13% of the total regulated effort in 2011 respectively) using predominantly trawls and primarily in the gear class TR2. Beam trawls are forbidden.

There are two derogations in place in Kattegat for TR2, CPart13 and CPart11. Since 2010, all Danish fishing activities were performed under the cod plan's provision in article 13.2.c, while all German fishing in gear category TR2 since 2010 fell under the article 13.2.b. Only Sweden reported under the derogation article 11 in gear category TR2, achieving the <1.5% cod catch by using a sorting grid. This represented 61% of the Swedish TR2 effort in Kattegat 2011 and 16% of the total TR2 effort in the area. The Swedish sorting grid was until 2009 under the derogation IIA83b in the old cod recovery plan (R (EC) 40/2008), and since it generates a catch composition that is very different from the TR2 'none' gear group it was decided to keep the old derogation in the tables by derogation of the present report. Both IIA83b and CPart11 are considered non-effort (unregulated) gears and are therefore not included in the effort regulated TR2 gear category in the tables and figures below (R (EC) No 1342/2008). The effort deployed by passive gears (GN1, GT and LL1) is relatively small, with a stable share of around 5% of the total regulated effort since 2005. The effort deployed by unregulated gear categories (including effort under the derogation CPart11) was 27% of the total effort in 2011.

According the ranked regulated gear groups' contributions to cod catch and landings in 2011, only the TR2 is estimated to exceed the level of the cumulative 20%.

STECF EWG notes that information on fully documented fisheries FDF was only provided by Sweden and only for 2010. FDF fishing effort and catches appear negligible.

STECF EWG 12-06 presents the estimated cod CPUE and respective effort transfer factors between donor and receiving regulated gear groups. All resulting transfer factors are indicated to be imprecise due to lack of adequate discard information.

STECF EWG 12-06 notes that the correlations between the summed partial harvest rates for catch, landings and discards of the major fisheries and their estimated fishing efforts are highly significant. The partial harvest rates of the dominating Danish and Swedish TR2 fisheries also closely correlated with their specific effort estimates in kW days at sea. Only the Danish gill netters are lacking such correlation. This indicates that effective fisheries management by fishing effort in units of kWdays at sea appears possible, also as an auxiliary measure to catch constraints and technical measures.

STECF EWG 12-06 notes that there are no indications that the Danish TR2 fishery operating exclusively under Article 13.2.c since 2010 has contributed to a reduction in harvest rate.

Effort regime evaluation for the Skagerrak, North Sea including 2EU and Eastern Channel

STECF EWG 12-06 notes that in this area, a substantial part of the effort is deployed by Non-European fleets (primarily Norway); this part is not accounted for in this report, except for the part dealing with partial fishing mortalities by fisheries. Norwegian fishing effort is reported to ICES (ICES, 2012)

Catch and effort data including special conditions in force since 2009 (CPart11 and CPart13) have been provided by all Member States with significant fishing activity in this area. As such, the data are considered to represent a complete account of fishing effort by regulated gears in the area as reported by national administrations.

Overall in 2011, regulated gears represented 69% of the total effort in area 3b. The main gears in management area 3b are demersal trawls/seines and beam trawls (51% and 42% of total 2011 regulated effort respectively). Nominal effort by both of these gear types has decreased since 2003.

STECF EWG 12-06 notes that only TR1 and TR2 gears exceed the maximum levels of fishing effort in kW days at sea. The other gears remains at or significantly below their maximum levels.

According the ranked regulated gear groups' contributions to cod catch and landings in 2011, only the TR1 and TR2 are estimated to exceed the level of the cumulative 20%.

STECF EWG 12-06 notes that in 2011, fully documented fisheries FDF still represent a small proportion of the total effort (4.9%), but it's increasing. All FDF countries contributed to this increase. Cod catches were recorded in fisheries using TR1, TR2, GN1 and Pots, but most catches (95.3% of total FDF cod catches) were whilst vessels were using the TR1 gear. In total, 25% of cod catches by EU vessels were taken during FDF trials; 41%, 35%, 30% and 20% of English, Scottish Danish and Dutch cod catches respectively.

STECF EWG 12-06 presents the estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and receiving regulated gear groups. Red cells indicate imprecise values due to lack of adequate discard information. Yellow cells indicate sufficient sampling and green cells good sampling information.

		BT1	BT2	GN1	GT1	LL1	TR1	TR2	TR3		CPUE
3b	BT1		1	0.197	1	0.599	0.19	0.693	1		190
3b	BT2	0.3		0.059	0.445	0.18	0.057	0.208	1		57
3b	GN1	1	1		1	1	0.964	1	1		964
3b	GT1	0.674	1	0.133		0.404	0.128	0.467	1		128
3b	LL1	1	1	0.329	1		0.317	1	1		317
3b	TR1	1	1	1	1	1		1	1		1000
3b	TR2	1	1	0.284	1	0.864	0.274		1		274
3b	TR3	0.053	0.175	0.01	0.078	0.032	0.01	0.036			10

The STECF EWG presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discards volumes in relation to the estimated total catch for the year available. It can be concluded from the estimated F in 2012 that the stock is subject to overfishing and that the annual F reductions are not following the plan. Discard mortality is generally high but has been reduced significantly since 2010.

STECF EWG 12-06 notes that the correlations between the summed partial Fs for catches of the major fisheries and their estimated fishing efforts are highly significant, but insignificant between landings and discard portions with fishing effort. The partial Fs of some major fisheries are also not significantly correlated with their fishing effort, which requires further investigation. The overall coincidence between F and fishing effort indicates that effective fisheries management by fishing effort in units of kWdays at sea shall be possible, also as an auxiliary measure to catch constraints and technical measures. STECF EWG 12-06 notes that there are no indications of reductions in partial Fs from landings of the Danish TR1 fisheries and the Scottish TR1 fisheries operating under the provisions of article 13.2.b and c of the cod plan. However, the reduction in partial F for discards of the Scottish TR1 fishery appears evident for the past three years, as well as for Danish TR1 in 2011, resulting in a reduction in partial Fs by 22 and 33% from 2010 to 2011, respectively. The German and French fisheries operating under the provision of article 13.2.b are either negligible or have reduced their effect in cod fishing mortalities substantially.

STECF EWG 12-06 notes that partial Fs of major fisheries for haddock 3an, saithe 3an 4 and 6, as well as plaice and sole in 4 are also provided.

STECF EWG 12-06 notes that discard information is often scarce and inadequate to support provision of the requested 2011 discard estimates for specific fisheries with additional quota allocations. The landings and discards for cod by the regulated gear for the countries and areas are estimated as:

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	2EU & 4	UK (incl SCO)	TR1	11145.244	1402.372	0.112

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	4	DNK	TR1	2789.625	225.694	0.075

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	3an	DNK	TR2	938.181	480.905	0.339

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	3an & 4	DNK	GN	2252.196	unknown	unknown

Effort regime evaluation for the West of Scotland

STECF EWG 12-06 notes that the so-called management line to the West of Scotland, which delimits the cod recovery zone at its western boundary, prevents a full review of the fishing effort regime as the requested and analysed data are not specific to separate the fisheries parameters between within and without the cod recovery zone.

The fishery West of Scotland is primarily an otter trawl fishery; beam trawls and static gears are hardly used. However Spanish data is not available for division VIa since 2010. In terms of kWdays the overall nominal effort in ICES division VIa displays a decrease of 43% since 2003. Recorded effort in 2011 was 52% lower than that in 2003 and 14% lower than in 2010. Without Spanish data the trend in longline (LL1) effort is uncertain but it is still the most important gear type after TR gears in this area.

The most important category in terms of cod catch and landings is TR1 with a three year average of 94-95% of the VIa cod catch – and landings - total by weight. The second most important gear category is TR2. The overall discard rate of cod (by weight) has increased in years subsequent to 2003. The rate of discarding in the TR1 gears has been between 70 and 90% in 2008-2011. Catches of cod by TR2 'none' have been negligible since 2009. Discard information on Nephrops for any gear and for all other species for non-trawl gears was not available for this report. Cod CPUE values have increased considerably for the TR1 gear type since 2005.

STECF EWG 12-06 presents the estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and receiving regulated gear groups. Red cells indicate imprecise values due to lack of adequate discard information. Green cells indicate well representative sampling.

	donor gear	receiving gear							
		BT1	BT2	GN1	LL1	TR1	TR2		CPUE
3d	BT1		1	0.1	1	0.006	0.077		1
3d	BT2	1		0.1	1	0.006	0.077		1
3d	GN1	1	1		1	0.058	0.769		10
3d	LL1	1	1	0.1		0.006	0.077		1
3d	TR1	1	1	1	1		1		171
3d	TR2	1	1	1	1	0.076			13

Fishing effort deployed and respective catches taken under the FDF scheme have been received and are presented.

The STECF EWG 12-06 presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discard volumes in relation to the estimated total landings for the years available. STECF EWG 12-06 notes that the correlation between the summed partial Fs for landings and discards of the major fisheries and their estimated fishing efforts is not statistically significant. The partial Fs of discards from the Scottish TR1 working under the Article 13.2.b and c are recently high and dominating the fishing mortality. There are also no indications that the partial F is decreasing in the Scottish TR2 fishery working under the provisions of the Article 13.2.b and c. The lack of significant relationships between F and effort for the greatest cod contributors to cod catches indicates that kWdays at sea may not be an appropriate auxiliary measure to catch constraints and technical measures.

Effort regime evaluation for the Irish Sea

STECF EWG 12-06 notes that the TR2 category (70-99mm mesh sizes) dominates, and effort had been relatively stable between 2003 and 2008. An effort reduction occurred in 2009, coinciding with the introduction of the current cod plan, since then effort has remained at the reduced level. The majority of TR2 effort is now carried out under Article 13 of Coun. Reg. 1342/2008 (CPart13; ~80-99% of TR2 effort). A small amount of effort previously incorporated in CPart13 became exempt from the cod plan effort restrictions under Article 11 of the regulation (CPart11) in 2010 (3%), doubling in 2011 to 6%.

STECF EWG 12-06 notes that cod landings have continued to follow the declining trend which began in 2009. In relation to overall landings by species, Nephrops dominate Irish Sea landings and have been above 9kt since 2007, peaking in 2008 and 2011 with over 10kt. Discard information available within the Irish Sea is incomplete. Discard data is not available for all species and/or years within each gear grouping. TR2 and BT2 have the most complete data particularly in more recent years, for species like cod, haddock, hake, plaice, rays, and whiting. Over the majority of the period, TR1 land the greatest proportion of cod (~40%), however this changed in 2011 when the proportion dropped to 35%, following a declining trend, to just below TR2. This placed TR2 as the top ranked gear in 2011 although demonstrating little change to 2010 proportions.

STECF EWG 12-06 presents the estimated cod CPUE (average 2009-2011) and respective effort transfer factors between donor and receiving regulated gear groups. Red cells indicate imprecise values due to lack of adequate discard information. Yellow cells indicate sufficient sampling.

	donor gear	receiving gear							
		BT2	GN1	GT1	LL1	TR1	TR2		CPUE
3c	BT2		0.016	0.081	1	0.078	0.725		50
3c	GN1	1		1	1	1	1		3094
3c	GT1	1	0.199		1	0.964	1		617
3c	LL1	0.02	0	0.002		0.002	0.014		1
3c	TR1	1	0.207	1	1		1		640
3c	TR2	1	0.022	0.112	1	0.108			69

STECF EWG 12-06 notes that there were no Fully Documented Fisheries (FDF) reported as operating within the Irish Sea.

STECF EWG 12-06 notes that the correlation between the summed partial Fs for landings of the major fisheries and their estimated fishing efforts is not statistically significant. The partial Fs of most Member State fisheries using regulated gears are not significantly correlated with their specific effort estimates ($p \leq 0.05$).

The lack of significant relationships between F and effort for the greatest cod contributors to cod landings indicates that kWdays at sea may not be an appropriate auxiliary measure to catch constraints and technical measures. STECF EWG 12-06 notes that the lack of discards prevents reliable conclusions and shall be considered when assessing management risks.

Effort regime evaluation for the Celtic Sea

STECF EWG 12-06 presents its review of trends in fisheries specific effort and catches in a consistent aggregation of the fisheries defined in the multi-annual cod plan to allow managers to evaluate the data with regard to a theoretical extension of the cod plan to include the Celtic Sea. The Celtic Sea is defined into two management areas, i.e. ICES Sub-divisions 7bcefghjk and ICES Sub-divisions 7fg.

STECF EWG 12-06 presents trends in fishing effort for the sensitive cod gears and non-regulated gears. Spanish data are not included as there were no data submitted. The demersal fisheries are dominated by the gears TR1, TR2 and BT2. Their effort measured in kWdays at sea remained stable during 2003-2007 and were reduced by about 20 % thereafter.

While discard information is scarce, LPUE of cod increased significantly in 2011.

Effort regime evaluation for Southern hake and Norway lobster

STECF EWG 12-06 notes that the presented analyses are considered insufficient to fully address the specific ToR due to the unavailability of Spanish data for 2010 and 2011, which were not submitted in response to the DCF data calls for fishing effort evaluations in 2011 and 2012. In addition, Portuguese discard data were resubmitted in 2012 in a format which is obviously consistent with DCF but inconsistent with the data formats and aggregation of the data calls. Therefore, earlier provided discard information had to be deleted from the data bases and could not be used any longer.

STECF EWG 12-06 presents the requested fisheries specific parameters available aggregated to the definitions of gear groups in the Annex IIB of the annual TAC and Quota Regulations.

STECF EWG will complete the analyses during its follow-up meeting EWG 12-12, 24-28 September 2012, to the extent of the provision of the requested information defined in the DCF data call in 2012 is provided.

STECF EWG 12-06 notes that the fishing effort regime is by units of days at sea per vessel. STECF EWG 12-06 notes that if a fishing effort regime with regards to Southern hake and Norway lobster is to be maintained, it shall consider an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness.

Effort regime evaluation for the Western Channel

STECF EWG 12-06 notes the great majority of fishing effort deployed in the Western Channel is non-effort regulated, while the two regulated gear groups, the beam trawls and the static nets, constitute relatively small part. The effort in kWdays at sea of gear groups regulated by fishing effort appears to be stable since 2009 after a major drop in 2008.

STECF EWG 12-06 notes that sole landing are dominated by effort regulated beam trawls (61%), non-effort regulated gears, (32%, mainly otter trawl gears), and static nets (7%). STECF EWG 12-06 reiterates its observation that a relatively high percentage of sole is landed by non-effort regulated gears.

STECF EWG 12-06 notes that discard information in the Western Channel is scarce. The landings and discards for sole by the regulated gear 3a (beam trawl) by UK are estimated as:

ANNEX	SPECIES	Year	REG_AREA	COUNTRY	REG_GEAR	LANDINGS	DISCARDS	DISC RATE
IIc	SOL	2011	7e	ENG	3a	349.807	21.961	0.059

STECF EWG 12-06 notes that the correlations between the summed partial Fs for landings of the major fisheries and their estimated fishing efforts are highly significant for the period 2005-2011. The correlation excludes the years 2003 and 2004 as the DCF data do represent only about 50% of the landings reported to ICES. The partial Fs of Belgian and English fisheries using the regulated gear 3a are closely correlated with their specific effort estimates in kW days at sea. However for the French regulated fisheries (3a and 3b), which represent just about 10% of the sole landings, the correlation between F and effort (kWdays) is statistically not significant. This indicates that effective fisheries management for sole in ICES Division VIIe by fishing effort in units of kWdays at sea appears possible, also an auxiliary measure to catch constraints and technical measures.

STECF EWG 12-06 notes that in 2011 the current fishing effort regime (days at sea per vessel) appears not constraining the fisheries, which have only used between 10 and 79% of the days at sea available. STECF EWG 12-06 notes that if a fishing effort regime in the Western Channel is to be maintained, it shall consider an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness. The lack of discard information in the assessment and forecast of fishing opportunities shall be considered when assessing management risks.

Effort regime evaluation for the Bay of Biscay

STECF EWG 12-06 presents trends in fishing effort and landings by fisheries and Member States aggregated towards major gear groups and, separately, for the vessels holding a special fishing permit (> 2 tons of sole per year) as defined in R (EC) No 388/2006. The regulation is therefore in the unit of fishing capacity.

STECF EWG 12-06 notes that all analyses and presented trends do exclude Spanish data, as Spain did not respond to the respective DCF data call for fishing effort regime evaluations. The resulting trends in fishing effort and landings shall be interpreted bearing in mind that the Spanish data are not considered and that discard information is scarce and dubious in certain cases.

STECF EWG 12-06 notes that the multiannual plan for the sustainable exploitation of the stock of sole in the Bay of Biscay (R (EC) 388/2006) stipulates provisions regarding maximum annual fishing capacity of the vessels holding the special fishing permit per Member State. STECF EWG 12-06 notes that only Belgium has provided the requested annual capacity data. STECF EWG 12-06 is therefore unable to evaluate the fishing effort regime in the Bay of Biscay, i.e. mainly to compare the trend in authorized fishing capacity with the trend in fishing mortality.

STECF EWG 12-06 notes that the French data submission on fishing effort in kWdays at sea and French landings consider special fishing permits only since 2010. STECF EWG 12-06 is therefore unable to fully evaluate the trend and uptake of the special fishing permit. STECF EWG 12-06 notes that the Belgian beam trawl fisheries are working exclusively under the provision of the special fishing permit since 2006, and that the French gill netters, trammel netters and otter trawlers are reported to be operating with the permit since 2010 at a rate of around 30, 10 and 50%, respectively. The vessels holding the permits are indeed taking the great majority of sole landing in 2010 and 2011.

STECF EWG 12-06 notes that it will address the outstanding analyses of partial fishing mortality by fisheries during its follow up meeting STECF EWG 12-12, 24-28 September 2012, Barza d'Ispra, Itlay.

2 RECOMMENDATIONS OF THE WORKING GROUP

The STECF EWG 12-06 has no specific recommendations.

3 INTRODUCTION

The STECF EWG 12-06 met during 11-15 June 2012 at the Portuguese Institute for Oceans and Fisheries (IPIMAR) in Lisbon, Portugal. The meeting started by 9 am on 11 June and was adjourned by 4 pm on 15 June 2012. Working conditions provided were optimum.

3.1 Terms of Reference for EWG-12-06 and EWG 12-12

Background

The Commission consults the STECF 'Working Group on fishing effort regime evaluations' 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],
- ✓ the multi-annual plan of Western Channel sole stock [R(EC) No 509/2007],
- ✓ the multi-annual plan for the cod stocks in the Baltic Sea [R(EC) No 1098/2007],
- ✓ the multi-annual plan for the sustainable exploitation of the stock of sole in the Bay of Biscay [R(EC) No 388/2006],
- ✓ 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 overarching request is for: i) an assessment of fishing effort deployed by fisheries

and métiers which are currently affected by fishing effort management schemes as defined in Annex II of the TAC and Quota Regulations Regulation and including an assessment of fishing effort deployed by fisheries and métiers which would be affected by the extension of the cod recovery plan to the Celtic Sea and an assessment of effort in the Biscay sole fishery.); ii) an assessment of effort in the Baltic Sea and iii) an assessment of effort in Deep Sea and Western Waters regimes.

There will be two meetings of this STECF Working Group which will take place from 11 to 15 June 2012 and from 24 to 28 September 2012.

1 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Baltic Sea cod management plan R(EC) No 1098/2007

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 defined in **R(EC) No 1098/2007** (and by associated special conditions defined in the Appendix 6 of the data call);

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

for the following parameters:

a. Fishing effort, measured in kW.days and in GT.days

b. Fishing activity measured in days absent from port (according to definitions adopted in R(EC) No 1098/2007) and fishing capacity measured in kW, GT and in number of vessels concerned per year.

c. Catches (landings and discards provided separately) of cod in the Baltic Sea by weight and by numbers at age.

d. Catches (landings and discards provided separately) of non-cod in the Baltic Sea by species, by weight and by numbers at age

e. 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 8 metres in each fishery, by gear and by Member State according to sampling plans implemented to estimate these parameters.

4. To assess fishing mortality by Member State and regulated gear types corresponding to the effort deployed and the calculated maximum effort allocated.

5. To quantify the evolution of the calculated maximum effort allocated to the cod fleet (regulated gear types) in relation to the effort really used by that fleet and highlight possible shifts between metiers.

6. To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2011 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differs from the figures estimated by the STECF for vessels not participating in these trials.

7. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

8. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

9. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

10. To assess and present in a tabular form the annual partial fishing mortalities of cod, for landings and discards separately, as generated by the effort regulated gears and the non-regulated gears by fishing areas and Member States, the latter non-regulated gears as a single lump group. The trends in gear group specific partial fishing mortalities shall then be compared with (correlated against) the trends in gear group specific fishing effort of the gears mentioned by fishing areas and Member States.

11. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for cod in the Baltic, considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

2 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Kattegat (Annex IIA to Regulation (EC) No 57/2011)

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

Kattegat (ICES functional unit IIIaS)

The data should also be broken down by

Member State;

Regulated gear types defined in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in the Appendix 6 of the data call);

Unregulated gear types catching cod;

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days, in number of vessels concerned.

b. Catches (landings and discards provided separately) of cod by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5 To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2011 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differ~~s~~ from the figures estimated by the STECF for vessels not participating in these trials.

6. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Kattegat, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

7. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard cpue's and standard correction factors to be used (within a MS) for transferring effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to be calculated per area per gear group (regulated gear) and presented in a table. Another table for the standard correction factors. Correction factors >=1 will all be set at value 1.

10. To assess and present in a tabular form the annual partial fishing mortalities of cod, for landings and discards separately, as generated by the effort regulated gears (Annex I to Council Reg. 1342/2008) and the non-regulated gears by Member States, the latter non-regulated gears as a single lump group. The trends in gear group specific partial fishing mortalities shall then be compared with (correlated against) the trends in gear group specific fishing effort of the gears mentioned by Member States.

11. To quantitatively assess the annual trend in cod mortality that would have resulted from the fishing mortality adjustments in Article 7 and the trends in fishing effort that would have resulted from Article 12 of Council Reg. 1342/2008, for the period 2008 to 2011. STECF is then requested to quantitatively assess the partial cod fishing mortality and fishing effort trends of the regulated gears that were observed during 2008 to 2011. STECF is requested to comment on the questions if and to which extent the Member States application of Article 13, Paragraph 2, points a, b, c and d have supported the reduction of cod fishing mortality as defined in Articles 7, 8 and 9. The requested analyses will be supported by additional data provided by the Commission DG Mare to STECF EWG 12-06.

12. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for cod, plaice and sole in areas a (Kattegat), considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

13. In their notification to the Commission under article 7.4 of Regulation 43/2012 and article 6.4 of regulation 44/2012 UK and DK used discard estimates in their calculation of the amount of additional allocation of quota. In relation to TOR 5.4 (2^{nd} question) of the STECF spring plenary report in 2012, STECF effort working group is requested to provide the Commission with the following discard estimates for 2011:

3 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Skagerrak, the North Sea and the Eastern Channel (Annex IIA to Regulation (EC) No 57/2011)

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

(i) Skagerrak (ICES functional Unit IIIaN),

(ii) North Sea (EC waters of ICES sub-area IIa and ICES sub-area IV),

(iii) Eastern channel (ICES division VIId)

The data should also be broken down by

Member State;

Regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** (and by associated

special conditions defined in the Appendix 6 of the data call);

Unregulated gear types catching cod, sole and plaice in fishing areas (i), (ii) and (iii);

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days, in number of vessels concerned and days at sea for the sole and plaice fishery.

b. Catches (landings and discards provided separately) of cod, sole and plaice by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod, non-sole and non-plaice by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod, sole and plaice (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod, sole and plaice.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod, sole and plaice and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Skagerrak, the North Sea and the Eastern Channel, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

6. To describe the spatial distribution of the fishing effort of regulated gears deployed in the Skagerrak, the North Sea and the Eastern Channel, 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 the first fishing effort regime in such areas.

7. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard cpue's and standard correction factors to be used (within a MS) for transferring effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to be calculated per area per gear group (regulated gear) and presented in a table. Another table for the standard correction factors. Correction factors >=1 will all be set at value 1.

10. To assess and present in a tabular form the annual partial fishing mortalities of cod, haddock, saithe (Skagerrak and North Sea only), whiting, plaice (North Sea only) and sole (North Sea only), for landings and discards separately, as generated by the effort regulated gears (Annex I to Council Reg. 1342/2008) and the non-regulated gears by Member States, the latter non-regulated gears as a single lump group. The trends in gear group specific partial fishing mortalities shall then be compared with (correlated against) the trends in gear group specific fishing effort of the gears mentioned by Member States.

11. To quantitatively assess the annual trend in cod mortality that would have resulted from the fishing mortality adjustments in Article 8 and the trends in fishing effort that would have resulted from Article 12 of Council Reg. 1342/2008, for the period 2008 to 2011.. STECF is requested to comment on the questions if and to which extent the Member States application of Article 13, Paragraph 2, points a, b, c and d have supported the reduction of cod fishing mortality as defined in Articles 7, 8 and 9. The requested analyses will be supported by additional data provided by the Commission DG Mare to STECF EWG 12-06.

12. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for cod, plaice and sole in areas Skagerrak, North Sea and Eastern Channel and 2EU, considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

13**.** In their notification to the Commission under article 7.4 of Regulation 43/2012 and article 6.4 of regulation 44/2012 UK and DK used discard estimates in their calculation of the amount of additional allocation of quota. In relation to TOR 5.4 (2^{nd} question) of the STECF spring plenary report in 2012, STECF effort working group is requested to provide the Commission with the following discard estimates for 2011:

Country	Area	Gear	Species	Discard estimate 2011
UK	2EU and 3an (Skagerrak) and 4 North Sea	TR1	Cod	
DK	4 North Sea	TR1	Cod	
DK	3an (Skagerrak)	TR2	Cod	
DK	3an (Skagerrak) and 4 North Sea	GN	Cod	

(*): Denmark will be asked to clarify which gears were used. The WG will be informed about the outcome.

STECF is also requested to explain the method and data used for estimation of those discard rates and comment on the quality of the data provided by the Member States concerned and the overall data used for this estimation.

4 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the West of Scotland (Annex II A to Regulation (EC) No 57/2011)

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

West of Scotland (ICES division VIa and EC waters of Vb)

The data should also be broken down by

Member State;

Regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in Appendix 6 to the data call as far as relevant);

Unregulated gear types catching cod;

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 by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2011 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differ~~s~~ from the figures estimated by the STECF for vessels not participating in these trials.

6. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the West of Scotland, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

7. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard cpue's and standard correction factors to be used (within a MS) for transfering effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to be calculated per area per gear group (regulated gear) and presented in a table. Another table for the standard correction factors. Correction factors >=1 will all be set at value 1.

10. To assess and present in a tabular form the annual partial fishing mortalities of cod, haddock, saithe (VIa only), for landings and discards separately, as generated by the effort regulated gears (Annex I to Council Reg. 1342/2008) and the non-regulated gears by Member States, the latter non-regulated gears as a single lump group. The trends in gear group specific partial fishing mortalities shall then be compared with (correlated against) the trends in gear group specific fishing effort of the gears mentioned by Member States.

11.To quantitatively assess the annual trend in cod mortality that would have resulted from the fishing mortality adjustments in Article 7 and the trends in fishing effort that would have resulted from Article 12 of Council Reg. 1342/2008, for the period 2008 to 2011. STECF is then requested to quantitatively assess the partial cod fishing mortality and fishing effort trends of the regulated gears that were observed during 2008 to 2011. STECF is requested to comment on the questions if and to which extent the Member States application of Article 13, Paragraph 2, points a, b, c and d have supported the reduction of cod fishing mortality as defined in Articles 7, 8 and 9. The requested analyses will be supported by additional data provided by the Commission DG Mare to STECF EWG 12-06.

12. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for cod West of Scotland, considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

5 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Irish Sea (Annex IIA to Regulation (EC) No 57/2011)

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

Irish Sea (ICES division VIIa)

The data should also be broken down by

Member State;

Regulated gear types designed in **Annex I** to **R(EC) No 1342/2008** (and by associated special conditions defined in Appendix 6 to the data call as far as relevant);

Unregulated gear types catching cod;

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 by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state, fishing area and fishing effort group designed in **Annex I to R(EC) No 1342/2008**).

2. Based on the information compiled under point (1) above, to rank fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**, on the basis of their contribution to catches expressed both in weight and in number of cod.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5 To assess the catches (absolute values, landings and discards provided separately) and effort deployed in 2011 corresponding to vessels participating in trials on fully documented fisheries, by species, by gear and Member State, with the aim to determine the quality of the data submitted, the potentials and limitations of the fully documented fisheries and to what extend in particular catches (absolute values, landings and discards provided separately) differ~~s~~ from the figures estimated by the STECF for vessels not participating in these trials.

6. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Irish Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

7. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

8. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

9. To develop and calculate standard cpue's and standard correction factors to be used (within a MS) for transferring effort across gear groups with different cpue (Reg. (EC) No 1342/2008 Art 17, paragraph 5).

Commission Regulation (EU) No 237/2010 article 8(b) describes:

Correction factor = cpue donor gear /cpue receiving gear

The cpue's have to be calculated per area per gear group (regulated gear) and presented in a table. Another table for the standard correction factors. Correction factors >=1 will all be set at value 1.

10. To assess and present in a tabular form the annual partial fishing mortalities of cod, for landings and discards separately, as generated by the effort regulated gears (Annex I to Council Reg. 1342/2008) and the non-regulated gears by Member States, the latter non-regulated gears as a single lump group. The trends in gear group specific partial fishing mortalities shall then be compared with (correlated against) the trends in gear group specific fishing effort of the gears mentioned by Member States.

11.To quantitatively assess the annual trend in cod mortality that would have resulted from the fishing mortality adjustments in Article 7 and the trends in fishing effort that would have resulted from Article 12 of Council Reg. 1342/2008, for the period 2008 to 2011. STECF is requested to comment on the questions if and to which extent the Member States application of Articles 13, Paragraph 2, points a, b, c and d have supported the reduction of cod fishing mortality as defined in Article 7, 8 and 9. The requested analyses will be supported by additional data provided by the Commission DG Mare to STECF EWG 12-06.

12. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for cod in Irish Sea, considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

6 – Assessment of fishing effort deployed by fisheries and métiers which will be affected by the extension of the cod recovery plan to the Celtic Sea

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

(i) Celtic Sea (total of ICES divisions VIIb, VIIc, VIIe, VIIf, VIIg, VIIh, VIIj and VIIk) and

(ii) combined area Bristol Channel/South-East Ireland (total of the subset of ICES divisions VIIf and VIIg)

The data should also be broken down by:

Member State;

Regulated gear types designed in **Annex I** to **R(EC) No 1342/2008**;

Unregulated gear types catching cod;

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 by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-cod by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of cod (such data shall be issued by Member state and fishing effort groups as designed in **Annex I to R(EC) No 1342/2008**).

2. When providing and explaining data in accordance with point (1), the following **specific question** should be answered as well:

For VIIf+VIIg only, identify the **main species** (volume and percentage) caught per gear category, and related trends in recent years. Specify when this calculation has taken account of discards as well.

Special request: to analyse discards and their development per gear type in each of the ICES divisions concerning hake, monkfish and megrim. This analysis should be carried out referring to fish lengths/age of discards.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of cod and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

6. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

7 – Assessment of fishing effort deployed by vessels under the Southern hake and Norway lobster plan (Council Regulation (EC) No 2166/2005) operating in the Atlantic waters of the Iberian Peninsula as specified in Annex IIB of Council Regulation (EC) No 57/2011

Terms of Reference:

1. The STECF is requested to compile, validate, analyse and assess the following historical data on fishing effort and catches in relation to vessels under the Southern hake and Norway lobster plan (Regulation (EC) 2166/2005):

details by Member State on both effort (2000-2011) deployed and catches (2003-2011) made by all fishing vessels, included those with less than 10 meters, in each fishery, broken down by age, gear type, and mesh size

The data should be broken down and assessed by:

Member State;

Regulated gear types, area as laid down **in Annex IIB of Council Regulation (EC) No 57/2011** and associated special conditions as laid down in Appendix 6 to the data call; unregulated gear types catching hake and Norway lobster;

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 hake and Norway lobster by weight and by numbers at age;

c. catches (landings and discards provided separately) of species other than hake and Norway lobster in areas covered by Annex IIB mentioned above (a particular attention should be paid to Anglerfish catches), by species, by weight and by numbers at age;

d. landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of hake, Norway lobster and Anglerfish in areas covered by Annex IIB (such data shall be issued by Member state, fishing gear and special conditions listed in **Annex IIB of Council Regulation (EC) No 57/2011**);

In assessing the data described above, particular attention should be paid to:

the quality of estimates of total catches and discards;

both the fishing effort and catches including landings and discards of hake, Norway lobster, anglerfish, and associated species in relation to vessels of overall length smaller than 10 metres in each fishery, by gear (regulated and unregulated gears) and by Member State. The representativeness of data originated from sampling schemes should also be assessed.

to the description of the spatial distribution of the fishing effort of regulated gears deployed in the Atlantic waters of the Iberian Peninsula 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 the fishing effort regime.

An excel table listing the kW.days from 2000 to 2011 broken down per gear type, special condition and Member State should be made available.

2. In the context of the revision of the current Southern hake and Norway lobster recovery plan (Council Regulation (EC) No 2166/2005) and on the basis of the data provided, the STECF is requested to assess the fishing effort regime, in particular commenting on the quality and completeness of these data used to assess the impact of future effort management measures proposed by the Commission.

3. To compare the evaluation of days allocated to the vessels carrying regulated gears (allowed activity) and really used by those vessels.

4. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

5. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

6. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for Nephrops, hake and monk in ICES Div. 8c and 9a, considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

8 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Western Channel
(Western Channel sole stocks ICES zone VIIe, Annex IIC to Regulation (EC) No 57/2011)

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

Western Channel (ICES division VIIe)

The data should also be broken down by

Member State;

Regulated gear types designed in **Annex IIC** to **R(EC) No 57/2011** (and by associated special conditions defined therein as far as relevant);

Unregulated gear types catching sole;

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 sole by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-sole by species, by weight and by numbers at age.

d. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) of sole (such data shall be issued by Member state and fishing gear listed in **Annex IIC to R(EC) No 57/2011**).

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 sole and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

4. To plot, the spatial distribution of the fishing effort of regulated gears deployed in the Baltic Sea, according to data reported in logbooks on the basis of ICES statistical rectangles and to provide interpretation of any changes or trends.

5. To compare the evaluation of days allocated to the vessels carrying regulated gears (allowed activity) and really used by those vessels.

6. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

7. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

8. To identify, based on available data on fisheries specific landings and effort by statistical rectangle, ways to estimate standardised catchability indices for sole in the Western Channel, considering the best practice to account for discards and to raise landings to catch figures. Detailed maps on estimated annual catchability indices by species shall then be presented for these areas.

9. In their notification to the Commission under article 7.4 of Regulation 43/2012 and article 6.4 of regulation 44/2012 UK and DK used discard estimates in their calculation of the amount of additional allocation of quota. In relation to TOR 5.4 (2^{nd} question) of the STECF spring plenary report in 2012, STECF effort working group is requested to provide the Commission with the following discard estimates for 2011:

Country	Area	Gear	Species	Discard estimate 2011
UK	7e Western Channel.	3a	Sole	

9 - Assessment of fishing effort and evaluation of management measures to be assessed in 2009 (Deep sea and Western Waters effort regime)

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

(i) ICES area I (EU waters; non EU waters), only linked to Deep Sea species

(ii) ICES area II (EU waters; non EU waters), only linked to Deep Sea species

(iii) ICES area III (EU waters; non EU waters), only linked to Deep Sea species

(iv) ICES area IV (EU waters; non EU waters), only linked to Deep Sea species

(v) ICES area V (EU waters; non EU waters)

(vi) ICES area VI (EU waters; non EU waters)

(vii) ICES area VII excluding VIId (EU waters; non EU waters)

(viii) ICES division VIId

(ix) the Biologically Sensitive Area as defined in Article 6 of Reg (EC) No 1954/2003

(x) ICES area VIII (EU waters; non EU waters)

(xi) ICES area IX (EU waters; non EU waters)

(xii) ICES area X (EU waters; non EU waters)

(xiii) ICES area XII (EU waters; non EU waters), only linked to Deep Sea species

(xiv) ICES area XIV (EU waters; non EU waters), only linked to Deep Sea species

(xv) CECAF area 34.1.1 (EU waters; non EU waters)

(xvi) CECAF area 34.1.2 (EU waters; non EU waters)

(xvii) CECAF area 34.1.3 (EU waters; non EU waters)

(xviii) CECAF area 34.2 (EU waters; non EU waters)

The data should also be broken down by

Member State;

The following gear types:

- Regulated gear types
  - Beam trawls
  - Bottom trawls & demersal seines
  - dredges
  - drifting longlines or set longlines (bottom)
  - driftnets or set gillnets
  - trammel nets
  - pots & traps

– Unregulated gear types:
    - Pelagic trawls and pelagic seines;
    - longlines (surface)

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) by weight of:

- 5 most important (in weight landed) demersal species excluding scallops, edible crab, spider crab,
- Scallops
- Spider crab and edible crab
- 5 most important (in weight landed) Deep-sea species (according to Annex I and II of Reg 2347/2002), only related to fisheries which have been identified with special condition DEEP
- 4 most important (in weight landed) pelagic species, plus always tuna-like species (SKJ,ALB,YFT,BET,SWO).

c. Landings Per Unit of Effort (LPUE) and Catches Per Unit Effort (CPUE) by Member State and gear, given by total catches of the gear divided by kW-days and GT-days.

2. If relevant data are available, to comment on the quality of estimations on total catches and discards.

3. When providing and explaining data in accordance with point (1), the following **specific question** should be answered as well:

Discuss whether additional data on fishing depth and VMS position could improve the analysis and interpretation of deep sea fisheries, and how these data could be called from MS, processes and presented

4. To identify recent effort trends in pelagic fisheries where possible, in particular in areas XI, X and CECAF areas.

5. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

10 – Assessment of fishing effort deployed by fisheries and métiers which are currently affected by the multiannual plan for the sustainable exploitation of the stock of common sole in the Bay of Biscay (R(EC) No 388/2006)

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

ICES division VIIIa, and

ICES division VIIIb

The data should also be broken down by:

Member State;

Type of gear (as laid down in **Annex IV of Commission Decision 2008/949/CE**) for regulated vessels (as laid down in **Article 5 of R(EC) No 388/2006)**

Type of gear (as laid down in **Annex IV of Commission Decision 2008/949/CE**) for unregulated vessels (as laid down in **Article 5 of R(EC) No 388/2006)**

for the following parameters:

a. Fishing effort, measured in kW.days, in GT.days and in number of vessels concerned

b. Fishing capacity in GT

c. Catches (landings and discards provided separately) of common sole (Solea solea) by weight and by numbers at age.

d. Catches (landings and discards provided separately) of species other than common sole, by weight and by numbers at age

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 separately) of common sole 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 the spatial distribution of the fishing effort deployed in the Bay of Biscay, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine the spatial distribution of fishing effort and its development among the time period.

5. To highlight any unexpected evolutions shown by the data which are not in line with the general trend.

6. To assess the correlation between fishing mortality rates and the effort deployed by Member States.

If a good correlation between fishing mortality rates and spend fishing effort is found, the WG is asked to explain or describe it. In case the correlation between the nominal fishing effort and the fishing mortality rates is weak, the WG is asked to describe whether this is due to a wrong descriptor (fe wrong descriptor for fishing capacity) or due to other factors.

3.2 Participants

The full list of participants at EWG-12-06 is presented in section X.

4 DATA USED

The following sections provide an overview on data definition, acquisition, and evaluation procedures agreed by the expert working group. There are also provided experts' concerns regarding the data as submitted by the Member States in response to the DCF data call in 2012 for fishing effort regime evaluations

4.1 Report Notations

4.1.1 Baltic Sea

To identify the categories assessed for effort and catch this working group adopts terminology that matches definitions made in the management plan for Baltic cod (R(EC) 1098/2007). This means that all trawls, Danish seines, gill nets, entangling nets or trammel nets with mesh size >=90mm and longlines were assumed to be regulated gears (Table 4.1.1.1). Remaining gear and mesh size combinations were taken to be unregulated gears (Table 4.1.1.2).

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 >=105mm using otter trawls, Danish seines or similar gears. When using static gears mesh size has to be above 110mm. In TOR 1e 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. However, to be consistent within the report we also used the gear categories from the cod management plan (Council Regulation (EC) 1098/2007) for this TOR.

Sub-Areas were defined according to Council Regulation (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". Effort trends and catch compositions for Subdivisions 27 and 28.2 separately were not analysed due to data problems and limited time available.

Table. 4.1.1.1 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 2.6.2 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

4.1.2 Cod Zones Multi-annual Plan

The compilation of effort data as described in this report represents a continuation of a process which was initiated in association with the establishment of recovery plans for various European cod and hake stocks.

In addition to other properties, major gear types are used to identify fisheries which are not effort regulated. The notation and categorisation effort regulated fisheries used has reflected that defined in the relevant technical regulations. The most recent revision of the cod recovery plan, and the associated effort regime are described in Regulation 1342/2008.

Under the revised 'cod plan' the following gear groupings are set out in Annex I of the Regulation together with areas in which they apply. Throughout the report reference is made to gears such as TR1, TR2 etc. Under the revised scheme Member States are allocated 'effort pots' in KW*days for each category which can then be managed nationally. EU allocated 'days at sea' per vessel are no longer applicable. The following summary of gear and area codes that apply in the current cod plan is taken from Annex 1 of Regulation 1342/2008.

ANNEX I
Effort groups are defined by one of the gear groupings set out in point 1 and one of the geographical areas set out in point 2.

1. Gear groupings

(a) Bottom trawls and seines (OTB, OTT, PTB, SDN, SSC, SPR) of mesh:
TR1 equal to or larger than 100 mm,
TR2 equal to or larger than 70 mm and less than 100 mm,
TR3 equal to or larger than 16 mm and less than 32 mm;

(b) Beam trawls (TBB) of mesh:
BT1 equal to or larger than 120 mm
BT2 equal to or larger than 80 mm and less than 120 mm;

(c) Gill nets, entangling nets (GN);

(d) Trammel nets (GT);

(e) Longlines (LL).

2. Groupings of geographical areas:
For the purposes of this Annex, the following geographical groupings shall apply:
(a) Kattegat;
(b) (i) Skagerrak; (ii) that part of ICES zone IIIa not covered by the Skagerrak and the Kattegat;
ICES zone IV and EC waters of ICES zone IIa; (iii) ICES zone VIId;
(c) ICES zone VIIa;
(d) ICES zone VIa.

This categorisation is relatively simple when compared to that of the previous version of the cod recovery plan , and the number of 'special conditions' under which vessels have differing allocations of effort is relatively restricted. The current cod recovery plan makes allowance for vessels which can demonstrate a track record of having caught less than 1,5% cod to be excluded from the effort regime (Regulation 1342/2008, Article 11, para 2b). There is also scope for groups of vessels to be allocated additional effort if they participate in discard reduction or cod avoidance schemes leading to equivalent or greater reductions in cod mortality than the corresponding effort restriction (Regulation 1342/2008, Article 13, para 2c). These conditions are represented in the database as follows:

Condition	Code
Effort deployed by those boats granted the <1.5% derogation excluding them from the effort regime	CPart11
Effort deployed by vessels operating in Member State schemes under Article 13	CPart13

However, STECF EWG 12-06 is requested under the specific ToR 11 to assess partial fishing mortality and fishing effort over the period 2008-2011 by each of the provisions of Article 13, paragraph 2, points a (catching less than 1% cod), b (catching less than 5% cod), c (cod avoidance or discard reduction plan) and d (west to the West of Scotland line), respectively. The Member States aggregated figures are then encoded by CPart13.2.a-d.

4.1.3 Southern hake and Nephrops and Western Channel sole

Notation devised for effort categories specified under Annexes IIB and IIC of Regulation (EC) No. 40/2008 remains the same as in previous reports. Under Annex IIB gear groups are defined under point 3 and special conditions under point 7.2. In 2007 gear group definitions were made for bottom trawls, gill nets and bottom long lines. These groupings were merged in the 2008 legislation. The working group considered maintaining the categories as defined in 2007 was important in terms of maximising the clarity of information from results. Therefore gear groupings have been kept consistent with those from the Annex IIB in 2007 (found in regulation (EC) No. 41/2007). Table 4.1.3.1 links notation with gear group and special conditions. So, for example, a vessel using a gill net of mesh size ≥ 60mm and conforming to the hake catch composition rules would belong to derogation "3.b.i IIB72a".

Table. 4.1.3.1 Gear group and special conditions of Annex IIB, Reg. (EC) No. 40/2008

Derogation			Mesh size range		Special Condition	
Gear group Point 3 [1]	Special condition Point 7 [2]	Gear	mesh size mm From	mesh size To mm	Hake landings < 5 tonnes in each of the years 2001, 2002 and 2003	Nephrops landings < 2.5 tonnes in each of the years 2001, 2002 and 2003
3.a		TD	32	inf		
3.b		G	60	inf		
3.c		LL	-	-		
3.a.i	7.2.(a) & 7.2.(b)	TD	32	inf	x	x
3.b.i	7.2.(a) & 7.2.(b)	G	60	inf	x	x
3.c	7.2.(a) & 7.2.(b)	LL	-	-	x	x

TD = Trawl or Danish seine or 'similar gears' (dredges are included under similar gears)
G = Gill net
LL = Long lines
1. Gear groupings correspond to Annex IIB found in Reg (EC) No. 41/2007.
Special conditions 7.2(a) and 7.2(b) can not be complied with independently.

4.1.4 Western Channel sole

Under Annex IIC gear groups are defined under point 3 and special conditions under point 7. Table 4.1.4.1 links notation with gear group and special conditions. So, for example, a vessel using a static net of mesh size less than 220mm belongs to derogation "3.b".

Table. 4.1.4.1 Gear group and special conditions of Annex IIC, Reg. (EC) No. 40/2008. Note that no special conditions are currently in operation under Annex IIC.

Derogation			Mesh size range		Special Condition
Gear group Point 3	Special condition Point 7	Gear	mesh size mm From	mesh size To mm	
3.a		BT	80	inf	none
3.b		GE & TR	0	219	none

BT = Beam Trawl
GE = Gill net or entangling net
TR = Trammel net

4.1.5 Celtic Sea

STECF EWG 12-06 defined the codes of gears as identical to the ones for the cod zones given in section 4.1.2.

4.1.6 Bay of Biscay

STECF EWG 12-06 defined the codes of major gear groups as identical in the 2012 DCF data call with an identification of the boats holding a special fishing permit as defined in R (EC) No 388/2006, encoded as SBcIIIart5.

4.1.7 Western Waters and Deep Sea

STECF EWG 12-06 defined the codes of major gear groups as identical in the 2012 DCF data call with an identification of the boats conducting deep sea trips, encoded as DEEP.

4.2 Data call

The DCF data call 2012 to support fishing effort regime evaluations published on 2 March 2012 with a deadline on 4 May 2012. The data call is fully documented at the JRC DCF web page: https://datacollection.jrc.ec.europa.eu/home

The STECF EWG 12-06 notes that the 2012 data call is largely consistent with the data call issued in 2011 for the same purpose. However, there was one new table defined for landings by ICES statistical square by fisheries to complement the information on fishing acitvities by square.

4.3 Data policy, formats and data availability

Originally, the catch and effort data base structures used by STECF-SGRST were developed by the ICES Study Group on the Development of Fishery-based Forecasts (ICES CM 2004/ACFM:11, 41 pp.) with few amendments required for the review of specific fishery regulations. Over time, there have been numerous changes to the original database and the way in which data are stored and accessed in order to reflect changes to some of the effort regimes and to accommodate data from deep-water and Fully Documented Fisheries.

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 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.

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

4.3.1 Data availability Table A Catch 2003-2011

Table 4.3.1.1 Overview of the catch data submission for the 2012 Fishing Effort Regimes data call. In bold the dates when catch data where submitted after the official submission deadline (4th of May).

Country	Data Submission	First Submission (Deadline 4-May)	Last Submission (Meeting 11-June to 15-June)
BEL	DCF website	**31-May**	
DEU	DCF website	3-May	**11-Jun**
DNK	DCF website	3-May	**14-Jun**
ESP	none		
EST	DCF website	3-May	
FIN	DCF website	3-May	
FRA	DCF website	4-May	**11-Jun**
GBR	File in the meeting	**12-Jun**	**14-Jun**
GBR SCO	DCF website	3-May	**13-Jun**
IRL	DCF website	4-May	
LTU	DCF website	2-May	**18-May**
LVA	DCF website	28-Apr	**21-May**
NLD	DCF website	**14-May**	**14-Jun**
POL	DCF website	27-Apr	2-May
PTR	DCF website	4-May	
SWE	DCF website	4-May	**24-May**

4.3.1.1 Belgium

A total number of 1453 records were submitted only for 2011. No updates for previous years data. There were 104 records with missing mesh size information for gear types such as trammels, dredges and gillnets. Moreover, many records regard species that are not requested in the official data call, like BLL, RJN, RJM, RJC and RJH. Specific condition reported for 2011 data was SBCIIIart5.

Belgium provided fleet specific landings data for 2003-2011 derived from official logbook databases for all vessels ≥10 meters. The data covers all areas in which the Belgian fleets are active and conforms to the requested aggregation, by quarter, area, gear and mesh sizes.

The species provided are: anglerfish, brill, cod, dab, haddock, hake, lemon sole, Nephrops, plaice, saithe, pollack, sole, skates and rays, turbot and whiting. The age composition on landings for sole and plaice in ICES subdivisions IV, VIIa, VIId, VIIfg and sole in subdivision VIIIab have been provided by quarter for the Belgian beam trawlers. The total number of samples, as well as numbers aged and length measurements by quarter have been apportioned in the same ratio as total quarterly beam trawl fleet landings to annual landings.

Discard data for 2004-2011 were provided from the Belgian Beam trawl fleet for the following species: anglerfish, brill, cod, dab, haddock, hake, lemon sole, plaice, saithe, sole, skates and rays, turbot and whiting. The areas covered are 4, 7a, 7d, 7e, 7f, 7g, 8a and 8b. Belgian discard data represent all ages and are disaggregation by age for cod in areas 4, 7a, 7e, 7f and 7g; for sole in areas 4, 7a, 7d, 7f, 7g, 8a and 8b; for plaice in areas 4, 7a, 7d, 7f and 7g. The discards information for the other species mentioned above are without disaggregation by age. Information by area for all observer-trips during the year has been merged together, giving an annual percentage of discards estimate per species. The annual estimates of discard rate have been assumed to apply in each of the 4 quarters.

There is no information on misreporting. The landings in the database are based on combined information of logbook data and sale slips. The actual landed weight is split according the logbook information on hours fished in the respective rectangles.

As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in the Bay of Biscay (VIIIa,b) were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00' N and 56° 00' N and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. Specific condition reported for 2011 data was SBCIIIart5 for all Belgian vessels operating in areas 8a and 8b.

Belgium did not provide any information for vessels under 10m.

4.3.1.2 Denmark

Danish data were submitted on time, and with the requested information for all tables. Tables A-D were submitted for 2011 only and appended to the previous time series. As in previous years, some few records did not pass the Data Submission filters when some information on e.g. gear, mesh size or fishing area was missing, but these records represent only a very small proportion of the reported Danish fisheries activities.

However, some issues were discovered during the course of the EWG for tables A-D. A minor one was corrected straight away and resubmitted during the early days of the meeting. Three other issues are to be mentioned:

- The reporting of Fully Documented Fishery is particularly ambiguous in the data call. Denmark interpreted it as such as that FDF records should be reported separately only (and therefore substracted from the total estimate within the same strata). The data call doesn't make it explicit enough that FDF should be actually summed up twice. As a consequence of this ambiguity, all Danish catches and effort figures in the specon "none" where some FDF fisheries are involved were by inadvertence underestimated. This misinterpretation was also present in the 2011 report of the STECF, but the extent of FDF fisheries was lesser in 2010 than in 2011 and this was therefore not noticed. This issue was manually addressed by the STECF EWG for all tables A-E and all years, leading to more accurate reporting in 2012.

- The data regarding small vessels (<10m in Annex IIa and <8m in Baltic) was observed to be erroneous (and thus largely underestimated) for data up to 2009

- Fishing activity (days at sea) in the Baltic up to 2007 is missing.

Denmark will make sure that these will be accounted for in future submissions, and underlines also the absolute need to remove all ambiguities and potential sources of misinterpretation in future data calls.

STECF EWG 12-06 noted that the Danish 2011 submission does not cover the special conditions BACOMA or T90.

4.3.1.3 Estonia

STECF-EWG 12-06 notes that discards were provided for flounder only. Mesh sizes are inconsistent with the data call for fleet <12 m.

4.3.1.4 Finland

Finish data were submitted in an inconsistent format together with a hint towards the data confidentiality clause in the DCF. STECF EWG 12-06 could not make use of the Finish data given its specific ToR.

4.3.1.5 France

No age data provided. Discards data provided only for 2010 and 2011 but care is required in the use of these data to draw firm conclusions about catch composition. Some missing area information was evident.

4.3.1.6 Germany

Fleet specific landings and estimated discard data were provided as outlined in the data call for 2003-2011 derived from official logbook data covering all vessels ≥10m. For the Baltic information for vessels >=8m is provided. For 2009-2011 also some information for vessels <10m in the North Sea are provided. These information, however, do not cover all vessels in this category as logbooks are not mandatory for these vessels. An extra table is provided for vessels <10m (North Sea) and <8m (Baltic) based on landings declarations from these vessels in a more aggregated format. All data provided do not include unallocated landings. The estimation of discards is based on about 20-30 observer trips per year. The sampling scheme does not cover all quarter-gear-mesh size combinations in the data call. Therefore, final discard estimates in this report are to some extent based on observations from other countries. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.1.a, 8.1.c, 8.1.d, 8.1.e and 8.1.f for the years 2003-2008 as requested. For 2009 onwards the special conditions from the new cod management plan are used.

4.3.1.7 Ireland

Ireland provided fleet specific landings data for 2003-2011 derived from declared landings within the national logbook database (IFIS) for all vessels ≥10 meters in length. Operational landings information was used in order to provide landings data within the Biologically Sensitive Area (BSA). All species requested by the group and landed by Irish vessels have been provided in the requested aggregation. The following special condition information was supplied: none, CPart13, CPart11 and DEEP. SPECON DEEP is a duplication of effort within the relevant areas.

Under 10 meter vessels are not required to complete logbooks, therefore landings data from these vessels are obtained from monthly reports. These reports provide species live weight by ICES area on a monthly basis. No vessel, gear, or effort information is recorded. There is some doubt as to the accuracy of these monthly reports.

It was not possible to accurately aggregate data to the level of EU, coast, and RFMO. Data was assigned according to the following: Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

There is no quantitative information on misreporting although area misreporting for cod is known to be an issue between VIIg and VIIa.

Revisions have been made to the 2003-2010 data due to continuing revisions and improvements to the national database, in addition to a revision of the methodology used to estimate discards.

Biological Landings estimations: Irish biological landings information is not recorded with mesh size information, this was re-constructed by linking to the logbooks database, where possible.

Samples were raised to the landings using the sample weights. The sample weights were estimated using length-weight relationships for each species (estimated for all quarters and areas within each year). Numbers-at age were estimated by applying age-length keys (ALKs). The ALKs are built up from aged fish from the relevant year, quarter and division. Gear and vessel parameters are assumed to be irrelevant for ALK data. Length classes with missing ages were filled in using an automatic procedure based on methods described in Gerritsen et al. (2006). Numbers-at-age for unsampled fleet segments were not estimated.

Discard and biological Discards estimations: Discard length distributions were raised to trip level and expressed in numbers (at length) per hour fished. The mean discard numbers at length per hour fished were estimated for each year, gear and ices division. OTTER trawl gears were further split into CRU (at least 50% Nephrops) and DEF (at least 50% demersal fish). ALKs were applied to these using the same approach as was used for the landings. The total fishing effort by quarter, vessel length category, gear, mesh size category, area, and special conditions was then used to estimate the discard numbers at age for each of these fleet segments.

WARNING: Due to the very high level of disaggregation, most of the fleet segments (year, quarter, vessel length, gear, mesh, area and specon) have no sampling data and many data points have been interpolated from other fleet segments. It is therefore not appropriate to re-aggregate the data in any way as this would result in highly imprecise and inaccurate data.

It has long been recognised by ICES expert groups like WKACCU; WKPRECISE; WKMERGE and WKPICS that sampling at highly resolved strata (fleet segments) is inefficient and will lead to over-stratification and problems of under-sampling or non-sampling of strata, and poor control over sampling probabilities. Instead, these expert groups advise that sampling frames and sample selection schemes should be specified with temporally stable strata that are capable of providing sufficient data for the required metiers and fishing grounds. For this reason it is inappropriate for STECF to demand data at a higher level of disaggregation than the sampling design allows.

4.3.1.8 Latvia

STECF EWG notes that according to the Latvian National Programme discard data should to be collected for cod only.

4.3.1.9 Lithuania

STECF EWG 12-06 notes that discards for cod were estimated and provided only.

4.3.1.10 The Netherlands

The Netherlands only provided catch data for 2011. No updates for previous years were submitted. There were no problems with the landings data, but there were problems with the discard data. The quality of the discard data as such is not problematic. There were problems with processing the discard data (aggregating and raising) in a consistent way this year. There are 2 sources which raises questions on the reliability 1) the internal inconsistency of the time series and 2) different data have been send to other working groups. For this reason, the reliability of the discard data provided by the Netherlands in 2011 was questionable. One of the more specific problems was solved during the meeting, making the reliability of the data higher. This data was processed and used by the EWG. The remaining issues were also solved during the meeting but were too late to be processed without disturbing the work of the EWG.

4.3.1.11 Poland

Comparison of 2011 mesh size data with 2004-2010 shows that they are not consistent and significantly different. Neither mesh size nor SPECON (BACOMA window, T90) information were available from the database for 2004-2010. Thus these information were estimated based on expert knowledge and assumptions. Targeted species assemblages (métier), actually fish species caught and gear used were taken into account to identify mesh size. In 2011 data about mesh size were calculated based on actual information derived from logbooks, this caused that many “-1” values (missing values) which were reported for 2001-2010, become known and changed into “16-31” or “32-54” in 2011. Information on discards was provided for cod (2003-2011) taken in fisheries targeting cod and discards for herring, sprat and flounder was delivered for 2011 only.

4.3.1.12 Portugal

Landings: Portugal presented data on landings for the period 2003-2011 for all species. Data from all years were resubmitted in kilograms and not in tons as requested in the data call. No differences were found between the resubmitted data in 2011 and the data submitted in 2010.

Discards: In the period 2004-2010, hake discards were provided, assuming that they were proportional to the trawl landings, the only gear sampled. However, considering that, according to the Data Collection Framework raising procedures, discards are raised using effort and not landings and that the data call grouping is not consistent with the sampled DCF métiers, hake discards from Portugal were removed from the database.

The Portuguese annual discard estimates have high coefficients of variation (> 30%). The assignment of these data to the data call disaggregated métiers when the métiers do not perfectly match is not possible without making strong assumptions different from those used in the established raising procedures and that could lead to completely different total discard estimates.

Therefore, data on hake annual discards by DCF métiers were provided and included in tables and figures in aggregated form.

At present, the procedure used to raise discards from haul to fleet level in the Portuguese trawl fisheries is adapted from Fernandes et al. (2010) (Jardim and Fernandes, in prep.). Using this procedure, species with low frequency of occurrence or abundance in discards (i.e., a large number of zeros in the data set) cannot be reliably estimated at fleet level (Jardim et al., 2011). The frequency of occurrence and abundance of most species in the discards of the Portuguese bottom trawl fleet was below 30%. Consequently, annual trawl discard volumes and length frequencies at fleet level were only estimated for some métiers, species and years.

In what concerns gillnets and trammel nets, sampled from late 2009 onwards, the sampling methodologies used in these fisheries were only recently standardized (Prista and Jardim, 2011). These are only two of the several métiers that can be performed by the so-called Portuguese polyvalent fleet (or multi-gear fleet). Besides nets, the vessels in this fleet are also frequently licensed to use pots and bottom longlines, and frequently carry out several métiers in a single fishing trip and/or switch métiers during the year. Such uncertainties in determining fishing effort at métier level, along with low spatial-temporal coverage of fleet activity and difficulties in raising data from multi-métier fishing trips to fleet level have hampered the estimation of gillnet and trammel net discards. No estimates at fleet level have been performed to date. Bottom longlines are not among the selected métiers for onboard sampling under the DCF National program.

Norway lobster is a valuable species and discards are negligible. No discard estimates were presented for other species due to the reasons presented above.

Age data: There is a serious concern about European hake growth. Tagging experiences show that growth rate could be two times higher than expected, although the true value is uncertain (ICES, 2009). At present, the assessment model is length based (ICES, 2010a).

No age data were provided for hake neither for the other main species. For Norway lobster, there is not a standardized ageing methodology.

4.3.1.13 Spain

Spain did not provide data this year and in 2011. The following comments correspond to the data provided in 2010: 2002-2009 landings and 2003-2009 discards data were provided by quarter, gear, mesh size range, area and special condition. Spain did not provide 2010 and 2011 data. 2000 and 2001 data were not provided because the logbooks data low quality those years. 2002-2009 8c and 9a data for Annex IIB and Deep Species and 2009 all areas data for DEEP SPECIES areas were submitted. Vessel length categories, allowed activity, fishing activity and fishing capacity were not identified for 2002-2008 8c and 9a data. No EU/RFMO/COST identification for ICES Subarea 10 and Divisions 7j, 7k, 8d, 8e, 8b, 14b and CECAF areas 34.1.2 and 34.2.0.

All discards data were deleted as there are unreasonable values reported. This is because the DCF sampling scheme is very wide (by year and for both ICES Divisions 8c and 9a together) and the Data Call raising strata are very detailed (quarter and ICES Division); therefore there were very few samples by Data Call stratum and the bias was huge. After, 2002-2009 8c and 9a otter hake discards were calculated with 2010 ICES WGHMM respective discard rates.

There are not hake, *Nephrops* and monkfish ages since nowadays there are relevant doubts in the specific international working groups about hake and monkfish ageing (see February 2010 STECF Hake Benchmark and 2011 ICES WGHMM) and there is not a standardized methodology for Nephrops ageing.

No information about vessels under 10 meters was provided since data source was logbooks, but Annex IIB does not deal with vessels under 10 meters.

4.3.1.14 Sweden

Sweden has provided catch data, both landings and discards in the required format for the years 2003-2011. Age distribution data were submitted for cod landings and discards in the Baltic, Skagerrak and Kattegat and for plaice discards in Skagerrak and Kattegat. Landings in tonnes were retrieved from logbooks and the age distribution data for landings were collected by market sampling. The discard data were collected under the Swedish on board discard sampling programme. No discards have been submitted for fisheries not covered by the sampling programme.

4.3.1.15 United Kindom

Data for 2011 were submitted during the experts meeting, and an error relating to the recording of fully documented fisheries effort under the IIA regime area 3b was identified and corrected for 2010. This led to an increase in catch for 2010 under Cpart13 (for TR1) and None (for GN1 and small amounts for unregulated gears) categories on last years' submission. Country codes included ENG, GBG, GBJ, NIR and IOM. In total, 35459 records were submitted or updated. As in previous years, there were a number of records with missing mesh size information and a combination of DEEP specific condition and BSA area which were ignored during the analysis. Specific conditions reported were DEEP, Cpart13 and FDFIIA.

Scotland: New data was submitted only for 2011. Scotland supplies data where records present no gear type information and/or no mesh size information for the purpose of data completeness. As in previous years there were records for area BSA and specific condition DEEP which were ignored in the analysis. Specific conditions reported were DEEP, FDFIIA, CPart11 and CPart13.

Landings and discard numbers at age were derived from market sampling and discard sampling data and the data was stratified by west coast (division VIa) and east coast (sub area IV). Discard numbers at age were supplied for cod, haddock, whiting and saithe if landings came from the above areas and gear category was one covered by the sampling scheme.

Landed weights were differentiated according to the data specification but no distinction could be made between mesh size categories in terms of proportions at age in the landings and discards, or in terms of the ratio of discards to landings. In addition, pooled age-length keys mean age/length relationship are common across most gears.

For data prior to 2009 adhoc fill-ins were used for missing discard sampling strata and saithe discards were not available in some years. For data from 2009 only annual discard data is available, i.e. comparisons of discard ratios can not be made between quarters.

Vessels <10m: No specific consideration is given to estimating discards for vessels < 10m and discard sampling staff tend not to sail on vessels in the 10 metre and under category. In 2003 the Scottish Fisheries Statistics showed landings of the main commercial demersal species from vessels <=10 m to be below the level where sampling intensities as defined in Appendix XV (Section H) of regulation (EC) 1639/2001 (Table 2) requires sampling to be carried out. Estimation of demersal discards for vessels <10m is based on the assumption that all vessels targeting Nephrops and operating in the same sampling area have the same catching and discarding characteristics.

4.3.2 Data availability Table B nominal fishing effort 2000-2011

Table 4.3.2.1 Overview of the effort data submission for the 2012 Fishing Effort Regimes data call. In bold the dates when effort data where submitted after the official submission deadline (4th of May).

Country	Data Submission	First Submission (Deadline 4-May)	Last Submission (Meeting 11-June to 15-June)
BEL	DCF website	**31-May**	**12-Jun**
DEU	DCF website	3-May	
DNK	DCF website	3-May	**14-Jun**
ESP	none		
EST	DCF website	3-May	**12-Jun**
FIN	DCF website	3-May	
FRA	DCF website	4-May	
GBR	File in the meeting	**12-Jun**	**14-Jun**
GBR SCO	DCF website	3-May	
IRL	DCF website	4-May	
LTU	DCF website	2-May	
LVA	DCF website	3-May	
NLD	DCF website	**14-May**	**17-May**
POL	DCF website	27-Apr	**14-Jun**
PTR	DCF website	3-May	
SWE	DCF website	4-May	**24-May**

4.3.2.1 Belgium

Data submitted mainly for 2011. 151 records in total submitted. There were 35 records submitted with no mesh size information for trammels, gillnet and dredges. Specific condition reported for 2011 data was SBCIIIart5.

Belgium provided effort data (kw*days at sea) for 2003-2011 by rectangle and by quarter, for all relevant areas where the Belgian fleets are operational. Since 2003 effort (and landings) are split proportionally over the rectangles as effort became available by rectangle from logbook data. As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in area VIIIa,b were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00' N and 56° 00' N and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

Voyage information on the national data base calculates days at sea based on the voyage start date and the voyage end date. For example, a voyage starting on one date and returning (landing) the following day will accrue 2 days at sea. Each day a vessel is at sea is counted only once with the effort details allocated according to the longest voyage on that date. Nominal effort in kwdays is calculated as days at sea multiplied by the power of the vessel in kilowatts at the voyage landing date. Activity and gear is assessed daily; where activity in a single day covers more than one area or more than one gear; that day's effort is allocated completely to the area/gear with the longest activity that day.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. Specific condition reported for 2011 data was SBCIIIart5 for all Belgian vessels operating in areas 8a and 8b.

Belgium did not provide any information for vessels under 10m.

4.3.2.2 Denmark

Danish data were submitted on time, and with the requested information for all tables. Tables A-D were submitted for 2011 only and appended to the previous time series. As in previous years, some few records did not pass the Data Submission filters when some information on e.g. gear, mesh size or fishing area was missing, but these records represent only a very small proportion of the reported Danish fisheries activities.

However, some issues were discovered during the course of the EWG for tables A-D. A minor one was corrected straight away and resubmitted during the early days of the meeting. Three other issues are to be mentioned:

- The reporting of Fully Documented Fishery is particularly ambiguous in the data call. Denmark interpreted it as such as that FDF records should be reported separately only (and therefore substracted from the total estimate within the same strata). The data call doesn't make it explicit enough that FDF should be actually summed up twice. As a consequence of this ambiguity, all Danish catches and effort figures in the specon "none" where some FDF fisheries are involved were by inadvertence underestimated. This misinterpretation was also present in the 2011 report of the STECF, but the extent of FDF fisheries was lesser in 2010 than in 2011 and this was therefore not noticed. This issue was manually addressed by the STECF EWG for all tables A-E and all years, leading to more accurate reporting in 2012.

- The data regarding small vessels (<10m in Annex IIa and <8m in Baltic) was observed to be erroneous (and thus largely underestimated) for data up to 2009

- Fishing activity (days at sea) in the Baltic up to 2007 is missing.

Denmark will make sure that these will be accounted for in future submissions, and underlines also the absolute need to remove all ambiguities and potential sources of misinterpretation in future data calls.

STECF EWG 12-06 noted that the Danish 2011 submission does not cover the special conditions BACOMA or T90.

4.3.2.3 Estonia

STECF EWG 12-06 noted that the data provided are only for vessels >=12m.

4.3.2.4 Finland

Finish data were submitted in an inconsistent format together with a hint towards the data confidentiality clause in the DCF. STECF EWG 12-06 could not make use of the Finish data given its specific ToR.

4.3.2.5 France

No fishing activity data for 2000 – 2009. No fishing capacity data at all (asked as kW or GT depending of the area, would be easier to fill if it was duplicated in kW and GT). Some missing area information was evident.

4.3.2.6 Germany

Germany provided fleet specific effort data for 2000-2010 in the requested formats derived from official logbook data. However, data on vessels <10m in the North Sea and <8m in the Baltic do not cover all vessels and trips because these vessels normally do not have to fill out logbooks. For the scientific evaluations in this report, the calculation procedure follows closely the description in the STECF technical report "Some technical guidance towards national fleet specific fishing effort and catch data aggregation" (ISBN 978-92-79-12134-0). This implies a calculation of kw-days based on calendar days and effort related to rescue operations etc. are not subtracted. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.1.a, 8.1.c, 8.1.d, 8.1.e and 8.1.f for the years 2000-2008. For 2009 onwards the special conditions from the new cod management plan are used.

4.3.2.7 Ireland

Ireland provided fleet specific kW*days-at-sea, GT*days-at-sea, and vessel numbers for 2000-2011 in the requested aggregation format, derived from the national logbook database (IFIS) for vessels ≥10 meters in length. The following special condition information was supplied: none, CPart13, CPart11 and DEEP. SPECON DEEP is a duplication of effort within the relevant areas. Days-at-sea data were constructed following the methodology guidelines provided by the Joint Research Council at a meeting held by the Commission in February 2009 were followed. Only one gear and area combination is applied to any one vessel day assigned according to the dominant fishing activity.

A revised dataset was submitted in 2012 for all previous years due to ongoing revisions and improvements within the national database from 2003.

Fishing activity and fishing capacity were not provided as Ireland does not operate within the areas for which this data was requested.

Mesh size information was only available from 2003 onwards.

Days-at-sea effort for 2000-2002 is presented as a calculated proxy, obtained from the average ratio of operational fishing days to days-at-sea by gear during 2003 to 2005.

Vessels less than 10m in length are not required to complete logbooks, and therefore no effort is available for these vessels.

It was not possible to accurately aggregate data to the level of EU, coast, and RFMO. Data was assigned according to the following: Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

4.3.2.8 Latvia

STECF EWG 12-06 noted that 2003 – 2008 data for fleet specific effort for small boats (<8m) were not provided, but 2005-2011 data for fishing activity are provided (if vessel don't have KW that's mean his effort will be zero).

4.3.2.9 Lithuania

No comments.

4.3.2.10 The Netherlands

The Netherlands provided effort data for 2011. No updates for previous years were submitted. The data was provided in the requested format using the official logbook data for vessels < 10 m, >= 10 <=15 m and >15 m. During the meeting it appears that fishing activity information for area 7e was missing, not only for 2011 but also for previous years. It was agreed that this data will be submitted after the meeting. Apart from this issue the data is considered to be reliable.

4.3.2.11 Poland

STECF EWG 12-06 notes that a different method of estimation of mesh size ranges in 2011 (compared to the previous years) caused inconsistent mesh size classes, which used to be "110-156" in 2004-2010 period. This mostly concerns vessels under 10 meters. Other variables seem to be very consistent across years.

4.3.2.12 Portugal

Portugal provided kW*days, GT*days and number of vessels for 2000-2011 in the requested aggregation format, derived from the national logbook database for vessels ≥10 meters in length. Data are provided by quarter, vessel length, gear, mesh size range, area and special condition.

No data on allowed activity were provided.

Data on fishing activity and fishing capacity were provided for the regulated gears and for specon=NONE (under effort restrictions).

Vessels < 10 meters are not required to complete logbooks. Effort of these vessels was estimated based on sales records and data is not available for all fields of the data call.

4.3.2.13 Spain

Spain did not provide data this year and in 2011.

4.3.2.14 Sweden

Nominal effort data has been submitted in the required format for the years 2000-2011. Nominal effort data for vessels <10m LOA is not considered reliable until 2009 and this will be corrected until next year´s meeting.

4.3.2.15 United Kindom

Data for 2011 were submitted during the experts meeting, and an error relating to the recording of fully documented fisheries effort under the IIA regime area 3b was identified and corrected for 2010 and 2011. This resulted in an increase in effort for 2010 under Cpart13 (TR1) and None (GN1 and small amounts for unregulated gears) categories. A total of 3825 records were submitted or updated. A number of records were submitted with missing mesh sizes for pots and dredges where mesh sizes are not applicable. Some records with both area BSA and specific condition DEEP submitted and ignored in the analysis. Specific conditions reported were DEEP, CPart13 and FDFIIA.

Scotland: New data was submitted for 2011 for all the fleets for vessels 10m and over and for vessels under 10 meters. Scotland supplies data where records present no gear type information and/or no mesh size information for the purpose of data completeness. As in previous years there were records for area BSA and specific condition DEEP which were ignored in the analysis. Specific conditions reported were DEEP, FDFIIA, CPart11 and CPart13. Any effort in the Cod Recovery Zone for TR1 and TR2 gears was assigned to special condition CPart13.

Vessels <10m: For vessels <10m effort is considered under reported 2000-2005 because of under reporting of POTS and shell fishing by hand. The <10m effort data for Scottish registered vessels 2000-2008 excludes voyages landing into ports in England and other non-Scottish areas of the UK. Scottish under 10m boats are known to use more than one type of gear on individual trips or within a quarter and multiple counting of boats is therefore significant.

4.3.3 Data availability Table C spatial fishing effort 2003-2011

Table 4.3.3.1 Overview of the spatial effort data submission for the 2012 Fishing Effort Regimes data call. In bold the dates when spatial effort data where submitted after the official submission deadline (4th of May).

Country	Data Submission	First Submission (Deadline 4-May)	Last Submission (Meeting 11-June to 15-June)
BEL	DCF website	**31-May**	**4-Jun**
DEU	DCF website	3-May	
DNK	DCF website	3-May	**14-Jun**
ESP	none		
EST	DCF website	3-May	
FIN	DCF website	3-May	
FRA	DCF website	4-May	
GBR	File in the meeting	**12-Jun**	**14-Jun**
GBR SCO	DCF website	3-May	
IRL	DCF website	4-May	
LTU	DCF website	2-May	
LVA	DCF website	3-May	

NLD	DCF website	**14-May**	**17-May**
POL	DCF website	27-Apr	**13-Jun**
PTR	DCF website	3-May	
SWE	DCF website	4-May	**24-May**

4.3.3.1 Belgium

Data submitted only for 2011. No updates for previous years' data. In total, 573 records were submitted. There were 50 records with missing mesh size information for gears such as trammels, gillnets and dredges. Specific condition reported for 2011 data was SBCIIIart5.

Belgium: Belgium provided effective effort by ICES statistical rectangle in units of hours trawled for the period 2003-2011, derived from the official logbook databases for all vessels ≥10 meters. The data covers all areas in which the Belgian fleets are active and conforms to the requested aggregation, by quarter, area, gear and mesh sizes. No spatial effort information is available for vessels less than 10m in length.

Trawled hours were calculated by summing fishing time to the aggregation level requested in the data call. To ensure consistency between datasets, the same base operational logbooks data was used as for the aggregation of days-at-sea effort.

As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in the Bay of Biscay (VIIIa,b) were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00' N and 56° 00' N and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. Specific condition reported for 2011 data was SBCIIIart5 for all Belgian vessels operating in areas 8a and 8b.

Belgium did not provide any information for vessels under 10m.

4.3.3.2 Denmark

Danish data were submitted on time, and with the requested information for all tables. Tables A-D were submitted for 2011 only and appended to the previous time series. As in previous years, some few records did not pass the Data Submission filters when some information on e.g. gear, mesh size or fishing area was missing, but these records represent only a very small proportion of the reported Danish fisheries activities.

However, some issues were discovered during the course of the EWG for tables A-D. A minor one was corrected straight away and resubmitted during the early days of the meeting. Three other issues are to be mentioned:

- The reporting of Fully Documented Fishery is particularly ambiguous in the data call. Denmark interpreted it as such as that FDF records should be reported separately only (and therefore substracted from the total estimate within the same strata). The data call doesn't make it explicit enough that FDF should be actually summed up twice. As a consequence of this ambiguity, all Danish catches and effort figures in the specon "none" where some FDF fisheries are involved were by inadvertence underestimated. This misinterpretation was also present in the 2011 report of the STECF, but the extent of FDF fisheries was lesser in 2010 than in 2011 and this was therefore not noticed. This issue was manually addressed by the STECF EWG for all tables A-E and all years, leading to more accurate reporting in 2012.

- The data regarding small vessels (<10m in Annex IIa and <8m in Baltic) was observed to be erroneous (and thus largely underestimated) for data up to 2009

- Fishing activity (days at sea) in the Baltic up to 2007 is missing.

Denmark will make sure that these will be accounted for in future submissions, and underlines also the absolute need to remove all ambiguities and potential sources of misinterpretation in future data calls.

STECF EWG 12-06 noted that the Danish 2011 submission does not cover the special conditions BACOMA or T90.

4.3.3.3 Estonia

STECF EWG 12-06 noted that data were provided only for vessels >=12m.

4.3.3.4 Finland

Finish data were submitted in an inconsistent format together with a hint towards the data confidentiality clause in the DCF. STECF EWG 12-06 could not make use of the Finish data given its specific ToR.

4.3.3.5 France

The EWG 12-06 noted some missing area and rectangle information especially at this level of desegregation (available for the ICES division but not for the statistical rectangle information).

4.3.3.6 Germany

No comments.

4.3.3.7 Ireland

Ireland provided effective effort by ICES statistical rectangle in units of hours fished for the period 2003-2011 in the requested aggregation format, derived from the national logbook database (IFIS) for vessels ≥10m in length. Hours fished were calculated by summing fishing time reported within the logbook operations. To ensure consistency between datasets, the same base operational logbooks data was used as for the aggregation of days-at-sea effort. The following special condition information was supplied: none, CPart13, CPart11 and DEEP. SPECON DEEP is a duplication of effort within the relevant areas.

No spatial effort information is available for vessels less than 10m in length.

It was not possible to accurately aggregate data to the level of EU, coast, and RFMO. Data was assigned according to the following: Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

4.3.3.8 Latvia

STECF EWG notes that 2003 – 2008 data for fleet specific effort for small boats (<8m) were not provided, but 2005-2011 data for fishing activity are provided (if vessels don't have KW that's mean his effort will be zero).

4.3.3.9 Lithuania

No comments.

4.3.3.10 The Netherlands

The Netherlands only provided effort by rectangle data for 2011. No updates for previous years were submitted. The data was provided in the requested format using the official logbook data for vessels < 10 m, >= 10 <=15 m and >15 m. The data is considered to be reliable.

4.3.3.11 Poland

STECF EWG 12-06 notes that relative changes of the total effective effort seem to be consisted across the years. Mesh size data breakdown for 2011 is not comparable with previous years because of different aggregation method used (as described above).

4.3.3.12 Portugal

Portugal provided effective effort (in hours) by rectangle for the period 2003-2011 for vessels ≥ 10 meters with the aggregation requested by the data call, based on logbook data.

No spatial effort information is available for vessels < 10 meters, since they are not required to complete logbooks.

4.3.3.13 Spain

Spain did not provide data this year and in 2011.

4.3.3.14 Sweden

Specific effort data by rectangle has been submitted in the required format for the years 2003-2011.

4.3.3.15 United Kindom

Data for 2011 were submitted during the experts meeting, and an error relating to the recording of fully documented fisheries effort under the IIA regime area 3b was identified and corrected for 2010 and 2011. This resulted in an increase in effort for 2010 under Cpart13 (TR1) and None (GN1 and small amount for unregulated gears) categories. In total, 14059 records were submitted or updated. There were a number of records for pots and dredges with missing mesh size information; records with area BSA and specific condition DEEP were also present and ignored during the analysis. Specific conditions reported were DEEP, CPart13 and FDFIIA.

Scotland: New data was submitted for 2011 for all the fleets for vessels 10m and over and for vessels under 10 meters.

Effort on voyages fishing in more than one rectangle is allocated according to logbook data. The hours fished entries are simply days at sea data multiplied by 24. This is because hours fished information has been proven unreliable from Scottish vessels (not a required field in logbooks).

Scotland supplies data where records present no gear type information and/or no mesh size information for the purpose of data completeness. As in previous years there were records for area BSA and specific condition DEEP which were ignored in the analysis. Specific conditions reported were DEEP, FDFIIA, CPart11 and CPart13.

4.3.4 Data availability Table D fishing Capacity in the Baltic Sea 2003-2011

Table 4.3.4.1 Overview of the capacity data submission for the 2012 Fishing Effort Regimes data call. In bold the dates when capacity data where submitted after the official submission deadline (4th of May).

Country	**Data Submission**	**First Submission (Deadline 4-May)**	**Last Submission (Meeting 11-June to 15-June)**
DEU	DCF website	3-May	
DNK	DCF website	3-May	
EST	DCF website	3-May	
FIN	DCF website	3-May	
LTU	DCF website	2-May	
LVA	DCF website	3-May	
POL	DCF website	2-May	
SWE	DCF website	4-May	

4.3.4.1 Denmark

Danish data were submitted on time, and with the requested information for all tables. Tables A-D were submitted for 2011 only and appended to the previous time series. As in previous years, some few records did not pass the Data Submission filters when some information on e.g. gear, mesh size or fishing area was missing, but these records represent only a very small proportion of the reported Danish fisheries activities.

However, some issues were discovered during the course of the EWG for tables A-D. A minor one was corrected straight away and resubmitted during the early days of the meeting. Three other issues are to be mentioned:

- The reporting of Fully Documented Fishery is particularly ambiguous in the data call. Denmark interpreted it as such as that FDF records should be reported separately only (and therefore substracted from the total estimate within the same strata). The data call doesn't make it explicit enough that FDF should be actually summed up twice. As a consequence of this ambiguity, all Danish catches and effort figures in the specon "none" where some FDF fisheries are involved were by inadvertence underestimated. This misinterpretation was also present in the 2011 report of the STECF, but the extent of FDF fisheries was lesser in 2010 than in 2011 and this was therefore not noticed. This issue was manually addressed by the STECF EWG for all tables A-E and all years, leading to more accurate reporting in 2012.

- The data regarding small vessels (<10m in Annex IIa and <8m in Baltic) was observed to be erroneous (and thus largely underestimated) for data up to 2009

- Fishing activity (days at sea) in the Baltic up to 2007 is missing.

Denmark will make sure that these will be accounted for in future submissions, and underlines also the absolute need to remove all ambiguities and potential sources of misinterpretation in future data calls.

4.3.4.2 Estonia

STECF EWG 12-06 notes that data for vessels <12 m were not provided.

4.3.4.3 Finland

Finish data were submitted in an inconsistent format together with a hint towards the data confidentiality clause in the DCF. STECF EWG 12-06 could not make use of the Finish data given its specific ToR.

4.3.4.4 Germany

Data on Capacity in the Baltic was provided as requested by the data call from logbook information. It was ensured that vessels do not count twice to get a realistic overview on fleet capacity. The full time series is covered.

4.3.4.5 Latvia

No comments.

4.3.4.6 Lithuania

No comments.

4.3.4.7 Poland

STECF 12-06 notes that Relative data provisions and estimated changes between years look reliable and consistent.

4.3.4.8 Sweden

Fisheries capacity data of active vessels in the Baltic Sea has been submitted in the required format for 2011.

4.3.5 Data availability Table E spatial landings 2003-2011

Table 4.3.5.1 Overview of the spatial landings data submission for the 2012 Fishing Effort Regimes data call. In bold the dates when spatial landings data where submitted after the official submission deadline (4th of May).

Country	**Data Submission**	**First Submission (Deadline 4-May)**	**Last Submission (Meeting 11-June to 15-June)**
BEL	DCF website	**31-May**	**4-Jun**
DEU	DCF website	4-May	
DNK	DCF website	3-May	**14-Jun**
ESP	none		
EST	DCF website	3-May	4-May
FIN	DCF website	3-May	
FRA	DCF website	**8-Jun**	**11-Jun**
GBR	File in the meeting	**13-Jun**	**15-Jun**
GBR SCO	DCF website	3-May	4-May
IRL	DCF website	4-May	
LTU	DCF website	2-May	
LVA	DCF website	3-May	**15-May**
NLD	DCF website	**25-May**	
POL	DCF website	2-May	**14-Jun**
PTR	DCF website	3-May	4-May
SWE	DCF website	4-May	**24-May**

4.3.5.1 Belgium

A total number of 41 646 records were submitted for 2003-2011. There were 1 874 records with missing mesh size information for gear types such as trammels, dredges and gillnets. Moreover, many records regard species that are not requested in the official data call, like BLL, RJN, RJM, RJC and RJH. Specific condition reported for 2003-2011 data was SBCIIIart5.

Belgium provided fleet specific landings data for 2003-2011 derived from official logbook databases for all vessels ≥10 meters. The data covers all areas in which the Belgian fleets are active and conforms to the requested aggregation, by quarter, area, gear and mesh sizes.

The species provided are: anglerfish, brill, cod, dab, haddock, hake, lemon sole, Nephrops, plaice, saithe, pollack, sole, skates and rays, turbot and whiting. The age composition on landings for sole and plaice in ICES subdivisions IV, VIIa, VIId, VIIfg and sole in subdivision VIIIab have been provided by quarter for the Belgian beam trawlers. The total number of samples, as well as numbers aged and length measurements by quarter have been apportioned in the same ratio as total quarterly beam trawl fleet landings to annual landings.

As Belgium does not have trip-by-trip information on the true mesh size for its fleets for 2003-2006, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in the Bay of Biscay (VIIIa,b) were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00' N and 56° 00' N and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. Since 2007 mesh sizes used by beam trawls operating in different areas have been based on the true mesh sizes used on each trip.

The Belgian gear categories are: beam, dredge, gill, longline, otter, and trammel. For trammel nets, no assumptions of mesh sizes were made. Specific condition reported for 2003-2011 data was SBCIIIart5 for all Belgian vessels operating in areas 8a and 8b.

Belgium did not provide any information for vessels under 10m.

4.3.5.2 Denmark

Danish data were submitted on time, and with the requested information for all tables. Tables A-D were submitted for 2011 only and appended to the previous time series. As in previous years, some few records did not pass the Data Submission filters when some information on e.g. gear, mesh size or fishing area was missing, but these records represent only a very small proportion of the reported Danish fisheries activities.

However, some issues were discovered during the course of the EWG for tables A-D. A minor one was corrected straight away and resubmitted during the early days of the meeting. Three other issues are to be mentioned:

- The reporting of Fully Documented Fishery is particularly ambiguous in the data call. Denmark interpreted it as such as that FDF records should be reported separately only (and therefore substracted from the total estimate within the same strata). The data call doesn't make it explicit enough that FDF should be actually summed up twice. As a consequence of this ambiguity, all Danish catches and effort figures in the specon "none" where some FDF fisheries are involved were by inadvertence underestimated. This misinterpretation was also present in the 2011 report of the STECF, but the extent of FDF fisheries was lesser in 2010 than in 2011 and this was therefore not noticed. This issue was manually addressed by the STECF EWG for all tables A-E and all years, leading to more accurate reporting in 2012.

- The data regarding small vessels (<10m in Annex IIa and <8m in Baltic) was observed to be erroneous (and thus largely underestimated) for data up to 2009

- Fishing activity (days at sea) in the Baltic up to 2007 is missing.

Denmark will make sure that these will be accounted for in future submissions, and underlines also the absolute need to remove all ambiguities and potential sources of misinterpretation in future data calls.

STECF EWG 12-06 noted that the Danish 2011 submission does not cover the special conditions BACOMA or T90.

4.3.5.3 Estonia

STECF EWG 12-06 notes that the mesh sizes are inconsistent with the data call for vessels <12 m.

4.3.5.4 Finland

Finish data were submitted in an inconsistent format together with a hint towards the data confidentiality clause in the DCF. STECF EWG 12-06 could not make use of the Finish data given its specific ToR.

4.3.5.5 France

France only submitted data for 2011. The EWG 12-06 noted some missing area and rectangle information especially at this level of desegregation (available for the ICES division but not for the statistical rectangle information).

4.3.5.6 Germany

Germany aggregated the landings from logbook information as requested by ICES statistical rectangles and covers the full time series. No complete data on the spatial distribution of landings could be provided for vessels <10m in the North Sea and <8m in the Baltic as these vessels are not mandatory to provide detailed logbook information. Description on special conditions from part A and B also apply to part E.

4.3.5.7 Ireland

Ireland provided landings by ICES statistical rectangle for the period 2003-2011 in the requested aggregation format, derived from the national logbook database (IFIS) for vessels ≥10m in length. Landings were calculated by summing live weights reported within the logbook operations as declared landings are not available at the level of statistical rectangle. To ensure consistency between datasets, the same base operational logbooks data was used as for the aggregation of declared landings within the Landings database (A). The following special condition information was supplied: none, CPart13, CPart11 and DEEP. SPECON DEEP is a duplication of effort within the relevant areas.

No spatial landings information is available for vessels less than 10m in length.

It was not possible to accurately aggregate data to the level of EU, coast, and RFMO. Data was assigned according to the following: Where an EU category existed within an area, all data from that area was categorised as EU, with the exception of ICES division X assumed to be RFMO. Those ICES divisions without an EU category where assumed as 1 coast and 2 coast.

4.3.5.8 Latvia

No comments.

4.3.5.9 Lithuania

No comments.

4.3.5.10 The Netherlands

No comments.

4.3.5.11 Poland

Comparison of 2011 mesh size data with 2004-2010 shows that they are not consistent and significantly different. Neither mesh size nor SPECON (BACOMA window, T90) information were available from the database for 2004-2010. Thus these information were estimated based on expert knowledge and assumptions. Targeted species assemblages (métier), actually fish species caught and gear used were taken into account to identify mesh size. In 2011 data about mesh size were calculated based on actual information derived from logbooks, this caused that many “-1” values (missing values) which were reported for 2001-2010, become known and changed into “16-31” or “32-54” in 2011.

4.3.5.12 Portugal

Portugal provided landings by species and by rectangle for the period 2003-2011 for vessels ≥ 10 meters with the aggregation requested by the data call, based on logbook data.

No spatial effort information is available for vessels < 10 meters, since they are not required to complete logbooks. No quality check was performed.

4.3.5.13 Spain

Spain did not provide data.

4.3.5.14 Sweden

Landings data by rectangle has been submitted in the required format for the years 2003-2011.

4.3.5.15 United Kindom

Data for 2003-2011 were submitted during the experts meeting, as specified in the data call. An error relating to the recording of fully documented fisheries effort under the IIA regime area 3b was identified, but not corrected during the meeting. There is known to be an underestimate of effort for TR1 for CPart13 and GN1 (and small amount for non-regulated gears) for SPECON “None” under area 3b which will be corrected for the September meeting. Specific conditions reported were DEEP, CPart13 and FDFIIA.

Scotland: New data was submitted for 2003-2011 for all the fleets for vessels 10m and over and for vessels under 10 meters according to the data call. Specific conditions reported were DEEP (2003-2008), DEEP and CPart13 (2009) and DEEP, FDFIIA, CPart11 and CPart13 (2010-2011).

4.3.6 Fisheries specific landing and effort data 2003-2010 of small boats (< 8m or <10m)

This STECF EWG 12-06- report provides an overview of landings and effort data provided by the experts regarding their national fisheries of small vessels<8m or <10m, which are not obliged to report their landings through logbooks but rather do landings declarations.

Previously, information on small vessels has been provided in the reports only as a series of individual country reports describing activities and landings. In this report individual country information is again provided where available – new information is provided from several countries. An attempt is also made to compile available information for each area into overall figures. Since not all countries were able to fulfil this part of the data call, the aggregate estimates for each region of the cod recovery zone 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 and can be used to comment on the likely relative importance compared with the regulated vessels.

Member States’ data submissions for small boats are summarized in the previous sections by data table A-E, sections 4.3.1-5, respectively.

4.4 Estimation of fisheries specific international landings and discards

The estimation of fisheries 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 fisheries properties and raised to the officially reported landings or discards in the SGDFF 2004 (ICES 2004) format. Fisheries definitions are based on area, year, quarter, gear, mesh size groups, special conditions as defined in Council Reg. 41/2007 Annexes IIA-C and 57/2011 Annexes IIA-C or the multiannual management plans, and national fisheries (metiers) definitions.

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

- Data management:

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

- Estimation of discard rates by fleet (DR):

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

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

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

$$DR = \frac{\sum_{snf} D_{snf}}{\sum_{snf} (L_{snf} + D_{snf})}$$ with $D_{snf} \geq 0$ and with $L_{snf} + D_{snf} > 0$ otherwise 0 (means no catch)

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

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

Fleets without any discards information remain as such.

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

  Let i be the age reference

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

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

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

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

  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

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

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

  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 0-11 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 0-11 are estimated at weighted means (according to ratios of landings at age and discards at age to catches at age).

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

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

The EWG-11-11 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.

EWG-11-11 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, EWG-11-11 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.

4.5 Treatment of CPUE data

In this report, EWG 12-16 presents CPUE by regulated gears 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. Unfortunately, discard information continues to be sparse or absent for some categories of gear in some areas. **The STECF EWG wishes to stress again that great care should be used in the interpretation of the discard and resulting catch data owing to the incomplete nature of information on discarded fish.**

EWG 12-06 notes that CPUE series are often interpreted and used as stock abundance indicator. However, EWG 12-06 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.

4.6 Ranking of gears on the basis of contribution to catches

Where required, EWG 12-06 presented the ranked contributions of the individual effort regulated gears to cod, plaice and sole catches for the years 2003 to 2011. There was discussion about whether the ranking should be based on a single recent year (possibly reflecting the most up to date importance of the different gear types in contributing to mortality of these species) or an average for a range of years (which allows for any aberrations in the series). A decision was taken to rank according to 2011. The data for other years are available for alternative analysis in the background spreadsheets.

The catch estimates are based on the sums of the landings and discards where available. EWG 12-06 considers the catch estimates as uncertain where fisheries lack discard estimates or they are poorly sampled. The ranking according to catch in numbers only considers derogations for which catch in numbers are available. **STECF EWG 12-06 wishes to stress again that great care should be used in the interpretation of the discard and resulting catch data owing to the incomplete nature of information on discarded fish.**

4.7 Summary of effort and landings by 'unregulated' gears

In the summary tables of effort a total value for a 'none' category is provided. This 'none' category represents

i) gear types and mesh sizes which are unregulated, i.e. non-regulated by effort in addition to

ii) unidentified mesh sizes. In the main effort summary tables, this category is not broken down into its constituent gears.

iii) the so-called derogation Swedish grid, which was encoded as IIA83b and CPart11, respectively. This gear configuration is explicitly exempted from the effort regime (R (EC) No 754/2009).

However, STECF EWG 12-06 has provided a break down of the main gears within the 'none' category in a dedicated subsection for each area. Information is given on effort (kW*days at sea) for gears such as 'beam', otter, pots, dredges etc, and for catches by these gears of key species (e.g. cod, plaice and sole). This analysis helps to identify which gears contribute significantly to landings of these species but which are not currently regulated.

With the adoption of the revised cod recovery plan towards the end of 2008 and the simplified list of regulated gears for which data are now collated, the compilation of the unregulated categories was more straightforward in 2009 onward and the data appear to be reliable.

It is important in making use of the data in this report, that the 'none' material is not counted more than once. It would be preferable to use data from the sections covering unregulated gears.

4.8 Presentation of spatial information on effective effort and landings

STECF EWG 12-06 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. In a number of the smaller areas, however, this resolution is inadequate for describing any localised changes of effort distribution (for example, in the Kattegat) and finer scale is desirable. Increasing availability of VMS data should provide opportunities for improved resolution in due course. 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 EWG 12-06 notes that only major changes in the geographical distribution patterns should be given attention given the imprecision of the created data set. A full set of figures is available electronically but a selection of key gears is included in this report.

Figures use a common scale across years for a given gear group (e.g. TR1) but scales are unique to each category such that the colours assigned to statistical rectangles for category TR1 cannot be compared directly to those assigned for category TR2. Note that this year the scale used in the plots relates to the actual effort values (rather than the percentile method used in previous years).

4.9 Response of EWG 12-06 regarding the estimation of spatio-temporal patterns in catchability

STECF EWG 12-06 identified the needs to estimate catchability coefficients and to undertake spatio-temporal analyses of them. The working group identified annual commercial catch rates standardized by catch rates derived from scientific surveys as appropriate indices. Such standardized catch rates could then be averaged and be used to indicate catchability patterns.

In particular, the task requires catch estimates at a reasonable spatio-temporal resolution. The working group did not support estimates of annual discards by statistical rectangle due to poor discard information available at such geographical resolution for all the significant fisheries involved. Furthermore, the working group did discuss and compile information on available survey catch rates.

The STECF EWG 12-06 will continue its considerations at its follow-up meeting STECF EWG 12-12 regarding an appropriate spatial resolution at which both annual commercial and survey catch information can be provided and the appropriate procedure to estimate patterns of catchability indices.

4.10 Response of EWG 12-06 regarding the list of species required in the DCF data calls to support fishing effort regime evaluations

STECF EWG 12-06 noted that the DCF data call with the aim to support fishing effort regime evaluations covers a long list of species. STECF EWG notes that such exhaustive long list of species is inappropriate and initiated its review in order to improve the effectiveness of future DCF data calls. STECF EWG 12-06 noted that data are called for unimportant species while, at the same time, few relevant species are lacking. STECF EWG 12-06 will continue its considerations at its follow-up meeting STECF 12-12 and provide an updated list of species to be proposed in future DCF data calls.

5 EVALUATIONS BY FISHING EFFORT MANAGEMENT REGIME

5.1 Baltic Sea effort regime evaluation in the context of the management plan for Baltic cod (Council Regulation (EC) No 1098/2007)

5.1.1 ToR 1.a Fishing effort in kWdays and GTdays by area, Member State and fisheries

Table 5.1.1.1 lists the trends in effort for gear categories defined in the cod management plan Council Regulation (EC) 1098/2007 in kW*days at sea for the whole Baltic. Table 5.1.1.2 lists the trends in effort by gear category, sub-area and member state. Table 5.1.1.3 lists effort trends by gear category and sub-area. Figures 5.1.1.1 – 5.1.1.6 show effort trends in regulated and unregulated gear categories by sub-areas.

In accordance with the TOR respective tables by gear-category, sub-area and member states in GT*days at sea (GT gross tonnage), activity (in days absent from port) and capacity (number of vessels) are available on the web site of the EWG. STECF EWG 1206 emphasises that the days at sea and 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.

There have been marked reductions in effort measured in kW-days in 2004-2011both for regulated gears in accordance with Council Regulation (EC) 1097/2007 and unregulated gears. The total effort deployed in the Baltic in 2011 was 0.1% lower compared to 2004 and 6% higher compared with 2010 (Table 5.1.1.1).

A clear reduction in total effort could be observed for sub-area A. In area B (Figures 5.1.1.2 and 5.1.1.3). Only in area C the effort deployed with unregulated gears fluctuated with a slight decreasing trend (Figure 5.1.1.5). Since the majority of cod catches stem from areas A and B (see section below), the slight increase in total effort can be observed both for regulated and unregulated gears. Decrease in total effort in areas A and B most likely decreased the fishing pressure on Baltic cod.

Table 5.1.1.3 describes the relative annual effort dynamics in Baltic cod r-GILL and r-_OTTER fisheries in 2004-2011. The total effort showed a consistent decreasing trend in area A. A decrease could be observed also in area B, except for the 2010 and 2011 which resulted from effort deployed by r-OTTER equipped with T90. The effort dynamics in area C did not show any particular trend.

The effort dynamics in Sub-division 28.2 increased in 2011after the steady decrease due to increased r-OTTER effort (Figure 5.1.1.8)This increase, however, should be taken with caution since the information on r-OTTER may have been partly generated on the basis of effort deployed by other gears while choosing predominant fishing gear during the year for the vessels involved.

The decrease in total effort for the main gears catching cod in areas A and B (r-Otter, see section below) was obvious for all Member States (Table 5.1.1.2). When combining specon BACOMA and none, the reductions were most pronounced for Denmark (-66%) and Poland (-68%) in area A and most pronounced for Poland (-79%) and Germany (-49%) in area B. In contrast, the effort for r-Gill (the second most important gear, see section below) increased for Denmark and Germany in Area A (by 8% and 22% respectively) At the same time combined effort decreased for Latvia (-96%) and for Poland (49%). This indicates a certain shift between métiers. In area B the effort decreased also for r-Gill substantially for all member states (-78% and 76% for Poland and for Latvia respectively). The sharp increase of pelagic effort in 2004 – 2005, described in the Figure 5.1.1.5 can be explained by the inclusion of Estonian data from 2005-2010 which contained substantial pelagic effort.

In sub-division 28.2. only Latvia reported the information on effort deployed in r-GILL fishery. The effort has decreased over the period of 2004.2011 by 54% and for r-OTTER by 58% (Figures 5.1.1.7 - 5.1.1.8).

For area C the full time series of information for r-OTTER was not available to the group. The effort for r-_GILL decreased by 36% (Sweden). The use of BACOMA-trawls increased over the years (see Figures 5.1.1.2, 5.1.1.4 and 5.1.1.6;). 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 and trends are highly uncertain.

Table 5.1.1.1 Trend in nominal effort (kW*days at sea) by gear categories according to Council Regulation (EC) 1098/2007, 2004-2011. An "r" in front of the gear type indicates regulated gears. Gear types without an "r" are non-regulated gears. **Data from Sweden and Poland were only available from 2003 or 2004 respectively. Relative change from 2004 to 2011.**

REG GEAR COD	SPECON	2004	2005	2006	2007	2008	2009	2010	2011	rel.change
BEAM	none		132	1090	881	27566	16298	884	884	1.00
DEM_SEINE	none	50829	31212	20892	20597	12522	5372	4811	11826	-0.77
DREDGE	none	78384	72955	97700	110931	45088	57512	75229	56203	-0.28
GILL	none	2514485	2781576	2466038	2294202	2019364	1865438	1924751	1901761	-0.24
none	none	96938	176122	205696	192219	168134	194458	127777	64672	-0.33
OTTER	none	2822656	2413377	1927192	1656416	1339785	1538768	1241674	1094607	-0.61
PEL_SEINE	none	2499				3528	16467	13674	12645	4.06
PEL_TRAWL	none	14282170	57258796	42368403	37461943	41572322	38799075	28289930	24865258	0.74
POTS	none	1519123	1616487	1346062	1211896	1209974	894295	1047462	922060	-0.39
r-BEAM	BACOMA					3867				0.00
	none							129		0.00
r-DEM_SEINE	BACOMA			35178	46741	46182	62042	36621	52423	1.00
	none	403303	276935	262342	242811	181854	118870	92271	62908	-0.84
r-GILL	none	9845133	8661465	7761426	6637435	5995191	4830867	4165995	3746400	-0.62
r-LONGLINE	none	1441250	1761808	1696090	1007775	732603	905232	819419	792979	-0.45
r-OTTER	BACOMA	7988730	6623938	8680449	6533232	5485697	4054010	4218632	4574495	-0.43
	none	5994718	6118754	3559359	2548784	2434264	2125267	2130595	2265651	-0.62
	T90						9536	160701	276747	1.00
r-PEL_TRAWL	BACOMA	1185898	571002	1684466	1635610	854557	346595	199507	955700	-0.19
	none	249065	219558	122741	37349	3841	27748	13555	29491	-0.88
r-TRAMMEL	none	237643	474318	432987	502243	541596	605039	466697	418420	0.76
TRAMMEL	none	20495	31581	32540	31788	25999	11012	11965	10883	-0.47
Grand Total		48733319	89090016	72700651	62172853	62703934	56483901	45042279	42116013	-0.14

Table 5.1.1.2. Trend in nominal effort (kW*days at sea) by regulated gear categories and sub-area 2003-2011. An "r" in front of the gear type indicates regulated gears in accordance with Council Regulation (EC) 1098/2007. Data from Sweden and Poland were only available from 2003 and 2004 respectively.

ANNEX	REG AREA COD	REG GEAR COD	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bal	28.2	r-DEM_SEINE	1534	804					4091	3967	
Bal	28.2	r-GILL	128458	38171	62083	52887	52229	16129	15303	23211	17613
Bal	28.2	r-OTTER	44642	88489	84119	64123	60310	34048	19735	4865	36969
Bal	28.2	r-PEL_TRAWL	882		6850	5500	1100		2860		
sum	28.2		175516	127464	153052	122510	113639	50177	41989	32043	54582
Bal	A	r-BEAM	442					3867		129	
Bal	A	r-DEM_SEINE	367803	401601	268305	275983	276172	220254	161197	101984	68761
Bal	A	r-GILL	2167947	2210506	3653135	3467058	3183757	3026786	2445924	2106754	1929084
Bal	A	r-LONGLINE	191483	236379	581682	411697	302100	166180	209075	163111	177380
Bal	A	r-OTTER	5561992	5074850	5365949	4152545	4377571	3548982	2851999	2394024	2448090
Bal	A	r-PEL_TRAWL	36123	22733	72345	52777	40983	6994	2744	12155	8247
Bal	A	r-TRAMMEL	248170	227410	467483	424258	487380	530740	587949	462938	416319
sum	A		8573960	8173479	10408899	8784318	8667963	7503803	6258888	5241095	5047881
Bal	B	r-DEM_SEINE	729	1702	8630	21537	13380	7782	19715	26908	46570
Bal	B	r-GILL	3485435	7544106	4914900	4198363	3379065	2902673	2322045	1985715	1758949
Bal	B	r-LONGLINE	539794	1204871	1180126	1284393	705675	566343	696157	656308	615599
Bal	B	r-OTTER	3957948	8908598	7372711	8081809	4701617	4364577	3336814	4115904	4668803
Bal	B	r-PEL_TRAWL	68361	1412230	718215	1754430	1631976	851404	371599	200907	976944
Bal	B	r-TRAMMEL	12204	10233	6835	8464	14863	10856	17090	3759	2101
Bal	C	r-GILL	88826	90521	93430	96005	74613	65732	62898	73526	58367
Bal	C	r-LONGLINE	992					80		0	
Bal	C	r-OTTER			4032	5454	2828	6402			
Bal	C	r-TRAMMEL				265					
sum	B-C		8154289	19172261	14298879	15450720	10524017	8775849	6826318	7063027	8127333

Table 5.1.1.3. Relative annual effort dynamics in Baltic cod r-GILL and r- OTTER fisheries in 2004-2011.

REG GEAR COD	REG AREA COD	SPECON	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
r-GILL	28.2	none	0.63	-0.15	-0.01	-0.69	-0.05	0.52	-0.24
r-GILL	A	none	0.65	-0.05	-0.08	-0.05	-0.19	-0.14	-0.08
r-GILL	B	none	-0.35	-0.15	-0.20	-0.14	-0.20	-0.14	-0.11
r-GILL	C	none	0.03	0.03	-0.22	-0.12	-0.04	0.17	-0.21
r-OTTER	28.2	BACOMA	-0.05	-0.24	-0.06	-0.44	-0.42	-0.75	6.60
r-OTTER	A	BACOMA	0.58	2.49	0.23	-0.27	-0.25	-0.14	0.11
r-OTTER	A	none	0.02	-0.56	-0.12	-0.08	-0.14	-0.19	-0.08
r-OTTER	A	T90	0.00	0.00	0.00	0.00	0.00	1.00	0.83
r-OTTER	B	BACOMA	-0.21	0.10	-0.39	-0.09	-0.27	0.14	0.07
r-OTTER	B	none	0.03	0.08	-0.53	0.05	-0.09	0.45	0.25
r-OTTER	B	T90	0.00	0.00	0.00	0.00	1.00	13.51	0.70
r-OTTER	C	BACOMA	0.00	0.00	0.00	1.00	-1.00	0.00	0.00
r-OTTER	C	none	1.00	0.35	-0.48	0.50	-1.00	0.00	0.00
All regulated gears 28.2			0.15	-0.20	-0.04	-0.55	-0.30	-0.20	0.94
All regulated gears A			0.24	-0.16	-0.01	-0.13	-0.19	-0.15	-0.03
All regulated gears B			-0.25	0.00	-0.34	-0.10	-0.22	0.08	0.05
All regulated gears C			0.08	0.04	-0.24	-0.07	-0.13	0.17	-0.21

Table 5.1.1.4 Trend in nominal effort (kW*days at sea) by regulated gear categories according to Council Regulation (EC) 1098/2007, sub-area and Member State for 2004-2011. Data from Estonia were only available from 2005.

ANNEX	REG AREA COD	REG GEAR COD	COUNTRY	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bal	28.2	r-DEM_SEINE	LVA	1534	804					4091	3967	
Bal	28.2	r-GILL	EST				166					
Bal	28.2	r-GILL	LVA	128458	38171	62083	52721	52229	16129	15303	23211	17613
Bal	28.2	r-OTTER	EST				221	221				
Bal	28.2	r-OTTER	LVA	44642	88489	84119	63902	60089	34048	19735	4865	36969
Bal	28.2	r-PEL_TRAWL	LVA	882		6850	5500	1100		2860		
Bal	A	r-BEAM	DEU	442					3867			
Bal	A	r-BEAM	DNK								129	
Bal	A	r-DEM_SEINE	DEU		7398	1912	23422	37741	38400	42327	9713	13789
Bal	A	r-DEM_SEINE	DNK	367803	394203	266393	252561	238431	181854	118870	92271	54972
Bal	A	r-GILL	DEU	786357	662527	1135980	1449940	1457215	1247682	932027	893907	809150
Bal	A	r-GILL	DNK	571865	548685	1292689	996895	805567	873961	816545	673772	594059
Bal	A	r-GILL	EST			40887	57436	19041	39051	41349		
Bal	A	r-GILL	LTU			19111	32901					
Bal	A	r-GILL	LVA	79148	142491	171002	161456	30116	12676	3528	11604	6174
Bal	A	r-GILL	POL		236261	331555	199045	325354	228173	135263	84558	80203
Bal	A	r-GILL	SWE	730577	620542	661911	569385	546464	625243	517212	442913	439498
Bal	A	r-LONGLINE	DEU	78859	80543	122727	119348	100892	97335	122409	74286	62880
Bal	A	r-LONGLINE	DNK	104894	91833	190411	205287	128411	32694	36906	44680	47835
Bal	A	r-LONGLINE	LTU			12533	0					
Bal	A	r-LONGLINE	POL		17962	143615	46306	53736	21615	6391	4502	6288
Bal	A	r-LONGLINE	SWE	7730	46041	112396	40756	19061	14536	43369	39643	60377
Bal	A	r-OTTER	DEU	1906314	1753928	1686831	1481387	1491775	1207722	1028646	933844	964057
Bal	A	r-OTTER	DNK	3376295	2927587	3073583	2063167	1822436	1680846	1460281	1177622	1080463
Bal	A	r-OTTER	EST			4199					4248	
Bal	A	r-OTTER	LTU			57602	84342					
Bal	A	r-OTTER	LVA	880		17632		18488			7920	
Bal	A	r-OTTER	POL		172618	310416	185144	618979	315079	172795	114560	96578
Bal	A	r-OTTER	SWE	278503	220717	215686	338505	425893	345335	190277	155830	306992
Bal	A	r-PEL_TRAWL	DEU	14111	3975	17039	20699	30856	3443		3740	5756
Bal	A	r-PEL_TRAWL	DNK	22012	13656	18809	26622	6246	2831	2744	8255	561
Bal	A	r-PEL_TRAWL	EST			662		1269				
Bal	A	r-PEL_TRAWL	LTU			16799	0					
Bal	A	r-PEL_TRAWL	POL		2220	16612	1258	2612			160	
Bal	A	r-PEL_TRAWL	SWE		2882	2424	4198		720			1930
Bal	A	r-TRAMMEL	DEU	10392	21308	40549	67494	132416	128657	134669	77750	106349
Bal	A	r-TRAMMEL	DNK	203360	176945	368235	311504	309804	351748	358269	323131	271262
Bal	A	r-TRAMMEL	SWE	34418	29157	58699	45260	45160	50335	95011	62057	38708
Bal	B	r-DEM_SEINE	DEU		822		11756	9000	7782	19715	26908	38601
Bal	B	r-DEM_SEINE	DNK	729	880	8630	9781	4380				7936
Bal	B	r-DEM_SEINE	POL									33
Bal	B	r-GILL	DEU	11696	8290	43704	14527	11824	5048	6594		
Bal	B	r-GILL	DNK	255291	239932	243786	254043	189372	195012	172298	136131	128849
Bal	B	r-GILL	EST			287824	253368	128268	40036	31107		
Bal	B	r-GILL	LTU			93187	55397	90686	128949	107267	104170	78123
Bal	B	r-GILL	LVA	1397564	1471236	701180	596996	568781	539579	401856	361015	350477
Bal	B	r-GILL	POL		4339027	2361250	1992875	1556930	1079645	791231	788566	682079
Bal	B	r-GILL	SWE	1820884	1485621	1183969	1031157	833204	914404	811692	595833	519421
Bal	B	r-LONGLINE	DEU	10248	11771	15007	9881	11920	17580	12580	6600	2420
Bal	B	r-LONGLINE	DNK	212604	107249	127573	154932	85371	45181	63747	77366	75291
Bal	B	r-LONGLINE	LTU			264	59543	35332	34991	6664	3956	5514
Bal	B	r-LONGLINE	POL		712715	691955	738832	410561	270046	412292	391897	324214
Bal	B	r-LONGLINE	SWE	316942	373136	345327	321205	162491	198545	200874	176489	208160
Bal	B	r-OTTER	DEU	334236	211999	280977	163096	80177	191198	220844	276398	108001
Bal	B	r-OTTER	DNK	1095043	774695	791940	1255868	568490	640633	610697	776245	1067163
Bal	B	r-OTTER	EST			94896	5729	9503			96642	179832
Bal	B	r-OTTER	LTU			342503	192759	170844	382050	286887	332848	398109
Bal	B	r-OTTER	LVA	458330	322019	242532	350925	186093	229860	198632	218426	473943
Bal	B	r-OTTER	POL		5657875	3902889	4457610	2534977	1715576	1018609	1245924	1021206
Bal	B	r-OTTER	SWE	2070339	1942010	1716974	1655822	1151533	1205260	1001145	1169421	1420549
Bal	B	r-PEL_TRAWL	DEU		182107	143688	141492	70379	16691	36135	61303	128870
Bal	B	r-PEL_TRAWL	DNK	63296	49327	40022	95679	31103	1010	4030	3536	5080
Bal	B	r-PEL_TRAWL	EST			214426	355398	702922	703021	219177	114680	714754
Bal	B	r-PEL_TRAWL	LTU			1100	89918	85447	61407	20974	1764	4420
Bal	B	r-PEL_TRAWL	LVA	5065	114489	4122	29965	122803	10521	14473		
Bal	B	r-PEL_TRAWL	POL		921668	193724	628134	440888	21895	36317	3424	24022
Bal	B	r-PEL_TRAWL	SWE		144639	121133	413844	178434	36859	40493	16200	99798
Bal	B	r-TRAMMEL	DNK	3108	2064	5598	7550	12631	5910	15546	3693	1185
Bal	B	r-TRAMMEL	SWE	9096	8169	1237	914	2232	4946	1544	66	916
Bal	C	r-GILL	EST			166	166					
Bal	C	r-GILL	SWE	88826	90521	93264	95839	74613	65732	62898	73526	58367
Bal	C	r-LONGLINE	SWE	992					80		0	
Bal	C	r-OTTER	EST			3628	5454	2828	4242			
Bal	C	r-OTTER	SWE			404			2160			
Bal	C	r-TRAMMEL	SWE				265					

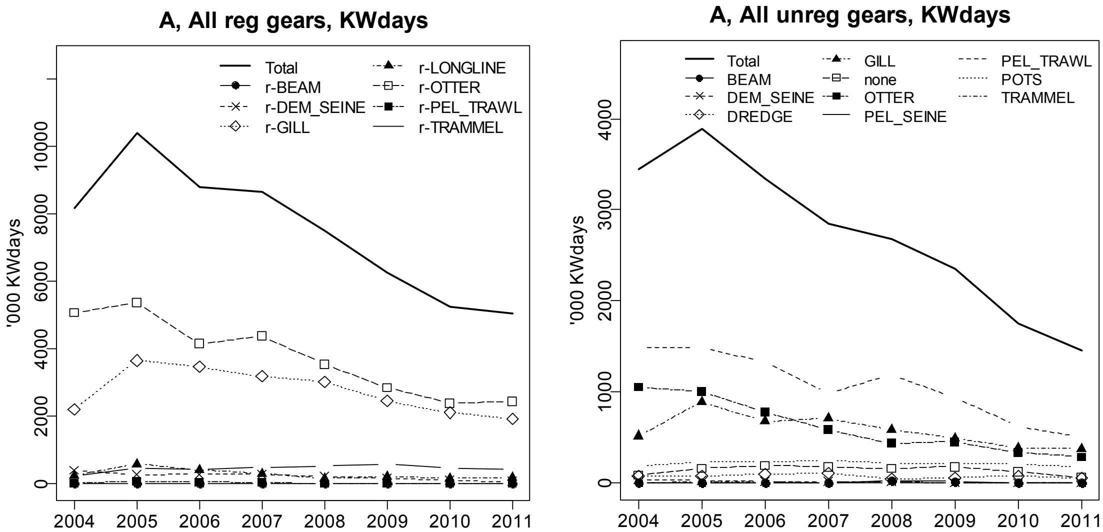


Figure 5.1.1.1. Area A Baltic: Trend in nominal effort by gear types 2004-2011 (Kw *days at sea). Left panel: Regulated gears. Right panel: Unregulated gears. Note that data from Poland, Latvia and Lithuania are only available from 2004 and from Estonian from 2005 onwards. Therefore, effort trends are shown from 2004 to 2011. No data from Finland.

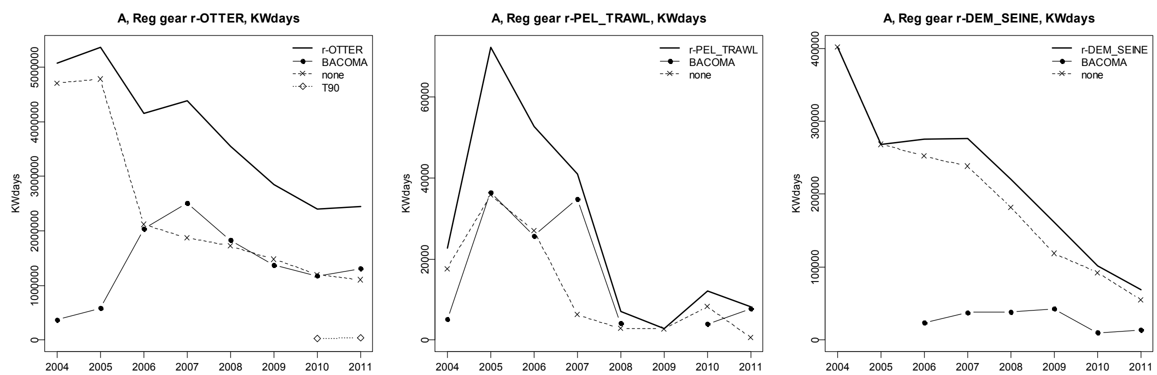


Figure 5.1.1.2. Area A Baltic: Trend in nominal by special conditions, 2004-2011 (kW *days at sea). Note that data from Poland, Latvia and Lithuania are only available from 2004 and from Estonian from 2005 onwards Therefore, effort trends are shown from 2004 to 2011. No data from Finland.

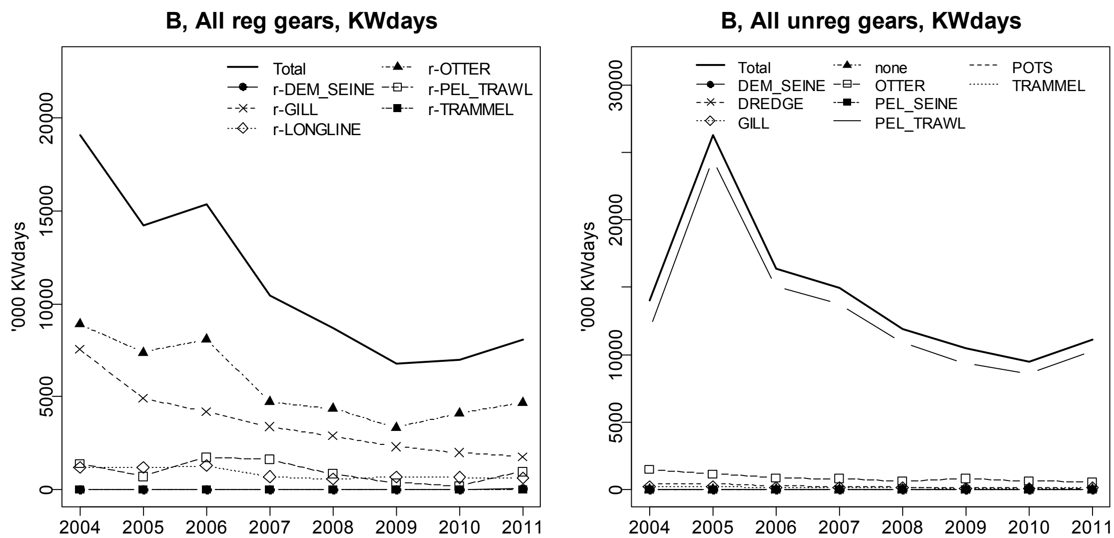


Figure 5.1.1.3. Area B Baltic: Trend in nominal effort by gear types 2004-2011 (kW *days at sea). Left: Regulated gears. Right: Unregulated gears. Note that data from Poland, Latvia and Lithuania are only available from 2004 onwards. Therefore, effort trends are shown from 2004 to 2011. Additionally, Estonian data set of 2005-2011 was included in database. No data from Finland.

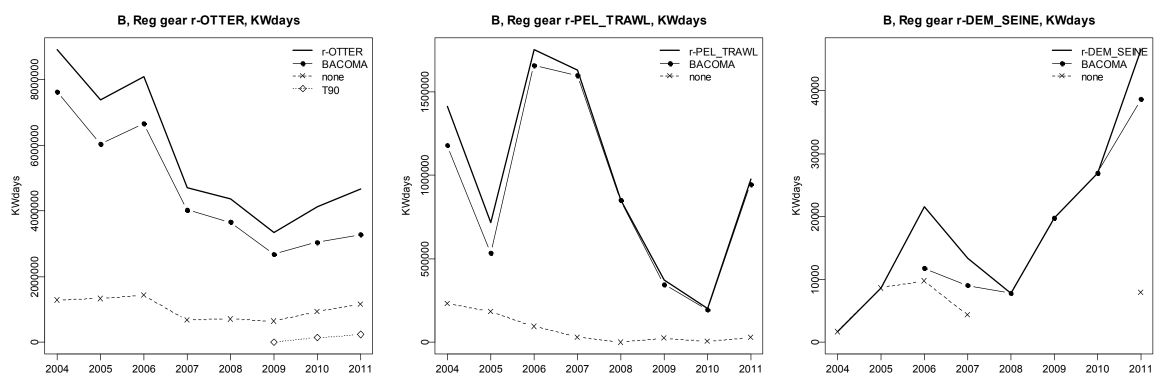


Figure 5.1.1.4. Area B Baltic: Trend in nominal effort by special conditions, 2004-2011 kW *days at sea). Note that data from Poland, Latvia and Lithuania are only available from 2004 and from Estonian from 2005 onwards. Therefore, effort trends are shown from 2004 to 2011. No data from Finland

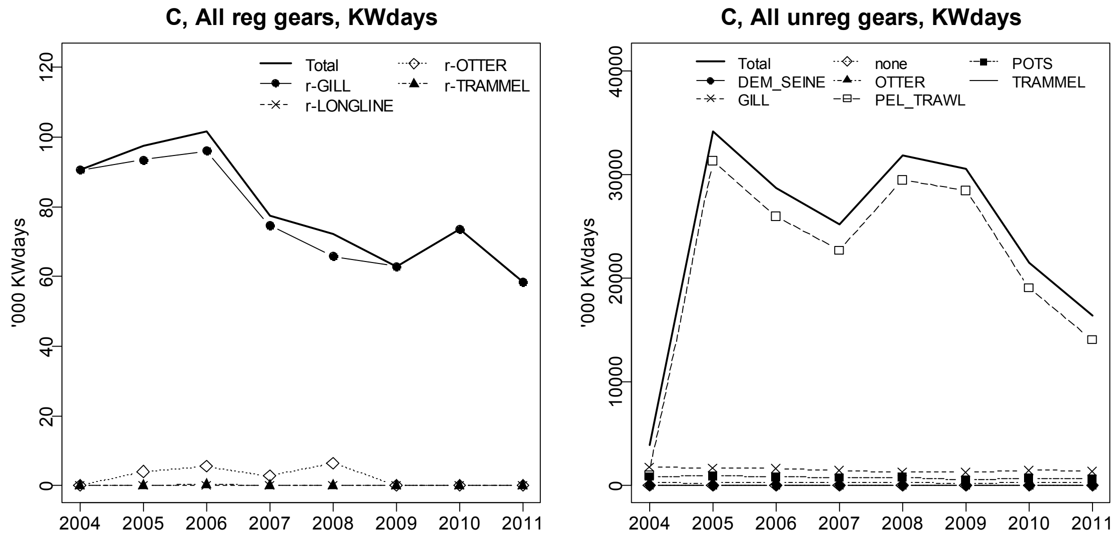


Figure 5.1.1.5. Area C Baltic: Trend in nominal effort by gear types 2004-2011 (kW *days at sea). Left: Regulated gears. Right: Unregulated gears. Note that data from Poland, Latvia and Lithuania are only available from 2004 onwards. Therefore, effort trends are shown from 2004 to 2011. Additionally, Estonian data from 2005-2011 (including substantial pelagic effort) was included. No data from Finland.

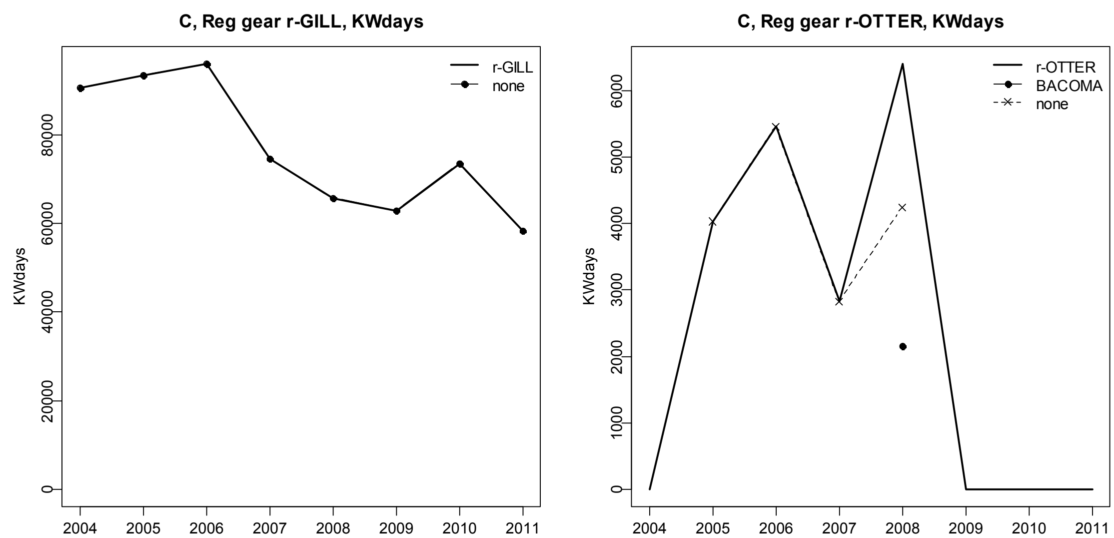


Figure 5.1.1.6. Area C Baltic: Trend in nominal effort by special conditions, 2004-2011 (kw *days at sea). Note that data from Poland, Latvia and Lithuania are only available from 2004 and from Estonian from 2005 onwards Therefore, effort trends are shown from 2004 to 2011. No data from Finland

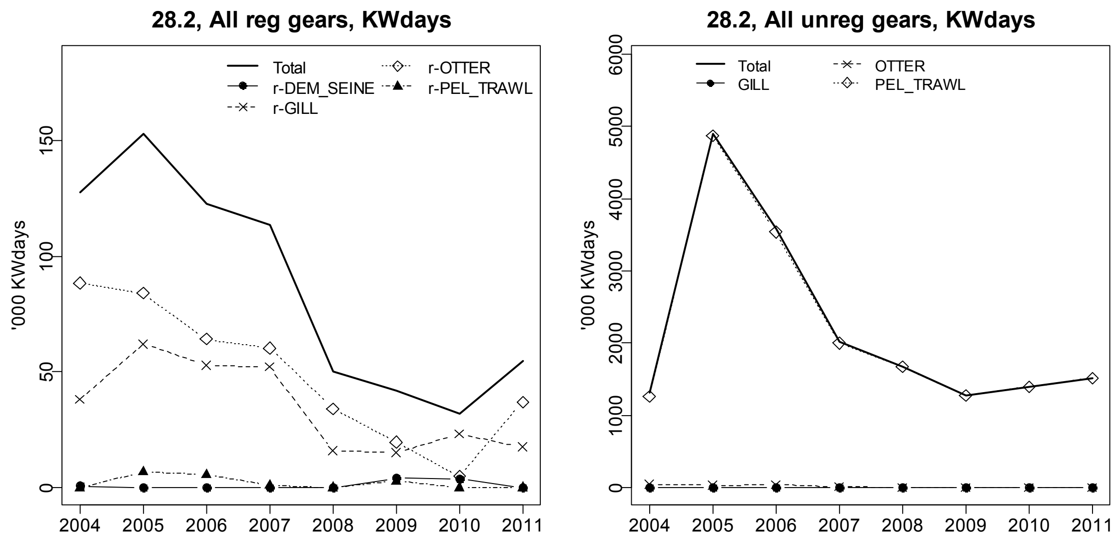


Figure 5.1.1.7. Area 28.2. Baltic: Trend in nominal effort by gear types 2004-2011(kW *days at sea). Left: Regulated gears. Right: Unregulated gears. Note that data from Poland, Latvia and Lithuania are only available from 2004 and from Estonian from 2005 onwards. Therefore, effort trends are shown from 2004 to 2011. No data from Finland

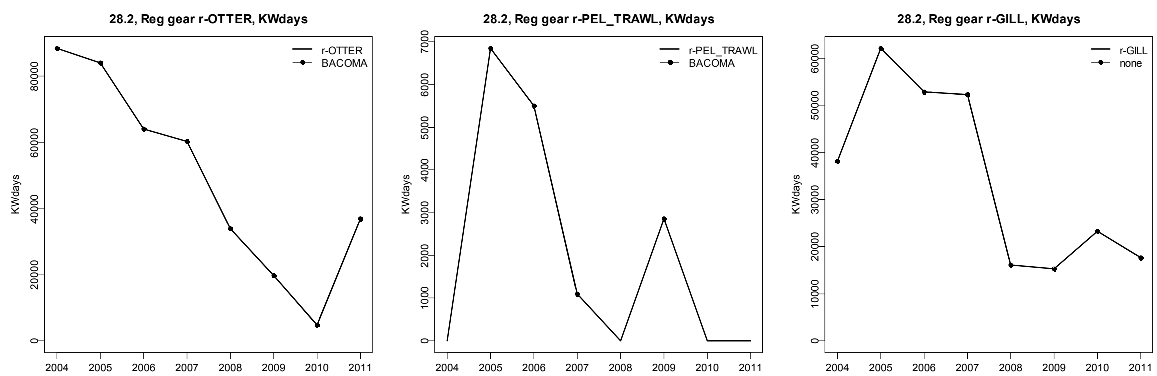


Figure 5.1.1.8. Area 28.2. Baltic: Trend in nominal effort by special conditions, 2004-2011 kW *days at sea). Note that data from Poland, Latvia and Lithuania are only available from 2004 and from Estonian from 2005 onwards. Therefore, effort trends are shown from 2004 to 2011. No data from Finland.

5.1.2 ToR 1.b Fishing activity by area, Member State and fisheries

Table 5.1.2.1 lists the estimated days at sea by area, regulated gear and Member State.

Table 5.1.2.1 Days at sea by area, regulated gear and Member State

Days at sea

REG AREA COD	REG GEAR COD	COUNTRY	2004	2005	2006	2007	2008	2009	2010	2011
A	r-GILL	DEU	7219	14201	22002	21213	17262	13418	11971	11310
		DNK					12001	10655	9228	7920
		EST		115	124	68	125	151		
		LTU								
		LVA	811	1044	997	145	47	12	48	21
		POL	3908	4173	2656	4062	2912	1914	1129	1110
		SWE	5329	5743	5015	4958	5547	4643	4057	3944
	r-OTTER	DEU	9467	8771	8125	7952	6727	5677	5239	5317
		DNK					9316	8507	7180	6110
		EST		7					6	
		LTU								
		LVA		76		84			36	
		POL	748	1361	589	2374	1323	940	717	733
		SWE	705	589	807	960	728	415	331	691
B	r-GILL	DEU	50	361	82	58	24	50		
		DNK					2362	2078	1645	1674
		EST		462	458	308	140	101		
		LTU						944	821	635
		LVA	9376	4413	3501	3306	3024	2447	2213	2140
		POL	40916	25446	21835	17523	13910	11214	10733	10158
		SWE	15348	12125	10484	9220	10766	9395	6868	6188
	r-OTTER	DEU	644	996	625	282	775	1078	1365	485
		DNK					2625	2694	3120	4133
		EST		100	26	43			171	281
		LTU						1300	1508	1812
		LVA	1421	1054	1546	797	1012	806	892	2005
		POL	24902	15831	17179	10038	7031	4601	5562	5583
		SWE	5079	4262	4041	2640	2847	2539	2810	3427
Grand Total			125923	101130	100092	86031	100504	85579	77650	75677

5.1.3 ToR 1.b Catches (landings and discards) of cod in weight and numbers at age by fisheries

The following tables list the landings and discards for cod by gear category, sub-area and Member State (Table 5.1.3.1) as well as aggregated over Member States (Table 5.1.3.2). Discard rates per year, gear category, sub-area and country can be found in Table 5.1.3.3 and aggregated over Member States in Table 5.1.3.2. In addition in Table 5.1.3.4 discard rates by sub-areas, gear category and years are presented, while in Table 5.1.3.5 discard and landing data by age is listed. Figures on landings and discards for the most important gear categories catching cod were also provided (Figure 5.1.3.1).

The overall problem highlighted in this section is the poor quality of discard data as already outlined. In addition, data from Poland are only available from 2004 and for Estonia, from 2005 onwards. Therefore, for the analyses of catch and discard trends, year 2003 had to be excluded.

The overall landings of Baltic cod in 2011 were 7% lower compared to 2004 (ICES, 2011) and 5% higher than in 2010. Discards fluctuate around low values without trend over years. Despite the quality of discard estimates has essentially improved since the introduction of EU Data Collection Programs the estimates should still be taken with caution.

Most cod landings stem from areas A and B. Area C only plays a very limited role according to available data, on cod present distribution pattern in the Baltic (Landings 2011 A+B = 50368 tonnes; Landings 2010 C = 69 tonnes (<1.4%)).

Discard rates for cod are highest for area B followed by area A (Table 5.1.3.1). For area C only very minor discard rate has been observed in gillnet fishery. This probably reflects the distribution of the cod stock. Discard rates were higher for pelagic trawls (up to 22 % in sub-area A in 2011) but remained generally <16% from 2005 onwards in most cases. The discards from gillnet fishery generally remained below 10%. Discard rates between Member States are of comparable magnitude. Only in area B were discard rates for r-Otter significantly higher for Sweden, Germany and Poland compared to the other countries in some years. 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.

Table 5.1.3.1 Landings (t) and discards (t) for cod in 2004-2011 by gear category, area and Member State. An “r” in front of the gear type indicates regulated gears in accordance with Council Regulation (EC) 1098/2007. Gear types without an “r” are non-regulated gears. Data from Estonia are only available from 2005 onwards

REG_AREA	REG_GEAR	SPECON	COUNTRY	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D	2008 L	2008 D	2009 L	2009 D	2010 L	2010 D	2011 L	2011 D
28.2	GILL	none	LVA													0	0	0	0
28.2	OTTER	none	LVA			0	0	0	0										
28.2	PEL_TRAWL	NONE	EST															0	0
28.2	PEL_TRAWL	none	LVA	17	0	9	0	9	0	13	0	5	0			1	0	3	0
28.2	r-GILL	none	LVA	74	0	151	3	90	2	102	7	39	1	39	0	37	0	36	0
28.2	r-OTTER	BACOMA	EST							1	0								
28.2	r-OTTER	BACOMA	LVA	173	0	195	0	168	0	93	0	57	0	121	0	12	0	41	0
28.2	r-PEL_TRAWL	BACOMA	LVA																
A	BEAM	none	DEU													2	0	3	0
A	DEM_SEINE	none	DNK	0	0	0	0	6	0	0	0								
A	DEM_SEINE	none	POL	0	0					0	0								
A	DREDGE	none	DNK																
A	GILL	none	DEU	0	0	22	0	21	0	17	0	4	0	1	0	3	0	0	0
A	GILL	none	DNK	56	0	258	4	122	0	119	0	20	0	12	0	7	0	7	0
A	GILL	none	POL	9	0	1	0	1	0	5	0	3	0	1	0	0	0		
A	GILL	none	SWE	0	0	1	0	0	0	1	0	0	0	1	0	1	0	2	0
A	none	none	DEU	3	0	18	0	34	0	9	0	3	0	3	0				
A	none	none	DNK	2782	0	426	0	808	0	99	0	52	0	24	0	40	0	30	0
A	none	none	SWE	1	0	23	0	7	0	35	0	15	0	6	0	17	0		
A	OTTER	none	DEU	21	0	77	0	60	0	39	0	57	0	33	0	22	34	52	0
A	OTTER	none	DNK	72	0	121	0	122	0	49	0	22	0	23	0	8	14	9	0
A	OTTER	none	POL	3	0	3	0	1	0	1	0	0	0					7	0
A	OTTER	none	SWE	1	0	0	0	1	0	0	0			0	0				
A	PEL_TRAWL	none	DEU	26	0	65	0	83	0	50	0	47	0	17	0	17	0	6	1
A	PEL_TRAWL	none	DNK	35	0	94	0	88	0	46	0	27	0	19	0	19	0	10	0
A	PEL_TRAWL	none	LVA							11	0			0	0				
A	PEL_TRAWL	none	POL	10	0	35	0	40	0	9	0	16	0	0	0	1	0	1	0
A	PEL_TRAWL	none	SWE	60	1	71	0	53	0	31	0	27	0	23	0	28	0	25	9
A	POTS	none	DEU	2	0	0	0	2	0	0	0	1	0	4	0	14	0	4	0
A	POTS	none	DNK			268	0	83	0	174	0	64	0	58	0	83	0	47	0
A	POTS	none	POL	0	0			1	0										
A	POTS	none	SWE	3	0	3	0	4	0	6	0	1	0	0	0	2	0	4	0
A	r-BEAM	BACOMA	DEU									9	0						
A	r-BEAM	none	DEU																
A	r-DEM_SEINE	BACOMA	DEU					51	0	143	0	250	0	194	0	51	0	71	0
A	r-DEM_SEINE	none	DEU	6	0	37	4												
A	r-DEM_SEINE	none	DNK	1318	81	1045	67	1339	64	1425	136	1222	2	581	9	466	7	319	13
A	r-GILL	none	DEU	624	13	1140	45	1744	0	1699	0	1534	0	874	87	1174	35	864	28
A	r-GILL	none	DNK	1444	15	2998	125	2310	0	2098	0	1865	1	1398	74	1378	33	1461	0
A	r-GILL	none	EST			60	3	102	0	52	0	132	0	194	8				
A	r-GILL	none	LVA	247	2	406	19	580	0	90	0	30	0	23	1	71	3	24	1
A	r-GILL	none	POL	316	7	449	18	436	0	884	0	641	0	266	36	168	3	225	4
A	r-GILL	none	SWE	1217	18	1151	46	1063	0	1153	0	1245	2	946	39	817	17	870	15
A	r-LONGLINE	none	DEU	24	0	59	3	32	0	20	0	20	0	13	0	32	0	27	0
A	r-LONGLINE	none	DNK	309	1	718	36	478	0	413	0	131	0	123	1	158	0	221	0
A	r-LONGLINE	none	LTU			8	0												
A	r-LONGLINE	none	POL	33	0	258	12	128	0	265	0	78	0	10	0	13	0	20	0
A	r-LONGLINE	none	SWE	113	3	204	7	100	0	54	0	58	0	157	0	107	0	167	2
A	r-OTTER	BACOMA	DEU					4944	332	4941	319	3155	231	2623	300	2556	567	3133	411
A	r-OTTER	BACOMA	EST			1	0									0	0		
A	r-OTTER	BACOMA	LVA			57	0	1	0	173	13					87	11		
A	r-OTTER	BACOMA	POL	129	13	309	0	177	13	1182	78	611	37	238	20	127	11	224	48
A	r-OTTER	BACOMA	SWE	755	40	634	2	1217	61	1525	132	1256	51	879	91	429	45	1241	542
A	r-OTTER	none	DEU	3685	320	4670	504	22	0	9	0	18	0	4	0	1	0	17	0
A	r-OTTER	none	DNK	7748	7	7273	17	6441	5	6921	9	5502	11	5353	10	4158	11	4742	0
A	r-OTTER	none	LTU			129	0	42	0										
A	r-OTTER	NONE	POL															7	0
A	r-OTTER	none	SWE													19	2		
A	r-OTTER	T90	SWE													45	4	149	65
A	r-PEL_TRAWL	BACOMA	DEU					76	0	187	0	5	0			13	0	13	3
A	r-PEL_TRAWL	BACOMA	EST			1	0			10	0								
A	r-PEL_TRAWL	BACOMA	POL			27	0	2	0	3	0								
A	r-PEL_TRAWL	BACOMA	SWE	8	0	5	0	7	0			2	0					6	2
A	r-PEL_TRAWL	none	DEU	11	0	35	0	0	0										
A	r-PEL_TRAWL	none	DNK	23	0	59	0	98	0	19	0	7	0	23	0	27	0	0	0
A	r-PEL_TRAWL	none	LTU			10	0												

Table 5.1.3.1 continued

B	DREDGE	none	DNK									6	0				
B	GILL	none	DNK	47	0	35	0	54	0	42	0	7	0	1	0	0	0
B	GILL	NONE	LVA														
B	GILL	none	POL	6	0	2	0	2	0	1	0	1	0	2	0	1	0
B	GILL	none	SWE			0	0	0	0	0	0	0	0	0	0	0	0
B	none	none	DNK	1057	0	41	0	82	0	9	0	3	0			2	0
B	none	none	SWE	5	0	3	0	11	0	8	0	7	0	4	0	0	0
B	OTTER	none	DEU									0	0	6	0	0	0
B	OTTER	none	DNK	60	0	66	0	33	0	10	0	3	0	6	1	1	0
B	OTTER	NONE	LTU													0	0
B	OTTER	none	LVA														
B	OTTER	none	POL	38	0	32	0	8	0	3	0	2	0			0	0
B	OTTER	NONE	SWE	24	0	22	0	15	0	16	0	16	0	22	2	10	0
B	PEL_TRAWL	none	DEU	5	0					0	0					0	0
B	PEL_TRAWL	none	DNK	29	0	80	0	21	0	24	0	6	0	13	1	3	3
B	PEL_TRAWL	none	EST			47	0	0	0	40	0	19	0	17	1		
B	PEL_TRAWL	NONE	LTU											52	0	30	43
B	PEL_TRAWL	none	LVA	57	0	69	0	56	0	207	0	149	0	177	14	159	107
B	PEL_TRAWL	none	POL	321	0	352	0	262	0	133	0	143	0	58	5	58	54
B	PEL_TRAWL	none	SWE	102	0	96	0	36	0	100	0	79	0	96	12	22	0
B	POTS	none	DNK			0	0			0	0						
B	POTS	none	POL	0	0	0	0	1	0								
B	POTS	none	SWE	0	0	0	0	0	0	0	0	1	0	12	1	8	0
B	r-DEM_SEINE	BACOMA	DEU					67	0	58	0	94	0	339	0	233	0
B	r-DEM_SEINE	none	DEU	1	0												
B	r-DEM_SEINE	none	DNK	0	0	89	0	82	0	45	0						
B	r-GILL	none	DEU	19	1	172	5	16	0	2	0	8	0	19	0		
B	r-GILL	none	DNK	595	13	605	15	719	25	729	51	871	32	789	28	465	43
B	r-GILL	none	EST			301	9	296	12	229	21	168	6	161	4		
B	r-GILL	NONE	LTU			3	0			1	0			451	16	484	139
B	r-GILL	none	LVA	3380	146	2106	70	1821	69	1657	195	1964	73	2333	72	2336	235
B	r-GILL	none	POL	5217	158	3496	109	3582	139	2048	132	2788	70	3448	138	3323	255
B	r-GILL	none	SWE	2894	40	1864	57	1629	55	1517	93	1969	75	1835	98	1081	32
B	r-LONGLINE	none	DEU	0	0	1	0	0	0			0	0			0	0
B	r-LONGLINE	none	DNK	238	2	378	5	319	0	192	0	113	0	89	6	139	16
B	r-LONGLINE	NONE	LTU											28	0	22	0
B	r-LONGLINE	none	POL	2122	26	1804	25	2553	0	1371	0	913	3	514	36	1372	173
B	r-LONGLINE	none	SWE	1197	16	951	19	896	0	537	0	724	1	621	48	412	62
B	r-OTTER	BACOMA	DEU					1199	220	596	110	1960	123	1991	260	2456	244
B	r-OTTER	BACOMA	EST			73	5	28	5	63	12					526	55
B	r-OTTER	BACOMA	LTU											2042	189	2595	232
B	r-OTTER	BACOMA	LVA	623	26	931	23	1603	106	1043	39	1658	156	1776	130	2434	311
B	r-OTTER	BACOMA	POL	5366	280	5291	358	6282	704	3399	506	4466	272	5478	489	6548	624
B	r-OTTER	BACOMA	SWE	7131	426	4502	649	5357	1334	6108	1459	5792	665	6785	982	7030	656
B	r-OTTER	none	DEU	1039	36	1570	44					26	1	34	0		
B	r-OTTER	none	DNK	3427	65	2964	73	6443	374	4539	118	5842	129	6683	130	8762	203
B	r-OTTER	none	LTU			23	0	112	9	669	11						
B	r-OTTER	NONE	POL														
B	r-OTTER	none	SWE											156	21	274	27
B	r-OTTER	T90	SWE											77	12	887	75
B	r-PEL_TRAWL	BACOMA	DEU					728	124	870	94	260	12	842	78	1228	34
B	r-PEL_TRAWL	BACOMA	EST			103	0	277	42	446	41	611	63	445	38	266	8
B	r-PEL_TRAWL	BACOMA	LTU														
B	r-PEL_TRAWL	BACOMA	LVA	348	9	6	0	140	28	751	86	32	3	122	10		
B	r-PEL_TRAWL	BACOMA	POL	1188	20	235	0	1111	22	1378	21	34	2	261	8	28	1
B	r-PEL_TRAWL	BACOMA	SWE	494	26	321	0	1596	393	1226	227	162	32	394	46	114	9
B	r-PEL_TRAWL	none	DEU	1530	22	578	22										
B	r-PEL_TRAWL	none	DNK	394	3	174	6	543	0	356	0	14	0	91	0	37	0
B	r-PEL_TRAWL	none	LTU			122	4	791	0	1732	0			218	0	13	0
B	r-PEL_TRAWL	NONE	POL														
B	r-PEL_TRAWL	T90	SWE														
B	r-TRAMMEL	none	DNK	7	0	2	0	4	0	36	0	26	0	68	0	10	0
B	r-TRAMMEL	none	SWE	2	0	1	0	0	0	0	0	1	0	0	0		
B	TRAMMEL	none	DNK					0	0	1	0						
B	TRAMMEL	none	SWE	1	0	0	0	0	0			0	0				
C	GILL	none	FIN	0	0	0	0	0	0	0	0	0	0	0	0	2	0
C	GILL	none	SWE			1	0	0	0							0	0
C	OTTER	none	SWE	0	0	0	0	4	0								
C	PEL_TRAWL	none	DNK														
C	POTS	none	FIN	0	0	0	0							0	0		
C	r-GILL	none	SWE	12	0	10	0	10	0	13	0	15	0	34	2	41	1
C	r-LONGLINE	none	SWE									0	0				
C	r-OTTER	BACOMA	SWE									1	0				
GRAND TOTAL A+B+C				60340	1839	53314	2429	62310	4136	56760	3903	49688	2053	53108	3576	56051	4440
GRAND TOTAL 28.2				264	0	355	3	267	2	209	7	101	1	160	0	50	0

Table 5.1.3.2 Landings (t) and discards (t) for cod in 2003-2011 by gear category and area. An “r” in front of the gear type indicates regulated gears in accordance with Council Regulation (EC) 1098/2007. Gear types without an “r” are non-regulated gears. Data from Estonia are only available from 2005 onwards

REG_AREA	REG_GEAR	SPECON	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D	2008 L	2008 D	2009 L	2009 D	2010 L	2010 D	2011 L	2011 D
28.2	GILL	none													0	0	0	0
28.2	OTTER	none			0	0	0	0										
28.2	PEL_TRAWL	none	17	0	9	0	9	0	13	0	5	0			1	0	3	0
28.2	r-GILL	none	74	0	151	3	90	2	102	7	39	1	39	0	37	0	36	0
28.2	r-OTTER	BACOMA	173	0	195	0	168	0	94	0	57	0	121	0	12	0	41	0
28.2	r-PEL_TRAWL	BACOMA																
A	BEAM	none													2	0	3	0
A	DEM_SEINE	none	0	0	0	0	6	0	0	0								
A	DREDGE	none																
A	GILL	none	65	0	282	4	144	0	142	0	27	0	15	0	11	0	9	0
A	none	none	2786	0	467	0	849	0	143	0	70	0	33	0	57	0	30	0
A	OTTER	none	97	0	201	0	184	0	89	0	79	0	56	0	30	48	68	0
A	PEL_TRAWL	none	131	1	265	0	264	0	147	0	117	0	59	0	65	0	42	10
A	POTS	none	5	0	271	0	90	0	180	0	66	0	62	0	99	0	55	0
A	r-BEAM	BACOMA									9	0						
A		none																
A	r-DEM_SEINE	BACOMA					51	0	143	0	250	0	194	0	51	0	71	0
A		FDFBAL															56	0
A		none	1324	81	1082	71	1339	64	1425	136	1222	2	581	9	466	7	319	13
A	r-GILL	none	3848	55	6204	256	6235	0	5976	0	5447	3	3701	245	3608	91	3444	48
A	r-LONGLINE	none	479	4	1247	58	738	0	752	0	287	0	303	1	310	0	435	2
A	r-OTTER	BACOMA	884	53	1001	2	6339	406	7821	542	5022	319	3740	411	3199	634	4598	1001
A		FDFBAL													264	0	620	0
A		none	11433	327	12072	521	6505	5	6930	9	5520	11	5357	10	4178	13	4766	0
A		T90													45	4	149	65
A	r-PEL_TRAWL	BACOMA	8	0	33	0	85	0	200	0	7	0			13	0	19	5
A		FDFBAL													8	0		
A		none	34	0	104	0	98	0	19	0	7	0	23	0	27	0	0	0
A	r-TRAMMEL	none	266	3	542	19	588	0	580	0	597	0	394	22	477	1	528	1
A	TRAMMEL	none	4	0	21	0	6	0	8	0	7	0	0	0	1	0	0	0
B	DEM_SEINE	FDFBAL															1	0
B	DREDGE	none									6	0						
B	GILL	none	53	0	37	0	56	0	43	0	8	0	3	0	1	0	13	0
B	none	none	1062	0	44	0	93	0	17	0	10	0	4	0	2	0	24	0
B	OTTER	FDFBAL													0	0		
B		none	122	0	120	0	56	0	29	0	21	0	34	3	11	0	36	2
B	PEL_TRAWL	FDFBAL													2	0	0	0
B		none	514	0	644	0	375	0	504	0	396	0	413	33	272	207	315	23
B	POTS	none	0	0	0	0	1	0	0	0	1	0	12	1	8	0	2	0
B	r-DEM_SEINE	BACOMA					67	0	58	0	94	0	339	0	233	0	365	0
B		none	1	0	89	0	82	0	45	0							90	0
B	r-GILL	none	12105	358	8547	265	8063	300	6183	492	7768	256	9036	356	7689	704	6160	264
B	r-LONGLINE	none	3557	44	3134	49	3768	0	2100	0	1750	4	1252	90	1945	251	1599	51
B	r-OTTER	BACOMA	13120	732	10797	1035	14469	2369	11209	2126	13876	1216	18072	2050	21589	2122	20021	2559
B		FDFBAL													725	0	1633	0
B		none	4466	101	4557	117	6555	383	5208	129	5868	130	6873	151	9036	230	8494	10
B		T90											77	12	887	75	1145	190
B	r-PEL_TRAWL	BACOMA	2030	55	665	0	3852	609	4671	469	1099	112	2064	180	1636	52	3183	602
B		FDFBAL													19	0		
B		none	1924	25	874	32	1334	0	2088	0	14	0	309	0	50	0	66	0
B		T90															24	7
B	r-TRAMMEL	none	9	0	3	0	4	0	36	0	27	0	68	0	10	0	1	0
B	TRAMMEL	none	1	0	0	0	0	0	1	0	0	0						
C	GILL	none	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	0
C	OTTER	none	0	0	0	0	4	0										
C	PEL_TRAWL	none																
C	POTS	none	0	0	0	0							0	0			0	0
C	r-GILL	none	12	0	10	0	10	0	13	0	15	0	34	2	41	1	60	3
C	r-LONGLINE	none									0	0						
C	r-OTTER	BACOMA									1	0						

Table 5.1.3.3 Discard rates for cod 2004-2011 by gear category, area and country. An "r" in front of the gear type indicates regulated gears in accordance with Council Regulation (EC) 1098/2007). Gear types without an "r" are non-regulated gears. Data from Estonia are only available from 2005 onwards

REG_AREA	REG_GEAR	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009	2010	2011
28.2	GILL	none	LVA	0	0	0	0	0	0	0	0
28.2	OTTER	none	LVA	0	0	0	0	0	0	0	0
28.2	PEL_TRAWL	NONE	EST	0	0	0	0	0	0	0	0
28.2	PEL_TRAWL	none	LVA	0	0	0	0	0	0	0	0
28.2	r-GILL	none	LVA	0	0.02	0.02	0.06	0.02	0	0	0
28.2	r-OTTER	BACOMA	EST	0	0	0	0	0	0	0	0
28.2	r-OTTER	BACOMA	LVA	0	0	0	0	0	0	0	0
28.2	r-PEL_TRAWL	BACOMA	LVA	0	0	0	0	0	0	0	0
A	BEAM	none	DEU	0	0	0	0	0	0	0	0
A	DEM_SEINE	none	DNK	0	0	0	0	0	0	0	0
A	DEM_SEINE	none	POL	0	0	0	0	0	0	0	0
A	DREDGE	none	DNK	0	0	0	0	0	0	0	0
A	GILL	none	DEU	0	0	0	0	0	0	0	0
A	GILL	none	DNK	0	0.02	0	0	0	0	0	0
A	GILL	none	POL	0	0	0	0	0	0	0	0
A	GILL	none	SWE	0	0	0	0	0	0	0	0
A	none	none	DEU	0	0	0	0	0	0	0	0
A	none	none	DNK	0	0	0	0	0	0	0	0
A	none	none	SWE	0	0	0	0	0	0	0	0
A	OTTER	none	DEU	0	0	0	0	0	0	0.61	0
A	OTTER	none	DNK	0	0	0	0	0	0	0.64	0
A	OTTER	none	POL	0	0	0	0	0	0	0	0
A	OTTER	none	SWE	0	0	0	0	0	0	0	0
A	PEL_TRAWL	none	DEU	0	0	0	0	0	0	0	0.14
A	PEL_TRAWL	none	DNK	0	0	0	0	0	0	0	0
A	PEL_TRAWL	none	LVA	0	0	0	0	0	0	0	0
A	PEL_TRAWL	none	POL	0	0	0	0	0	0	0	0
A	PEL_TRAWL	none	SWE	0.02	0	0	0	0	0	0	0.26
A	POTS	none	DEU	0	0	0	0	0	0	0	0
A	POTS	none	DNK	0	0	0	0	0	0	0	0
A	POTS	none	POL	0	0	0	0	0	0	0	0
A	POTS	none	SWE	0	0	0	0	0	0	0	0
A	r-BEAM	BACOMA	DEU	0	0	0	0	0	0	0	0
A	r-BEAM	none	DEU	0	0	0	0	0	0	0	0
A	r-DEM_SEINE	BACOMA	DEU	0	0	0	0	0	0	0	0
A	r-DEM_SEINE	none	DEU	0	0.1	0	0	0	0	0	0
A	r-DEM_SEINE	none	DNK	0.06	0.06	0.05	0.09	0	0.02	0.01	0.04
A	r-GILL	none	DEU	0.02	0.04	0	0	0	0.09	0.03	0.03
A	r-GILL	none	DNK	0.01	0.04	0	0	0	0.05	0.02	0
A	r-GILL	none	EST	0	0.05	0	0	0	0.04	0	0
A	r-GILL	none	LVA	0.01	0.04	0	0	0	0.04	0.04	0.04
A	r-GILL	none	POL	0.02	0.04	0	0	0	0.12	0.02	0.02
A	r-GILL	none	SWE	0.01	0.04	0	0	0	0.04	0.02	0.02
A	r-LONGLINE	none	DEU	0	0.05	0	0	0	0	0	0
A	r-LONGLINE	none	DNK	0	0.05	0	0	0	0.01	0	0
A	r-LONGLINE	none	LTU	0	0	0	0	0	0	0	0
A	r-LONGLINE	none	POL	0	0.04	0	0	0	0	0	0
A	r-LONGLINE	none	SWE	0.03	0.03	0	0	0	0	0	0.01
A	r-OTTER	BACOMA	DEU	0	0	0.06	0.06	0.07	0.1	0.18	0.12
A	r-OTTER	BACOMA	EST	0	0	0	0	0	0	0	0
A	r-OTTER	BACOMA	LVA	0	0	0	0.07	0	0	0.11	0
A	r-OTTER	BACOMA	POL	0.09	0	0.07	0.06	0.06	0.08	0.08	0.18
A	r-OTTER	BACOMA	SWE	0.05	0	0.05	0.08	0.04	0.09	0.09	0.3
A	r-OTTER	none	DEU	0.08	0.1	0	0	0	0	0	0
A	r-OTTER	none	DNK	0	0	0	0	0	0	0	0
A	r-OTTER	none	LTU	0	0	0	0	0	0	0	0
A	r-OTTER	NONE	POL	0	0	0	0	0	0	0	0
A	r-OTTER	none	SWE	0	0	0	0	0	0	0.1	0
A	r-OTTER	T90	SWE	0	0	0	0	0	0	0.08	0.3
A	r-PEL_TRAWL	BACOMA	DEU	0	0	0	0	0	0	0	0.19
A	r-PEL_TRAWL	BACOMA	EST	0	0	0	0	0	0	0	0
A	r-PEL_TRAWL	BACOMA	POL	0	0	0	0	0	0	0	0
A	r-PEL_TRAWL	BACOMA	SWE	0	0	0	0	0	0	0	0.25
A	r-PEL_TRAWL	none	DEU	0	0	0	0	0	0	0	0
A	r-PEL_TRAWL	none	DNK	0	0	0	0	0	0	0	0
A	r-PEL_TRAWL	none	LTU	0	0	0	0	0	0	0	0

Table 5.1.3.3 continued.

B	DREDGE	none	DNK	0	0	0	0	0	0	0	0
B	GILL	none	DNK	0	0	0	0	0	0	0	0
B	GILL	NONE	LVA	0	0	0	0	0	0	0	0
B	GILL	none	POL	0	0	0	0	0	0	0	0
B	GILL	none	SWE	0	0	0	0	0	0	0	0
B	none	none	DNK	0	0	0	0	0	0	0	0
B	none	none	SWE	0	0	0	0	0	0	0	0
B	OTTER	none	DEU	0	0	0	0	0	0	0	0
B	OTTER	none	DNK	0	0	0	0	0	0.14	0	0
B	OTTER	NONE	LTU	0	0	0	0	0	0	0	0
B	OTTER	none	LVA	0	0	0	0	0	0	0	0
B	OTTER	none	POL	0	0	0	0	0	0	0	0.06
B	OTTER	NONE	SWE	0	0	0	0	0	0.08	0	0
B	PEL_TRAV	none	DEU	0	0	0	0	0	0	0	0
B	PEL_TRAV	none	DNK	0	0	0	0	0	0.07	0.5	0
B	PEL_TRAV	none	EST	0	0	0	0	0	0.06	0	0
B	PEL_TRAV	NONE	LTU	0	0	0	0	0	0	0.59	0
B	PEL_TRAV	none	LVA	0	0	0	0	0	0.07	0.4	0.08
B	PEL_TRAV	none	POL	0	0	0	0	0	0.08	0.48	0
B	PEL_TRAV	none	SWE	0	0	0	0	0	0.11	0	0.13
B	POTS	none	DNK	0	0	0	0	0	0	0	0
B	POTS	none	POL	0	0	0	0	0	0	0	0
B	POTS	none	SWE	0	0	0	0	0	0.08	0	0
B	r-DEM_SE	BACOMA	DEU	0	0	0	0	0	0	0	0
B	r-DEM_SE	none	DEU	0	0	0	0	0	0	0	0
B	r-DEM_SE	none	DNK	0	0	0	0	0	0	0	0
B	r-GILL	none	DEU	0.05	0.03	0	0	0	0	0	0
B	r-GILL	none	DNK	0.02	0.02	0.03	0.07	0.04	0.03	0.08	0
B	r-GILL	none	EST	0	0.03	0.04	0.08	0.03	0.02	0	0
B	r-GILL	NONE	LTU	0	0	0	0	0	0.03	0.22	0
B	r-GILL	none	LVA	0.04	0.03	0.04	0.11	0.04	0.03	0.09	0.04
B	r-GILL	none	POL	0.03	0.03	0.04	0.06	0.02	0.04	0.07	0.05
B	r-GILL	none	SWE	0.01	0.03	0.03	0.06	0.04	0.05	0.03	0.05
B	r-LONGLIN	none	DEU	0	0	0	0	0	0	0	0
B	r-LONGLIN	none	DNK	0.01	0.01	0	0	0	0.06	0.1	0
B	r-LONGLIN	NONE	LTU	0	0	0	0	0	0	0	0
B	r-LONGLIN	none	POL	0.01	0.01	0	0	0	0.07	0.11	0.03
B	r-LONGLIN	none	SWE	0.01	0.02	0	0	0	0.07	0.13	0.06
B	r-OTTER	BACOMA	DEU	0	0	0.16	0.16	0.06	0.12	0.09	0.11
B	r-OTTER	BACOMA	EST	0	0.06	0.15	0.16	0	0	0.09	0.12
B	r-OTTER	BACOMA	LTU	0	0	0	0	0	0.08	0.08	0.04
B	r-OTTER	BACOMA	LVA	0.04	0.02	0.06	0.04	0.09	0.07	0.11	0.1
B	r-OTTER	BACOMA	POL	0.05	0.06	0.1	0.13	0.06	0.08	0.09	0.12
B	r-OTTER	BACOMA	SWE	0.06	0.13	0.2	0.19	0.1	0.13	0.09	0.14
B	r-OTTER	none	DEU	0.03	0.03	0	0	0.04	0	0	0
B	r-OTTER	none	DNK	0.02	0.02	0.05	0.03	0.02	0.02	0.02	0
B	r-OTTER	none	LTU	0	0	0.07	0.02	0	0	0	0
B	r-OTTER	NONE	POL	0	0	0	0	0	0	0	0
B	r-OTTER	none	SWE	0	0	0	0	0	0.12	0.09	0
B	r-OTTER	T90	SWE	0	0	0	0	0	0.13	0.08	0.14
B	r-PEL_TRA	BACOMA	DEU	0	0	0.15	0.1	0.04	0.08	0.03	0.14
B	r-PEL_TRA	BACOMA	EST	0	0	0.13	0.08	0.09	0.08	0.03	0.16
B	r-PEL_TRA	BACOMA	LTU	0	0	0	0	0	0	0	0
B	r-PEL_TRA	BACOMA	LVA	0.03	0	0.17	0.1	0.09	0.08	0	0
B	r-PEL_TRA	BACOMA	POL	0.02	0	0.02	0.02	0.06	0.03	0.03	0.15
B	r-PEL_TRA	BACOMA	SWE	0.05	0	0.2	0.16	0.16	0.1	0.07	0.24
B	r-PEL_TRA	none	DEU	0.01	0.04	0	0	0	0	0	0
B	r-PEL_TRA	none	DNK	0.01	0.03	0	0	0	0	0	0
B	r-PEL_TRA	none	LTU	0	0.03	0	0	0	0	0	0
B	r-PEL_TRA	NONE	POL	0	0	0	0	0	0	0	0
B	r-PEL_TRA	T90	SWE	0	0	0	0	0	0	0	0.23
B	r-TRAMME	none	DNK	0	0	0	0	0	0	0	0
B	r-TRAMME	none	SWE	0	0	0	0	0	0	0	0
B	TRAMMEL	none	DNK	0	0	0	0	0	0	0	0
B	TRAMMEL	none	SWE	0	0	0	0	0	0	0	0
C	GILL	none	FIN	0	0	0	0	0	0	0	0
C	GILL	none	SWE	0	0	0	0	0	0	0	0
C	OTTER	none	SWE	0	0	0	0	0	0	0	0
C	PEL_TRAV	none	DNK	0	0	0	0	0	0	0	0
C	POTS	none	FIN	0	0	0	0	0	0	0	0
C	r-GILL	none	SWE	0	0	0	0	0	0.06	0.02	0.05
C	r-LONGLIN	none	SWE	0	0	0	0	0	0	0	0
C	r-OTTER	BACOMA	SWE	0	0	0	0	0	0	0	0

A	r-DEM_SE	FDFBAL	DNK	0	0	0	0	0	0	0	0
A	r-OTTER	FDFBAL	DNK	0	0	0	0	0	0	0	0
A	r-PEL_TRA	FDFBAL	DNK	0	0	0	0	0	0	0	0
B	DEM_SEIN	FDFBAL	DNK	0	0	0	0	0	0	0	0
B	OTTER	FDFBAL	DNK	0	0	0	0	0	0	0	0
B	PEL_TRAV	FDFBAL	DNK	0	0	0	0	0	0	0	0
B	r-OTTER	FDFBAL	DNK	0	0	0	0	0	0	0	0
B	r-PEL_TRA	FDFBAL	DNK	0	0	0	0	0	0	0	0

Table 5.1.3.4: Discard rates for cod 2004-2011 by gear category and area. An “r” in front of the gear type indicates regulated gears in accordance with Council Regulation (EC) 1098/2007. Gear types without an “r” are non-regulated gears. Data from Estonia are only available from 2005 onwards.

REG_AREA	REG_GEAR	2004	2005	2006	2007	2008	2009	2010	2011
28.2	GILL	0	0	0	0	0	0	0	0
28.2	OTTER	0	0	0	0	0	0	0	0
28.2	PEL_TRAWL	0	0	0	0	0	0	0	0
28.2	r-GILL	0	0.02	0.02	0.06	0.02	0	0	0
28.2	r-OTTER	0	0	0	0	0	0	0	0
28.2	r-PEL_TRAWL	0	0	0	0	0	0	0	0
A	BEAM	0	0	0	0	0	0	0	0
A	DEM_SEINE	0	0	0	0	0	0	0	0
A	DREDGE	0	0	0	0	0	0	0	0
A	GILL	0	0.01	0	0	0	0	0	0
A	none	0	0	0	0	0	0	0	0
A	OTTER	0	0	0	0	0	0	0.62	0
A	PEL_TRAWL	0.01	0	0	0	0	0	0	0.19
A	POTS	0	0	0	0	0	0	0	0
A	r-BEAM	0	0	0	0	0	0	0	0
A	r-DEM_SEINE	0.06	0.06	0.04	0.08	0	0.01	0.01	0.03
A	r-GILL	0.01	0.04	0	0	0	0.06	0.02	0.01
A	r-LONGLINE	0.01	0.04	0	0	0	0	0	0
A	r-OTTER	0.03	0.04	0.03	0.04	0.03	0.04	0.08	0.1
A	r-PEL_TRAWL	0	0	0	0	0	0	0	0.22
A	r-TRAMMEL	0.01	0.03	0	0	0	0.05	0	0
A	TRAMMEL	0	0	0	0	0	0	0	0
B	DREDGE	0	0	0	0	0	0	0	0
B	GILL	0	0	0	0	0	0	0	0
B	none	0	0	0	0	0	0	0	0
B	OTTER	0	0	0	0	0	0.08	0	0.05
B	PEL_TRAWL	0	0	0	0	0	0.07	0.43	0.07
B	POTS	0	0	0	0	0	0.08	0	0
B	r-DEM_SEINE	0	0	0	0	0	0	0	0
B	r-GILL	0.03	0.03	0.04	0.07	0.03	0.04	0.08	0.04
B	r-LONGLINE	0.01	0.02	0	0	0	0.07	0.11	0.03
B	r-OTTER	0.05	0.07	0.12	0.12	0.06	0.08	0.07	0.09
B	r-PEL_TRAWL	0.02	0.02	0.11	0.06	0.09	0.07	0.03	0.16
B	r-TRAMMEL	0	0	0	0	0	0	0	0
B	TRAMMEL	0	0	0	0	0	0	0	0
C	GILL	0	0	0	0	0	0	0	0
C	OTTER	0	0	0	0	0	0	0	0
C	PEL_TRAWL	0	0	0	0	0	0	0	0
C	POTS	0	0	0	0	0	0	0	0
C	r-GILL	0	0	0	0	0	0.06	0.02	0.05
C	r-LONGLINE	0	0	0	0	0	0	0	0
C	r-OTTER	0	0	0	0	0	0	0	0
Fully Documented Fishery									
A	r-DEM_SEINE	0	0	0	0	0	0	0	0
A	r-OTTER	0	0	0	0	0	0	0	0
A	r-PEL_TRAWL	0	0	0	0	0	0	0	0
B	DEM_SEINE	0	0	0	0	0	0	0	0
B	OTTER	0	0	0	0	0	0	0	0
B	PEL_TRAWL	0	0	0	0	0	0	0	0
B	r-OTTER	0	0	0	0	0	0	0	0
B	r-PEL_TRAWL	0	0	0	0	0	0	0	0

Table 5.1.3.5 Cod landings (L) and discards (D) at ages 1-9 ('000) by gear category and area 2004-2011. An "r" in front of the gear type indicates regulated gears in accordance with Council Regulation (EC) 1098/2007 (see section 2.6). Gear types without an "r" are non-regulated gears. Data on age distribution were available for sub-areas A and B only. Data from Estonia are only available from 2005 onwards.

REG_AREA	Year	REG_GEAR	SPECON	LANDINGS t	DISCARDS t	AGE 1 L	AGE 1 D	AGE 2 L	AGE 2 D	AGE 3 L	AGE 3 D	AGE 4 L	AGE 4 D	AGE 5 L	AGE 5 D	AGE 6 L	AGE 6 D	AGE 7 L	AGE 7 D	AGE 8 L	AGE 8 D	AGE 9 L	A
28.2	2003	r-GILL	none	99.771	5.4		1.248		0.777	4.287	7.352	68.683	2.219	33.047	0.277	3.751	0.055	0.402		0.045			
28.2	2003	r-OTTER	BACOMA	16.397	0.4			0.012	0.015	0.327	0.166	3.112	0.575	5.492	0.004	2.016		1.055		0.379		0.1	
28.2	2004	r-OTTER	BACOMA	47.475	0.2					0.199		2.682		8.146		11.797		4.495		1.142		0.522	
28.2	2005	r-OTTER	BACOMA	158.267						3.205		62.763		67.57		30.981		2.671					
28.2	2006	r-GILL	none	15.267	0.42				0.023	0.085	0.189	5.203	0.333	7.823	0.018	1.697		0.349		0.009			
28.2	2006	r-OTTER	BACOMA	63.466	0.5					7.009		29.352		18.838		10.076		0.438					
28.2	2007	r-GILL	none	90.046	7.02		0.627	0.098	5.875	4.003	5.19	31.266	0.354	37.428	0.174	10.479	0.052	1.479		0.264			
28.2	2008	r-GILL	none	24.127	1.22		0.022		0.707	3.18	1.239	7.17	0.197	7.758	0.044	2.856	0.007	0.668	0.007	0.081			
A	2003	DREDGE	none	8.496		1.239		9.417		1.089													
A	2003	GILL	none	111.743	0.002	3.367		31.01		29.512		10.539		2.489		1.222		0.332		0.034			
A	2003	none	none	2960.165		195.562		1176.279		712.154		245.126		53.616		28.719		8.176		0.315			
A	2003	OTTER	none	152.681		21.786		90.743		36.326		7.536		1.097		0.585		0.16		0.005			
A	2003	PEL_TRAWL	none	122.178		8.201		69.607		39.137		8.136		1.307		0.74		0.294		0.034			
A	2003	r-DEM_SEINE	none	1351.443	80.214	141.798	57.83	671.326	142.27	439.22	45.88	101.381	5.53	11.823	0.59	6.389	0.06	1.513		0.11			
A	2003	r-GILL	none	3998.597	59.267	191.713	11.174	1437.638	31.013	1027.16	4.077	350.883		70.184		33.492		11.118		0.664			
A	2003	r-LONGLINE	none	395.574	4.397	7.622		143.518		164.2		45.696		5.696		2.57		0.557		0.019			
A	2003	r-OTTER	none	11720.873	1550.217	1132.676	932.936	6186.382	2416.389	3687.89	209.248	877.963	0.106	139.89	0.01	62.475		17.595		0.886		0.013	
A	2003	r-PEL_TRAWL	none	92.81	1.484	14.175	0.629	54.646	1.754	19.297	0.245	4.119		0.457		0.088		0.007					
A	2003	r-TRAMMEL	none	300.606	3.803	7.666		48.33		38.652		31.23		11.701		7.041		2.541		0.071			
A	2003	TRAMMEL	none	3.907	0.056	0.275		2.173		0.859		0.321		0.056		0.033		0.008		0			
A	2004	GILL	none	64.843	0	3.235		9.006		25.531		4.687		1.412		0.294		0.071		0			
A	2004	none	none	2786.019		206.939		675.406		1318.615		201.666		38.844		9.34		2.266		0.193			
A	2004	OTTER	none	97.905		9.926		26.246		46.838		6.138		1.349		0.304		0.081		0			
A	2004	PEL_TRAWL	none	91.08	0.192	2.161	0.202	23.48	0.302	49.636	0.101	7.257		1.551		0.363		0.085		0.001			
A	2004	r-DEM_SEINE	none	1323.573	80.862	95.238	33.495	325.636	153.42	819.498	55.411	55.816	6.323	10.157	0.791	1.559	0.051	0.547		0.001			
A	2004	r-GILL	none	3846.883	55.115	144.728		698.335		1599.098		315.254		70.641		15.217		3.759		0.259			
A	2004	r-LONGLINE	none	478.922	3.524	25.909		106.176		241.11		37.396		6.027		1.477		0.393		0.021			
A	2004	r-OTTER	none	11433.168	327.124	640.812	415.127	3131.414	388.368	6348.471	44.898	696.05	0.011	132.425		26.604		8.021		1.204			
A	2004	r-PEL_TRAWL	none	33.935		3.25		12.207		17.649		2.827		0.297		0.085		0.011		0			
A	2004	r-TRAMMEL	none	265.909	3.386	3.688		13.911		53.046		23.178		11.493		2.778		0.693		0.068			
A	2004	TRAMMEL	none	4.223				0.098		0.784		0.492		0.204		0.046		0.008					
A	2005	DEM_SEINE	none	0.487		0.001		0.321		0.092		0.08		0.011		0.003		0.002		0			
A	2005	GILL	none	281.902	4.031	14.237		155.71		41.284		39.042		7.959		2.52		0.817		0.257		0.006	
A	2005	none	none	467.056		10.597		191.321		58.008		76.153		13.724		6.131		1.173		0.747		0.009	
A	2005	OTTER	none	201.444		6.976		124.449		31.696		30.894		6.444		1.78		0.36		0.18		0.01	
A	2005	PEL_TRAWL	none	263.992		19.112		138.325		29.096		31.939		7.344		2.954		0.728		0.387		0.015	
A	2005	POTS	none	271.683		39.316		220.18		27.567		15.44		3.496		0.587		0.205		0.009		0.009	
A	2005	r-DEM_SEINE	none	1082.046	70.676	83.986	98.499	781.996	105.029	158.968	30.537	145.72	3.187	19.44	0.36	4.807	0.03	0.633		0.359		0.013	
A	2005	r-GILL	none	6144.971	253.906	207.236	49.765	2758.068	38.752	817.522	2.444	795.494	0.045	197.915		75.482		27.546		9.713		0.308	
A	2005	r-LONGLINE	none	1245.759	58.067	20.077		604.882		200.849		193.047		43.748		15.662		7.363		2.089		0.065	
A	2005	r-OTTER	BACOMA	274.871	2.137				1.71	8.815	3.419	64.352	0.57	57.299		29.972				1.763			
A	2005	r-OTTER	none	10454.959	460.271	418.881	707.1	6673.821	528.751	1645.394	1.536	1423.472	0.247	274.103	0.029	86.504		24.926		9.497	0.01	0.145	
A	2005	r-PEL_TRAWL	BACOMA	10.911	0.103				0.029	0.991	0.225	7.018	0.008	2.394				0.165					
A	2005	r-PEL_TRAWL	none	104.713		0.994		70.232		20.587		16.877		4.253		1.038		0.292		0.112		0.001	
A	2005	r-TRAMMEL	none	542.518	18.552	6.236		84.467		40.106		78.031		20.939		13.486		4.962		2.279		0.027	
A	2005	TRAMMEL	none	20.319		0.279		4.641		2.005		3.422		0.704		0.352		0.108		0.043		0.002	
A	2006	DEM_SEINE	none	6.359		0.502		1.996		2.729		0.283		0.056		0.022		0.011		0.006		0.002	
A	2006	GILL	none	141.715		3.694		24.657		83.758		6.179		2.947		0.393		0.078		0.028		0.012	
A	2006	none	none	849.63		12.749		113.703		448.044		36.832		25.389		4.109		0.915		0.576		0.106	
A	2006	OTTER	none	180.724		0.282		15.23		130.528		6.067		5.143		0.738		0.147		0.136		0.011	
A	2006	PEL_TRAWL	none	264.373		1.392		27.535		165.965		9.785		6.775		1.257		0.363		0.288		0.053	

Table 5.1.3.5 continued.

A	2006 POTS	none	89.848		3.598		23.549		51.43		3.273		0.904		0.137		0.05		0.038	0
A	2006 r-DEM_SEINE	none	1338.573	63.56	31.738	28.074	195.954	111.83	1015.075	42.505	51.533	5.205	19.808	0.864	2.921	0.02	0.826		0.39	
A	2006 r-GILL	none	5883.069	0.194	113.775	0.191	916.596	0.166	2957.087	0.069	310.229		159.137		26.498		6.422		1.925	
A	2006 r-LONGLINE	none	737.746		6.591		112.838		420.531		28.09		17.969		3.376		0.64		0.659	0
A	2006 r-OTTER	BACOMA	5709.844	384.024	190.925	374.631	1509.086	300.3	3806.33	161.139	95.523		34.134		2.378					
A	2006 r-OTTER	none	6471.263	4.788	118.419	4.773	1022.277	7.642	4501.082	2.741	244.705	0.37	153.741	0.05	23.696		4.815		1.399	0
A	2006 r-PEL_TRAWL	none	98.334		9.189		37.824		56.597		3.829		0.949		0.108		0.025		0.01	0
A	2006 r-TRAMMEL	none	588.309		2.473		29.237		196.202		31.435		34.764		7.465		1.586		0.416	0
A	2006 TRAMMEL	none	5.732		0.006		0.135		1.597		0.286		0.278		0.071		0.019		0.014	0
A	2007 DEM_SEINE	none	0.217		0.006		0.083		0.075		0.065		0.017		0.002		0		0	
A	2007 GILL	none	142.01		1.075		31.024		31.861		40.364		9.282		1.703		0.236		0.07	0
A	2007 none	none	143.127		0.786		28.535		27.127		33.827		8.876		2.105		0.345		0.154	0
A	2007 OTTER	none	89.405		0.081		14.231		16.203		24.439		4.641		1.346		0.15		0.098	0
A	2007 PEL_TRAWL	none	146.056		0.076		12.461		19.093		40.29		8.1		2.285		0.303		0.177	0
A	2007 POTS	none	179.698		3.127		64.205		55.742		49.22		11.013		1.619		0.226		0.054	0
A	2007 r-DEM_SEINE	none	1425.059	135.692	6.235	252.374	351.521	196.09	380.874	55.554	461.559	4.97	83.965	0.72	15.407	0.02	1.82		0.614	
A	2007 r-GILL	none	5523.286	0.542	47.115	0.303	938.331	0.752	1045.492	0.06	1367.781		375.881		90.452		13.876		4.372	1
A	2007 r-LONGLINE	none	752.957		4.214		133.014		135.101		173.786		46.794		10.569		1.997		1.064	0
A	2007 r-OTTER	BACOMA	6436.365	541.695	681.367	700.85	2293.944	674.622	1764.361	72.631	1146.095	25.98	44.341		14.93		0.536		0.22	
A	2007 r-OTTER	none	6927.983	8.954	41.697	15.832	1667.457	11.596	1639.089	3.445	2019.189	0.663	364.712	0.01	93.867		8.608		3.952	1
A	2007 r-PEL_TRAWL	none	18.536		0.346		5.203		4.94		5.498		1.188		0.221		0.023		0.007	0
A	2007 r-TRAMMEL	none	580.558		0.396		20.792		30.394		108.467		34.99		15.874		1.941		1.033	0
A	2007 TRAMMEL	none	7.974		0.011		0.996		1.252		2.148		0.395		0.124		0.008		0.005	0
A	2008 GILL	none	28.047		0.109		1.519		4.547		3.909		3.113		1.529		0.457		0.141	0
A	2008 none	none	70.548		0.315		6.354		15.599		11.298		7.677		3.473		0.994		0.374	0
A	2008 OTTER	none	23.84		0.018		1.426		6.229		4.733		2.581		1.101		0.215		0.155	0
A	2008 PEL_TRAWL	none	103.242		163.15		47.191		14.311		13.294		10.057		5.229		1.378		0.572	
A	2008 POTS	none	65.866		1.82		12.501		21.538		13.523		6.672		2.566		0.87		0.125	0
A	2008 r-DEM_SEINE	none	1222.033	1.918	8.144	6.91	110.552	1.41	414.228	0.2	279.735	0.02	167.307		66.205		17.534		2.662	0
A	2008 r-GILL	none	3512.15	1.366	6.436	0.466	231.366	1.832	755.267	0.914	460.659	0.104	361.942	0.007	172.74		54.705		20.49	0
A	2008 r-LONGLINE	none	285.849		4.23		37.839		80.329		55.693		29.733		12.948		3.98		0.832	
A	2008 r-OTTER	BACOMA	5021.773	319.094	138.263	195.363	1489.189	438.133	2306.211	192.906	765.941	20.621	213.853	0.708	8.533		4.162		2.323	0
A	2008 r-OTTER	none	5501.681	11.261	53.625	18.221	677.274	17.986	1464.901	5.586	1005.707	1.209	638.215	0.033	266.539		68.581		28.589	0
A	2008 r-PEL_TRAWL	none	7.446		0.01		0.98		1.131		0.843		0.846		0.41		0.114		0.055	
A	2008 r-TRAMMEL	none	596.71	0.102	0.567	0.046	12.654	0.126	47.133	0.078	48.494	0.025	52.878	0.003	23.394		7.499		5.269	0
A	2008 TRAMMEL	none	5.71						0.094		0.307		0.569		0.288		0.073		0.058	
A	2009 GILL	none	13.399	0.009	0.408	0.006	0.435	0.018	1.235	0.007	2.669		1.695		0.615		0.303		0.03	
A	2009 none	none	32.421		3.515		4.802		9.484		11.49		4.292		1.591		0.416		0.094	0
A	2009 OTTER	none	55.491	0.005	1016.518	0.002	0.454	0.009	3.991	0.004	7.597		5.241		1.506		0.729		0.14	
A	2009 PEL_TRAWL	none	46.466		139.355		49.965		9.755		5.527		3.642		1.266		0.877		0.176	
A	2009 POTS	none	62.167		16.071		16.821		14.342		16.407		6.361		1.394		0.32		0.061	
A	2009 r-DEM_SEINE	none	580.543	9.188	10.966	5.78	16.69	11.609	122.564	10.497	215.344	1.792	102.863	0.284	25.533	0.045	7.326		0.752	
A	2009 r-GILL	none	3167.023	239.306	110.424	43.962	162.85	164.278	469.97	243.438	701.703	86.101	350.331	5.128	139.096	0.299	53.945		11.003	1
A	2009 r-LONGLINE	none	303.536	1.122	11.391	0.69	16.919	2.226	51.741	0.837	91.567	0.028	39.859		15.626		5.372		1.205	0
A	2009 r-OTTER	BACOMA	3003.325	342.219	14.309	118.15	272.286	310.083	1194.768	367.205	1096.295	132.903	272.874	8.158	84.253	1.378	11.296		1.75	1
A	2009 r-OTTER	none	5352.894	9.955	322.178	15.312	464.318	17.115	1215.248	5.764	1725.443	1.291	807.725	0.045	234.117		74.155		13.274	0
A	2009 r-PEL_TRAWL	none	22.979		5.444		6.113		5.6		6.205		2.232		0.516		0.134		0.042	
A	2009 r-TRAMMEL	none	393.644	21.442	2.901	11.438	3.929	35.721	13.083	21.735	36.621	3.49	40.037	0.104	15.147	0.02	9.534		2.53	0
A	2010 GILL	none	10.139	0	0.014		2.219		3.516		2.164		0.964		0.271		0.078		0.021	0
A	2010 none	none	56.584	0	0.53		18.038		20.504		11.574		4.377		1.034		0.227		0.101	0
A	2010 OTTER	none	8.953	0	0.035		1.812		4.324		1.883		0.944		0.332		0.126		0.034	0
A	2010 PEL_TRAWL	none	65.084	0	2.761		28.659		17.518		11.855		4.753		1.052		0.423		0.13	0
A	2010 POTS	none	98.783	0	0.056		29.228		43.637		28.112		10.421		1.73		0.21		0.135	0
A	2010 r-DEM_SEINE	none	465.903	6.571	0.006	4.512	59.817	9.142	241.402	7.52	148.637	1.73	52.239	0.351	11.266	0.048	1.664		0.384	0
A	2010 r-GILL	none	3606.88	91.26	33.012	78.252	1209.113	123.508	884.591	22.98	689.736	16.913	290.64	3.739	70.96		21.109		3.933	0

Table 5.1.3.5 continued.

A	2010	r-LONGLINE	none	309.634	0	0.264		77.834		101.079		59.194		23.977		8.124		2.799		0.628		0
A	2010	r-OTTER	BACOMA	3199.417	633.656	111.888	246.326	1624.443	798.091	616.492	204.851	687.798	158.161	236.308	43.714	43.593	0.019	12.469		1.306		0
A	2010	r-OTTER	none	4118.871	12.182	2.028	7.095	699.815	28.009	1791.546	2.255	1152.966	0.56	444.094	0.08	111.019		22.514		7.772		1
A	2010	r-OTTER	T90	44.805	4.304	1.201	4.487	20.933	6.735	13.174	0.348	3.954		1.056		0.335		0.136		0.027		0
A	2010	r-PEL_TRAWL	none	27.413				2.922		14.62		8.687		2.937		0.729		0.108		0.043		
A	2010	r-TRAMMEL	none	477.124	0.835	3.276	0.864	80.909	1.047	86.085	0.047	70.248		39.75		12.838		4.109		1.343		0
A	2010	TRAMMEL	none	0.408				0.063		0.153		0.126		0.056		0.01		0.002				
A	2011	GILL	NONE	8.583	0.018		0.005	0.146	0.018	1.603	0.012	2.889		1.159		0.447		0.167		0.039		0
A	2011	none	NONE	29.983	0			0.638		7.831		11.472		3.984		1.318		0.544		0.072		0
A	2011	OTTER	NONE	68.256	0			0.635		13.514		28.1		10.144		3.981		1.539		0.237		0
A	2011	PEL_TRAWL	NONE	42.628	10.262	0.034	1.109	5.31	11.671	16.359	9.617	11.539	0.267	2.91		0.758		0.264		0.089		0
A	2011	POTS	NONE	55.144	0.083		0.034	3.834	0.109	25.528	0.042	16.974	0.001	3.87		0.659		0.242		0.039		0
A	2011	r-DEM_SEINE	NONE	319.074	13.428		2.866	1.988	20.677	65.534	19.38	156.009	5.306	56.234	1.185	21.878	0.203	6.895	0.03	1.636	0.02	0
A	2011	r-GILL	NONE	3443.462	47.237	8.411	32.547	323.984	61.958	994.271	23.899	725.028	0.721	261.258	0.202	101.461		40.543		8.431		2
A	2011	r-LONGLINE	NONE	433.778	2.184		0.732	28.644	2.695	130.596	1.293	132.484	0.033	46.376	0.017	15.375		5.591		1.574		0
A	2011	r-OTTER	BACOMA	4597.402	1001.006	84.87	335.014	1850.977	1284.242	2027.689	518.73	481.697	11.678	92.516		11.014		2.824		1.165		0
A	2011	r-OTTER	NONE	4763.103	0.624	0.22	4.874	91.654	0.636	1090.395	0.152	1902.269	0.006	681.848		268.044		99.518		17.917		8
A	2011	r-OTTER	T90	149.196	64.834		12.177	49.083	80.763	74.243	41.872	27.445	0.448	5.934		1.046		0.104		0.164		0
A	2011	r-PEL_TRAWL	BACOMA	15.003	5.095		0.313	1.488	6.334	10.166	4.218	3.561	0.02	0.709		0.114		0.019		0.023		0
A	2011	r-PEL_TRAWL	NONE	0.094	0					0.008		0.03		0.014		0.006		0.003				
A	2011	r-TRAMMEL	NONE	528.063	1.471		0.624	11.891	1.89	58.014	0.784	85.618	0.018	41.685	0.004	24.874		12.016		1.552		0
A	2011	TRAMMEL	NONE	0.21	0			0.001		0.039		0.073		0.028		0.011		0.005				
B	2003	GILL	none	20.697				0.613		11.417		6.644		0.776		0.115		0.025				
B	2003	none	none	925.83				97.408		483.702		214		51.617		12.931		3.721		0.366		
B	2003	OTTER	none	58.666				6.365		43.397		12.686		1.652		0.626		0.218		0.015		
B	2003	PEL_TRAWL	none	88.424				10.275		46.681		19.006		5.321		1.555		0.539		0.047		
B	2003	r-DEM_SEINE	none	7.215				4.258		3.38		0.364		0.056		0.004		0.001		0		
B	2003	r-GILL	none	6366.842	133.513			717.591	12.478	1922.261	25.178	1456.398	13.742	841.46	6.942	180.373	0.47	52.312	0.043	9.956		0
B	2003	r-LONGLINE	none	1242.873	31.908			71.491		374.547		248.818		110.97		46.685		14.985		1.857		
B	2003	r-OTTER	BACOMA	4245.68	550.055		7.545	2.435	182.651	446.545	1008.081	1982.105	258.587	1599.822	4.434	357.236		107.819		49.256		9
B	2003	r-OTTER	none	8686.802	674.407	193.11	256.056	1625.259	1219.829	4704.274	612.699	1791.554	122.096	532.152	18.646	84.534	2.549	25.172	0.075	3.126		0
B	2003	r-PEL_TRAWL	none	153.537				11.845		114.53		35.725		7.886		1.499		0.415		0.034		
B	2003	r-TRAMMEL	none	11.067	0.017			0.413		6.61		3.179		0.496		0.105		0.033		0.001		
B	2004	GILL	none	53.257				1.789		17.892		18.115		3.364		0.926		0.333		0.059		0
B	2004	none	none	1062.323				60.055		356.007		355.396		64.172		16.392		5.482		0.809		0
B	2004	OTTER	none	107.187				10.12		50.884		34.852		4.165		1.764		0.767		0.128		0
B	2004	PEL_TRAWL	none	513.013				61.492		239.921		160.101		19.924		7.302		3.136		0.482		
B	2004	r-DEM_SEINE	none	0.292				0.014		0.177		0.096		0.008		0.004		0.002		0.001		
B	2004	r-GILL	none	8571.745	235.801		8.261	126.724	49.106	1881.88	152.67	3038.285	42.58	1409.652	23.985	402.9	7.12	97.65	0.741	14.254		3
B	2004	r-LONGLINE	none	3557.042	44.161			316.944		1283.902		998.512		182.028		78.901		36.704		5.777		1
B	2004	r-OTTER	BACOMA	5521.562	268.801				147.946	605.673	407.316	1721.955	91.806	1297.787	1.599	370.028		120.93		73.974		
B	2004	r-OTTER	none	4465.61	100.646	56.559	45.891	717.67	130.126	2216.117	82.321	1304.436	18.517	149.195	3.389	27.742	0.411	9.433	0.021	2.917		0
B	2004	r-PEL_TRAWL	BACOMA	1952.358	52.651			0.966	20.113	310.747	86.213	854.516	0.105	275.568		47.06		20.599		21.849		7
B	2004	r-PEL_TRAWL	none	1923.959	25.054	59.274	17.324	434.71	33.007	823.655	4.906	318.333		51.643		9.294		7.032		3.01		0
B	2004	r-TRAMMEL	none	9.025	0.024			0.609		5.68		3.291		0.233		0.061		0.025		0.006		0
B	2005	GILL	none	36.936	0			3.784		8.067		13.437		5.564		0.633		0.162		0.018		0
B	2005	none	none	44.503				3.432		17.15		19.589		4.194		0.419		0.145		0.02		0
B	2005	OTTER	none	119.711				17.505		44.261		44.838		10.175		2.085		0.853		0.128		0
B	2005	PEL_TRAWL	none	608.866				98.261		240.13		225.547		46.652		10.449		4.535		0.724		0
B	2005	POTS	none	0.162				0.022		0.067		0.077		0.017		0.001		0				
B	2005	r-DEM_SEINE	none	89.165				36.387		29.443		15.303		4.785		0.931		0.301		0.059		0
B	2005	r-GILL	none	6361.617	201.88			296.943	29.809	1846.513	122.058	2311.562	44.407	890.284	8.359	171.679	2.129	45.098	0.532	5.418		
B	2005	r-LONGLINE	none	3134.62	49.531		0.113	447.752		1371.774	19.118	1005.761		238.877		48.952		13.294		2.472		0
B	2005	r-OTTER	BACOMA	7421.368	1034.773		13.19	59.263	942.995	1979.084	1230.47	2675.948	321.698	1714.025	40.696	534.718		124.667		33.313		10
B	2005	r-OTTER	none	4342.704	84.885		15.543	1124.893	100.941	1731.687	91.928	1324.534	22.838	267.843	4.26	43.842	0.5	16.068	0.034	2.619		0

Table 5.1.3.5 continued.

B	2005 r-PEL_TRAWL	none	874.661	31.823	24.126	53.573	426.13	31.064	211.812		124.179		20.228		2.409		1.048		0.179		0
B	2005 r-TRAMMEL	none	2.362	0			0.265		0.291		0.255		0.222		0.099		0.026		0.008		0
B	2006 GILL	none	55.511				8.672		37.673		13.427		3.062		0.485		0.05		0.026		
B	2006 none	none	90.826				11.003		59.082		20.97		4.791		0.995		0.194		0.085		0
B	2006 OTTER	none	55.743				7.492		38.665		12.293		2.688		0.62		0.212		0.052		0
B	2006 PEL_TRAWL	none	374.902				70.241		287.085		78.138		14.525		2.481		0.645		0.178		
B	2006 r-DEM_SEINE	none	82.075				9.889		56.552		20.222		4.248		0.852		0.197		0.049		0
B	2006 r-GILL	none	3308.567	122.615		1.051	133.603	14.065	1050.015	72.029	1032.034	79.226	752.946	5.915	167.834		35.178		5.574		2
B	2006 r-LONGLINE	none	3768.222				351.051		1999.403		1098.55		279.634		41.61		14.288		6.572		3
B	2006 r-OTTER	BACOMA	13698.764	2221.251		1.767	422.064	1376.364	5518.013	3742.896	5753.465	262.4	2387.762	44.053	813.948	2.098	193.219		49.738		16
B	2006 r-OTTER	none	6555.415	383.496		35.202	914.931	347.398	4885.862	473.963	1654.541	158.356	327.422	40.454	58.581	5.965	11.005	0.644	3.608		1
B	2006 r-PEL_TRAWL	BACOMA	3565.828	539.758				169.105	2551.583	1160.52	1063.002		226.856		38.357		13.87		8.453		10
B	2006 r-PEL_TRAWL	none	1333.691				135.15		1040.951		403.786		79.349		12.249		1.497		0.452		0
B	2006 r-TRAMMEL	none	4.239				0.525		2.276		0.713		0.217		0.083		0.011		0.008		0
B	2006 TRAMMEL	none	0.104				0.032		0.062		0.007		0.002		0.001		0		0		
B	2007 GILL	none	42.725				0.253		4.848		21.349		13.177		1.671		0.232		0.139		0
B	2007 none	none	15.958				0		1.352		7.69		4.736		0.704		0.159		0.104		0
B	2007 OTTER	none	24.061				0.179		3.434		13.564		7.405		0.835		0.12		0.095		0
B	2007 PEL_TRAWL	none	504.133				2.977		55.554		259.533		161.061		20.42		2.808		1.683		0
B	2007 POTS	none	0.276				0.007		0.054		0.137		0.05		0.008		0.002		0.002		
B	2007 r-DEM_SEINE	none	44.82				0.001		4.431		24.796		14.834		1.918		0.291		0.144		0
B	2007 r-GILL	none	4339.8	384.991		43.662	31.925	152.905	668.155	135.551	1744.927	47.376	993.936	44.003	248.319	13.381	61.195	2.46	15.262		4
B	2007 r-LONGLINE	none	2099.686				4.646		361.239		1046.827		395.17		84.881		10.313		6.181		1
B	2007 r-OTTER	BACOMA	11081.297	2125.452			32.22	673.868	1638.446	2336.389	3526.93	161.632	3785.906		1487.312		292.319		54.092		15
B	2007 r-OTTER	none	5208.02	128.586		14.105	45.403	125.161	722.638	175.991	3072.911	52.557	1691.638	12.142	184.09	1.512	23.954	0.154	15.767		2
B	2007 r-PEL_TRAWL	BACOMA	4653.347	468.688	256.286	286.88	779.624	466.126	1502.068	325.263	2119.728	36.71	274.869		25.127		9.471		3.47		0
B	2007 r-PEL_TRAWL	none	2088.183				0.182		250.534		1234.89		757.606		71.504		6.092		3.312		0
B	2007 r-TRAMMEL	none	36.81				0.068		0.642		3.512		3.886		2.312		1.187		0.759		
B	2007 TRAMMEL	none	1.225				0.035		0.147		0.398		0.237		0.049		0.017		0.008		0
B	2008 DREDGE	none	5.816				0.043		0.858		2.858		2.557		0.751		0.099		0.006		0
B	2008 GILL	none	8.271				0.27		2.021		2.847		2.288		0.891		0.135		0.012		0
B	2008 none	none	6.33				0.062		1.055		1.905		1.648		0.635		0.125		0.033		0
B	2008 OTTER	none	15.686				0.237		2.95		6.12		5.179		1.732		0.294		0.047		0
B	2008 PEL_TRAWL	none	347.431				8.673		79.944		146.085		118.171		39.39		5.812		0.386		0
B	2008 r-GILL	none	5328.486	204.764		0.811	24.367	134.74	1268.727	174.137	1511.163	52.973	1423.372	25.739	452.06	3.978	103.036	0.073	17.013		2
B	2008 r-LONGLINE	none	1750.025	3.82			5.511		463.233		764.862		253.761		78.11		9.329		2.504		0
B	2008 r-OTTER	BACOMA	13869.162	1216.164	173.798	170.408	1851.315	942.251	5206.419	1546.441	5567.228	159.255	1710.958	26.812	556.629		274.916		52.679		13
B	2008 r-OTTER	none	5867.208	129.825		13.693	120.263	133.825	1307.971	193.244	2375.298	58.442	1933.505	13.444	653.351	1.717	97.354	0.165	10.203		2
B	2008 r-PEL_TRAWL	BACOMA	1097.852	111.801	30.225	33.551	333.267	152.378	514.04	83.123	203.297	8.969	56.224	0.321	4.116		2.078		0.138		
B	2008 r-PEL_TRAWL	none	13.978				0.344		4.129		5.614		4.155		1.479		0.146		0.017		0
B	2008 r-TRAMMEL	none	26.346				0.495		7.959		8.789		5.547		2.102		0.428		0.09		0
B	2009 GILL	none	1.191	0					0.168		0.479		0.417		0.13		0.026		0.003		
B	2009 OTTER	none	32.578	3.182		0.362	0.148	4.625	5.005	3.548	17	0.234	10.97		2.973		0.617		0.26		0
B	2009 PEL_TRAWL	none	412.991	33.326		1.124	0.107	38.693	32.897	47.594	104.731	2.228	100.758		42.573		15.802		4.871		
B	2009 r-GILL	none	7588.386	292.835		23.243	53.549	460.026	1067.241	358.559	2115.902	17.2	1922.201	3.813	643.47	1.419	205.972	0.421	42.416	0.05	9
B	2009 r-LONGLINE	none	1252.325	90.128		21.322	105.374	175.663	482.876	84.223	315.939	2.416	146.13		50.851		20.322		4.972		2
B	2009 r-OTTER	BACOMA	18071.002	2050	24.608	214.257	764.415	2444.938	8085.408	2537.783	8059.779	254.517	2077.616	9.051	575.324	1.961	122.019		44.824		12
B	2009 r-OTTER	NONE	6873.357	151.244		14.288	62.569	163.485	1693.2	234.662	3234.29	62.804	2020.749	13.387	511.25	1.598	102.633	0.15	26.365		3
B	2009 r-PEL_TRAWL	BACOMA	2012.943	171.706	3.853	10.833	108.319	116.623	767.399	186.487	740.563	56.472	194.934	5.256	47.194	0.457	7.689		2.065		0
B	2009 r-PEL_TRAWL	none	308.598	0			0.95		49.033		170.878		114.779		23.624		3.787		2.103		0
B	2009 r-TRAMMEL	none	68.106	0.017		0.01	0.057	0.038	3.117	0.006	12.824	0.001	14.165		6.719		2.938		0.923		
B	2010 GILL	none	1.239	0			0.096		0.529		0.406		0.086		0.007		0.007				
B	2010 none	NONE	1.762	0			0.026		0.357		0.882		0.512		0.079		0.007		0.004		0
B	2010 OTTER	none	11.147	0			0.696		4.43		4.5		1.291		0.317		0.082		0.026		0
B	2010 PEL_TRAWL	NONE	157.625	0			3.576		42.364		72.366		20.302		4.688		1.722		0.8		0

Table 5.1.3.5 continued.

B	2010	POTS	NONE	7.641	0			0.557		2.995		2.659		0.728		0.178		0.059		0.012		0
B	2010	r-GILL	none	7689.013	705.003		177.973	253.126	1116.061	2120.129	862.49	3008.796	155.164	1164.895		267.457		80.999		17.809		
B	2010	r-LONGLINE	none	1944.818	251.481		26.656	36.294	347.26	609.943	330.796	824.562	23.411	247.46	0.45	52.521		11.364		5.821		
B	2010	r-OTTER	BACOMA	21588.374	2122.619	65.397	322.622	2547.409	2648.829	8128.85	2376.654	9014.869	267.432	2220.047	26.163	652.95	1.032	130.36		31.931		12
B	2010	r-OTTER	none	9035.927	230.561		16.462	62.315	218.059	1234.375	349.019	5184.016	143.407	2661.464	32.611	348.229	3.218	39.842	0.23	19.066		2
B	2010	r-OTTER	T90	886.7	74.835		16.033	52.274	117.621	348.7	56.324	374.119	4.292	81.793	0.068	18.665		6.068		2.03		0
B	2010	r-PEL_TRAWL	BACOMA	1636.498	52.489	25.12	13.246	640.654	66.179	284.166	20.418	373.507	12.749	152.341	4.252	32.189		12.385		1.37		
B	2010	r-PEL_TRAWL	none	41.115	0					3.808		24.426		12.663		1.695		0.242		0.107		0
B	2011	GILL	NONE	9.958	0.008		0.001	1.196	0.015	6.623	0.004	2.383		0.474		0.141						
B	2011	none	NONE	24.109	0					2.295		10.079		10.182		2.895		0.567		0.054		0
B	2011	OTTER	NONE	35.11	2.442		0.684	9.932	4.942	18.009	0.444	6.44		3.614		0.917		0.187		0.016		
B	2011	PEL_TRAWL	NONE	315.01	23.03		6.17	66.059	45.859	221.815	4.965	53.876	0.003	13.225		3.877		0.968		0.177		0
B	2011	POTS	NONE	2.7	0.018		0.008	0.404	0.037	1.74	0.003	0.605		0.136		0.018						
B	2011	r-DEM_SEINE	NONE	90.22	0					5.303		33.668		39.649		16.552		2.796		0.598		0
B	2011	r-GILL	NONE	5286.507	236.378		96.528	479.611	452.983	2238.066	64.431	1758.59	1.373	835.401	1.46	249.135		42.404		9.047		1
B	2011	r-LONGLINE	NONE	1599.647	51.296		10.867	184.969	93.202	766.693	26.228	509.38	0.481	195.643	0.166	52.585		14.188		9.179		0
B	2011	r-OTTER	BACOMA	20021.413	2558.339	32.275	265.977	3984.485	3974.896	11338.989	1873.155	5566.181	107.323	1881.638	11.86	374.513	0.613	62.816		41.286		0
B	2011	r-OTTER	NONE	8493.801	10.411		0.5	9.369	6.27	1088.442	14.97	3618.401	8.3	3604.213	2.21	1170.923	0.32	204.981	0.04	37.347	0.01	4
B	2011	r-OTTER	T90	1145.247	189.755		11.262	168.884	298.37	952.816	141.353	215.263	0.117	23.276		3.642		1.101		0.307		0
B	2011	r-PEL_TRAWL	BACOMA	3168.744	601.783	98.319	145.229	1353.813	877.697	1989.028	432.264	415.142	9.413	48.846	0.165	3.165		1.337		0.248		
B	2011	r-PEL_TRAWL	NONE	56.019	0					3.169		22.833		27.418		11.094		1.605		0.365		0
B	2011	r-PEL_TRAWL	T90	23.938	7.493		0.049	2.451	10.979	20.953	6.589	4.96	0.004	0.401		0.055		0.012		0.004		0
B	2011	r-TRAMMEL	NONE	1.485	0			0.002		1.101		0.136		0.124		0.034		0.003		0.001		
C	2010	r-GILL	NONE	41.097	1.25		1.544	0.372	2.075	2.209	0.515	7.634	0.032	3.673		1.759		1.166		0.531		
C	2011	r-GILL	NONE	59.892	3.427		0.713	0.363	6.826	7.114	1.235	8.473	0.001	4.574	0.01	1.784		0.721		0.345		0
A	2010	r-OTTER	FDFBAL	263.837				46.612		132.395		79.579		27.217		5.857		0.738		0.32		0
A	2010	r-PEL_TRAWL	FDFBAL	7.859				3.351		3.377		1.734		0.538		0.12		0.001		0.021		
A	2011	r-DEM_SEINE	FDFBAL	56.336	0			0.191		8.397		23.65		9.376		3.776		1.527		0.189		0
A	2011	r-OTTER	FDFBAL	620.265	0			9.77		151.017		284.055		99.842		36.393		11.925		2.778		
B	2010	PEL_TRAWL	FDFBAL	1.741				0.002		0.162		0.92		0.473		0.073		0.02		0.011		0
B	2010	r-OTTER	FDFBAL	724.89				5.708		105.847		458.648		219.987		26.093		2.451		0.955		
B	2010	r-PEL_TRAWL	FDFBAL	18.544				0.014		2.229		11.237		3.854		0.963		0.083		0.093		
B	2011	DEM_SEINE	FDFBAL	1.047	0					0.116		0.499		0.467		0.117		0.019		0.002		
B	2011	PEL_TRAWL	FDFBAL	0.023	0					0.007		0.009		0.007		0.001						
B	2011	r-OTTER	FDFBAL	1633.044	0			2.512		271.619		767.627		684.895		175.085		26.697		4.452		0

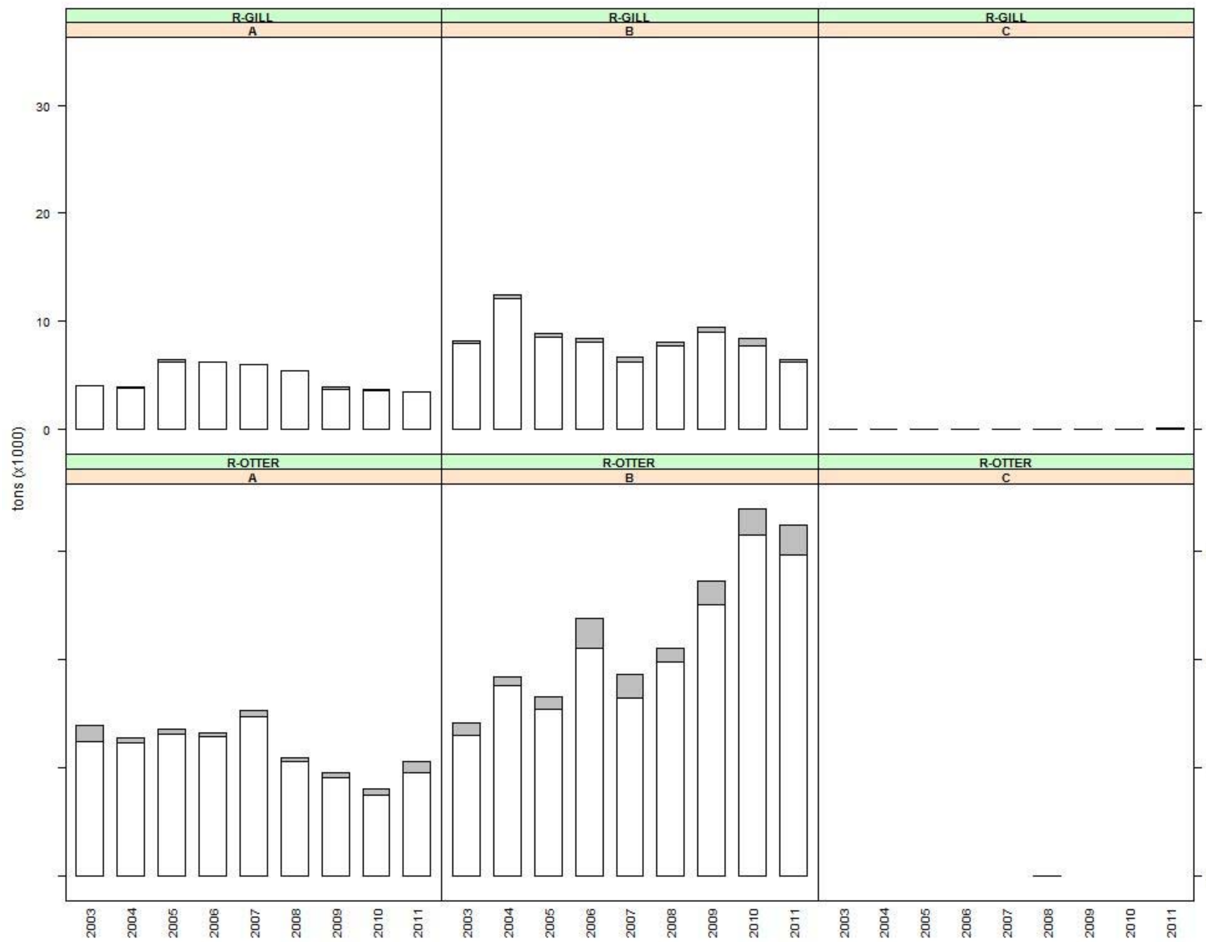


Figure 5.1.3.1 Catch and landings in tonnes of Baltic cod by sub-area and gear category 2003-2011. White bars show landings, grey bars discards. An “r” in front of the gear type indicates regulated gears in accordance with R(EC) 1098/2007 (see section 2.6).

5.1.4 Tor 1.d Catches (landings and discards) of non-cod species in weight and numbers at age by area, Member State and fisheries

Table 5.1.4.1 Major species caught at ages 1-9 (thousands) in landings, discards and discard rates in the Baltic by area, gears (r- indicates regulated gears).

Table 5.1. Catches (landings-L and discards-D) of non-cod species in weight and numbers at age by area and fisheries.

REG_AREA	SPECIES	Year	REG_GEAR	SPECON	LANDINGS t	DISCARDS t	AGE 0 L	AGE 0 D	AGE 1 L	AGE 1 D	AGE 2 L	AGE 2 D	AGE 3 L	AGE 3 D	AGE 4 L	AGE 4 D	AGE 5 L	AGE 5 D	AGE 6 L	AGE 6 D	AGE 7 L	AGE 7 D	AGE 8 L	AGE 8 D	AGE 9 L	AGE 9 D	AGE 10
28.2	HER	2003	PEL_TRAWL	none	2011.695				10362.034		8871.71		18045.98		13616.257		4992.822		6647.621		2231.899		2491.36		1597.393		1799.
28.2	HER	2004	PEL_TRAWL	none	2167.531				1447.266		15370.149		16222.357		20185.116		9800.578		6639.821		3581.463		2311.151		1527.189		2211.
28.2	HER	2005	PEL_TRAWL	none	3941.037				5735.18		14794.277		45533.994		31306.21		25270.378		8307.006		7458.276		3082.766		2214.732		2299.
28.2	HER	2006	PEL_TRAWL	none	3391.081				4941.141		10829.861		21291.123		40475.83		16772.204		13380.328		6594.945		1862.341		764.618		2225.
28.2	HER	2007	PEL_TRAWL	none	3167.969				1002.02		6541.603		5971.057		18318.858		26106.256		14199.929		8386.447		4639.046		1524.972		2582.
28.2	HER	2008	PEL_TRAWL	none	3796.644				2975.967		13975.247		23830.344		13934.836		19707.233		24783.223		7692.623		4619.045		1651.843		3904.
28.2	HER	2009	PEL_TRAWL	none	3250.514				1924.424		24800.167		18055.837		23862.142		10586.049		12255.515		10284.883		3232.386		1258.114		997.
28.2	HER	2010	PEL_TRAWL	none	3700.155				1049.412		5217.563		16266.501		12018.416		18474.047		14417.069		10168.023		13267.513		3520.469		4053.
28.2	HER	2011	PEL_TRAWL	NONE	3168.367				1328.844		4535.096		14360.566		31474.644		13772.696		9474.058		4979.445		3345.433		3779.766		1384.
28.2	SPR	2003	PEL_TRAWL	none	30723.511		47131.18		884129.569		710218.483		305724.563		758213.516		53574.181		424734.278		64941.442		236063.208				
28.2	SPR	2004	PEL_TRAWL	none	38940.177		2029.594		1343145.463		1815783.681		667162.605		234260.964		519462.671		54134.48		256970.248		197595.959				
28.2	SPR	2005	PEL_TRAWL	none	58364.978		70337.613		219671.376		4864605.092		1632252.676		480063.075		156359.43		104628.228		69070.109		105994.143				
28.2	SPR	2006	PEL_TRAWL	none	49090.726		3565.385		715061.038		949710.207		3739640.499		610211.489		159615.494		44389.82		42592.183		55724.185				
28.2	SPR	2007	PEL_TRAWL	none	47833.613		8882.29		904526.386		1413745.799		302683.352		2019991.601		439587.009		137968.742		34535.507		79716.926				
28.2	SPR	2008	PEL_TRAWL	none	50089.909		46350.003		891490.606		2062727.754		1027137.524		151182.676		881846.413		191475.782		28502.81		27097.513				
28.2	SPR	2009	PEL_TRAWL	none	38131.211		11212.103		1207183.351		856338.417		1022451.341		391955.034		72248.237		332995.421		92065.549		52192.373				
28.2	SPR	2010	PEL_TRAWL	none	36039.748		97909.794		247420.74		2366902.146		486147.225		415731.124		157903.928		74797.673		136083.794		48298.549				
28.2	SPR	2011	PEL_TRAWL	NONE	23371.374		65233.765		368178.507		263342.474		1348382.959		282958.437		116322.699		71836.761		24830.505		70621				
A	FLE	2005	r-OTTER	none	383.469	36.607							118.559	88.301	402.261	52.315	326.732	9.411	71.946		10.87		3.15				
A	FLE	2008	r-GILL	none	836.939	559.405				0.019	20.558	76.651	419.003	807.358	674.702	856.067	687.544	301.843	323.079	47.08	112.993	19.572	38.23		20.595		0
A	FLE	2008	r-OTTER	BACOMA	2754.444	664.414				15.208	155.394	424.004	2565.574	1521.577	3418.23	770.486	2080.398	367.582	636.844	102.987	161.231	19.598	54.457	6.491	19.685	1.362	4
A	FLE	2008	r-TRAMMEL	none	36.344						0.147		7.781		25.427		29.905		14.441		4.098		1.962		1.06		0.
A	FLE	2009	POTS	none	0.017						0.184		0.023														
A	FLE	2009	r-GILL	none	864.632	466.936			0.017	4.713	18.02	647.541	842.155	2017.335	1132.099	352.734	342.704	34.179	128.967	10.391	40.655	9.167	23.638	0.019	11.327		5
A	FLE	2009	r-OTTER	BACOMA	2584.376	1084.23				4.266	69.021	320.268	2776.286	3202.319	3578.057	1390.369	1104.749	220.038	398.792	64.356	130.283	26.486	67.482	6.039	23.42	1.337	4
A	FLE	2009	r-TRAMMEL	none	36.012	0.507					0.117	0.473	13.34	2.087	36.175	0.433	20.327	0.033	8.368	0.017	2.988	0.017	1.475		0.713		0
A	FLX	2010	r-GILL	none	121.159	34.111			0.386	10.759	44.923	106.118	191.015	91.873	120.016	14.899	24.89	0.735	9.917	0.599	3.878		1.131		0.304		0
A	FLX	2010	r-OTTER	BACOMA	230.764	163.123			0.677	12.769	74.116	220.742	317.133	357.417	214.922	138.413	62.308	22.49	28.532	9.455	14.019	3.757	6.866	2.054	2.92	0.856	1
A	FLX	2011	r-GILL	NONE	530.438	18.851					88.107		917.072		432.905		132.434		39.782		48.118		13.99		23.248		4
A	FLX	2011	r-OTTER	BACOMA	2190.83	413.68			212.363		1438.302	1779.406	5630.007	524.676	782.063		211.24		33.266		105.934		73.888				5
A	HER	2003	GILL	none	2438.119						1.067		25.322		1095.232		3486.185		2367.661		3007.043		1750.381		506.547		119
A	HER	2003	none	none	672.55				11.161		319.142		1296.457		2894.931		2106.758		484.689		115.03		51.108		1.534		0
A	HER	2003	OTTER	none	5473.046						266.315		1841.152		11334.26		16371.6		5291.541		3133.301		1570.237		199.811		52
A	HER	2003	PEL_TRAWL	none	17958.783				3416.379		5805.077		18042.7		47774.701		50209.617		14452.843		7836.501		4021.119		613.867		159
A	HER	2004	GILL	none	6132.627						4.245		468.937		2538.276		11650.943		12438.823		4038.678		1814.876		692.904		178
A	HER	2004	OTTER	none	2092.66				881.708		896.581		5425.733		10455.272		5212.569		2096.636		452.914		46.714		17.407		0
A	HER	2004	PEL_TRAWL	none	17120.31				4310.238		3342.773		15236.061		36950.104		41231.648		28790.897		6437.106		2113.32		828.846		195
A	HER	2006	PEL_TRAWL	none	16570.109				2515.782		3602.75		53654.361		43076.363		14424.664		9470.044		7470.004		3985.641		651.449		485
A	HER	2007	OTTER	none	5968.993				29172.185		42651.172		23109.215		8456.412		3454.841		4015.716		985.807		820.764				176
A	HER	2007	PEL_TRAWL	none	5052.447				65261.449		23139.534		24259.156		7414.971		2648.156		1968.433		986.238		271.485				107
A	HER	2007	r-OTTER	BACOMA	0.002				0.104		0.005																
A	HER	2008	GILL	none	8068.662				87.678		779.521		4017.502		7988.718		15917.385		9969.072		3585.083		2873.901		1391.393		712
A	HER	2008	OTTER	none	8897.219				402721.818		31267.525		14399.786		6046.269		1947.385		1089.449		199.724		104.429		19.384		0
A	HER	2008	PEL_TRAWL	none	19695.122				14095.363		23994.601		48292.134		45510.237		32987.565		14355.502		4690.764		3255.664		1162.138		507
A	HER	2008	r-GILL	none	6.303				0.006		0.317		1.997		5.027		10.976		7.143		2.75		2.377		1.164		0
A	HER	2009	GILL	none	6670.985				8.199		481.405		1869.464		6293.282		10056.179		10349.944		4950.543		1544.015		785.417		461
A	HER	2009	OTTER	none	5396.287	384.27			22207.177	17725.304	30292.75	4283.62	6807.911	44.721	4445.985	193.822	5043.094		5077.604		2349.553		737.192		331.083		231
A	HER	2009	PEL_TRAWL	none	15851.194	0			6345.011		24252.26		30270.06		27825.382		20807.726		15336.835		6387.074		2145.107		902.675		429.
A	HER	2009	POTS	none	289.523				14.058		355.661		641.871		726.332		476.231		272.271		95.729		34.155		10.001		2.
A	HER	2009	r-GILL	none	12.375	1.004					0.994		3.094		9.612		15.026		16.794		8.507		2.873		1.768		1.
A	HER	2010	GILL	none	4976.705	0			1.094		21.243		1071.472		3875.053		7614.406		5426.509		4028.087		2512.968		871.543		412.
A	HER	2010	OTTER	none	3526.446	489.12			20135.359		22917.158		10684.527		4811.366		2804.527		1411.826		1167.105		767.445		283.797		96.
A	HER	2010	PEL_TRAWL	none	8160.123				14792.873		12687.881		17096.489		12672.044		9502.304		5676.762		3757.447		2397.491		931.117		394.
A	HER	2011	GILL	NONE	3468.626	0					18.915		260.671		2568.136		3636.966		4842.329		3724.097		2050.746		881.279		266.
A	HER	2011	OTTER	NONE	1640.661	0			27907.047		4742.922		2721.736		3820.862		1462.759		1257.756		921.865		444.575		163.48		55.
A	HER	2011	PEL_TRAWL	NONE	8058.329	0			2808.225		10299.873		9471.639		15836.82		9686.688		8695.913		4867.315		2319.6		855.986		283.
A	HER	2011	POTS	NONE	257.515	0			0.018		46.192		104.491		1554.053		448.705		212.021		104.025		91.273		0.365		0.
A	PLE	2004	r-OTTER	none	0.004	0.029						0.04		0.07		0.03		0.01		0.01							
A	PLE	2006	r-OTTER	none	4.017	20.287				0.16		22.84		37.22		17.45		6.94		2.39		1.13		0.44		0.14	
A	PLE	2008	r-GILL	none	253.514	168.724				14.878	67.086	407.764	324.595	608.22	339.933	79.967	60.608	9.103	16.609	2.643	5.77						
A	PLE	2008	r-OTTER	BACOMA	248.599	131.872				6.687	75.324	295.14	456.565	499.475	250.368	86.418	91.517	17.132	46.287	4.174	12.846		6.776	0.305			
A	PLE	2008	r-TRAMMEL	none	104.412						5.059		40.292		62.027		64.304		60.733		4.445		4.706				
A	PLE	2009	r-GILL	none	197.652	5.59					0.064	0.562	12.687	8.454	76.704	12.375	114.186	1.226	75.609	0.013	47.175		29.625		6.054		3
A	PLE	2009	r-OTTER	BACOMA	253.476	77.347				1.532	5.071	144.712	128.559	300.596	363.443	110.617	132.069	11.216	49.292	3.009	31.432	0.381	15.369	0.267	6.997		0.
A	PLE	2009	r-TRAMMEL	none	66.21	0.023							18.104		113.147		40.729		2.249								
A	PLE	2010	r-OTTER	BACOMA	0.842	0			0.004		0.257		1.551		1.374		0.23		0.037		0.012		0.003		0.007		
A	PLE	2010	r-OTTER	none	0.422	3.691				3.4		9.87		5.13		1.18		0.33		0.07		0.05		0.01			
A	PLE	2011	r-DEM_SEINE	NONE	0.026	1.843				0.02		2.66		3.87		1.35		0.24		0.04		0.01					
A	PLE	2011	r-OTTER	NONE	0	0.893				0.16		3.52		3.04		0.35		0.07		0.01							
A	SPR	2003	OTTER	none	569.645				6414.753		12151.912		8494.512		2061.334		1924.156		1013.688		263.455		257.956				
A	SPR	2003	PEL_TRAWL	none	2069.45				41513.847		61128.308		36846.217		6218.105		7085.505		2536.174		743.758		1283.292				
A	SPR	2004	OTTER	none	1842.331				167554.26		20045.212		11441.954		6475.569		2179.707		377.035								
A	SPR	2004	PEL_TRAWL	none	13290.163				1805426.605		116647.463		66525.06		35326.332		18469.471		696.234								
A	SPR	2007	OTTER	none	4242.328				211433.373		55600.659		36008.228		91968.726		23170.66		1630.89		1952.436		1128.876		701.575		
A	SPR	2007	PEL_TRAWL	none	1631.39				123816.373		45927.191		10918.595		23303.058		4473.468		771.232		352.42		116.995		130.561		
A	SPR	2007	r-OTTER	BACOMA	0.03				0.379		0.454		0.371		0.934		0.224		0.019		0.021		0.009		0.008		
A	SPR	2008	OTTER	none	3402.927				5903.733		71270.997		48587.532		49932.895		40980.655		5286.729		3200.246		1103.034				
A	SPR	2008	PEL_TRAWL	none	4095.215				7099.583		93477.474		60051.793		50628.47		46579.774		8277.996		3105.368		868.2				
A	SPR	2009	OTTER	none	2480.522	32.969			15370.069	926.624	33152.059	804.558	69272.472	603.474	19029.601	228.448	20702.275	154.957	6473.447	63.688	2151.728	13.637	375.272		588.032	6.018	
A	SPR	2009	PEL_TRAWL	none	7024.67	0			104457.577		86442.21		183716.13		50197.443		56751.022		18108.744		6429.227		1124.624		1995.7		
A	SPR	2011	PEL_TRAWL	NONE	668.86	0			3808.802		6822.74		22074.53		6855.863		2368.09		1010.166		1440.732						
A	WHG	2008	r-DEM_SEINE	none	0.076	0.613		4.25		5.02		0.63		0.03													
A	WHG	2009	r-DEM_SEINE	none	0.013	0.259		1.8		2.12		0.27		0.01													
A	WHG	2011	r-DEM_SEINE	NONE	0	0.112				0.08		0.18		0.47													
B	FLE	2005	r-PEL_TRAWL	none	0.025	0.007							0.002	0.008	0.019	0.016	0.024	0.007	0.008	0.001	0.002						
B	FLE	2008	r-OTTER	BACOMA	692.854	1528.928					28.528	751.932	391.254	5764.811	570.59	1754.508	476.849	501.288	232.308		77.435		44.83		32.604		8.
B	FLE	2009	r-OTTER	BACOMA	1679.301	264.796				1.637	21.094	78.373	1060.777	779.646	1611.092	425.069	885.353	91.924	500.729	29.106	219.934	7.99	91.988	2.074	23.438	0.359	
B	FLX	2010	r-OTTER	BACOMA	39.754	202.666			0.048	3.014	8.096	179.682	51.504	462.403	46.07	225.485	15.585	38.484	6.595	17.299	3.242	5.958	1.172	2.309	0.394	0.766	0.
B	FLX	2011	r-GILL	NONE	281.98	55.099					0.061		3.017		36.073		36.916		43.579		51.364		244.738		189.772		173.
B	FLX	2011	r-LONGLINE	NONE	2.64	0											0.114		0.274		0.449		1.1		0.664		0.
B	FLX	2011	r-OTTER	BACOMA	4614.315	7262.101			0.085		119.519	6.229	2306.506	4300.121	5424.591	43422.209	1695.63	3620.589	1675.331	582.342	1476.385	826.964	1275.238	871.27	670	416.68	448.
B	HER	2009	PEL_TRAWL	NONE	21674.458	0	39171.374		84129.116		367687.616		133971.933		230405.516		66180.43		17204.111		58135.253		5837.573		11426.666		9669.
B	HER	2010	OTTER	none	2003.591	0			1344.123				12396.218		8363.704		4928.548		5974.136		5974.136		1941.623		1194.856		896.
B	HER	2010	PEL_TRAWL	none	42624.411	0	5946.313		91604.781		173251.593		418397.022		149956.887		340751.138		102184.702		53873.22		122971.875		22476.144		52704.
B	HER	2011	GILL	NONE	90.41	0							12.055		85.136		239.586		185.34		42.191		41.438				
B	HER	2011	PEL_TRAWL	NONE	55657.231	190.944	10528.893		56344.337	14623.796	288084.738	766.088	255265.843		428714.165		154082.171		174189.537		67241.805		57217.984		54482.78		25178.
B	PLE	2005	r-OTTER	none	6.704	61.814				10.69		230.5		117.5		11.18		0.06									
B	PLE	2008	r-OTTER	BACOMA	43.364	3.615				0.042	9.882	4.264	67.571	9.917	45.331	3.124	18.374	0.899	8.788	0.437	2.036	0.039	1.443	0.022			
B	PLE	2009	r-OTTER	BACOMA	45.028	71.209				0.384	1.451	58.87	29.036	186.532	100.048	141.535	15.736	18.886	3.003	3.23	1.233	1.742	0.731	1.29	0.176		0.
B	PLE	2009	r-OTTER	none	0.054	0.285						0.1		0.78		0.56		0.06		0.01							
B	PLE	2010	r-OTTER	BACOMA	23.777	34.02				2.139	3.103	22.86	34.582	43.891	46.57	50.43	9.903	16.173	1.964	4.174	0.899	1.595	0.245	0.663	0.306	0.398	0.
B	PLE	2011	r-OTTER	BACOMA	3.878	27.542				9.539	1.948	47.492	6.071	43.867	4.074	28.004	1.232	13.195	0.196	1.017	0.06		0.158		0.075		0.
B	PLE	2011	r-OTTER	NONE	0.021	0.87				0.43		4.27		1.26		0.45		0.12		0.02							
B	SPR	2003	PEL_TRAWL	none	97219.864		135436.039		2425580.055		2145986.498		1057345.132		2558003.122		195185.664		1455958.651		227601.497		816668.032				
B	SPR	2004	PEL_TRAWL	none	198018.528		3482.836		2972547.721		7052836.514		3412684.809		1752997.524		4290967.354		348748.073		2027783.206		1579827.744				
B	SPR	2005	PEL_TRAWL	none	195796.709		80690.748		272393.028		18159838.52		5102444.686		1606959.44		618636.336		463907.871		325746.524		417729.144				
B	SPR	2006	PEL_TRAWL	none	168592.625		5914.521		1197625.161		3911875.998		13444513.44		2340450.841		541566.796		167685.567		186146.38		223065.571				
B	SPR	2007	PEL_TRAWL	none	171427.104		31311.685		3124120.355		5689340.121		1128932.63		9429845.13		2131081.31		363914.073		149442.905		245268.019		347.148		
B	SPR	2008	PEL_TRAWL	none	44507.497		688246.651		1010916.364		1973455.075		571360.201		154423.671		444151.771		123027.431		26802.38		12102.394				
B	SPR	2009	OTTER	none	14919.464				501622.815		194302.837		408094.64		84946.715		98776.391		35304.136		14045.476		2671.762		4331.13		
B	SPR	2009	PEL_TRAWL	none	216007.337	0	45486.268		10212518.95		5510371.783		5515136.904		1779981.875		529564.231		1705710.019		451180.823		181920.437		1969.374		
B	SPR	2010	PEL_TRAWL	none	178771.999	0	557614.29		967252.086		12087067		2957383.352		2788130.56		984911.396		379972.486		736855.123		350855.595		30322.3		
B	SPR	2011	PEL_TRAWL	NONE	56190.013	3	7967.017		1330118.734		1765643.904		2613082.6		487272.296		193119.018		47323.504		40234.245		21777.002		1671.079		1442.
B	WHG	2009	r-OTTER	none	0.005	0.05						0.01		0.09		0.03											
B	WHG	2011	r-OTTER	NONE	0	0.253						0.03		0.29		0.13											
C	HER	2003	POTS	none	4024.78	6.82			117.721		5156.167		1224.295		12811.021		1016.41		574.664		5141.879		3285.933		56665.216		6107
C	HER	2004	POTS	none	4059.558	2.87			4		13265.416		28947.838		15220.693		14153.673		12254		14167.62		17243.603		2727.603		2
C	HER	2005	POTS	none	2358.58	0.267	538.457				6591.589		26089.123		12887.929		24538.808		2923.479		8211.963		2195.862		999.848		525.
C	HER	2006	POTS	none	2288.609	0.149					1639		2205		24727		15086		7502		6196		8034		1387		1
C	HER	2007	POTS	none	2818.022	6.229					19351.51		25250.319		9670.4		36419.625		14283.964		4515.504		2850.952		3395.313		378.
C	HER	2008	POTS	none	2850.587	0.385	76.664		689.976		1891.044		1950.672		545.166		289.619		16306.127		8288.51		18001.323		22735.06		2443
C	HER	2009	PEL_TRAWL	none	18433.788	0	531.559		83356.316		257725.393		82854.027		246088.437		52813.431		21476.799		114006.541		9636.882		12804.371		7498.
C	HER	2009	POTS	none	2256.818	1.358			72.257		17141.177		24527.373		21235.881		3890.66		1398.919		7393.071		4094.467		4875.689		651.
C	HER	2010	PEL_TRAWL	none	19152.109	0	6181.857		39490.168		110323.795		289145.333		59279.99		216346.185		59780.051		10768.354		50224.216		2329.127		17894.
C	HER	2011	PEL_TRAWL	NONE	19311.112	0	156477.091		80823.449		120424.486		212705.108		258199.044		78327.559		75062.245		22621.792		9939.73		18717.619		5606.
C	SPR	2007	PEL_TRAWL	none	63891.478		218847.558		2871300.831		2798726.237		232442.653		2290284.261		515979.365		44353.288		43608.768		51981.226				
C	SPR	2008	PEL_TRAWL	none	68107.162		440400.639		2175450.651		3310869.717		766450.472		283811.764		1135430.179		496389.623		32414.601		78325.287				
C	SPR	2009	PEL_TRAWL	none	75061.933	0	215573.8		3718705.352		1803332.51		1791639.424		627252.564		316109.175		1013281.358		236083.716		217912.143		171.344		
C	SPR	2010	PEL_TRAWL	none	66389.128	0	164016.846		269792.69	3	4906884.894		1563974.321		1105092.428		375204.78		218697.178		325517.126		174539.428				
C	SPR	2011	PEL_TRAWL	NONE	39201.708	0	365955.754		1655729.221		393554.313		1823273.502		483881.715		176433.966		116431.55		55949.286		111674.847				

5.1.5 ToR 1.e CPUE and LPUE of cod by area and fisheries

Although it was explicitly asked to analyse CPUE and LPUE time series of Baltic cod for gear categories which are in accordance with Council Regulation (EC) 2187/2005 only, the STECF EWG used the categories from the cod management plan to be consistent within the report and to provide respective advice.

The Tables 5.1.5.1, 5.1.5.2 and Figures 5.1.5.1-5.1.5.2 provide data on CPUE and LPUE by year and derogation as well as aggregated over countries. The CPUE figures in the table should only be considered indicative since estimated discard ratios depend on sampling intensity.

CPUEs and LPUEs were in general higher for otter trawls, demersal seines and pelagic trawls compared to gill nets. CPUES and LPUES varied considerably between countries. CPUE and LPUE aggregated over countries and years showed a generally increasing trend in Areas A -C, although CPUEs and LPUEs showed some inter-annual variability. In area B CPUEs and LPUEs decreased somewhat in 2011. The relatively strong increase in CPUE and LPUE values in Areas B and C in the most recent years can be explained by the dynamics of Eastern Baltic cod (ICES, 2012;Tables 3.4.2.1 and 3.4.2.2).

CPUE and LPUE by area, gear and Member State will be made available in the report of the follow-up meeting on review of fishing effort regimes, STECF EWG 12-12, 24-28 September 2012.

Table 5.1.5.1 Baltic: Cod CPUE (g/KW*days) by derogation, and year, 2004-2011 for areas A, B, C and 28.2.

REG AREA COD	REG GEAR COD	SPECON	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2011	CPUE 2009-2011
28.2	GILL	none	0	0	0	0	0	0	0	0	0
	OTTER	none		0	0		0	0	0	0	0
	PEL_TRAWL	none	13	2	3	7	3	0	1	2	1
	r-GILL	none	1912	2481	1740	2087	2542	2549	1594	2044	1995
	r-OTTER	BACOMA	1966	2330	2620	1559	1674	6131	2467	1109	2826
	r-PEL_TRAWL	BACOMA	0				0	0	0	0	0
A	BEAM	none	0					0	2262	3394	277
	DEM_SEINE	none	0	0	348	0		0	0	0	0
	DREDGE	none						0	0	0	0
	GILL	none	113	309	207	196	44	25	26	24	25
	none	none	31881	2896	4472	803	442	185	463	526	334
	OTTER	none	102	215	250	170	204	141	237	230	198
	PEL_TRAWL	none	90	176	196	147	101	66	102	104	86
	POTS	none	28	1175	384	716	306	287	470	316	359
	r-BEAM	BACOMA	0	0	0	0	2327	0	0	0	0
		none	0	0	0	0	0	0	0	0	0
	r-DEM_SEINE	BACOMA	0	0	2177	3789	6510	4583	5354	5077	4800
		none	3496	4297	5555	6551	6731	4963	5115	6815	5364
	r-GILL	none	1832	1815	1823	1925	1840	1643	1755	1810	1730
	r-LONGLINE	none	2036	2468	1856	2684	1785	1456	1894	2458	1910
	r-OTTER	BACOMA	2460	1736	3316	3432	2937	3003	3263	4292	3518
		none	2440	2592	2998	3567	3115	3457	3624	4652	3837
		T90	0	0	0	0	0	0	2195	5229	4158
	r-PEL_TRAWL	BACOMA	1568	977	3306	5882	1441	0	3333	2992	3107
		none	1872	2929	3658	2882	2473	8382	3555	0	4587
	r-TRAMMEL	none	1183	1198	1388	1194	1125	706	1035	1273	971
	TRAMMEL	none	1566	1286	669	1278	470	0	396	0	93
B	DREDGE	none	0	0	0	0	4525	0	0	0	0
	GILL	none	93	82	141	108	27	8	14	89	35
	none	none	114172	2956	5891	1096	1038	323	496	3145	1248
	OTTER	none	84	105	67	34	31	44	15	70	42
	PEL_TRAWL	none	46	27	25	37	37	49	56	33	45
	POTS	none	0	0	3	0	5	85	52	18	55
	r-DEM_SEINE	BACOMA	0	0	5699	6444	12079	17195	8659	9448	10990
		none	588	10313	8384	10046	0	0	0	11341	11341
	r-GILL	none	1958	2041	2289	2300	3049	4417	4227	3652	4123
	r-LONGLINE	none	3490	3194	3414	3491	3386	2256	3348	2682	2780
	r-OTTER	BACOMA	2017	2067	2722	3490	4374	7527	7791	6906	7390
		none	3532	3508	4843	7909	8456	10871	10898	9039	10173
		T90	0	0	0	0	0	9333	6952	5661	6218
	r-PEL_TRAWL	BACOMA	2004	1301	2811	3346	1422	6501	8630	3995	5185
		none	8421	4932	13942	67132	13861	12358	13298	2316	7384
	r-TRAMMEL	none	778	434	473	2422	2579	3979	2660	952	3486
	TRAMMEL	none	0	0	0	44	0	0	0	0	0
C	GILL	none	0	1	0	0	0	0	1	1	1
	OTTER	none	0	0	14			0	0	0	0
	PEL_TRAWL	none						0	0	0	0
	POTS	none	0	0				0	0	0	0
	r-GILL	none	133	107	104	161	213	556	585	1079	724
	r-LONGLINE	none	0	0	0	0	0	0	0	0	0
	r-OTTER	BACOMA	0	0	0	0	463	0	0	0	0

Table 5.1.5.2 Baltic: Cod LPUE (g/KW*days) by derogation and year, 2003-2011 for areas A, B, C and 28.2

REG AREA COD	REG GEAR COD	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
28.2	GILL	none	0	0	0	0	0	0	0	0	0
	OTTER	none		0	0		0	0	0	0	0
	PEL_TRAWL	none	13	2	3	7	3	0	1	2	1
	r-GILL	none	1912	2432	1702	1953	2480	2549	1594	1551	1995
	r-OTTER	BACOMA	1955	2330	2620	1559	1674	6131	2467	8428	2826
	r-PEL_TRAWL	BACOMA	0				0	0	0	0	0
A	BEAM	none	0					0	2262	3394	277
	DEM_SEINE	none	0	0	348	0		0	0	0	0
	DREDGE	none						0	0	0	0
	GILL	none	113	305	207	196	44	25	26	23	25
	none	none	31881	2896	4472	803	442	185	463	244	334
	OTTER	none	102	215	250	170	204	141	93	198	151
	PEL_TRAWL	none	89	176	196	147	101	66	102	68	81
	POTS	none	28	1175	384	716	306	287	470	264	359
	r-BEAM	BACOMA	0	0	0	0	2327	0	0	0	0
		none	0	0	0	0	0	0	0	0	0
	r-DEM_SEINE	BACOMA	0	0	2177	3789	6510	4583	5354	7207	4800
		none	3294	4029	5302	5977	6720	4888	5050	3457	5257
	r-GILL	none	1806	1743	1822	1925	1839	1540	1712	1636	1670
	r-LONGLINE	none	2023	2358	1856	2684	1785	1451	1894	2655	1902
	r-OTTER	BACOMA	2321	1732	3117	3210	2762	2706	2723	3912	2987
		none	2372	2485	2996	3562	3108	3451	3614	4123	3831
		T90	0	0	0	0	0	0	2016	6676	3067
	r-PEL_TRAWL	BACOMA	1568	977	3306	5882	1441	0	3333	4872	2762
		none	1872	2929	3658	2882	2473	8382	3555	0	4587
	r-TRAMMEL	none	1170	1157	1388	1194	1125	670	1033	1138	954
	TRAMMEL	none	1566	1286	669	1278	470	0	396	0	93
B	DREDGE	none	0	0	0	0	4525	0	0	0	0
	GILL	none	93	82	141	108	27	8	14	183	35
	none	none	114172	2956	5891	1096	1038	323	496	5949	1248
	OTTER	none	84	105	67	34	31	41	15	55	39
	PEL_TRAWL	none	46	27	25	37	37	45	32	37	36
	POTS	none	0	0	3	0	5	85	52	13	55
	r-DEM_SEINE	BACOMA	0	0	5699	6444	12079	17195	8659	13565	10990
		none	588	10313	8384	10046	0	0	0		11341
	r-GILL	none	1902	1980	2207	2131	2952	4249	3872	3102	3898
	r-LONGLINE	none	3449	3145	3414	3491	3378	2105	2965	2438	2570
	r-OTTER	BACOMA	1910	1886	2339	2934	4022	6761	7093	6578	6641
		none	3454	3420	4575	7719	8273	10638	10627	9990	10013
		T90	0	0	0	0	0	8075	6410	8274	5496
	r-PEL_TRAWL	BACOMA	1951	1301	2428	3041	1288	5980	8364	16278	4624
		none	8313	4757	13942	67132	13861	12358	13298	17819	7384
	r-TRAMMEL	none	778	434	473	2422	2579	3979	2660	532	3486
	TRAMMEL	none	0	0	0	44	0	0	0	0	0
C	GILL	none	0	1	0	0	0	0	1	1	1
	OTTER	none	0	0	14			0	0	0	0
	PEL_TRAWL	none						0	0	0	0
	POTS	none	0	0				0	0	0	0
	r-GILL	none	133	107	104	161	213	541	571	816	698
	r-LONGLINE	none	0	0	0	0	0	0	0	0	0
	r-OTTER	BACOMA	0	0	0	0	463	0	0	0	0

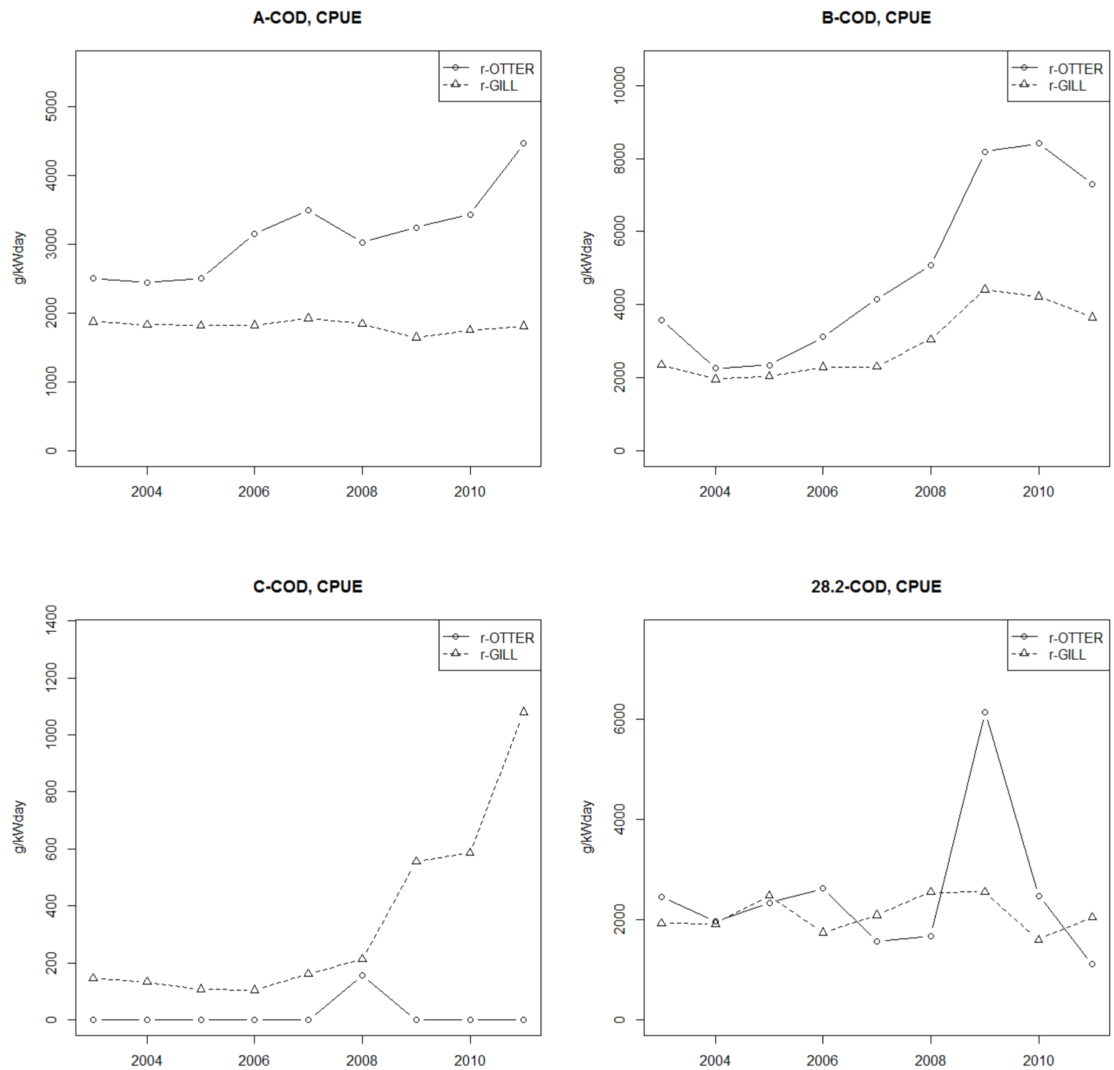


Figure 5.1.5.1 Cod CPUE (g/KW*days) by derogation, country and year, 2003-2011 for areas A, B, C and 28.2.

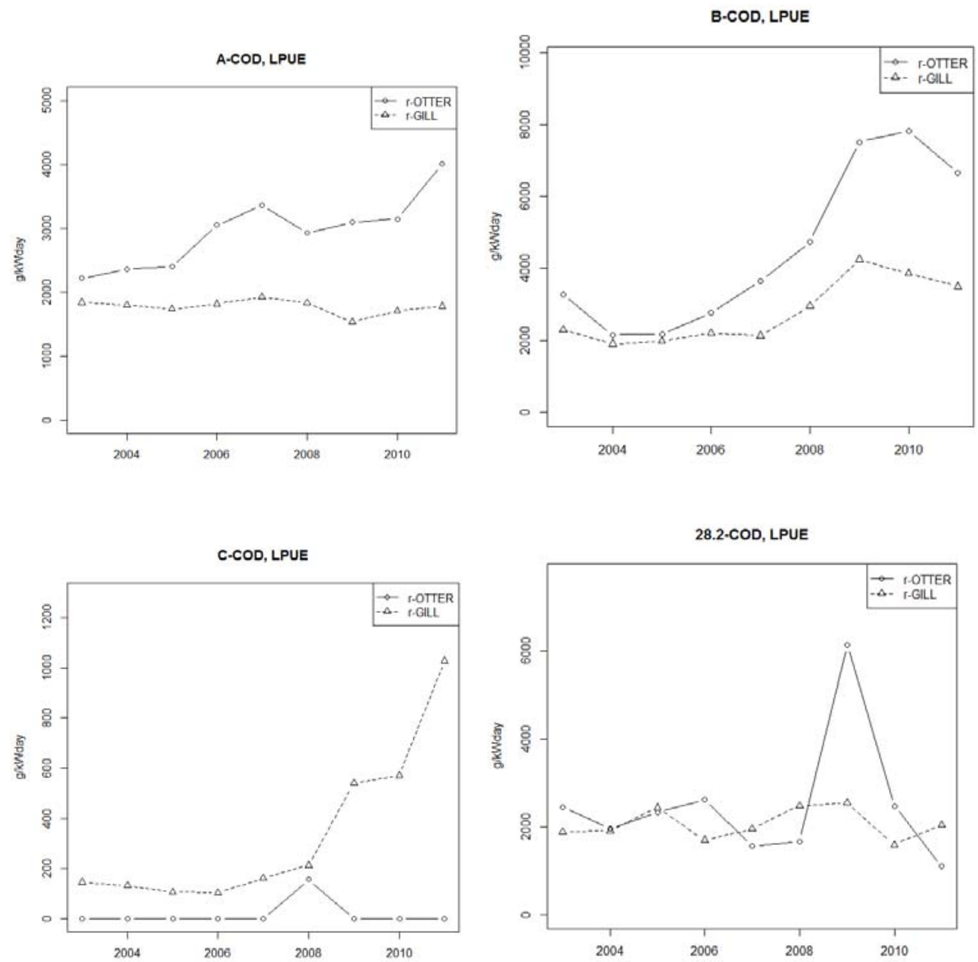


Figure 5.1.5.2 Cod LPUE (g/KW*days) by derogation, country and year, 2003-2011 for areas A, B, C and 28.2.

Ranked gear categories according to catches and landings of cod by sub-area can be found in Tables 5.1.5.3 and 5.1.5.4.

There are some differences in the dominating gear that are responsible for the cod catches. Throughout the period of observations the otter trawl fishery was dominant in Areas A and B with gillnet fishery as the second most important cod catching gear. In area C, gillnets were the major gears although the total amount of cod catches was low compared to areas 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 larger shifts occurred. In the Sub-area 28.2, only trawls and gillnets were involved in cod fishery during the period (except minor catch by pelagic trawls in 2003). The proportion between gears had been changing on annual basis without clear trend. According to available data, cod catches from unregulated gear types do not play a significant role.

Table 5.1.5.3 Ranked gear categories according to the proportional catches of cod 2003-2011, ascending ranking according to 2011.

ANNEX	REG_AREA	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	28.2	r-PEL_TRAWL	0.030								
Bal	28.2	r-GILL	0.674	0.298	0.441	0.354	0.537	0.418	0.244	0.755	0.468
Bal	28.2	r-OTTER	0.296	0.702	0.559	0.646	0.463	0.582	0.756	0.245	0.532

ANNEX	REG_AREA	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	A	r-BEAM	0.000					0.000			
Bal	A	r-PEL_TRAWL	0.005	0.002	0.006	0.008	0.009	0.001	0.002	0.003	0.001
Bal	A	r-DEM_SEINE	0.071	0.075	0.050	0.065	0.069	0.079	0.052	0.040	0.026
Bal	A	r-LONGLINE	0.020	0.026	0.056	0.033	0.031	0.015	0.020	0.024	0.028
Bal	A	r-TRAMMEL	0.015	0.014	0.024	0.026	0.024	0.032	0.028	0.036	0.034
Bal	A	r-GILL	0.201	0.208	0.278	0.278	0.244	0.291	0.263	0.282	0.226
Bal	A	r-OTTER	0.689	0.676	0.586	0.590	0.624	0.581	0.635	0.615	0.684

ANNEX	REG_AREA	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	B	r-TRAMMEL	0.001	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000
Bal	B	r-DEM_SEINE	0.000	0.000	0.003	0.004	0.003	0.003	0.008	0.005	0.010
Bal	B	r-LONGLINE	0.054	0.093	0.106	0.090	0.060	0.054	0.033	0.047	0.037
Bal	B	r-PEL_TRAWL	0.008	0.105	0.052	0.138	0.208	0.038	0.062	0.037	0.087
Bal	B	r-GILL	0.343	0.324	0.292	0.200	0.192	0.249	0.229	0.180	0.143
Bal	B	r-OTTER	0.595	0.478	0.547	0.568	0.536	0.655	0.665	0.730	0.723

ANNEX	REG_AREA	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	C	r-OTTER						0.063			
Bal	C	r-LONGLINE						0			
Bal	C	r-GILL	1	1	1	1	1	0.938	1	1	1

Table 5.1.5.4 Ranked gear categories according to the proportional landings of cod 2003-2011, ascending ranking according to 2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	28.2	COD	r-PEL_TRAWL	0.030								
Bal	28.2	COD	r-GILL	0.670	0.300	0.436	0.349	0.520	0.406	0.244	0.755	0.468
Bal	28.2	COD	r-OTTER	0.299	0.700	0.564	0.651	0.480	0.594	0.756	0.245	0.532

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	A	COD	r-BEAM	0.000					0.000			
Bal	A	COD	r-PEL_TRAWL	0.005	0.002	0.006	0.008	0.009	0.001	0.002	0.003	0.001
Bal	A	COD	r-DEM_SEINE	0.073	0.072	0.049	0.063	0.066	0.080	0.054	0.042	0.027
Bal	A	COD	r-LONGLINE	0.021	0.026	0.056	0.034	0.032	0.016	0.021	0.025	0.030
Bal	A	COD	r-TRAMMEL	0.016	0.015	0.024	0.027	0.024	0.033	0.028	0.039	0.037
Bal	A	COD	r-GILL	0.216	0.210	0.278	0.284	0.251	0.297	0.259	0.292	0.240
Bal	A	COD	r-OTTER	0.668	0.674	0.587	0.584	0.619	0.574	0.636	0.600	0.664

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	B	COD	r-TRAMMEL	0.001	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000
Bal	B	COD	r-DEM_SEINE	0.000	0.000	0.003	0.004	0.003	0.003	0.009	0.005	0.011
Bal	B	COD	r-LONGLINE	0.056	0.096	0.109	0.099	0.066	0.057	0.033	0.045	0.039
Bal	B	COD	r-PEL_TRAWL	0.008	0.106	0.054	0.136	0.214	0.036	0.062	0.039	0.080
Bal	B	COD	r-GILL	0.357	0.325	0.298	0.211	0.196	0.255	0.237	0.179	0.150
Bal	B	COD	r-OTTER	0.578	0.473	0.536	0.550	0.520	0.647	0.657	0.732	0.721

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Bal	C	COD	r-LONGLINE						0			
Bal	C	COD	r-OTTER						0.063			
Bal	C	COD	r-GILL	1	1	1	1	1	0.938	1	1	1

5.1.6 ToR 2 Remarks on quality of catches and discard estimates

Discard estimates were available from all Baltic Member States except for Finland. This country, however has landed small quantities of the eastern cod stock (approximately 1% of the total landings). It seems that the sampling intensity, particularly in passive gears, was generally lower as compared to active gears. This might imply that even if all major métiers were sampled, the discard estimate is an underestimate compared to the real discard. Therefore, variation in discard figures from year to year must be taken with caution and may not reflect the true exploitation pattern of the fishery. The EU Data Collection Framework (DCF) defines which metiers (Level 6) are to be sampled in a country following the rules of the fisheries metiers ranking system. The sampling strata includes also Baltic ICES Sub-divisions (not ICES rectangles) and months. Independently of the uncertainties in the discard estimates available to the STECF EWG, the changes in discard level reflect relatively well the year-classes strength of the eastern Baltic cod stock, which is in particular evident for the active gears (see Figure 5.1.3.1). Also discard ratio estimates for the Member States for the same year and fishing gears are close and follow the same trends across years studied.

5.1.7 ToR 3 Information on small boats (<8m by area)

Fishing effort and catches of cod corresponding to vessels of length overall smaller than 8 m by gear and Member State are provided

Lithuania provided data from 2006; Latvia provided data from 2009; both until 2011. Estonia did not provide effort data for this fleet segment at all.

5.1.7.1 Fishing effort of small boats by area, Member State and fisheries

According to provided information (Table 5.1.7.1.1), the biggest fishing effort was deployed by Finland, Sweden and Poland (97% on average comparing with total fishing effort in that fleet segment) (Figure 5.1.7.1.1).

The most of effort was distributed between non regulated gill nets (45%), pots (34%) and regulated gill nets (17%) (Figure 5.1.7.1.2). Only 4% of fishing effort was deployed by other types of fishing gears .

The biggest fishing effort was deployed in the area C (67% in average comparing with total fishing effort); the lowest in the area A (5% in average comparing with total fishing effort) (Figure 5.1.7.1.3?). 28% of fishing effort was deployed in area B. Fishing effort in the Sub-division 28.2 consisted 1% of all fishing efforts in the area B only. Dynamics of fishing efforts in areas A, B, C has shown that from 2004 fishing effort in the area B significantly decreased; in the area C fishing efforts fluctuated around its average; in the area A fishing effort increased from 2010.

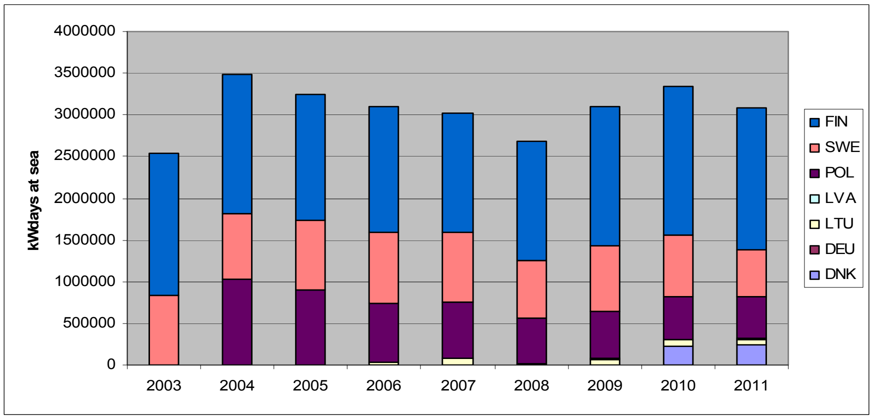


Figure 5.1.7.1.1 Distribution of fishing effort (kW days at sea) by Member States in 2003 – 2011.

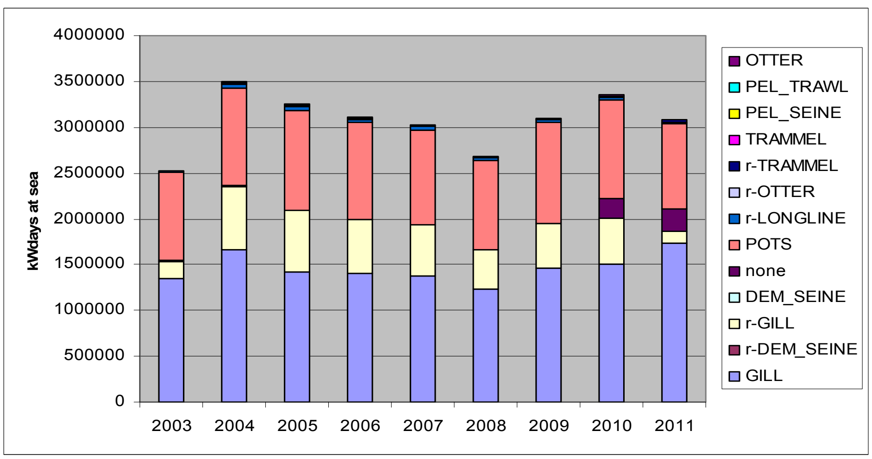


Figure 5.1.7.1.2 Distribution of fishing effort (kW days at sea) by different fishing gears in 2003 – 2011.

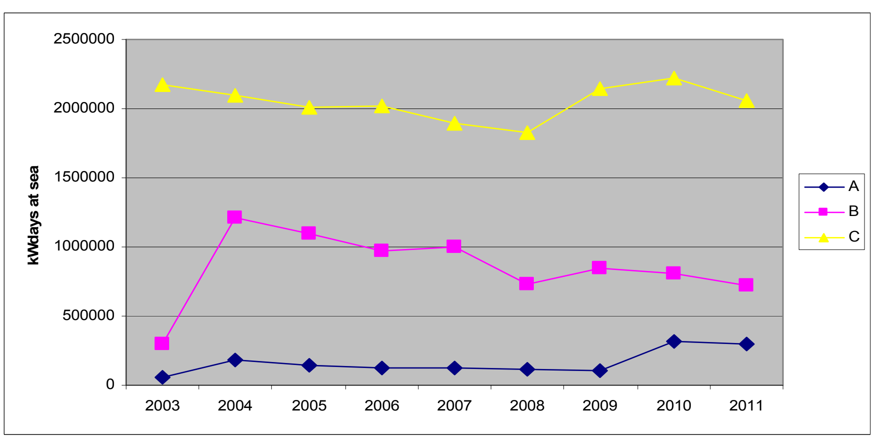


Figure 5.1.7.1.3. Dynamics of fishing effort (kW days at sea) in areas A, B, C.

Table 5.1.7.1.1 Fishing effort (kWdays at sea) of small boats by area, Member State and fisheries.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_	2003	2004	2005	2006	2007	2008	2009	2010	2011
28.2	GILL	none	LVA	u8m							2460	1024	
28.2	r-DEM_SEINE	none	LVA	u8m							46	36	
28.2	r-GILL	none	LVA	u8m							7387	5022	6518
A	DEM_SEINE	none	POL	u8m		1925	1035						
A	DEM_SEINE	none	SWE	u8m			16						
A	GILL	none	POL	u8m		70644	49864	34033	43230	35850	21984	35190	41160
A	GILL	none	SWE	u8m	2871	6271	383	885			1353	485	313
A	none	none	DNK	u8m	482	699	1348	1117	1597	653	1221	195335	208188
A	none	none	SWE	u8m	22	74	2813	2052	2659	2739	110	706	
A	POTS	none	POL	u8m		26730	20268	14502	15888	25323	21954	20576	12497
A	POTS	none	SWE	u8m	28974	23886	25365	28788	23451	12845	23090	29839	8425
A	r-GILL	none	DEU	u8m									192
A	r-GILL	none	POL	u8m		26014	19941	15700	18809	17544	15584	9865	
A	r-GILL	none	SWE	u8m	24692	13884	15332	16650	15614	15720	7406	13074	15376
A	r-LONGLINE	none	POL	u8m		658			29	97	753	102	173
A	r-LONGLINE	none	SWE	u8m		2522	392						
A	r-OTTER	none	POL	u8m						21			
A	r-TRAMMEL	none	POL	u8m				114	119				
A	r-TRAMMEL	none	SWE	u8m	3672	8118	10053	8683	7146	7657	7687	14540	9764
A	TRAMMEL	none	POL	u8m		3058	2708	2243	5295	1367	971	112	
B	DEM_SEINE	none	POL	u8m		3111	959	31		59		82	1098
B	DEM_SEINE	none	SWE	u8m						44			
B	GILL	none	LTU	u8m							34504	30277	16793
B	GILL	none	LVA	u8m							844	462	720
B	GILL	none	POL	u8m		145108	109011	72210	71172	60146	51258	50365	402402
B	GILL	none	SWE	u8m	11760	17940	17036	18779	21529	17550	27674	31454	28688
B	none	none	DNK	u8m							0	26845	26008
B	none	none	SWE	u8m	61	9		1014	4495	1100	1109	998	
B	PEL_SEINE	NONE	POL	u8m									22
B	PEL_TRAWL	none	POL	u8m			59						
B	POTS	NONE	LTU	u8m									5018
B	POTS	none	POL	u8m		124796	107603	69044	59160	46887	44134	69259	30576
B	POTS	none	SWE	u8m	152174	138253	149638	180982	205254	137653	162669	129568	85842
B	r-DEM_SEINE	none	LVA	u8m									
B	r-GILL	none	LTU	u10m				30799	67068	16778			
B	r-GILL	none	LTU	u8m							28808	42127	42080
B	r-GILL	none	LVA	u8m							1078	1979	3266
B	r-GILL	none	POL	u8m		613889	572660	483645	447619	343626	398418	322538	22
B	r-GILL	none	SWE	u8m	118038	111340	86034	71269	79583	81410	68069	61424	42923
B	r-LONGLINE	none	LTU	u10m				1966	10496	132			
B	r-LONGLINE	none	LTU	u8m							2170	3787	7999
B	r-LONGLINE	none	POL	u8m		30606	27836	21358	19258	12029	14925	13281	9063
B	r-LONGLINE	none	SWE	u8m	6965	12481	15858	8229	8089	6978	6209	5882	3589
B	r-TRAMMEL	none	POL	u8m		77							
B	r-TRAMMEL	none	SWE	u8m	1423	3881	3238	3931	3740	3410	1530	11884	10915
B	TRAMMEL	none	POL	u8m		119			37	31			
B	TRAMMEL	none	SWE	u8m	6098	6999	3406	11500	5455	4858	5238	5030	5433
C	DEM_SEINE	none	SWE	u8m	1827	824			526				
C	GILL	none	FIN	u8m	1168557	1152304	1000201	1033994	957521	888768	1057622	1188962	1101469
C	GILL	NONE	POL	u8m									102
C	GILL	none	SWE	u8m	165644	160268	173471	166700	168797	154373	185927	169655	139908
C	none	none	SWE	u8m	3192	257	1269	4126	2030	331	629		
C	OTTER	none	SWE	u8m	816			66					
C	POTS	none	FIN	u8m	532031	505759	510189	483518	472706	527856	609518	586124	599198
C	POTS	none	SWE	u8m	255454	240193	275226	277286	251989	227243	247262	234842	191732
C	r-GILL	none	SWE	u8m	47268	39858	49762	46841	40313	28534	38939	38007	25078
C	r-LONGLINE	none	SWE	u8m				3077					
C	TRAMMEL	none	SWE	u8m	912	912							

5.1.7.2 Catches (landings and discards) of small boats by area, Member State and fisheries

STECF notes that discard observation and estimation are scarce for small boats. Using the information available, the estimated catches are believed to represent rather landings. According to provided information (Table 5.1.7.2.1) the biggest cod landings on average were taken with fishing gears named as “none” (34%) and regulated gill nets (34%) (Figure 5.1.7.2.1). Other important gears for cod landings were unregulated gill nets (23%) and regulated longlines (7%). By other types of fishing gears 2% of cod was fished only.

The landings of cod were taken almost equally from the area A (53%) and from the area B (47%) (Figure 5.1.7.2.2). The catches of cod in the area C consisted of less than 0.1% of total landings. The landings of cod in the area 28.2 consisted of 2% of all landings in the area B only. Since 2005 the negative trend in total cod landings can be observed. The main reason of that issignificant decrease- of landings in the area A. Comparison of 2011 and 2010 reveals clear decrease of cod landings o take by regulated gill nets and increase in landings taken by unregulated gill nets. Landings of cod corresponding to vessels of length overall lessthan 8 m consist of 4.2% of total catches in the area A, 1.6% - in the areas B+C and 2.2% - for all Baltic.

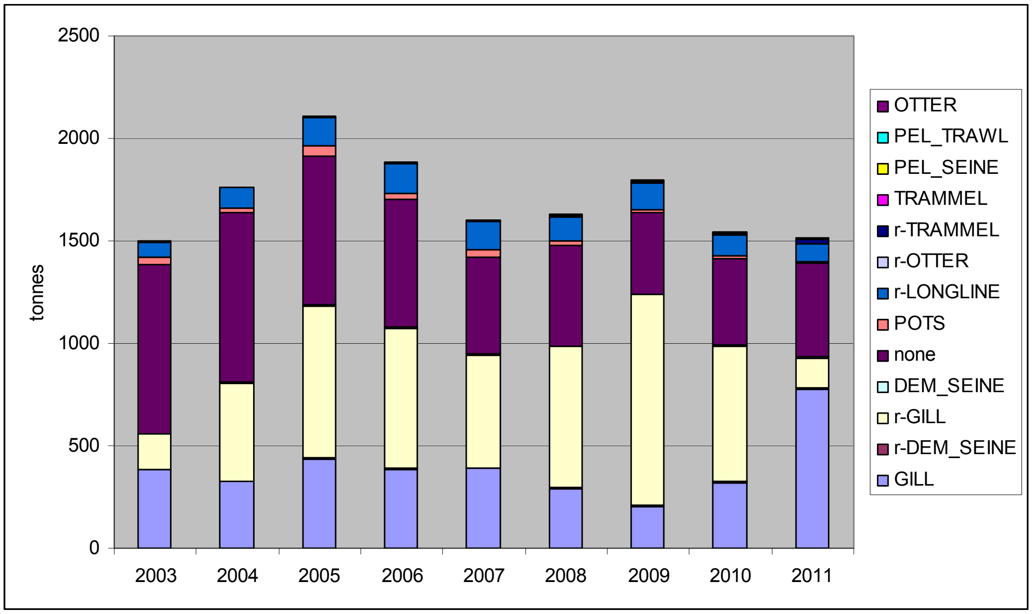


Figure 5.1.7.2.1 Distribution of cod landings taken by different gear types in 2003 – 2011.

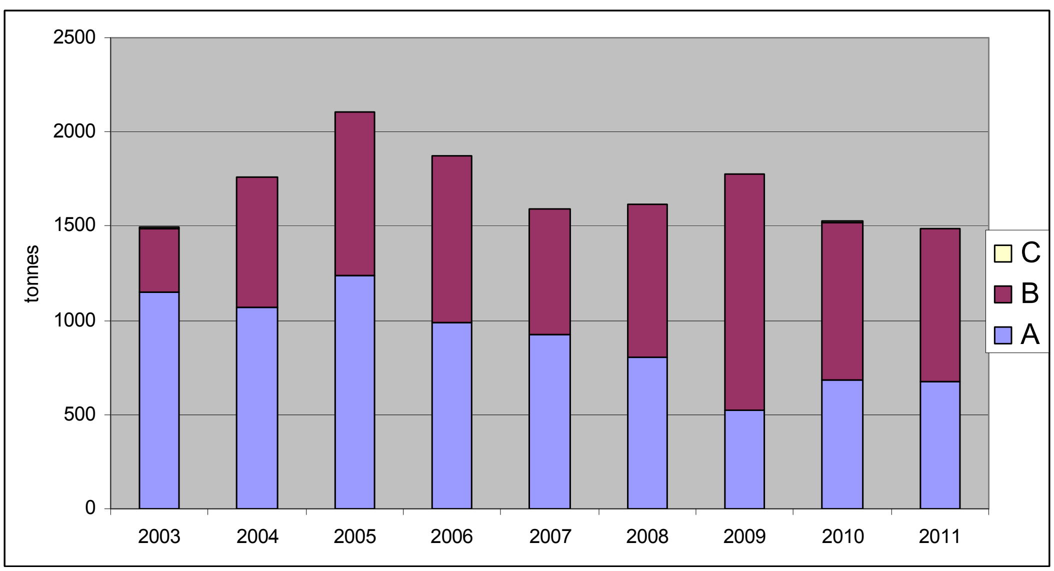


Figure 5.1.7.2.2 Cod landings and dynamics (2003 – 2011) in the areas A, B, C.

Table 5.1.7.2.1. Cod landings taken by < 8 m vessels in 2003-2011 (t).

REG_AREA	REG_GEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011
28.2	GILL									
28.2	r-DEM_SEINE									
28.2	r-GILL			8	39	50	36	8	6	4
28.2	r-LONGLINE									
28.2 TOTAL		0	0	8	39	50	36	8	6	4
A	GILL	386	321	436	381	388	290	199	308	263
A	none	717	648	589	471	340	327	222	290	330
A	OTTER									
A	POTS	7	10	33	16	23	5	4	9	5
A	r-DEM_SEINE									
A	r-GILL	35	76	145	106	128	154	85	65	55
A	r-LONGLINE	1	10	27	13	44	18	10	8	6
A	r-OTTER		1				1			
A	r-TRAMMEL	5	1	6	3	5	9	4	7	19
A	TRAMMEL									
A TOTAL		1151	1067	1236	990	928	804	524	687	678
B	GILL		6	2	4	1	2	6	7	511
B	none	108	179	142	152	134	166	175	125	127
B	PEL_SEINE									
B	POTS	23	14	14	14	11	14	7	6	4
B	r-GILL	138	403	598	580	421	530	939	600	89
B	r-LONGLINE	70	90	111	136	95	96	124	93	80
B	r-OTTER									
B	r-TRAMMEL								5	1
B	TRAMMEL									
B TOTAL		339	692	867	886	662	808	1251	836	812
C	GILL						1	1	1	1
C	POTS	9								
C	r-GILL									
C	r-LONGLINE									
C TOTAL		9	0	0	0	0	1	1	1	1
GRAND TOTAL A+B+C		**1499**	**1759**	**2103**	**1876**	**1590**	**1613**	**1776**	**1524**	**1491**

5.1.8 ToR 4 Partial fishing mortality of cod by area, Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToR 10. The EWG 12-06 analyses and response can be found in section 5.1.14.

5.1.9 ToR 5 Trend in calculated maximum effort of regulated gears and uptake by area and Member State

The EWG was given the task of quantifying the evolution of the calculated maximum effort allocated to the cod fleet (ceiling of days using regulated gear types) in relation to the effort actually used by that fleet and was asked to highlight possible shifts between métiers.

The group analysed the data obtained by the DCF data call of 2nd February 2012 and found that the available data do not support an analyses to estimate the uptake of the fishing effort. However, STECF EWG 12-06 estimated the effort ceilings from the available data from the numbers of boats using a regulated gears in a given area and year times the maximum number of days granted as stipulated in the annual TAC and quota regulations. These can be seen in the following Table 5.1.9.1.

Table 5.1.9.1 Estimated ceilings (maximum) of days at sea by area and country as estimated from the number of vessels using any regulated gear in any area times the maximum days at sea per vessel.

Area A							Area B						
COUNTRY	2006	2007	2008	2009	2010	2011	COUNTRY	2006	2007	2008	2009	2010	2011
DEU	97734	90024	75374	65325	55024	46455	DEU	14514	6188	8544	9280	8480	8480
DNK	146874	119536	90984	74370	58463	53138	DNK	47724	27482	21894	20160	18560	18560
EST	1092	744	446	402	362		EST	10578	6552	5340	4160	4800	4800
FIN	819	744	892	1005	1267	1304	FIN	738	546	712	800	1120	1120
							LTU				5440	4800	4800
LVA	8190	3224	669	402	1629	163	LVA	20172	12012	10502	10240	9120	9120
POL	41496	64728	43931	24120	15204	13692	POL	133332	90272	82770	52640	50560	50560
SWE	36309	35712	30997	24723	19186	20701	SWE	76752	56056	48772	43520	37280	37280
sum	332514	314712	243293	190347	151135	135453		303810	199108	178534	146240	134720	134720

The STECF EWG did also estimate the trends in days used by the individual vessels deploying regulated gears. The resulting figures are given in the Table 5.1.9.2. Now these figures cannot be linked in order to estimate the requested uptake of effort. STECF EWG 12-06 notes that the upper Table 5.1.9.1 provides estimated maximum allowed days for all vessels using any of the regulated gears while the table below is vessel and fisheries specific (by gear group). Such information is incompatible as any vessel may have switched the gear groups and thus may be multiple counted. Given the lack of vessel specific effort data and that the regulation of maximum effort allowed is by vessel when using any regulated gear, STECF EWG 12-06 concludes that the ToR to estimate the effort uptake cannot be accomplished properly.

STECF EWG 12-06 concludes that simple fishing effort ceilings by vessel imply a number of drawbacks which imply management risks of missing the management goal. Without taking into account the fishing power of boats of different length and engine power and without accounting for the effectiveness of the gears used, such management risk appears unacceptably high. STECF EWG 12-06 recommends that, if the management wants to continue a fishing effort management scheme in the Baltic, a more suitable effort unit shall be defined and applied to account for fisheries specific effects.

Further conclusions on the effort unit of kWdays at sea and its relation to fishing mortality by fisheries are provided in section 5.1.14.

Table 5.1.9.2. Estimated days at sea used by Member States in the various areas deploying regulated gears.

ANNEX	REG AREA	REG GEAR COD	COUNTRY	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bal	28.2	r-DEM_SEINE	LVA	46	31					86	87	
Bal	28.2	r-GILL	EST				1					
Bal	28.2	r-GILL	LVA	1036	336	598	430	366	153	343	534	414
Bal	28.2	r-OTTER	EST				1	1				
Bal	28.2	r-OTTER	LVA	200	402	435	312	287	173	99	38	161
Bal	28.2	r-PEL_TRAWL	LVA	4		31	25	5		13		
Bal	A	r-BEAM	DEU	2					18			
Bal	A	r-BEAM	DNK								1	
Bal	A	r-DEM_SEINE	DEU		18	4	49	66	100	83	23	46
Bal	A	r-DEM_SEINE	DNK						917	628	473	317
Bal	A	r-GILL	DEU	8462	7219	14201	22002	21213	17262	13418	11971	11310
Bal	A	r-GILL	DNK						12001	10655	9228	7920
Bal	A	r-GILL	EST			115	124	68	125	151		
Bal	A	r-GILL	LTU									
Bal	A	r-GILL	LVA	472	811	1044	997	145	47	12	48	21
Bal	A	r-GILL	POL		3908	4173	2656	4062	2912	1914	1129	1110
Bal	A	r-GILL	SWE	6311	5329	5743	5015	4958	5547	4643	4057	3944
Bal	A	r-LONGLINE	DEU	917	918	1456	1659	1449	1375	1625	976	772
Bal	A	r-LONGLINE	DNK						558	573	640	681
Bal	A	r-LONGLINE	LTU									
Bal	A	r-LONGLINE	POL		389	1601	544	693	240	123	87	120
Bal	A	r-LONGLINE	SWE	71	328	807	325	150	124	388	319	472
Bal	A	r-OTTER	DEU	10251	9467	8771	8125	7952	6727	5677	5239	5317
Bal	A	r-OTTER	DNK						9316	8507	7180	6110
Bal	A	r-OTTER	EST			7					6	
Bal	A	r-OTTER	LTU									
Bal	A	r-OTTER	LVA	4		76		84			36	
Bal	A	r-OTTER	POL		748	1361	589	2374	1323	940	717	733
Bal	A	r-OTTER	SWE	754	705	589	807	960	728	415	331	691
Bal	A	r-PEL_TRAWL	DEU	67	20	78	120	177	22		17	27
Bal	A	r-PEL_TRAWL	DNK						17	14	44	4
Bal	A	r-PEL_TRAWL	EST			3		3				
Bal	A	r-PEL_TRAWL	LTU									
Bal	A	r-PEL_TRAWL	POL		3	40	3	8			1	
Bal	A	r-PEL_TRAWL	SWE		5	6	9		1			6
Bal	A	r-TRAMMEL	DEU	182	295	643	1091	2150	2092	2065	1349	1734
Bal	A	r-TRAMMEL	DNK						4253	4424	4008	3185
Bal	A	r-TRAMMEL	SWE	378	340	722	596	522	683	963	616	443
Bal	B	r-DEM_SEINE	DEU		2		20	15	18	41	52	76
Bal	B	r-DEM_SEINE	DNK									16
Bal	B	r-DEM_SEINE	POL									1
Bal	B	r-GILL	DEU	67	50	361	82	58	24	50		
Bal	B	r-GILL	DNK						2362	2078	1645	1674
Bal	B	r-GILL	EST			462	458	308	140	101		
Bal	B	r-GILL	LTU							944	821	635
Bal	B	r-GILL	LVA	8803	9376	4413	3501	3306	3024	2447	2213	2140
Bal	B	r-GILL	POL		40916	25446	21835	17523	13910	11214	10733	10158
Bal	B	r-GILL	SWE	18648	15348	12125	10484	9220	10766	9395	6868	6188
Bal	B	r-LONGLINE	DEU	57	74	92	47	56	82	59	30	11
Bal	B	r-LONGLINE	DNK						475	633	693	669
Bal	B	r-LONGLINE	LTU							80	43	58
Bal	B	r-LONGLINE	POL		7984	7926	8748	5036	3101	2862	3706	3352
Bal	B	r-LONGLINE	SWE	3304	3944	3574	3503	1925	2513	2226	1671	1901
Bal	B	r-OTTER	DEU	1043	644	996	625	282	775	1078	1365	485
Bal	B	r-OTTER	DNK						2625	2694	3120	4133
Bal	B	r-OTTER	EST			100	26	43			171	281
Bal	B	r-OTTER	LTU							1300	1508	1812
Bal	B	r-OTTER	LVA	1759	1421	1054	1546	797	1012	806	892	2005
Bal	B	r-OTTER	POL		24902	15831	17179	10038	7031	4601	5562	5583
Bal	B	r-OTTER	SWE	5275	5079	4262	4041	2640	2847	2539	2810	3427
Bal	B	r-PEL_TRAWL	DEU		626	441	357	247	79	168	281	515
Bal	B	r-PEL_TRAWL	DNK						5	15	16	24
Bal	B	r-PEL_TRAWL	EST			125	163	178	230	109	61	225
Bal	B	r-PEL_TRAWL	LTU							90	8	20
Bal	B	r-PEL_TRAWL	LVA	23	462	12	136	547	43	58		
Bal	B	r-PEL_TRAWL	POL		2342	496	1534	1059	56	89	10	74
Bal	B	r-PEL_TRAWL	SWE		260	205	651	296	63	66	60	197
Bal	B	r-TRAMMEL	DNK						58	202	40	16
Bal	B	r-TRAMMEL	SWE	128	117	18	14	29	59	18	1	6
Bal	C	r-GILL	EST			1	1					
Bal	C	r-GILL	SWE	1133	1141	1156	1045	862	874	859	1021	902
Bal	C	r-LONGLINE	SWE	15					1		0	
Bal	C	r-OTTER	EST			21	27	14	21			
Bal	C	r-OTTER	SWE			1			8			
Bal	C	r-TRAMMEL	SWE				24					

5.1.10 ToR 6 Evaluation of fully documented fisheries FDF

5.1.10.1 Fishing effort of FDF vessels by area, Member State and fisheries in comparison with fisheries not working under FDF provisions

Table 5.1.10.1.1 provides the information on fully documented fishery, which was made available to the Expert Group. The data were provided only by Denmark for the Areas A and B by gear types for 2010 and 2011. The fully documented fishery represented 4% of the total Danish regulated effort deployed in both areas A and B in 2010 and 10% in 2011.

Table 5.1.10.1.1 Danish fishing effort (kWdays at sea) and cod landings (t) taken by FDF vessels.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	Year 2010 (effort)	2010 L (cod)	2010 D (cod)	Year 2011 (effort)	2011 L (cod)	2011 D (cod)
A	PEL_TRAWL	FDFBAL	DNK	440					
	r-DEM_SEINE	FDFBAL	DNK				6256	56	0
	r-OTTER	FDFBAL	DNK	41001	264	0	78223	620	0
	r-PEL_TRAWL	FDFBAL	DNK	660	8	0			
B	DEM_SEINE	FDFBAL	DNK	3740			9240	1	0
	none	FDFBAL	DNK	220					
	OTTER	FDFBAL	DNK	440	0	0			
	PEL_TRAWL	FDFBAL	DNK	12760	2	0	3960	0	0
	r-OTTER	FDFBAL	DNK	83407	725	0	221886	1633	0
	r-PEL_TRAWL	FDFBAL	DNK	1540	19	0			
Grand Total				144208	1018	0	319565	2310	0

5.1.10.2 Catches (landings and discards) of cod and other species taken by FDF fisheries by area, Member State and fisheries in comparison with fisheries not working under FDF provisions

The reported Danish landings of cod from the fully documented fishery amounted to 272 t in area A and 746 t in area B (total 1018 t) in 2010 (Table 5.1.10.1.1). The respective values for 2011 were 676 t in area A and 1,634t for area B. The landings from fully documented fishery covered 6% from the reported cod landings in these areas in 2010 and 9% of the landings in 2011. No discards were reported in this segment of fishery for both years.

5.1.11 ToR 7 Spatio-temporal patterns in effective effort by area and fisheries

According to available effort data in units of fished hours, the spatial distribution of deployed otter trawl effort (Figure 5.1.11.1) did not show any particular trend over the time series. During 2003–2011 period the biggest fishing effort concentration was observed in areas of Bornholm Deep and in the northern part of Polish EEZ. However, the effort seems to be distributed more evenly across the areas A-C after 2006.

The gillnet effort has been concentrated in areas A and B without any clear temporal pattern (Figure 5.1.11.2). During 2003–2011 period the biggest fishing efforts concentration was in the Polish coastal areas. The Figure 5.1.11.3 shows the general distribution pattern of another big contributor of effort in the Baltic – the pelagic trawls. The distribution pattern indicates the high concentration of effort in the areas of Bornholm and Gdansk Deep as well as in the Sub-division 28.2 in 2003-2007.

The pelagic trawl effort was distributed rather evenly in the most recent years. This can be explained with northward distribution of sprat stock in recent years (ICES, 2012).

A full set of effort distribution figures, will be made available on the web page of the EWG 12-06.

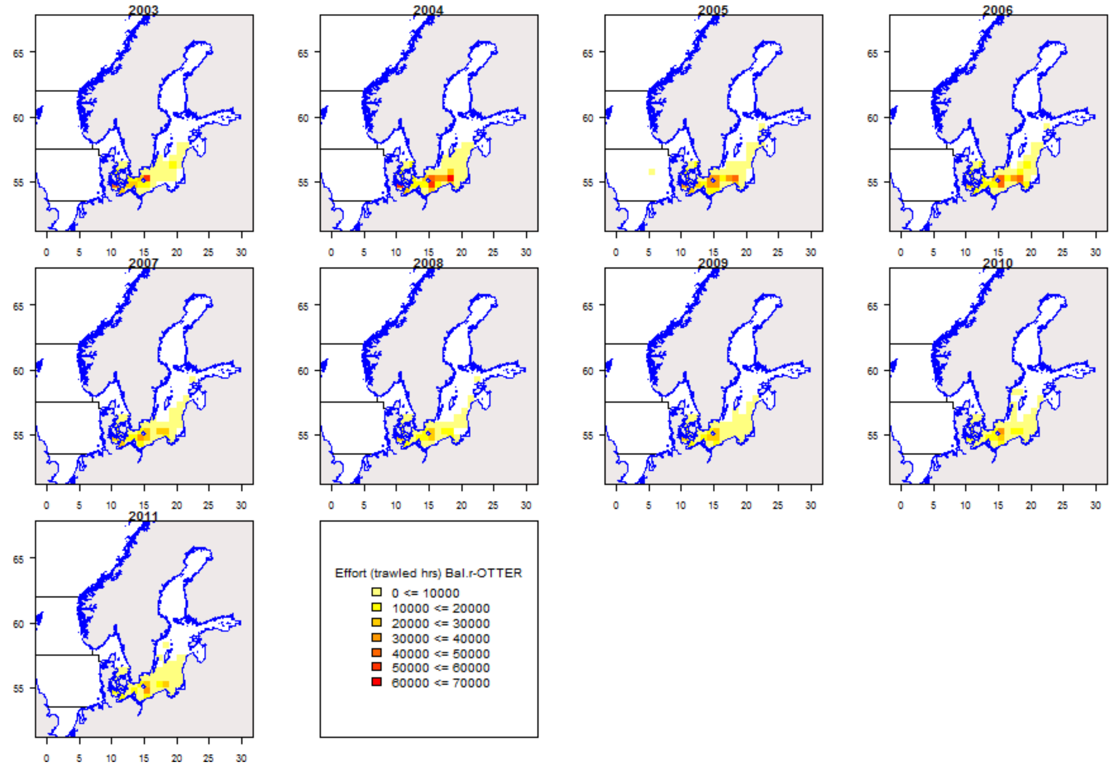


Figure 5.1.11.1 Spatial distribution of effective effort (trawled hours) r-OTTER 2003-2011. There was no data reported on the spatial distribution from Finland.

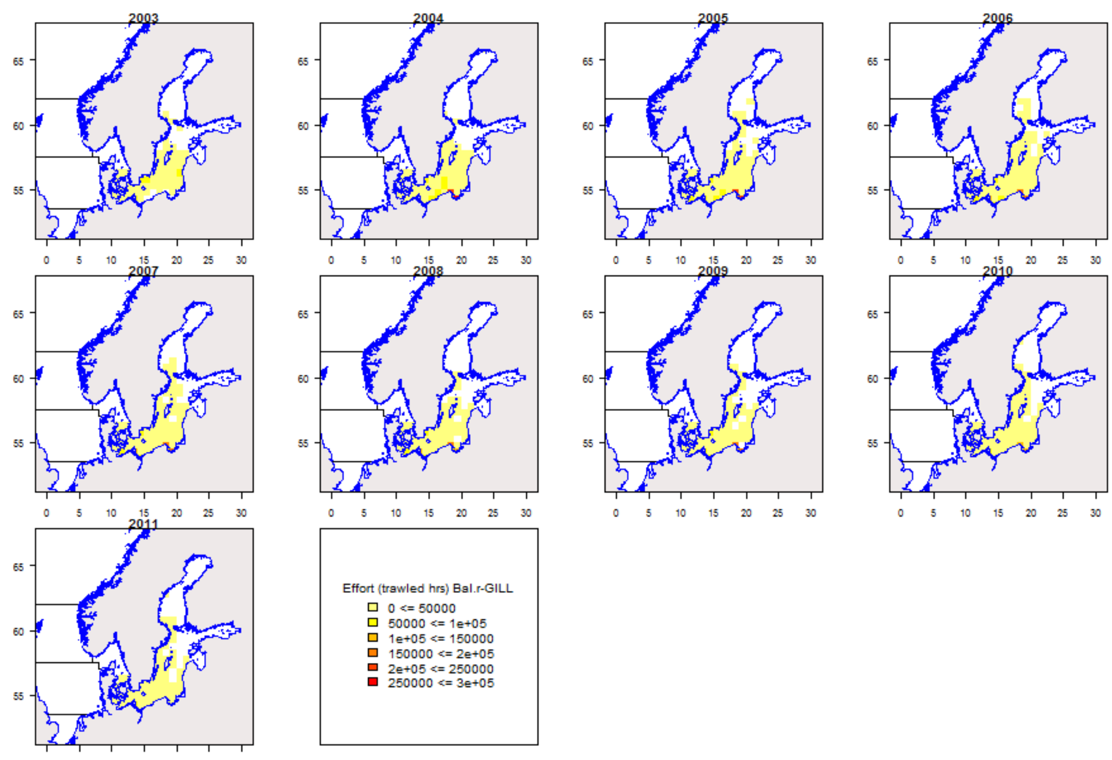


Figure. 5.1.11.2 Spatial distribution of effective effort (fishing hours) r-Gill 2003-2011. There was no data reported on the spatial distribution from Finland.

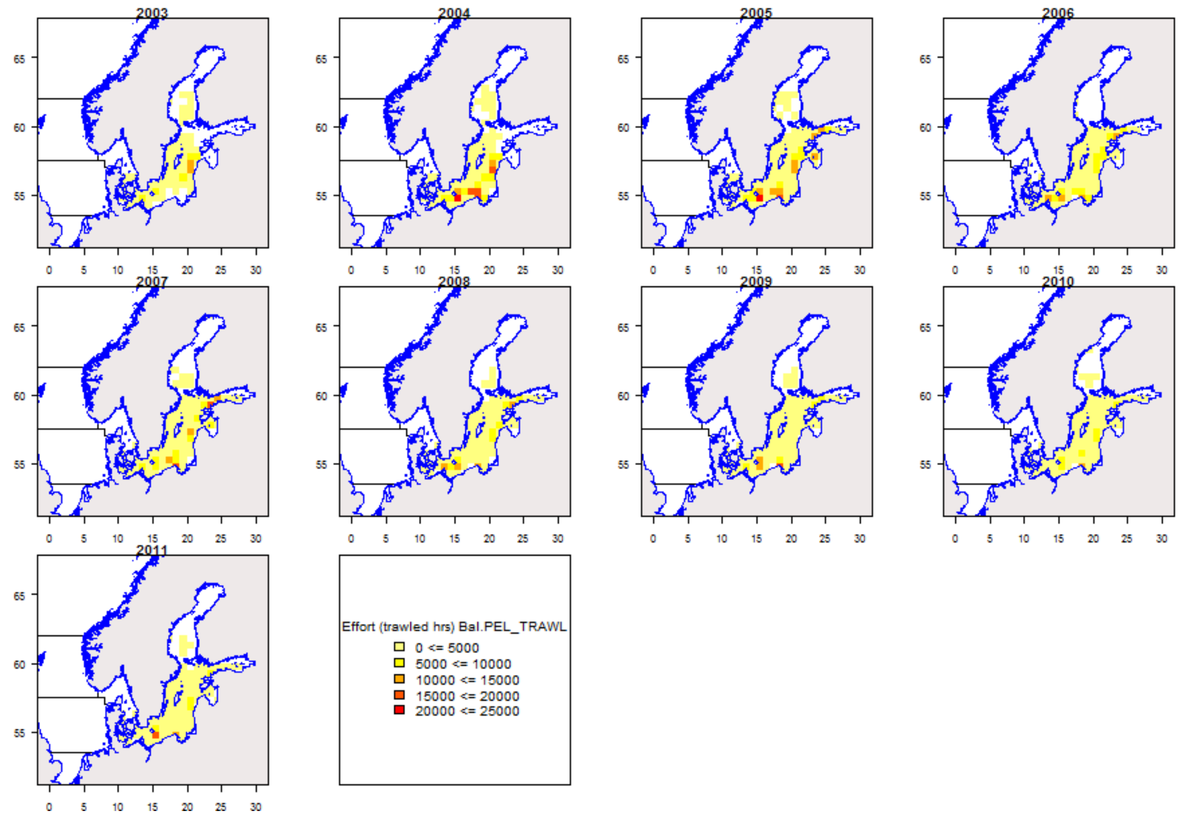


Figure. 5.1.11.3 Spatial distribution of effective effort (fishing hours) pelagic trawls 2003-2011. There was no data reported on the spatial distribution from Finland.

5.1.12 ToR 8 Any unexpected evolutions of the trends in catches and effort by area, Member State and fisheries

The STEF EWG 12-06 has no specific observations to report.

5.1.13 ToR 9 Correlation between partial cod mortality and fishing effort by area, Member State and fisheries

The STECF EWG 12-06 has estimated partial fishing mortalities of both stocks of Western and Eastern Baltic cod for all identified regulated and non-regulated gear groups by Member States and correlated them against fishing effort. The major fisheries are presented in the following section 5.1.14.

5.1.14 ToR 10 Estimation of partial fishing mortalities of cod by area, Member State and fisheries and correlation between partial cod mortality and fishing effort by area, Member State and fisheries

5.1.14.1 Western Baltic cod in area A

The STECF EWG presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discards volumes in relation to the estimated total catch for the year available. The full list of all fisheries can be downloaded from the EWG's web page. The anticipated trend in fishing mortality as derived from the cod plan is also presented in the following Table 5.1.14.1. The sustainable exploitation target is defined as Fmsy=0.25. The trends in fishing effort in units of kWdays at sea of the relevant fisheries are also presented in Table 5.1.14.1. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤ 0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded from the estimated F in 2012 (Table 5.1.14.1) that the stock is subject to overfishing and that the annual F reductions are following the plan since 2010. Discard mortality is generally low. The listed fisheries do contribute by more than 90% to the total fishing mortality. Among the relevant gill net and otter trawl fisheries by Germany, Denmark, Poland and Sweden, there are evident also significant partial Fs of under 8m boats.

STECF EWG 12-06 notes that the correlations between the summed partial Fs for catch and landings of the major fisheries and their estimated fishing efforts are highly significant. The correlation between the rather low partial Fs of discards and effort are not significant, but discarding is considered a minor issue in the Western Baltic anyway. The partial Fs of most of the Member States fisheries using regulated gears are also closely correlated with their specific effort estimates in kW days at sea. This indicates that effective fisheries management by fishing effort in units of kWdays at sea appears possible, also as an auxiliary measure to catch constraints and technical measures.

Table 5.1.14.1 The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort.

2008 moving reference year annual F reductions by 10 percent until F<=Fmsy=0.25, not to F=0.6												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan							1.015	1.093	1.063	0.738	0.707	0.636	0.572	0.515	0.464	0.418
reduction F plan												-0.10	-0.10	-0.10	-0.10	-0.10
F estimated							1.015	1.093	1.063	0.738	0.707	0.725	0.604	0.443	0.420	
reduction F estimated												0.03	-0.17	-0.27	-0.05	
F par estimated as F*landings or discards(fishery)/Catch(total)							2003	2004	2005	2006	2007	2008	2009	2010	2011	
Bal	A	DEU	r-GILL	none	COD	landings	0.043	0.03	0.047	0.052	0.046	0.056	0.034	0.037	0.022	
Bal	A	DEU	r-GILL	none	COD	discards	0.001	0.001	0.002	0	0	0	0.003	0.001	0.001	
Bal	A	DEU	r-OTTER	none	COD	landings	0.151	0.175	0.191	0.147	0.134	0.116	0.101	0.08	0.081	
Bal	A	DEU	r-OTTER	none	COD	discards	0.06	0.015	0.021	0.01	0.009	0.008	0.012	0.018	0.011	
Bal	A	DNK	none	none	COD	landings	0.131	0.14	0.049	0.036	0.013	0.007	0.005	0.005	0.003	
Bal	A	DNK	none	none	COD	discards	0	0	0	0	0	0	0	0	0	
Bal	A	DNK	r-DEM_SEINE	none	COD	landings	0.055	0.063	0.043	0.04	0.038	0.045	0.022	0.015	0.008	
Bal	A	DNK	r-DEM_SEINE	none	COD	discards	0.003	0.004	0.003	0.002	0.004	0	0	0	0	
Bal	A	DNK	r-GILL	none	COD	landings	0.062	0.069	0.123	0.068	0.057	0.068	0.054	0.043	0.038	
Bal	A	DNK	r-GILL	none	COD	discards	0.001	0.001	0.005	0	0	0	0.003	0.001	0	
Bal	A	DNK	r-LONGLINE	none	COD	landings	0.014	0.015	0.029	0.014	0.011	0.005	0.005	0.005	0.006	
Bal	A	DNK	r-LONGLINE	none	COD	discards	0	0	0.001	0	0	0	0	0	0	
Bal	A	DNK	r-OTTER	none	COD	landings	0.321	0.369	0.298	0.19	0.187	0.201	0.205	0.13	0.122	
Bal	A	DNK	r-OTTER	none	COD	discards	0.002	0	0.001	0	0	0	0	0	0	
Bal	A	DNK	r-TRAMMEL	none	COD	landings	0.011	0.011	0.019	0.014	0.012	0.017	0.011	0.011	0.01	
Bal	A	DNK	r-TRAMMEL	none	COD	discards	0	0	0.001	0	0	0	0	0	0	
Bal	A	LVA	r-GILL	none	COD	landings	0.005	0.012	0.017	0.017	0.002	0.001	0.001	0.002	0.001	
Bal	A	LVA	r-GILL	none	COD	discards	0	0	0.001	0	0	0	0	0	0	
Bal	A	POL	r-GILL	none	COD	landings	0	0.015	0.018	0.013	0.024	0.023	0.01	0.005	0.006	
Bal	A	POL	r-GILL	none	COD	discards	0	0	0.001	0	0	0	0.001	0	0	
Bal	A	POL	r-OTTER	none	COD	landings	0	0.006	0.013	0.005	0.032	0.022	0.009	0.004	0.006	
Bal	A	POL	r-OTTER	none	COD	discards	0	0.001	0	0	0.002	0.001	0.001	0	0.001	
Bal	A	SWE	r-GILL	none	COD	landings	0.054	0.058	0.047	0.031	0.031	0.045	0.036	0.026	0.022	
Bal	A	SWE	r-GILL	none	COD	discards	0.001	0.001	0.002	0	0	0	0.001	0.001	0	
Bal	A	SWE	r-OTTER	none	COD	landings	0.036	0.036	0.026	0.036	0.041	0.046	0.034	0.015	0.036	
Bal	A	SWE	r-OTTER	none	COD	discards	0.002	0.002	0	0.002	0.004	0.002	0.004	0.002	0.016	
Bal	A	DEU	u8m	none	COD	landings	0.016	0.015	0.018	0.011	0.01	0.01	0.007	0.01	0.007	
Bal	A	DNK	u8m	none	COD	landings	0.03	0.031	0.03	0.017	0.013	0.016	0.011	0.011	0.01	
sum							0.999	1.024	0.958	0.677	0.647	0.663	0.552	0.401	0.390	
landings							0.929	0.999	0.920	0.663	0.628	0.652	0.527	0.378	0.361	
discards							0.070	0.025	0.038	0.014	0.019	0.011	0.025	0.023	0.029	
rel. contribution to F estimated							0.984	0.937	0.901	0.917	0.915	0.914	0.914	0.905	0.929	

Effort kW days running previous year baseline														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations not applicable as days at sea per vessel														
reduction														
Effort estimated (re	8573960	8219652	10308939	8743955	8570532	7476898	6296885	5199305	4963402					
						-0.13	-0.16	-0.17	-0.05					
											2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	786357	662527	1135980	1449940	1457215	1247682	932027	893907	809150		0.766	9	3.153	0.016
kW days at sea	786357	662527	1135980	1449940	1457215	1247682	932027	893907	809150		0.492	9	1.495	0.179
kW days at sea	1906314	1753928	1686831	1481387	1491775	1207722	1028646	933844	964057		0.907	9	5.698	0.001
kW days at sea	1906314	1753928	1686831	1481387	1491775	1207722	1028646	933844	964057		0.567	9	1.821	0.111
												0		
												0		
kW days at sea	367803	394203	266393	252561	238431	181854	118870	92271	48716		0.956	9	8.622	0.000
kW days at sea	367803	394203	266393	252561	238431	181854	118870	92271	48716		0.854	9	4.343	0.003
kW days at sea	571865	548685	1292689	996895	805567	873961	816545	673772	594059		0.790	9	3.409	0.011
kW days at sea	571865	548685	1292689	996895	805567	873961	816545	673772	594059		0.589	9	1.928	0.095
kW days at sea	104894	91833	190411	205287	128411	32694	36906	44680	47835		0.807	9	3.615	0.009
kW days at sea	104894	91833	190411	205287	128411	32694	36906	44680	47835		0.528	9	1.645	0.144
kW days at sea	3376295	2927587	3073583	2063167	1822436	1680846	1460281	1136621	1002240		0.928	9	6.590	0.000
kW days at sea	3376295	2927587	3073583	2063167	1822436	1680846	1460281	1136621	1002240		0.741	9	2.920	0.022
kW days at sea	203360	176945	368235	311504	309804	351748	358269	323131	271262		0.575	9	1.859	0.105
kW days at sea	203360	176945	368235	311504	309804	351748	358269	323131	271262		0.393	9	1.131	0.295
kW days at sea	79148	142491	171002	161456	30116	12676	3528	11604	6174		0.981	9	13.378	0.000
kW days at sea	79148	142491	171002	161456	30116	12676	3528	11604	6174		0.538	9	1.689	0.135
kW days at sea		156979	237887	152597	245290	162174	91031	84558	80203		0.858	8	4.092	0.006
kW days at sea		156979	237887	152597	245290	162174	91031	84558	80203		0.124	8	0.306	0.770
kW days at sea		298219	379740	238104	623532	359528	255252	114560	96578		0.894	8	4.887	0.003
kW days at sea		298219	379740	238104	623532	359528	255252	114560	96578		0.583	8	1.758	0.129
kW days at sea	730577	620542	661911	569385	546464	625243	517212	442913	439498		0.876	9	4.805	0.002
kW days at sea	730577	620542	661911	569385	546464	625243	517212	442913	439498		0.361	9	1.024	0.340
kW days at sea	278503	220717	215686	338505	425893	345335	190277	155830	306992		0.763	9	3.123	0.017
kW days at sea	278503	220717	215686	338505	425893	345335	190277	155830	306992		0.210	9	0.568	0.588
												0		
												0		
sum	8405116	7994656	9680348	8220788	8124934	7081463	5808844	4907691	4666764		0.855	9	4.362	0.003
sum	8405116	7994656	9680348	8220788	8124934	7081463	5808844	4907691	4666764		0.865	9	4.561	0.003
sum	8405116	7994656	9680348	8220788	8124934	7081463	5808844	4907691	4666764		0.270	9	0.742	0.482
rel effort	0.98	0.973	0.939	0.94	0.948	0.947	0.922	0.944	0.94					

5.1.14.2 Eastern Baltic cod in area A

The STECF EWG presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discards volumes in relation to the estimated total catch for the year available. The full list of all fisheries can be downloaded from the EWG's web page. The anticipated trend in fishing mortality as derived from the cod plan is also presented in the following Table 5.1.14.2. The sustainable exploitation target is defined as Fmsy=0.3. The trends in fishing effort in units of kWdays at sea of the relevant fisheries are also presented in Table 5.1.14.2. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤ 0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded from the estimated F in 2012 (Table 5.1.14.1) that the stock is sustainably exploited and that the annual F reductions had been following the plan since 2010. According to Eero et al. (2012), the stock recovery is due to increased productivity (recruitment) and improved control over catches. Discard mortality is generally low. The listed fisheries do contribute by more than 87% to the total fishing mortality. Among the relevant gill net and otter trawl fisheries by Germany, Denmark, Latvia, Poland and Sweden, there is evident also significant partial Fs of under 8m boats.

STECF EWG 12-06 notes that the correlations between the summed partial Fs for catch, landings and discards of the major fisheries and their estimated fishing efforts are highly significant. The partial Fs of most of the Member States fisheries using regulated gears are also closely correlated with their specific effort estimates in kW days at sea. This indicates that effective fisheries management by fishing effort in units of kWdays at sea appears possible, also as an auxiliary measure to catch constraints and technical measures.

Table 5.1.14.2 The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort.

2008 moving reference year annual F reductions by 10 percent until F<=Fmsy=0.3						Reference year				
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan	0.953	1.446	0.953	0.78	0.54	0.486	0.437	0.393	0.354	0.319
reduction F plan						-0.10	-0.10	-0.10	-0.10	-0.10
F estimated	0.953	1.446	0.953	0.78	0.54	0.266	0.263	0.283	0.257	
reduction F estimated						-0.51	-0.01	0.08	-0.09	

F par estimated as F*landings or discards(fishery)/Catch(total)							2003	2004	2005	2006	2007	2008	2009	2010	2011
Bal	B	DEU	r-OTTER	none	COD	landings	0.047	0.037	0.047	0.022	0.009	0.016	0.012	0.014	0.004
Bal	B	DEU	r-OTTER	none	COD	discards	0.003	0.001	0.001	0.004	0.002	0.001	0.002	0.001	0.001
Bal	B	DEU	r-PEL_TRAWL	none	COD	landings	0	0.054	0.017	0.013	0.013	0.002	0.005	0.007	0.011
Bal	B	DEU	r-PEL_TRAWL	none	COD	discards	0	0.001	0.001	0.002	0.001	0	0	0	0.002
Bal	B	DNK	r-GILL	none	COD	landings	0.032	0.021	0.018	0.013	0.011	0.007	0.005	0.003	0.002
Bal	B	DNK	r-GILL	none	COD	discards	0.001	0	0	0	0.001	0	0	0	0
Bal	B	DNK	r-LONGLINE	none	COD	landings	0.011	0.008	0.011	0.006	0.003	0.001	0.001	0.001	0.001
Bal	B	DNK	r-LONGLINE	none	COD	discards	0	0	0	0	0	0	0	0	0
Bal	B	DNK	r-OTTER	none	COD	landings	0.174	0.121	0.089	0.116	0.068	0.046	0.041	0.052	0.045
Bal	B	DNK	r-OTTER	none	COD	discards	0.002	0.002	0.002	0.007	0.002	0.001	0.001	0.001	0
Bal	B	DNK	r-PEL_TRAWL	none	COD	landings	0.006	0.014	0.005	0.01	0.005	0	0.001	0	0
Bal	B	DNK	r-PEL_TRAWL	none	COD	discards	0	0	0	0	0	0	0	0	0
Bal	B	LVA	r-GILL	none	COD	landings	0.116	0.119	0.063	0.033	0.025	0.016	0.014	0.014	0.01
Bal	B	LVA	r-GILL	none	COD	discards	0.003	0.005	0.002	0.001	0.003	0.001	0	0.001	0
Bal	B	LVA	r-OTTER	none	COD	landings	0.029	0.022	0.028	0.029	0.016	0.013	0.011	0.014	0.016
Bal	B	LVA	r-OTTER	none	COD	discards	0.002	0.001	0.001	0.002	0.001	0.001	0.001	0.002	0.002
Bal	B	POL	r-GILL	none	COD	landings	0	0.184	0.104	0.064	0.031	0.022	0.021	0.02	0.016
Bal	B	POL	r-GILL	none	COD	discards	0	0.006	0.003	0.002	0.002	0.001	0.001	0.002	0.001
Bal	B	POL	r-LONGLINE	none	COD	landings	0	0.075	0.054	0.046	0.021	0.007	0.003	0.008	0.006
Bal	B	POL	r-LONGLINE	none	COD	discards	0	0.001	0.001	0	0	0	0	0.001	0
Bal	B	POL	r-OTTER	none	COD	landings	0	0.189	0.158	0.113	0.051	0.035	0.034	0.039	0.036
Bal	B	POL	r-OTTER	none	COD	discards	0	0.01	0.011	0.013	0.008	0.002	0.003	0.004	0.005
Bal	B	POL	r-PEL_TRAWL	none	COD	landings	0	0.042	0.007	0.02	0.021	0	0.002	0	0.001
Bal	B	POL	r-PEL_TRAWL	none	COD	discards	0	0.001	0	0	0	0	0	0	0
Bal	B	SWE	r-GILL	none	COD	landings	0.151	0.102	0.056	0.029	0.023	0.016	0.011	0.006	0.004
Bal	B	SWE	r-GILL	none	COD	discards	0.004	0.001	0.002	0.001	0.001	0.001	0.001	0	0
Bal	B	SWE	r-LONGLINE	none	COD	landings	0.036	0.042	0.028	0.016	0.008	0.006	0.004	0.002	0.002
Bal	B	SWE	r-LONGLINE	none	COD	discards	0.001	0.001	0.001	0	0	0	0	0	0
Bal	B	SWE	r-OTTER	none	COD	landings	0.238	0.251	0.135	0.096	0.091	0.046	0.043	0.048	0.045
Bal	B	SWE	r-OTTER	none	COD	discards	0.039	0.015	0.019	0.024	0.022	0.005	0.006	0.004	0.007
Bal	B	SWE	r-PEL_TRAWL	none	COD	landings	0	0.017	0.01	0.029	0.018	0.001	0.002	0.001	0.003
Bal	B	SWE	r-PEL_TRAWL	none	COD	discards	0	0.001	0	0.007	0.003	0	0	0	0.001
Bal	B	POL	u8m	none	COD	landings	0	0.012	0.014	0.01	0.004	0.003	0.006	0.003	0.003
sum							0.895	1.356	0.888	0.728	0.464	0.250	0.231	0.248	0.224
landings							0.840	1.310	0.844	0.665	0.418	0.237	0.216	0.232	0.205
discards							0.055	0.046	0.044	0.063	0.046	0.013	0.015	0.016	0.019
rel. contribution to F estimated							0.939	0.938	0.932	0.933	0.859	0.94	0.878	0.876	0.872

Effort kW days running previous year baseline										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Effort plan/ TAC regulations not applicable as days at sea per vessel										
reduction										
Effort estimated (r	8154289	16930439	13173041	14183748	9667191	8248558	6520991	6978080	7905076	
						-0.15	-0.21	0.07	0.13	

										2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011	pearson r	n	t	p
kW days at sea	334236	211999	280977	163096	80177	191198	220844	276398	108001	0.730	9	2.826	0.026
kW days at sea	334236	211999	280977	163096	80177	191198	220844	276398	108001	0.009	9	0.024	0.982
kW days at sea		182107	143688	141492	70379	16691	36135	61303	128870	0.763	8	2.891	0.028
kW days at sea		182107	143688	141492	70379	16691	36135	61303	128870	0.734	8	2.647	0.038
kW days at sea	255291	239932	243786	254043	189372	195012	172298	136131	128849	0.848	9	4.233	0.004
kW days at sea	255291	239932	243786	254043	189372	195012	172298	136131	128849	0.238	9	0.648	0.538
kW days at sea	212604	107249	127573	154932	85371	45181	63747	77366	75291	0.835	9	4.015	0.005
kW days at sea	212604	107249	127573	154932	85371	45181	63747	77366	75291		9		
kW days at sea	1095043	774695	791940	1255868	568490	640633	610697	692838	845277	0.713	9	2.690	0.031
kW days at sea	1095043	774695	791940	1255868	568490	640633	610697	692838	845277	0.719	9	2.737	0.029
kW days at sea	63296	49327	40022	95679	31103	1010	4030	1996	5080	0.807	9	3.615	0.009
kW days at sea	63296	49327	40022	95679	31103	1010	4030	1996	5080		9		
kW days at sea	1397564	1471236	701180	596996	568781	539579	401856	361015	350477	0.982	9	13.755	0.000
kW days at sea	1397564	1471236	701180	596996	568781	539579	401856	361015	350477	0.855	9	4.362	0.003
kW days at sea	458330	322019	242532	350925	186093	229860	198632	218426	473943	0.485	9	1.467	0.186
kW days at sea	458330	322019	242532	350925	186093	229860	198632	218426	473943	0.670	9	2.388	0.048
kW days at sea		3158758	1764081	1447588	1078801	809153	595808	788566	682079	0.990	8	17.190	0.000
kW days at sea		3158758	1764081	1447588	1078801	809153	595808	788566	682079	0.974	8	10.531	0.000
kW days at sea		539537	509033	558119	306635	221448	311408	391897	324194	0.862	8	4.165	0.006
kW days at sea		539537	509033	558119	306635	221448	311408	391897	324194	0.560	8	1.656	0.149
kW days at sea		4909628	3585641	3994417	2328400	1510922	1010675	1245924	1020888	0.945	8	7.077	0.000
kW days at sea		4909628	3585641	3994417	2328400	1510922	1010675	1245924	1020888	0.877	8	4.471	0.004
kW days at sea		781540	169019	556240	375522	22590	35231	3424	24022	0.976	8	10.978	0.000
kW days at sea		781540	169019	556240	375522	22590	35231	3424	24022	0.734	8	2.647	0.038
kW days at sea	1820884	1485621	1183969	1031157	833204	914404	811692	595833	519421	0.968	9	10.206	0.000
kW days at sea	1820884	1485621	1183969	1031157	833204	914404	811692	595833	519421	0.866	9	4.582	0.003
kW days at sea	316942	373136	345327	321205	162491	198545	200874	176489	208160	0.899	9	5.431	0.001
kW days at sea	316942	373136	345327	321205	162491	198545	200874	176489	208160	0.819	9	3.776	0.007
kW days at sea	2070339	1942010	1716974	1655822	1151533	1205260	1001145	1169421	1420549	0.890	9	5.164	0.001
kW days at sea	2070339	1942010	1716974	1655822	1151533	1205260	1001145	1169421	1420549	0.714	9	2.698	0.031
kW days at sea		144639	121133	413844	178434	36859	40493	16200	99798	0.940	8	6.749	0.001
kW days at sea		144639	121133	413844	178434	36859	40493	16200	99798	0.961	8	8.512	0.000
											0		
sum	8024529	16693433	11966875	12991423	8194786	6778345	5715565	6213227	6414899	0.897	9	5.369	0.001
	8024529	16693433	11966875	12991423	8194786	6778345	5715565	6213227	6414899	0.896	9	5.339	0.001
	8024529	16693433	11966875	12991423	8194786	6778345	5715565	6213227	6414899	0.685	9	2.488	0.042
rel effort	0.984	0.986	0.908	0.916	0.848	0.822	0.876	0.89	0.811				

5.1.15 ToR 11 Considerations in order to accomplish spatio-temoral pattern in standardized catchability indices for cod

The STECF EWG 12-06 discussed this task and elaborated generic ideas given in section 4.9 of the present report.

5.2 Kattegat effort regime evaluation in the context of Annex IIA to Council Regulation (EC) No 57/2011)

5.2.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member State and fisheries

Trends in effort by the new cod plan gear groups and by country are shown in Table (5.2.2.1). The total effort in the Kattegat decreased by 36% between 2005 and 2011. The total regulated effort has decreased by 44% since 2005 and by 16% between 2010 and 2011. Table (5.2.2.2) summarises the aggregated effort by regulated cod plan gear categories and derogations. TR2 dominates the effort in recent years. Table 5.2.2.3 lists the effort deployed by non-regulated gears, respectively.

Table 5.2.2.1 Kattegat: Trend in nominal effort (Kw *days at sea) by regulated gear group and country. 2005-2011. The gear category TR2 does not include effort carried out under the derogation CPart11 (from 2009 and onwards) or IIA83b (2005-2008).

REG AREA	REG GEAR	COUNTRY	2005	2006	2007	2008	2009	2010	2011	rel 2005	rel 2010
3a	GN1	DEU	26827	38486	39725	31562	23156	19526	21484	0.80	1.10
		DNK	130267	104450	72977	66270	83095	66976	46211	0.35	0.69
		SWE	9609	14748	14949	32697	33120	32270	27481	2.86	0.85
	GT1	DNK	28221	24922	12119	11758	23209	14225	11408	0.40	0.80
		SWE	12833	19178	34170	29266	17518	26612	25205	1.96	0.95
	LL1	DNK		220			406		221		
		SWE	10684	27478	37856	25234					
	TR1	DEU	4985	5262	5526	1964					
		DNK	205850	193619	186575	158868	104096	69037	48671	0.24	0.70
		SWE	24870	5160	19799	57592	6985	13626	1006	0.04	0.07
	TR2	DEU	7505	10318	35338	38716	19918	30730	13670	1.82	0.44
		DNK	2547492	2254222	2026307	2148493	2214066	2385563	1998979	0.78	0.84
		SWE	932268	1062871	1041966	920320	436355	284594	271686	0.29	0.95
	TR3	DEU									
		DNK	485616	358274	306240	152411	95897	36383	25572	0.05	0.70
		SWE			1470		1148				
Total			4427027	4119208	3835017	3675151	3058969	2979542	2491594	0.56	0.84

Table 5.2.2.2 Kattegat: Trend in nominal effort (Kw *days at sea) by regulated gear group and derogation 2005-2011. Note that all Danish and German TR2 effort is under the TR2 CPart13 derogation from 2010 and onwards, meaning that all TR2 'none' effort from 2010 is Swedish.

AREA	GEAR	SPECON	2005	2006	2007	2008	2009	2010	2011	rel. 2005	rel. 2010
3a	GN1	none	166703	157684	127651	130529	139371	118772	95176	0.57	0.80
	GT1	none	41054	44100	46289	41024	40727	40837	36613	0.89	0.90
	LL1	none	10684	27698	37856	25234	406		221	0.02	
	TR1	none	235705	204041	211900	218424	111081	82663	49677	0.21	0.60
	TR2	CPART13						2405583	2003159		0.83
		none	3487265	3327411	3103611	3107529	2670339	295304	281176	0.08	0.95
	TR3	none	485616	358274	307710	152411	97045	36383	25572	0.05	0.70
Total			4427027	4119208	3835017	3675151	3058969	2979542	2491594	0.56	0.84

Table 5.2.2.3 Trend in nominal effort (kW*days at sea) of unregulated gears in Kattegat 2005-2011. Sweden is the only country using the derogation Cpart11/IIIA83b.

AREA	GEAR	SPECON	2005	2006	2007	2008	2009	2010	2011	rel 2005	rel 2010
3a	TR2	CPART11					415194	482432	426638		0.88
		IIA83B	113989	165425	233076	307336				0.00	
	DEM_SEINE	none	354								
	DREDGE	none	33713	39802	50977	55259	36768	36517	51741	1.53	1.42
	none	none	8924	17261	15766	24584	47342	41620	21348	2.39	0.51
	OTTER	none	189643	258570	200213	157752	232709	75844	30403	0.16	0.40
	PEL_SEINE	none	25640	52976	32560	16157	11000	19876	19160	0.75	0.96
	PEL_TRAWL	none	448473	374703	349489	192363	378195	300799	329370	0.73	1.09
	POTS	none	65450	75311	86516	75233	64289	29897	32929	0.50	1.10
Total			886186	984048	968597	828684	1185497	986985	911589	1.03	0.92

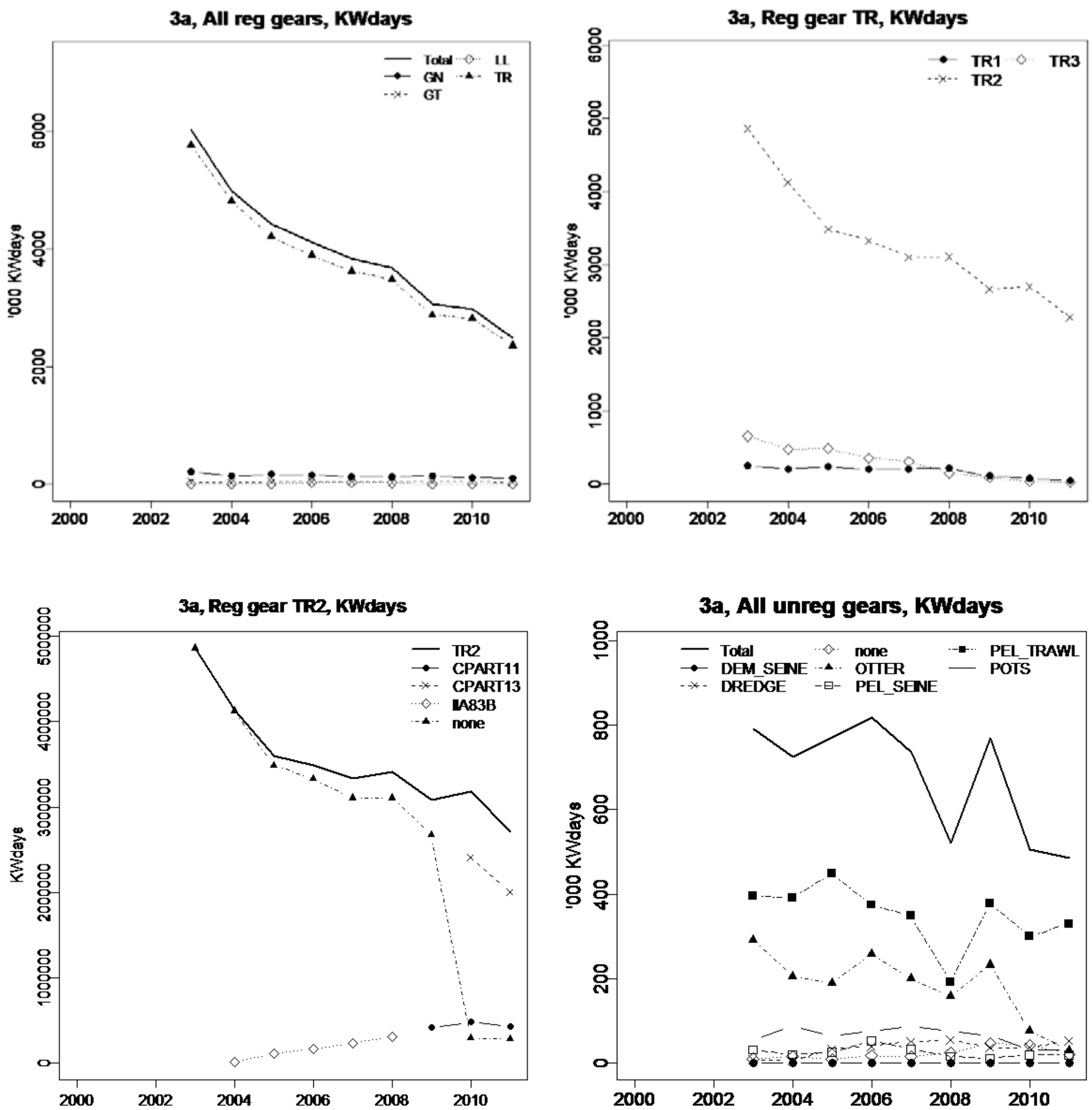


Figure 5.2.2.1. Kattegat: Top left: Trend in nominal effort (Kw *days at sea) by regulated gear types, 2000-2011. TR=Demersal trawl, BT=Beam trawl, GN=Gillnet, GT=Trammel net, LL=Longline. Note that the derogations CPart11 and IIA83b are not included in the TR gear category since they are considered unregulated.

Top right: effort by gear types within gear group TR; TR1=mesh size ≥100mm; TR2=mesh size ≥70, ≤100mm; TR3 ≥16, ≤32 mm. The derogations CPart11 and IIA83b are not included in the TR2 category.

Bottom left: Effort by derogation within gear type TR2. Note that the derogations CPart11 and IIA83b are included here for comparison with the regulated TR2 gear categories.

Bottom right: effort by unregulated gear categories. CPart11 and IIA83b are not shown here but are shown in the bottom left figure for comparison with the regulated TR2 gear categories.

All Danish and German TR2 'none' effort from 2010 onwards are used under the provisions of article 13 of the cod plan. The Swedish TR2 effort is in the TR2 none and TR2 CPart11. The total TR2 effort (top right figure) decreased rapidly from 2003 to 2005. From 2006 and onwards the effort decreased more slowly.

The effort deployed in Gross tonnage days (GTdays) and number of vessels are not described in this report but can be found on the STECF EWG 12-06 website under the Final Report section: Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

5.2.2 ToR 1.b and c Catches (landings and discards) of cod and non-cod species in weight and numbers at age by fisheries

STECF EWG 12-06 presents the requested cod in weight by fisheries. The task to present the catches in numbers at age is deferred to the follow-up meeting STECF EWG 12-12, 24-28 September 2012.

Table 5.2.2.1. Kattegat landings (L), discards (D) and discard rate (R) of cod (COD), Nephrops (NEP), plaice (PLE), sole (SOL) and whiting (WGH) by gear category and derogation 2005-2011, including the unregulated CPart11 and IIA83b. Note that there are no Danish discard data for NEP, PLE, SOL and WGH reported on the derogation CPart13 in 2010 in the table below. For information, the Danish discard data for TR2 Cpart 13 in 2010 was as follows: Nephrops (NEP)=721 tonnes, Plaice (PLE)=304 tonnes, Sole (Sol)=10 tonnes, Whiting (WHG)=173 tonnes.

ANNEX	SPECIES	AREA	GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	COD	3a	GN1	none	26	0	0	25	0	0	28	0	0	45	0	0	13	0	0	10	0	0	3	0	0
IIa	COD	3a	GT1	none	7	0	0	3	0	0	4	0	0	3	0	0	1	0	0	1	0	0	0	0	0
IIa	COD	3a	LL1	none	1	0	0	3	0	0	0	0	0	14	0	0			0			0			0
IIa	COD	3a	TR1	none	117	57	0.33	49	9	0.16	83	47	0.36	32	4	0.11	17	12	0.41	4	0	0	1	0	0
IIa	COD	3a	TR2	CPART11			0			0			0			0	0	13	1	0	10	1	0	3	1
IIa	COD	3a	TR2	CPart13			0			0			0			0			0	82	71	0.46	78	35	0.31
IIa	COD	3a	TR2	IIA83b	0	3	1	0	3	1	0	6	1	0	2	1			0			0			0
IIa	COD	3a	TR2	none	630	470	0.43	629	661	0.51	452	396	0.47	299	165	0.36	121	75	0.38	27	10	0.27	38	22	0.37
IIa	COD	3a	TR3	none	14	0	0	36	0	0	7	0	0	7	0	0	0	0	0			0	0	0	0
IIa	NEP	3a	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0
IIa	NEP	3a	GT1	none	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
IIa	NEP	3a	TR1	none	6	0	0	5	0	0	29	226	0.89	63	166	0.72	17	12	0.41	35	33	0.49	20	0	0
IIa	NEP	3a	TR2	CPART11			0			0			0			0	241	216	0.47	264	192	0.42	202	122	0.38
IIa	NEP	3a	TR2	CPart13			0			0			0			0			0	1697	0	0	1091	197	0.15
IIa	NEP	3a	TR2	IIA83b	46	37	0.45	51	41	0.45	95	75	0.44	129	129	0.5			0			0			0
IIa	NEP	3a	TR2	none	1424	1023	0.42	1194	1006	0.46	1583	1435	0.48	1780	1781	0.5	1627	918	0.36	133	120	0.47	101	67	0.4
IIa	NEP	3a	TR3	none	1	0	0	2	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0
IIa	PLE	3a	GN1	none	74	0	0	70	0	0	62	0	0	59	0	0	26	0	0	21	0	0	10	0	0
IIa	PLE	3a	GT1	none	36	0	0	44	0	0	28	0	0	39	0	0	6	0	0	10	0	0	6	0	0
IIa	PLE	3a	LL1	none			0			0			0			0			0			0			0
IIa	PLE	3a	TR1	none	392	175	0.31	468	184	0.28	434	225	0.34	272	99	0.27	181	71	0.28	54	183	0.77	59	0	0
IIa	PLE	3a	TR2	CPART11			0			0			0			0	3	37	0.92	3	26	0.9	1	30	0.97
IIa	PLE	3a	TR2	CPart13			0			0			0			0			0	249	0	0	197	253	0.56
IIa	PLE	3a	TR2	IIA83b	0	8	1	0	9	1	1	17	0.94	2	20	0.91			0			0			0
IIa	PLE	3a	TR2	none	479	462	0.49	675	398	0.37	572	566	0.5	467	261	0.36	287	316	0.52	35	94	0.73	14	58	0.81
IIa	PLE	3a	TR3	none	7	0	0	1	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IIa	SOL	3a	GN1	none	107	0	0	101	0	0	64	0	0	57	0	0	71	0	0	57	0	0	60	0	0
IIa	SOL	3a	GT1	none	17	0	0	16	0	0	15	0	0	16	0	0	14	0	0	21	0	0	20	0	0
IIa	SOL	3a	TR1	none	9	0	0	17	0	0	9	5	0.36	7	1	0.12	2	0	0	2	0	0	1	0	0
IIa	SOL	3a	TR2	CPART11			0			0			0			0	1	8	0.89	2	2	0.5	2	3	0.6
IIa	SOL	3a	TR2	CPart13			0			0			0			0			0	130	0	0	148	6	0.04
IIa	SOL	3a	TR2	IIA83b	1	0	0	0	0	0	1	0	0	1	1	0.5			0			0			0
IIa	SOL	3a	TR2	none	244	26	0.1	264	17	0.06	209	15	0.07	211	16	0.07	166	10	0.06	6	0	0	4	0	0
IIa	SOL	3a	TR3	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	WHG	3a	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0			0
IIa	WHG	3a	GT1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
IIa	WHG	3a	LL1	none	0	0	0	0	0	0	0	0	0			0			0			0			0
IIa	WHG	3a	TR1	none	3	25	0.89	0	0	0	2	13	0.87	2	8	0.8	1	3	0.75	0	1	1	0	0	0
IIa	WHG	3a	TR2	CPART11			0			0			0			0	1	17	0.94	1	13	0.93	1	18	0.95
IIa	WHG	3a	TR2	CPart13			0			0			0			0			0	8	0	0	7	84	0.92
IIa	WHG	3a	TR2	IIA83b	1	1	0.5	1	1	0.5	1	2	0.67	1	12	0.92			0			0			0
IIa	WHG	3a	TR2	none	66	832	0.93	73	770	0.91	65	659	0.91	42	384	0.9	23	163	0.88	7	38	0.84	5	35	0.88
IIa	WHG	3a	TR3	none	431	0	0	333	0	0	173	0	0	170	0	0	54	0	0	16	0	0	13	0	0

Detailed information by country is downloadable and provided on the STECF EWG 12-06 website: Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

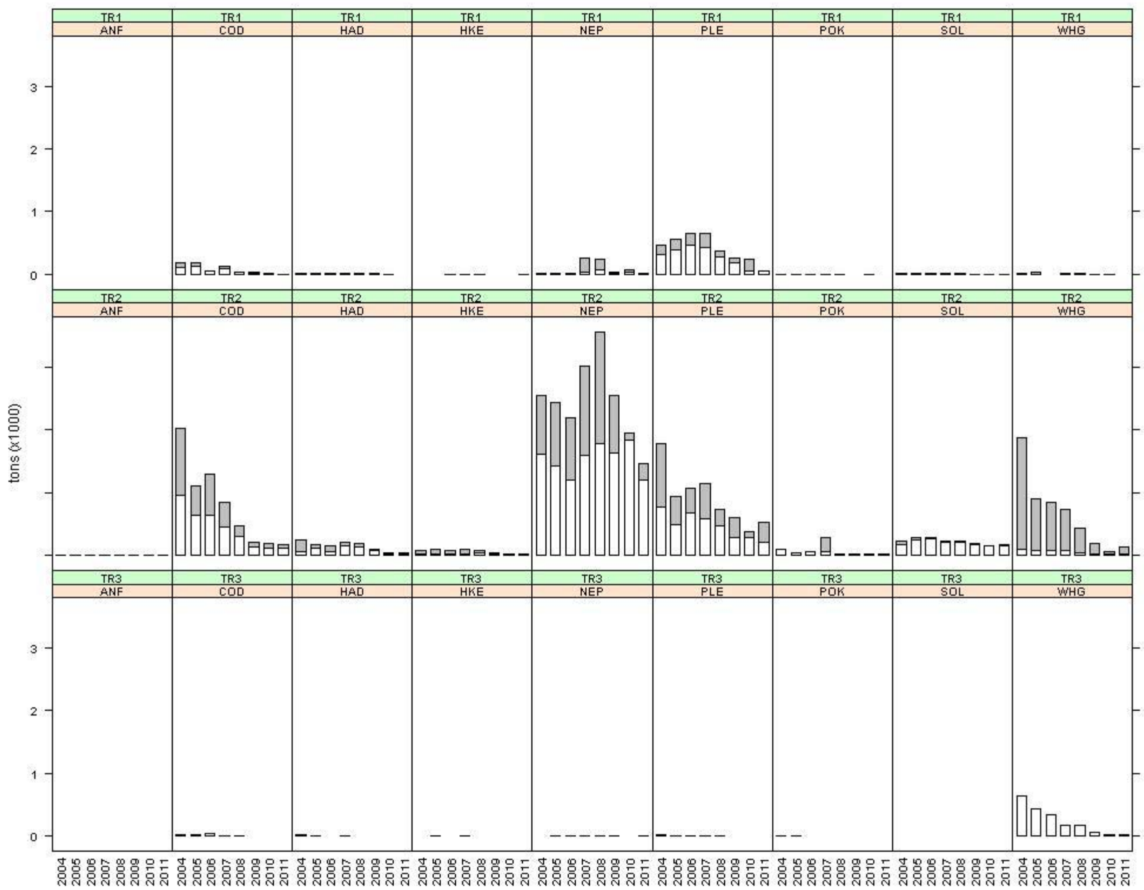


Figure 5.2.2.2. Landings (white) and discards (grey) in tonnes by the regulated gear categories TR1, TR2 and TR3 and by species in Kattegat 2004-2011. Note that there are no Danish discards other than for cod in the TR2 gear category 2010 in this figure. For information, the Danish discard data for TR2 in 2010 was as follows: Nephrops (NEP)=721 tonnes, Plaice (PLE)=304 tonnes, Sole (Sol)=10 tonnes, Whiting (WHG)=173 tonnes. The derogations CPart11 and IIA83b are not included in the TR2 gear category above.

Table 5.2.2.2 Unregulated gears, landings (t) of cod 2005-2011. Landings for CPart11 and IIA83b are not shown in this table, since they are shown in table 5.2.2.1.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L	2011 L
IIa	COD	3a	DEM_SEINE	none	DNK	0	0	0	0	0	0	0
IIa	COD	3a	none	none	DNK	6	10	1	0	0	0	0
IIa	COD	3a	none	none	SWE	0	0	0	0	0	0	0
IIa	COD	3a	OTTER	none	DNK	7	14	1	0	0	0	0
IIa	COD	3a	OTTER	none	SWE	5	4	5	4	9	3	1
IIa	COD	3a	PEL_TRAWL	none	DNK	5	15	1	0	0	0	0
IIa	COD	3a	PEL_TRAWL	none	SWE	0	0	4	0	0	0	0
IIa	COD	3a	POTS	none	DNK	0	0	0	0	0	0	0
IIa	COD	3a	POTS	none	SWE	0	0	0	0	0	0	0

Table 5.2.2.3. Unregulated gears, landings of plaice 2005-2011. Landings for CPart11 and IIA83b are not shown in this table, since they are shown in table 5.2.2.1.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L	2011 L
IIa	PLE	3a	DEM_SEINE	none	DNK	1	0	0	0	0	0	0
IIa	PLE	3a	none	none	DNK	1	4	7	2	1	2	0
IIa	PLE	3a	OTTER	none	DEU	0	0	0	0	0	0	0
IIa	PLE	3a	OTTER	none	DNK	1	4	2	1	0	0	0
IIa	PLE	3a	OTTER	NONE	SWE	0	1	1	1	3	2	0
IIa	PLE	3a	PEL_TRAWL	none	DNK	0	0	0	0	0	0	0
IIa	PLE	3a	POTS	none	DNK	0	0	0	0	0	0	0

Table 5.2.2.4 Unregulated gears, landings of sole 2005-2011. Landings for CPart11 and IIA83b are not shown in this table, since they are shown in Table 5.2.2.1.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L	2011 L
IIa	SOL	3a	DEM_SEINE	none	DNK	0	0	0	0	0	0	0
IIa	SOL	3a	none	none	DNK	2	2	3	1	0	0	0
IIa	SOL	3a	OTTER	none	DEU	0	0	0	0	0	0	0
IIa	SOL	3a	OTTER	none	DNK	0	1	0	0	0	0	0
IIa	SOL	3a	OTTER	none	SWE	0	0	0	0	0	0	0
IIa	SOL	3a	PEL_TRAWL	none	DNK	0	0	0	0	0	0	0
IIa	SOL	3a	POTS	none	DNK	0	0	0	0	0	0	0

5.2.3 ToR 1.d CPUE and LPUE of cod by fisheries

STECF EWG 12-06 presents the estimated trends in CPUE and LPUE for cod, plaice and sole in figures and tables below.

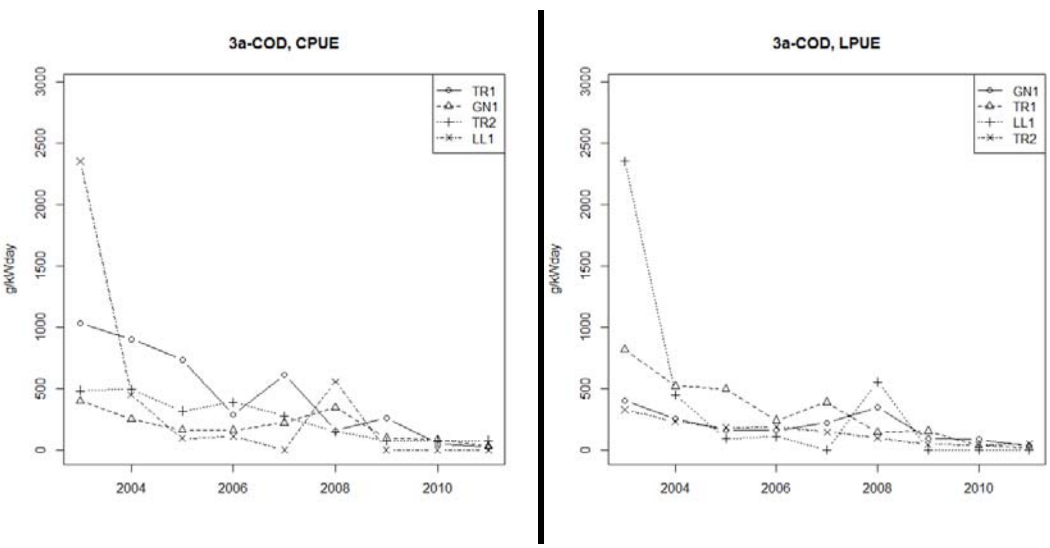


Figure 5.2.3.1 Left: CPUE (g/kWday) of cod by gear category (no special condition). Right: LPUE (g/kWday) of cod by gear category 2003-2011. CPUE and LPUE for the derogations CPart11 and IIA83b are not included in the TR2 gear category in this figure.

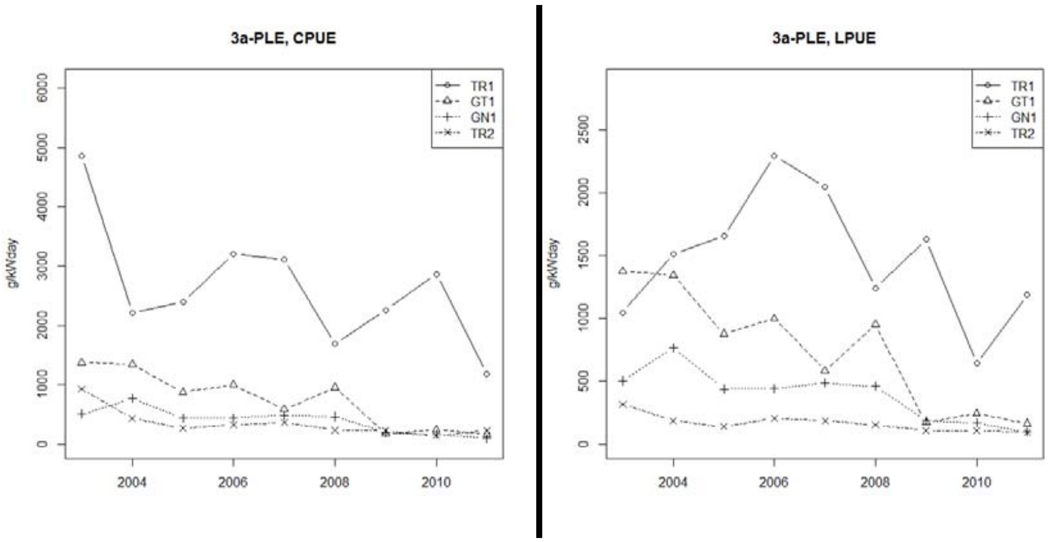


Figure 5.2.3.2 Left: CPUE (g/kWday) of plaice by gear category (no special condition). Right: LPUE (g/kWday) of plaice by gear category 2003-2011. CPUE and LPUE for the derogations CPart11 and IIA83b are not included in the TR2 gear category in this figure. There are no Danish discard data included in the CPUE calculation for TR2 in 2010. With the Danish discard information included, the CPUE of Plaice of TR2 2010 is 980 g/kWd

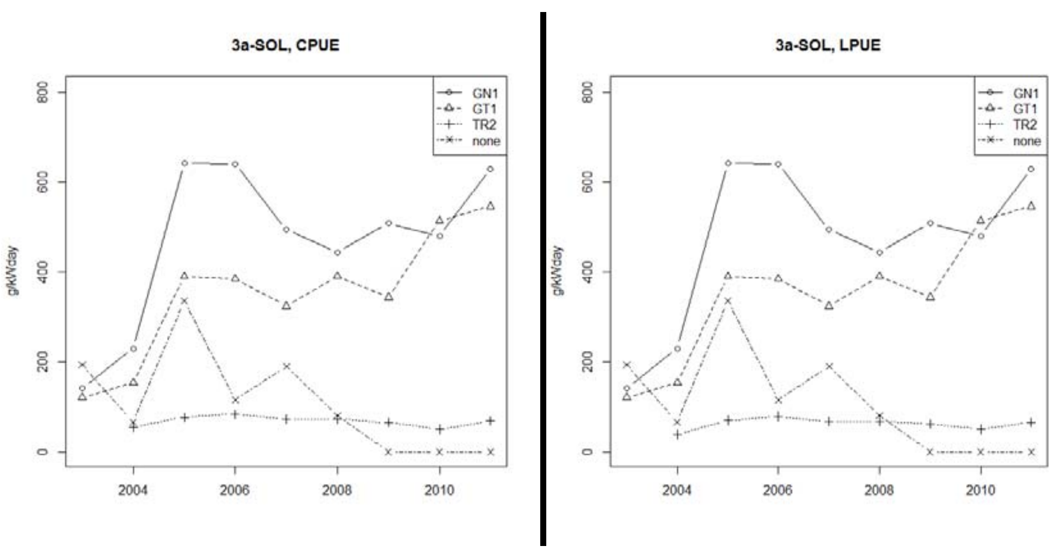


Figure 5.2.3.3 Left: CPUE (g/kWday)of sole by gear category (no special condition). Right: LPUE (g/kWday) of sole by gear category 2003-2011. CPUE and LPUE for the derogations CPart11 and IIA83b are not included in the TR2 gear category in this figure. There is no Danish discard data included in the CPUE calculation for TR2 in 2010. With the Danish discard information included, the CPUE of sole of TR2 2010 is 47 g/kWd.

Table 5.2.3.1. CPUE (g/kWd) of cod, sole, plaice by gear and derogation 2004-2011. Danish discard information for TR2 in 2010 was included in the calculation.

ANNEX	SPECIES	REG AREA	REG GEAR	SPECON	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2011	CPUE 2009-2011
IIa	COD	3a	GN1	none	251	162	159	219	345	93	84	32	74
IIa	COD	3a	GT1	none	538	146	68	86	73	25	0	0	8
IIa	COD	3a	LL1	none	449	94	108	0	555	0	0	0	0
IIa	COD	3a	TR1	none	903	734	289	613	156	261	48	20	140
IIa	COD	3a	TR2	CPART11	0	0	0	0	0	34	21	9	21
IIa	COD	3a	TR2	CPART13	0	0	0	0	0	0	64	57	61
IIa	COD	3a	TR2	IIA83B		26	18	30	7	0	0	0	0
IIa	COD	3a	TR2	none	491	316	388	273	149	73	129	210	90
IIa	COD	3a	TR3	none	54	29	100	23	46	0	0	0	0
IIa	PLE	3a	GN1	none	766	438	444	486	460	187	168	95	156
IIa	PLE	3a	GT1	none	1344	877	998	583	951	172	245	164	195
IIa	PLE	3a	LL1	none						0	0	0	0
IIa	PLE	3a	TR1	none	2209	2401	3200	3110	1694	2260	2867	1188	2247
IIa	PLE	3a	TR2	CPART11	0	0	0	0	0	96	60	73	76
IIa	PLE	3a	TR2	CPART13	0	0	0	0	0	0	230	224	159
IIa	PLE	3a	TR2	IIA83B		70	60	73	72	0	0	0	0
IIa	PLE	3a	TR2	none	430	270	322	367	234	225	437	256	247
IIa	PLE	3a	TR3	none	19	14	3	13	0	0	0	0	0
IIa	SOL	3a	GN1	none	230	642	641	494	444	509	480	630	532
IIa	SOL	3a	GT1	none	154	390	385	324	390	344	514	546	465
IIa	SOL	3a	TR1	none	19	42	78	66	27	18	12	20	16
IIa	SOL	3a	TR2	CPART11	0	0	0	0	0	22	6	9	12
IIa	SOL	3a	TR2	CPART13	0	0	0	0	0	0	58	77	64
IIa	SOL	3a	TR2	IIA83B		0	0	4	10	0	0	0	0
IIa	SOL	3a	TR2	none	55	77	84	72	73	65	20	11	56
IIa	SOL	3a	TR3	none	0	0	0	0	0	0	0	0	0

Table 5.2.3.2 LPUE (g/kWd) of cod, sole and plaice by gear and derogation 2004-2011

ANNEX	SPECIES	REG AREA	REG GEAR	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
IIa	COD	3a	GN1	none	251	162	159	219	345	93	84	32	74
IIa	COD	3a	GT1	none	538	146	68	86	73	25	0	0	8
IIa	COD	3a	LL1	none	449	94	108	0	555	0	0	0	0
IIa	COD	3a	TR1	none	521	496	240	387	142	153	36	20	86
IIa	COD	3a	TR2	CPART11	0	0	0	0	0	0	0	0	0
IIa	COD	3a	TR2	CPART13	0	0	0	0	0	0	35	39	37
IIa	COD	3a	TR2	IIA83B		0	0	0	0	0	0	0	0
IIa	COD	3a	TR2	none	233	180	189	145	96	45	91	135	57
IIa	COD	3a	TR3	none	54	29	100	23	46	0	0	0	0
IIa	PLE	3a	GN1	none	766	438	444	486	460	187	168	95	156
IIa	PLE	3a	GT1	none	1344	877	998	583	951	172	245	164	195
IIa	PLE	3a	LL1	none						0	0	0	0
IIa	PLE	3a	TR1	none	1515	1659	2294	2048	1241	1629	641	1188	1204
IIa	PLE	3a	TR2	CPART11	0	0	0	0	0	10	6	2	6
IIa	PLE	3a	TR2	CPART13	0	0	0	0	0	0	104	98	101
IIa	PLE	3a	TR2	IIA83B		0	0	0	3	0	0	0	0
IIa	PLE	3a	TR2	none	187	137	202	184	150	107	119	50	103
IIa	PLE	3a	TR3	none	19	14	3	13	0	0	0	0	0
IIa	SOL	3a	GN1	none	230	642	641	494	444	509	480	630	532
IIa	SOL	3a	GT1	none	154	390	385	324	390	344	514	546	465
IIa	SOL	3a	TR1	none	19	42	78	42	27	18	12	20	16
IIa	SOL	3a	TR2	CPART11	0	0	0	0	0	0	4	5	3
IIa	SOL	3a	TR2	CPART13	0	0	0	0	0	0	54	74	63
IIa	SOL	3a	TR2	IIA83B		0	0	4	3	0	0	0	0
IIa	SOL	3a	TR2	none	39	70	79	67	68	62	17	11	54
IIa	SOL	3a	TR3	none	0	0	0	0	0	0	0	0	0

5.2.4 ToR 2 Rank regulated gear groups on the basis of catches expressed both in weight and in number of cod

STECF EWG 12-06 presents the gear groups ranked to their relative importance of catches and landings of cod, Nephrops, plaice and sole in 2011.

Table 5.2.4.1 Ranked regulated gear categories according to the proportional catches of cod, Nephrops, plaice and sole 2003-2011. There is no Danish discard information for TR2 in 2010 other than for cod included in this table. Note that the derogations CPart11 and IIA83b are not included in the TR2 category below.

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
IIa	3a	COD	TR2	0.83	0.88	0.83	0.91	0.83	0.82	0.82	0.93	0.97
IIa	3a	COD	GN1	0.03	0.02	0.02	0.02	0.03	0.08	0.05	0.05	0.02
IIa	3a	COD	TR1	0.09	0.08	0.13	0.04	0.13	0.06	0.12	0.02	0.01
IIa	3a	COD	TR3	0.03	0.01	0.01	0.03	0.01	0.01	0.00	0.00	0.00
IIa	3a	COD	GT1	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00
IIa	3a	COD	LL1	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
IIa	3a	NEP	TR2	0.99	1.00	1.00	1.00	0.92	0.94	0.99	0.97	0.98
IIa	3a	NEP	TR1	0.01	0.00	0.00	0.00	0.08	0.06	0.01	0.03	0.01
IIa	3a	NEP	GT1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	NEP	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	NEP	GN1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	PLE	TR2	0.77	0.74	0.58	0.58	0.60	0.61	0.68	0.59	0.87
IIa	3a	PLE	TR1	0.20	0.19	0.35	0.35	0.35	0.31	0.28	0.37	0.10
IIa	3a	PLE	GN1	0.02	0.05	0.05	0.04	0.03	0.05	0.03	0.03	0.02
IIa	3a	PLE	GT1	0.01	0.01	0.02	0.02	0.01	0.03	0.01	0.02	0.01
IIa	3a	PLE	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	PLE	LL1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	SOL	TR2	1.00	0.84	0.67	0.68	0.71	0.74	0.67	0.63	0.66
IIa	3a	SOL	GN1	0.00	0.12	0.27	0.24	0.20	0.19	0.27	0.26	0.25
IIa	3a	SOL	GT1	0.00	0.01	0.04	0.04	0.05	0.05	0.05	0.10	0.08
IIa	3a	SOL	TR1	0.00	0.02	0.02	0.04	0.04	0.02	0.01	0.01	0.00
IIa	3a	SOL	TR3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.2.4.2 Ranked regulated gear categories according to the proportional landings of cod, Nephrops, plaice and sole 2003-2011. Note that the derogations CPart11 and IIA83b are not included in the TR2 category in this table.

ANNEX	AREA	SPECIES	GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
IIa	3a	COD	TR2	0.80	0.84	0.79	0.84	0.79	0.75	0.80	0.88	0.97
IIa	3a	COD	GN1	0.04	0.03	0.03	0.03	0.05	0.11	0.09	0.08	0.03
IIa	3a	COD	TR1	0.10	0.09	0.15	0.07	0.14	0.08	0.11	0.03	0.01
IIa	3a	COD	TR3	0.04	0.02	0.02	0.05	0.01	0.02	0.00		0.00
IIa	3a	COD	GT1	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.00
IIa	3a	COD	LL1	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
IIa	3a	NEP	TR2	0.99	1.00	0.99	0.99	0.98	0.97	0.99	0.98	0.98
IIa	3a	NEP	TR1	0.01	0.00	0.00	0.00	0.02	0.03	0.01	0.02	0.02
IIa	3a	NEP	GT1	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	NEP	TR3	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	NEP	GN1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	PLE	TR2	0.78	0.62	0.48	0.54	0.52	0.56	0.57	0.77	0.74
IIa	3a	PLE	TR1	0.13	0.26	0.40	0.37	0.39	0.32	0.36	0.15	0.21
IIa	3a	PLE	GN1	0.06	0.09	0.07	0.06	0.06	0.07	0.05	0.06	0.03
IIa	3a	PLE	GT1	0.03	0.03	0.04	0.03	0.03	0.05	0.01	0.03	0.02
IIa	3a	PLE	TR3	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	PLE	LL1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IIa	3a	SOL	TR2	0.74	0.79	0.65	0.66	0.70	0.73	0.66	0.63	0.65
IIa	3a	SOL	GN1	0.19	0.16	0.28	0.25	0.22	0.20	0.28	0.26	0.26
IIa	3a	SOL	GT1	0.03	0.02	0.05	0.04	0.05	0.05	0.06	0.10	0.09
IIa	3a	SOL	TR1	0.03	0.02	0.02	0.04	0.03	0.02	0.01	0.01	0.00
IIa	3a	SOL	TR3	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.2.5 ToR 3 Remarks on quality of catches and discard estimates

The STECF EWG 12-06 expresses overall high confidence in the data and results.

5.2.6 ToR 4 Information on small boats (<10m)

5.2.6.1 Fishing effort of small boats by Member State

Vessels <10m LOA are exempted from the effort regulation in Kattegat with regard to the cod plan.

Swedish and Danish nominal effort data for vessels <10m LOA is not considered reliable until 2009 and 2010 respectively and it is not possible to conclude anything over the whole time series (Table 5.2.6.1.1). Data will be updated to next year. However, the Swedish effort in the gear category TR2 has increased from 4801kWd in 2009 to 36719kWd in 2011. Between 2010 and 2011 the Danish nominal effort deployed by small vessels was fairly stable, 289374 and 297343kWd respectively.

No Swedish data of number of vessels <10m LOA was submitted until 2009 and Danish effort data of number of small vessels is not considered reliable until 2010. However, the number of vessels <10m LOA operating in Kattegat (Table 5.2.6.2) has increased slightly between 2010 and 2011.The number of Swedish vessels in the TR2 fishery increased from 7 to 14 between 2010 and 2011.

Table 5.6.1.1. Nominal effort (kW*days at sea) of vessels <10m LOA in Kattegat 2005-2011. The Swedish and Danish effort in the table is not considered reliable until 2009 and 2010 respectively.

AREA	GEAR	SPECON	COUNTRY	2005	2006	2007	2008	2009	2010	2011	rel. 2005	rel. 2010
3a	GN1	none	DEU		378							
3a	GN1	none	SWE	8969	13797	10737	8132	62122	93134	45170	5.04	0.49
3a	GT1	none	SWE	2480	4581	5574	3920	38574	41407	25114	10.13	0.61
3a	LL1	none	SWE	3652	2882	6088	5726		209	55	0.02	0.26
3a	none	none	DNK	752	636	666	154	696	289374	297343	395.40	1.03
3a	none	none	SWE	185				37960	21438	21887	118.31	1.02
3a	OTTER	none	SWE					128				
3a	PEL_SEINE	none	SWE				128					
3a	POTS	none	SWE	13180	33804	13819	13096	134604	182519	105753	8.02	0.58
3a	TR1	none	SWE			154		828	966	1242		1.29
3a	TR2	CPART11	SWE					2891	7932	4607		0.58
3a	TR2	IIA83B	SWE	2610	4789	8658	8757					
3a	TR2	none	SWE	7008	4298	3734	3031	4801	17516	36719	5.24	2.10

Table 5.6.1.2. Number of vessels >10m LOA operating Kattegat by gear group 2009-2011.

GEAR	COUNTRY	2009	2010	2011	rel 2010
GN1	SWE	18	15	13	0.87
GT1	SWE	6	9	7	0.78
LL1	SWE		1	15	15
none	DNK	1	185	185	1
	SWE	18	17	14	0.82
OTTER	SWE	1			
POTS	SWE	43	37	37	1
TR1	SWE	1	1	1	1
TR2	SWE	8	7	14	2
Total		96	272	286	1.05

5.2.6.2 Catches (landings and discards) of cod and associated species by small boats by Member State

Table 5.2.6.2.1 Landings (t) of cod, plaice, sole and Nephrops by vessels <10m LOA, 2005-2011.

SPECIES	GEAR	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L	2011 L
COD	GN1	24	31	21	8	5	7	6
COD	GT1	1	2	1	2	4	3	2
COD	LL1	2	6	7	1	0	0	0
COD	none	99	114	44	25	20	10	8
COD	PEL_TRAWL	0	0	0	0	0	0	0
COD	POTS	0	0	0	0	0	0	0
COD	TR1	0	2	2	0	0	0	0
COD	TR2	1	3	2	1	0	1	1
COD	TR3	0	0	0	0	0	0	0
COD total		127	158	77	37	29	21	17
PLE	DREDGE	0	0	0	0	0	0	0
PLE	GN1	31	42	46	26	19	14	5
PLE	GT1	7	12	13	10	25	13	14
PLE	LL1	0	0	0	0	0	0	0
PLE	none	183	207	189	119	90	68	34
PLE	PEL_TRAWL	0	0	0	0	0	0	0
PLE	POTS	0	0	0	0	0	0	0
PLE	TR1	2	1	11	0	0	0	7
PLE	TR2	2	11	16	11	14	15	10
PLE total		225	273	275	166	148	110	70
SOL	GN1	24	23	15	19	17	24	21
SOL	GT1	6	10	10	10	12	10	8
SOL	LL1	0	0	0	0	0	0	0
SOL	none	173	152	104	91	88	79	53
SOL	POTS	0	1	0	0	0	0	0
SOL	TR1	2	0	1	0	0	0	0
SOL	TR2	2	7	9	9	11	13	8
SOL	TR3	0	0	0	0	0	0	0
SOL total		207	193	139	129	128	126	90
NEP	GN1	0	0	0	0	0	0	0
NEP	GT1	0	0	0	0	0	0	0
NEP	none	8	4	5	6	9	9	26
NEP	OTTER	0	0	0	0	0	0	0
NEP	POTS	4	4	5	6	8	11	11
NEP	TR1	0	0	0	0	0	0	0
NEP	TR2	4	5	9	10	6	30	17
NEP	TR3	0	0	0	0	0	0	0
NEP total		16	13	19	22	23	50	54

Table 5.2.6.2.1 Percentage of total landings of cod, sole and plaice by vessels under 10m 2005-2011.

	2005	2006	2007	2008	2009	2010	2011
COD	13%	17%	12%	8%	15%	14%	12%
PLE	19%	18%	20%	16%	23%	23%	20%
SOL	35%	32%	32%	31%	34%	37%	28%

5.2.7 ToR 5 Evaluation of fully documented fisheries FDF

5.2.7.1 Fishing effort of FDF by Member State and fisheries in comparison with fisheries not working under FDF provisions

STECF EWG noted that only Sweden had provided data on the use of the provisions related to fully documented fisheries FDF, only for 2010. Such information is listed in Table 5.2.7.1.1.

Table 5.2.7.1.1 Fishing effort (kW days at sea) used under the provisions of the FDF.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	VESSEL_LE	2010	2011
FDFIIA	3a	TR2	FDFIIA	SWE	O15M	25294	

5.2.7.2 Catches (landings and discards) of cod and other species taken by FDF fisheries by Member State and fisheries in comparison with fisheries not working under FDF provisions

STECF EWG noted that only Sweden had provided data on the use of the provisions related to fully documented fisheries FDF, only for 2011. Such information is listed in Table 5.2.7.2.1.

Table 5.2.7.2.1 Landings and discards (t) and estimated discard rates for cod, Nephrops and plaice taken under the provisions of the FDF.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
FDFIIA	COD	3a	TR2	FDFIIA	SWE	1	0	0			0
FDFIIA	NEP	3a	TR2	FDFIIA	SWE	7	4	0.36			0
FDFIIA	PLE	3a	TR2	FDFIIA	SWE	2	0	0			0

5.2.8 ToR 6 Spatio-temporal patterns in effective effort by fisheries

It should be noted that Kattegat is a rather small management area to find any changes in the pattern of the distribution of effort between the gears using statistical rectangles. A smaller grid would be required in order to pick up any spatial changes in this area.

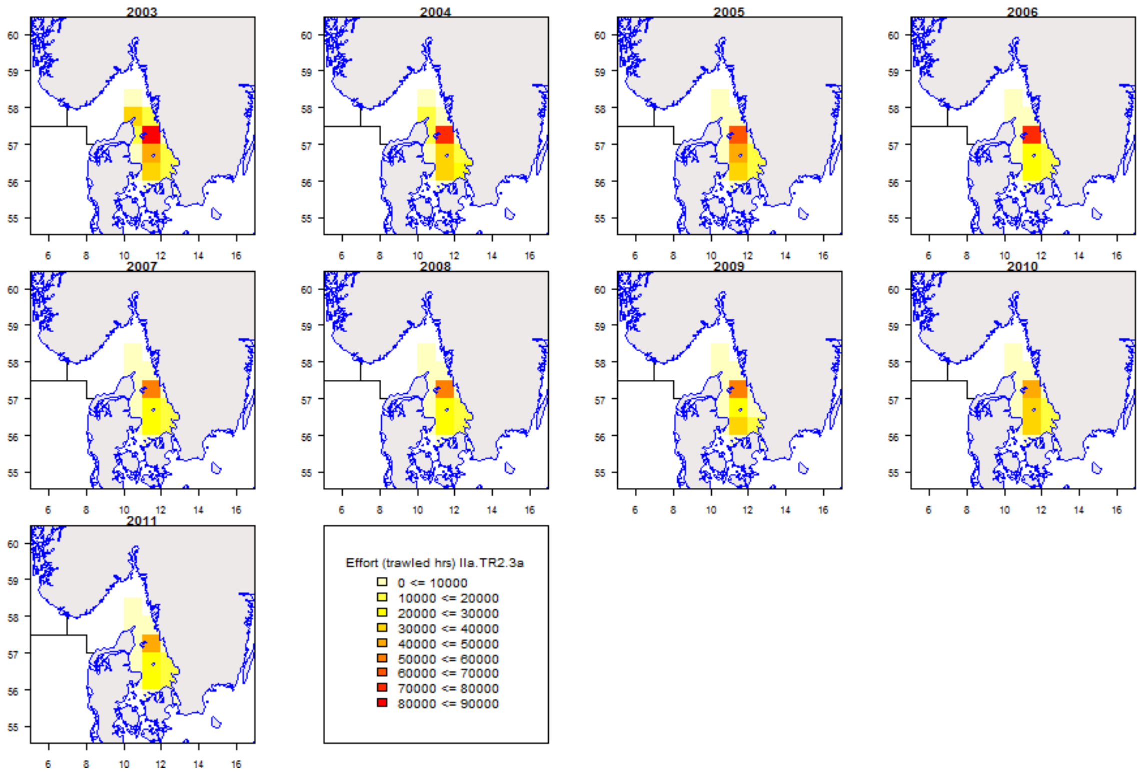


Figure 5.2.8.1 Spatial distribution of effective effort for the gear category TR2 including CPart11 and IIA83b in Kattegat 2003-2011.

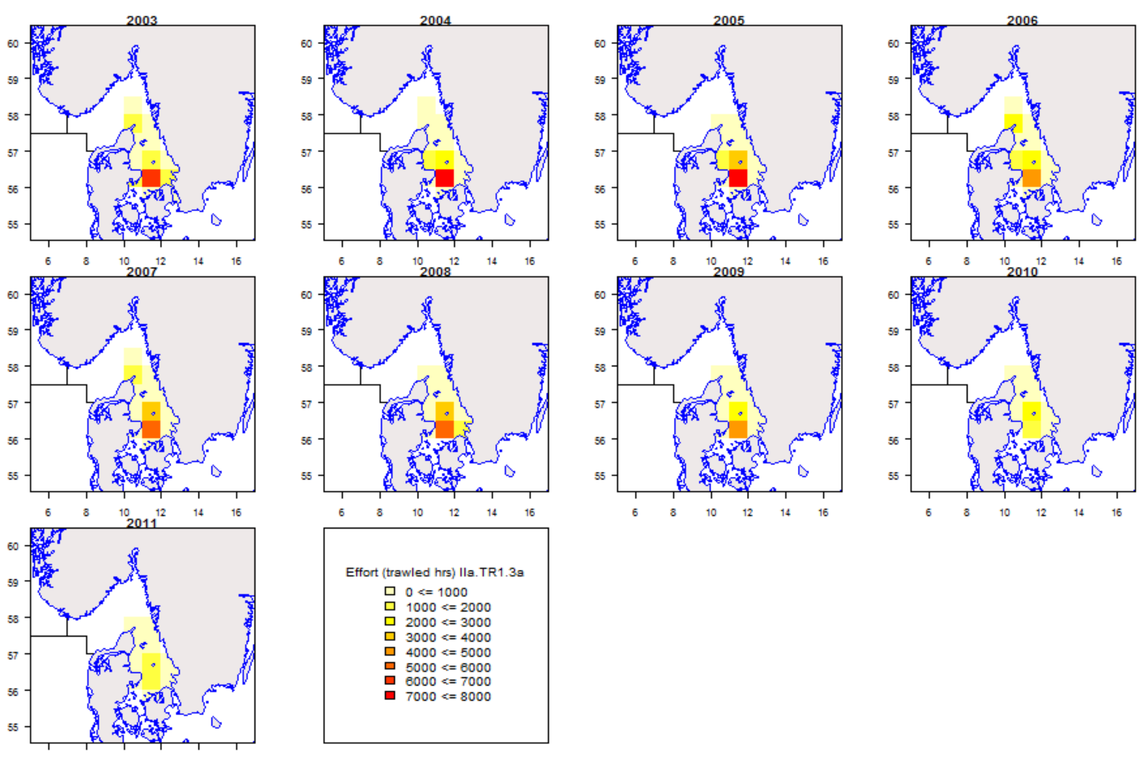


Figure 5.2.8.2 Spatial distribution of effective effort for the gear category TR1 in Kattegat 2003-2011.

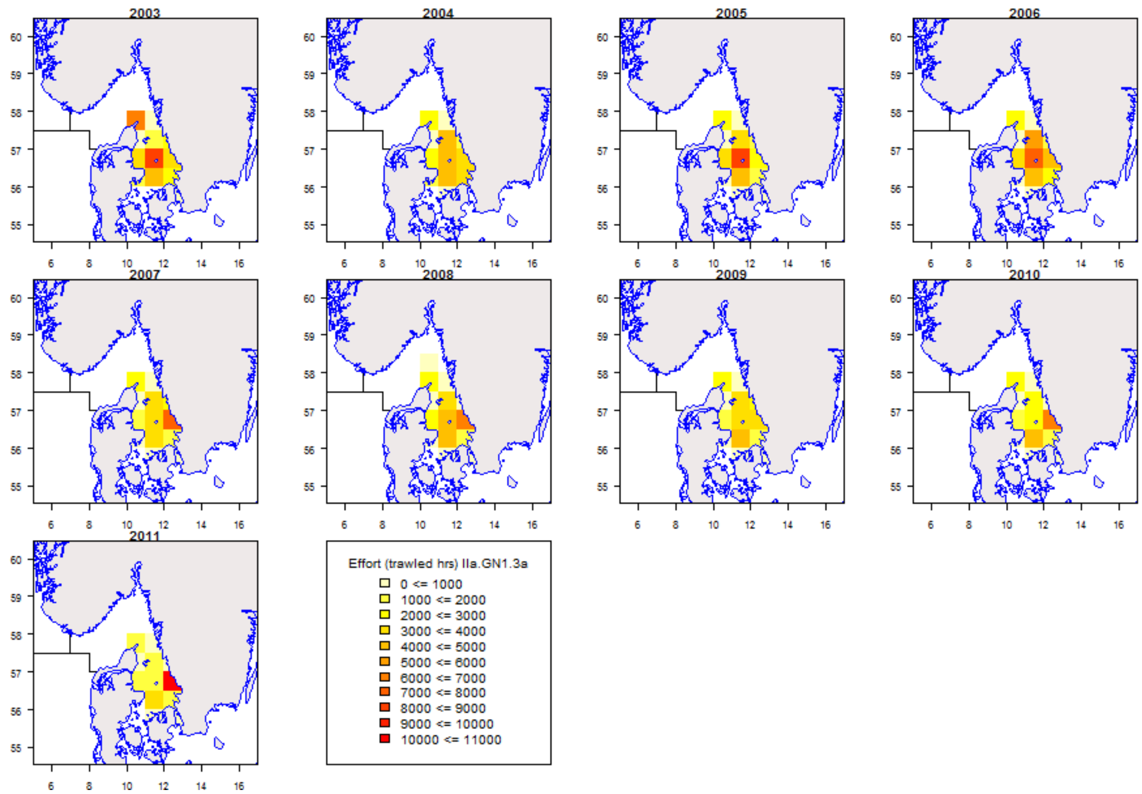


Figure 5.2.8.3 Spatial distribution of effective effort for the gear category GN1 in Kattegat 2003-2011.

5.2.9 ToR 7 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

STECF EWG 12-06 has no specific comments.

5.2.10 ToR 8 Correlation between partial cod mortality and fishing effort by Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToR 10. The EWG 12-06 analyses and response can be found in chapter 5.2.13.

5.2.11 ToR 9 Estimation of conversion factors to be applied for effort transfers between regulated gear groups

STECF EWG 12-06 presents the estimated cod CPUE and respective effort transfer factors between donor and receiving regulated gear groups. Red cells in Table 5.2.11.1 are indicated to be imprecise due to lack of adequate discard information.

Table 5.2.11.1 Cod CPUE and respective effort transfer factors between donor and receiving regulated gear groups based on averages 2009-2011. Red cells are indicated to be imprecise due to lack of adequate discard information.

	donor gear	receiving gear							
		GN1	GT1	LL1	TR1	TR2	TR3		CPUE
3a	GN1		1	1	0.529	0.822	1		74
3a	GT1	0.108		1	0.057	0.089	1		8
3a	LL1	0	0		0	0	1		0
3a	TR1	1	1	1		1	1		140
3a	TR2	1	1	1	0.643		1		90
3a	TR3	0	0	1	0	0			0

5.2.12 ToR 10 Estimation of partial fishing mortalities of cod by area, Member State and fisheries and correlation between partial cod mortality and fishing effort by area, Member State and fisheries

STECF EWG 12-06 interprets the this task to be largely overlapping with the following ToR 11. The response can therefore be found in the following section 5.2.13.

5.2.13 ToR 11 Comparative analyses between trends in fishing mortality and fishing effort by Member State and fisheries and the cod plan (R (EC) No 1342/2008) provisions, in particular with regard to Article 13

The STECF EWG presents partial exploitation rates by major fisheries and Member States in relation to the estimated total exploitation rate by ICES (2012) and the landings and discards volumes in relation to the estimated total catch for the year available. The full list of all fisheries can be downloaded from the EWG's web page. The anticipated trend in fishing mortality as derived from the cod plan is also presented in the following Table 5.2.13.1. The sustainable exploitation target remains undefined. The trends in fishing effort in units of kWdays at sea of the relevant fisheries are also presented in Table 5.2.13.1. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤ 0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded that the stock remains at a very poor state and annual harvest rates vary among 40% since 2008 without a trend. Danish gill netters and Danish and Swedish otter trawlers, together with boats smaller than 10 m represent more than 80 percent of the estimated harvest rates. Discards contribute significantly to the overall harvest rates but appear to be reduced since 2008.

STECF EWG 12-06 notes that the correlations between the summed partial harvest rates for catch, landings and discards of the major fisheries and their estimated fishing efforts are highly significant. The partial harvest rates of the dominating Danish and Swedish TR2 fisheries also closely correlated with their specific effort estimates in kW days at sea. Only the Danish gill netters are lacking such correlation. This indicates that effective fisheries management by fishing effort in units of kWdays at sea appears possible, also as an auxiliary measure to catch constraints and technical measures.

STECF EWG 12-06 notes that there are no indications that the Danish TR2 fishery operating exclusively under Article 13.2.c since 2010 has contributed to a reduction in harvest rate.

Table 5.2.13.1 The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

Runnig prvious year annual F reductions by 25 percent as SSB remains below Blim												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
harvest rate as F proxy plan												0.417	0.313	0.235	0.176	0.132
reduction F plan													-0.25	-0.25	-0.25	-0.25
harvest rate as F proxy estimated							0.975	0.701	0.687	0.585	0.522	0.417	0.365	0.44	0.381	
reduction F estimated													-0.12	0.06	-0.09	
													not following the provision of Article 7			
Harvest rate partial estimated						CATCH	2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3a	DNK	GN1	none	COD	landings	0.026	0.009	0.011	0.006	0.011	0.023	0.013	0.018	0.005	
IIa	3a	DNK	GN1	none	COD	discards	0	0	0	0	0	0	0	0	0	
IIa	3a	DNK	TR1	none	COD	landings	0.047	0.019	0.039	0.013	0.024	0.017	0.02	0.006	0.002	
IIa	3a	DNK	TR1	none	COD	discards	0.014	0.015	0.019	0.003	0.019	0.001	0.015	0	0	
IIa	3a	DNK	TR2	CPart13.2.c	COD	landings	0.285	0.159	0.161	0.125	0.118	0.124	0.107	0.149	0.148	
IIa	3a	DNK	TR2	CPart13.2.c	COD	discards	0.124	0.087	0.098	0.068	0.091	0.083	0.068	0.13	0.066	
IIa	3a	SWE	TR1	none	COD	landings	0.017	0.01	0.011	0.003	0.015	0.005	0.001	0.002	0	
IIa	3a	SWE	TR1	none	COD	discards	0.003	0.008	0.004	0	0.004	0.002	0	0	0	
IIa	3a	SWE	TR2	none	COD	landings	0.217	0.114	0.132	0.102	0.093	0.079	0.043	0.049	0.07	
IIa	3a	SWE	TR2	none	COD	discards	0.116	0.215	0.121	0.17	0.095	0.029	0.026	0.019	0.039	
IIa	3a	DNK	u10m	none	COD	landings	0.072	0.04	0.053	0.052	0.03	0.022	0.02	0.029	0.028	
IIa	3a	SWE	u10m	none	COD	landings	0.005	0.003	0.007	0.005	0.008	0.003	0.018	0.013	0.008	
sum							0.926	0.636	0.596	0.490	0.470	0.363	0.293	0.373	0.330	
landings							0.669	0.311	0.354	0.249	0.261	0.248	0.184	0.224	0.225	
discards							0.257	0.325	0.242	0.241	0.209	0.115	0.109	0.149	0.105	
rel. contribution to harvest rate estimated							0.95	0.907	0.868	0.838	0.9	0.871	0.803	0.848	0.866	

Effort kW days running previous year baseline														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations						4562331.33	3899687	3091144	2437733	2050136				
reduction	not following the provision of Article 12.2 and 4 (base line revisions?)						-0.15	-0.21	-0.21	-0.16				
Effort estimated (r	6031166	4989673	4427027	4119208	3833547	3675151	3057821	2979542	2491594					
							-0.17	-0.03	-0.16					
											2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	184730	111650	130267	104450	72977	66270	83095	66976	46211		0.390	9	1.121	0.299
kW days at sea	184730	111650	130267	104450	72977	66270	83095	66976	46211		#DIV/0!	9	#DIV/0!	#DIV/0!
kW days at sea	201816	191679	205850	193619	186575	158868	104096	69037	48671		0.733	9	2.851	0.025
kW days at sea	201816	191679	205850	193619	186575	158868	104096	69037	48671		0.605	9	2.010	0.084
kW days at sea	3455075	3059057	2547492	2254222	2026307	2148493	2214066	2385563	1998979		0.854	9	4.343	0.003
kW days at sea	3455075	3059057	2547492	2254222	2026307	2148493	2214066	2385563	1998979		0.564	9	1.807	0.114
kW days at sea	44370	15121	24870	5160	19799	57592	6985	13626	1006		0.497	9	1.515	0.174
kW days at sea	44370	15121	24870	5160	19799	57592	6985	13626	1006		0.262	9	0.718	0.496
kW days at sea	1369635	1033710	932268	1062871	1041966	920320	436355	284594	271686		0.813	9	3.694	0.008
kW days at sea	1369635	1033710	932268	1062871	1041966	920320	436355	284594	271686		0.686	9	2.494	0.041
kW days at sea											#DIV/0!	0	#DIV/0!	#DIV/0!
kW days at sea											#DIV/0!	0	#DIV/0!	#DIV/0!
sum	5255626	4411217	3840747	3620322	3347624	3351543	2844597	2819796	2366553		0.955	9	8.519	0.000
sum	5255626	4411217	3840747	3620322	3347624	3351543	2844597	2819796	2366553		0.867	9	4.603	0.002
sum	5255626	4411217	3840747	3620322	3347624	3351543	2844597	2819796	2366553		0.808	9	3.628	0.008
rel effort	0.871	0.884	0.868	0.879	0.873	0.912	0.93	0.946	0.95			9		

5.2.14 ToR 12 Considerations in order to accomplish spatio-temoral patterns in standardized catchability indices for cod

The STECF EWG 12-06 discussed this task and elaborated generic ideas given in section 4.9 of the present report.

5.3 Skagerrak, North Sea and Eastern Channel effort regime evaluation in the context of Annex IIA to Council Regulation (EC) No 57/2011)

5.3.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member State and fisheries

Catch and effort data including special conditions in force since 2009 (CPart11 and CPart13) have been provided by all Member States with significant fishing activity in this area. As such, the data are considered to represent a complete account of fishing effort by regulated gears in the area as reported by national administrations. As a result, any inconsistencies or problems in the data arise from the reported data rather than the subsequent compilation by the working group. In the current dataset and as last year, there is a particular issue with the data for 2002 when the reported effort by French vessels is substantially higher than in other years. This appears anomalous but does not affect perception of more recent trends in effort; times series are accordingly displayed from 2003 on only. In many cases the French data for 2009 are identical or very close to the corresponding figures for 2008, hence the 2009 figures should still be regarded as preliminary; they have not been revised this year.

In addition, the group noted that some discrepancies were observed between the effort reported to STECF and the effort reported to ICES for the North Sea, the Skagerrak and the Eastern English Channel (ICES, 2012), but the extent and source of these discrepancies could not be investigated further.

Information on nominal effort (KWDays) by regulated and unregulated gears in the Skagerrak, North Sea (incl. 2EU) and the Eastern Channel are listed by country in Table 5.3.1.1 for the current cod plan categories. Additional information including GTdays and numbers of vessels or the extended time series can be found on the STECF website.

Information related to the Fully Documented Fishery (FDF) is dealt with specifically in section 5.3.8 further below.

Trends in nominal aggregated effort in kilowatt-days by overall gear category according to Annex IIa of Council Regulations 43/2009, 53/2010 and 57/2011 are given in Tables 5.3.1.2 and shown in Figure 5.3.1.1. Data are presented as aggregate totals for the whole of area 3b, and do not thus distinguish between the various sub-areas. A more detailed analysis of unregulated gears is presented in section 5.3.5.

Overall, regulated gears to total effort in area 3b represented 69% in 2011. The main gears in management area 3b are demersal trawls/seines and beam trawls (51% and 42% of total 2011 regulated effort respectively). Nominal effort by both of these gear types has decreased since 2003, and this is reflected in the decrease in total effort over the same period. After having remained constant over 2008-2010, beam trawling effort decreased by 13% in 2011.

Within regulated demersal trawls/seines, nominal effort is shared between smaller mesh size (70-99mm, TR2) and larger mesh sizes (>=100mm, TR1) (55% and 44% respectively). Beam trawling is dominated at 96% by smaller mesh size (80-119 mm, BT2)

Figures 5.3.1.2–5.3.1.6 show effort totals by mesh size category within the regulated gear types.

Figure 5.3.1.2 shows trends in nominal effort (kW*days) by demersal trawls / seines by regulated mesh size category. The overall effort by these gears has shown a reduction since 2003. However, while small mesh size trawling (TR2) have shown a continuous decline of effort over the years (-35% in 2011 compared to the average 2004-2006), the effort by larger mesh (TR1) remained relatively stable over the previous cod plan (2004-2009) and declined only after the full implementation of the new cod plan in 2010. Overall TR1 and TR2 effort decreased by 6% and 8% respectively between 2010 and 2011 (Table 5.1.3.2).

It is sometimes difficult to interpret these aggregated trends, because the current grouping covers many different fisheries. TR2 in particular gathers as different fisheries as e.g. *Nephrops* trawling, mainly in the Northern North Sea, and whiting trawling in the south-western North Sea, and these local fisheries may follow different dynamics. Similarly, TR1 fisheries cover both a mixed whitefish fishery and a saithe-targeted fishery.

Since 2009, all Scottish and English effort by TR gears has been allocated to Special Condition CPart13, and a large part Swedish effort by TR2 gears allocated to CPart11. In addition, a small amount of Scottish effort granted under CPart11 was observed in area 3b. For German vessels, 51% of TR1 and 7% of TR2 effort was allocated to CPart13 in 2011.

The share of static gears effort has been stable over the period, around 6-7% of the total regulated effort deployed in the Skagerrak, North Sea (incl. 2EU) and Eastern Channel. STECF EWG 12-06 notes that the fishing activities for static gears may be poorly quantified by nominal effort (kW*days at sea). With that caveat, usage of gillnets and trammel nets (Figure 5.3.1.4) has fluctuated without real trends and the overall level of effort in longlines is still very low.

Table 5.3.1.1 Area 3b: Trend in nominal effort (Kw *days at sea) by Gear group, country and specon, 2004-2011 (the extended time series is available on the STECF website).

REG GEAR	COUNTRY	SPECON	2004	2005	2006	2007	2008	2009	2010	2011	Rel 04-06	Rel 2010
BT1	**BEL**	none	1439951	1509759	1333012	1320169	987634	575501	486680	644908	0.45	1.33
	DEU	none	31698	2128	53986	30297	17674		884	1535	0.05	1.74
	DNK	none	1366044	1316858	788891	856617	449199	413427	569744	433062	0.37	0.76
	FRA	none										
	NLD	none	814723	856823	1598963	828513	392987	439835	488309	308958	0.28	0.63
	SCO	none	694716	730810	603091	349914	68568	53082				
	ENG	none	671129	618160	1321240	305837	228530	265710	202684	169873	0.20	0.84
	NIR	none	543305	36825								
BT2	**BEL**	none	6717425	5952619	6201205	5891626	6228335	5531728	4368821	3470955	0.55	0.79
	DEU	none	2080593	2212397	1927398	1590823	1464163	1666322	1801775	1240530	0.60	0.69
	DNK	none	87890	100871	92798	104694	39730	78215	3678	440		0.12
	FRA	none	1372579	994258	1324297	1238613	1194714	1194714	610829	609703	0.50	1.00
	NLD	none	45326214	45000599	39370689	38450313	27720830	28729727	28648855	25777844	0.60	0.90
	SCO	none	4610314	4185264	3109683	2800641	1354776	560729	144306			
	ENG	none	4230884	4470070	3333673	3576089	2343694	2891909	3528678	2942307	0.73	0.83
	NIR	none	47517	16785								
	GBJ	none	14375	10346								
GN1	**BEL**	none	171233	167853	151507	129532	168969	181261	196692	95383	0.58	0.48
	DEU	none	163665	273203	236585	152633	281182	235144	276024	225797	1.01	0.82
	DNK	none	2503663	2355996	2086597	1234706	1328785	1475494	1567471	1443100	0.62	0.92
	FRA	none	406304	289076	332356	448038	198741	197488	100810	52988	0.15	0.53
	NLD	none	416025	387945	512022	521697	507733	419797	357091	316070	0.72	0.89
	SCO	none	197407	165644	293823	320785	417076	376332	440579	607650	2.78	1.38
	SWE	none	127286	89748	76409	58618	96877	101209	67326	70682	0.72	1.05
	ENG	none	362508	308493	311045	182202	75938	188216	211651	252170	0.77	1.19
GT1	**BEL**	none				42078	34200	12430	41780	46185		1.11
	DEU	none			1547			15444	1188	924	0.60	0.78
	DNK	none	246854	240716	184802	98425	126223	197308	178830	223000	0.99	1.25
	FRA	none	3426003	4121419	5467522	5292713	3621742	3617988	2431158	2529724	0.58	1.04
	NLD	none					740	26917	37399	21431		0.57
	SWE	none	16206	27824	56771	62309	63022	36250	21260	23899	0.71	1.12
	ENG	none	10306	14525	17181	10999	22498	18440	25367	20026	1.43	0.79
LL1	**BEL**	none					1768		3047	128		0.04
	DNK	none	85345	44687	45289	18078	27772	30722	48293	62587	1.07	1.30
	FRA	none	163370	97311	114742	162573	216282	216282	166766	94156	0.75	0.56
	SCO	none	4350		7542	1487	276674	620890	301689	156352	26.30	0.52
	SWE	none	44221	42904	123481	165019	53381	11352	6600	8580	0.12	1.30
	ENG	none	115019	182590	95139	53675	45863	42923	57724	44458	0.34	0.77
	NIR	none										

(ctd next page)

Table 5.3.1.1 (ctd)

REG GEAR	COUNTRY	SPECON	2004	2005	2006	2007	2008	2009	2010	2011	Rel 04-06	Rel 2010
TR1	**BEL**	none	1989			161520	201379	220428	220777	129741	65.23	0.59
	DEU	CPART13						927872	918707	846030		0.92
		none	1719696	2166578	2436727	2041064	1774792	891953	912558	805546	0.38	0.88
	DNK	none	7154017	7853341	7402801	5385763	5347921	5120432	4972090	4582610	0.61	0.92
	FRA	none	2348974	1961936	2724981	2642190	2787798	2696190	2004742	1841280	0.79	0.92
	IRL	none										
	NLD	none	593232	547564	532260	648039	1411644	1323312	1415882	1176692	2.11	0.83
	SCO	CPART13						12245575	10444829	9986666		0.96
		none	12684328	12158294	11661338	11022980	12176291					
	SWE	none	470803	496754	292520	357841	426261	255594	207882	216991	0.52	1.04
	ENG	CPART13						2145727	2110555	2142321		1.02
		none	1498089	1256186	1824680	1501767	1851664					
	NIR	CPART13						56140	29360	33246		1.13
		none	16948	70711	51951	61460	49104					
	GBJ	none										
TR2	**BEL**	none	546386	354543	390268	312570	441190	553209	638857	600864	1.40	0.94
	DEU	CPART13						2420	39820	31020		0.78
		none	905330	704404	771597	680681	457259	471414	424525	410357	0.52	0.97
	DNK	none	8088391	5913518	4689098	3433945	3310190	3394115	3199997	3317731	0.53	1.04
	FRA	none	14841436	13427913	15043571	14787652	12000527	11759062	8070194	7727033	0.54	0.96
	IRL	none	884									
	NLD	none	1813096	1643732	1512140	1819497	2482280	1937751	1936340	1921901	1.16	0.99
	SCO	CPART11							97359	38429		0.39
		CPART13						8344074	8205442	6768863		0.82
		none	9486074	9108230	8677821	8887263	9195955					
	SWE	CPART11						766754	699160	695814		1.00
		IIA83B	308459	542007	664971	894575	735039					
		none	1646761	1430032	1451764	1160743	1365913	781107	661331	514449	0.34	0.78
	ENG	CPART13						1910232	1720025	1620355		0.94
		none	1976703	2187597	1892451	1769650	1959629					
	NIR	CPART13						385631	398496	273858		0.69
		none	12440	221904	532885	758972	409182					
	GBJ	CPART13						7480				
		none	20201	24143	10560	13420	9680					
	IOM	none										
	GBG	none										
TR3	**BEL**	none					663		3536			
	DEU	none			772	884	4410	426				
	DNK	none	3226366	2586161	1822500	846368	939474	607063	1077111	334898	0.13	0.31
	FRA	none	81511	106826	115612	138596	67827	66507	148174	125135	1.24	0.84
	IRL	none								2247		
	NLD	none	45942	43261	20649	20589	4038	274	31973	23268	0.64	0.73
	SCO	none	5460	2356	116	11896		33117	27524			
	SWE	none	3330	1564	588	919			1986			
	ENG	none	7840	3315	6360	1472	492	82	718	621	0.11	0.86
Grand Total			**148013808**	**141637376**	**135704267**	**125662029**	**109466902**	**107326727**	**98013938**	**88063371**	0.62	0.90

Table 5.3.1.2 Area 3b: Trend in nominal effort (Kw *days at sea) by Gear group. 2004-2011 (the extended time series is available on the STECF website). NB TR2 CPArt11 and SPECON IIA83b is accounted for in the *un*regulated gears

REG GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	2011	Rel 04-06	Rel 2010
BT1	none	5561566	5071363	5699183	3691347	2144592	1747555	1748301	1558336	0.29	0.89
BT2	none	64487791	62943209	55359743	53652799	40346242	40653344	39106942	34041779	0.56	0.87
GN1	none	4348091	4037958	4000344	3048211	3075301	3174941	3217644	3063840	0.74	0.95
GT1	none	3699369	4404484	5727823	5506524	3868425	3924777	2736982	2865189	0.62	1.05
LL1	none	412305	367492	386193	400832	621740	922169	584119	366261	0.94	0.63
TR1	CPART13						15375314	13503451	13008263		0.96
	none	26488076	26511364	26927258	23822624	26026854	10507909	9733931	8752860	0.33	0.90
TR2	CPART13						10649837	10363783	8694096		0.84
	none	39337702	35016016	34972155	33624393	31631805	18896658	14931244	14492335		0.97
TR3	none	3370449	2743483	1966597	1020724	1016904	707469	1291022	486169	0.18	
Total Regulated		147705349	141095369	135039296	124767454	108731863	106559973	97217419	87329128	0.62	0.90
Unregulated incl CPArt11		64310989	57396791	50758827	47752457	42510687	46417089	44683604	40296855	0.70	0.90
Grand Total		212016338	198492160	185798123	172519911	151242550	152977062	141901023	127625983	0.64	0.90
% regulated		70%	71%	73%	72%	72%	70%	69%	68%		

As a quality check, STECF routinely compares the data currently submitted with the data submitted during the previous year, as is displayed in table 5.3.1.3. Compared to the data submitted in 2011, updates were reported by Denmark, England and Irland. Danish and English updates relate to ambiguous interpretation of the data call for the reporting of FDF fisheries, that were previously substracted from the total effort reported within the same strata. This ambiguity was clarified in 2012, leading to correction of data submitted in 2011.

Table. 5.3.1.3 Area 3b: Relative change in nominal effort 2012 data submission compared to 2011 submission (kW *days at sea) by country, gear, derogation and vessel length 2000-2010.

COUNTRY	ANNEX	REG AREA	REG GEAR	SPECON	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
DNK	IIa	3b	none	none	O15M	0	0	0	0	0	0	0	0	0	0	0.055
DNK	IIa	3b	PEL_TRAWL	none	O15M	0	0	0	0	0	0	0	0	0	0	0.001
DNK	IIa	3b	TR1	none	O15M	0	0	0	0	0	0	0	0	0	0	0.295
DNK	IIa	3b	TR2	none	O15M	0	0	0	0	0	0	0	0	0	0	0.004
ENG	IIa	3b	DREDGE	none	O10T15M	0	0	0	0	0	0	0	0	0	0	0.038
ENG	IIa	3b	GN1	none	O15M	0	0	0	0	0	0	0	0	0	0	0.155
ENG	IIa	3b	POTS	none	O10T15M	0	0	0	0	0	0	0	0	0	0	0.001
ENG	IIa	3b	TR1	CPART13	O10T15M										0	0.289
ENG	IIa	3b	TR1	CPART13	O15M										0	0.25
IRL	IIa	3b	PEL_TRAWL	none	O15M	0	0	0	0.059	0.29	0.1	0.109	0.101	0.116	0.173	0.358
IRL	IIa	3b	POTS	none	O15M						0.019	0	0	0.083	0.197	0.038

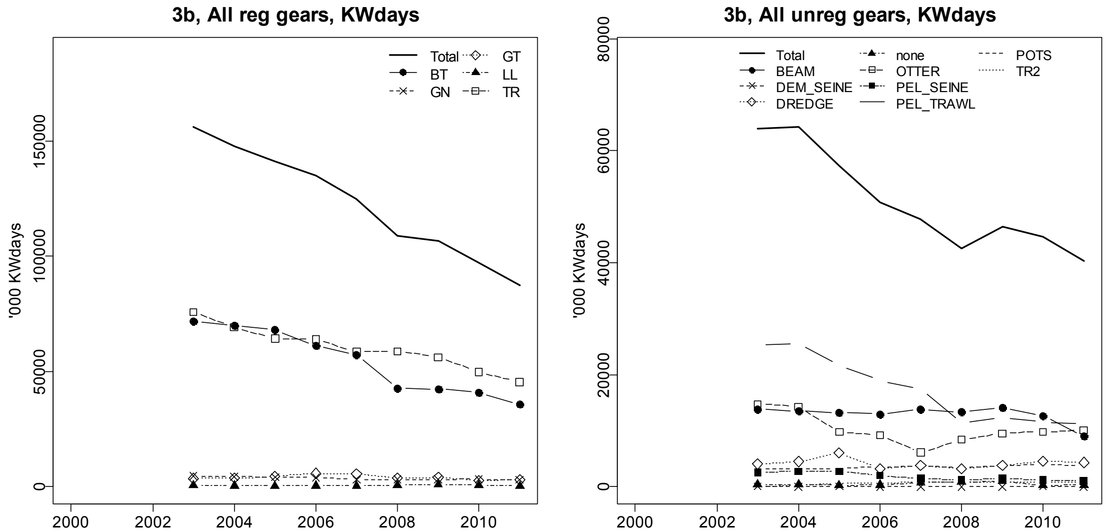


Figure 5.3.1.1. Effort trends for regulated (left) and unregulated (right) gear types. TR = demersal otter trawl and demersal seine, BT = Beam trawl, GN = Gillnet, GT = Trammel net, LL = Longline.

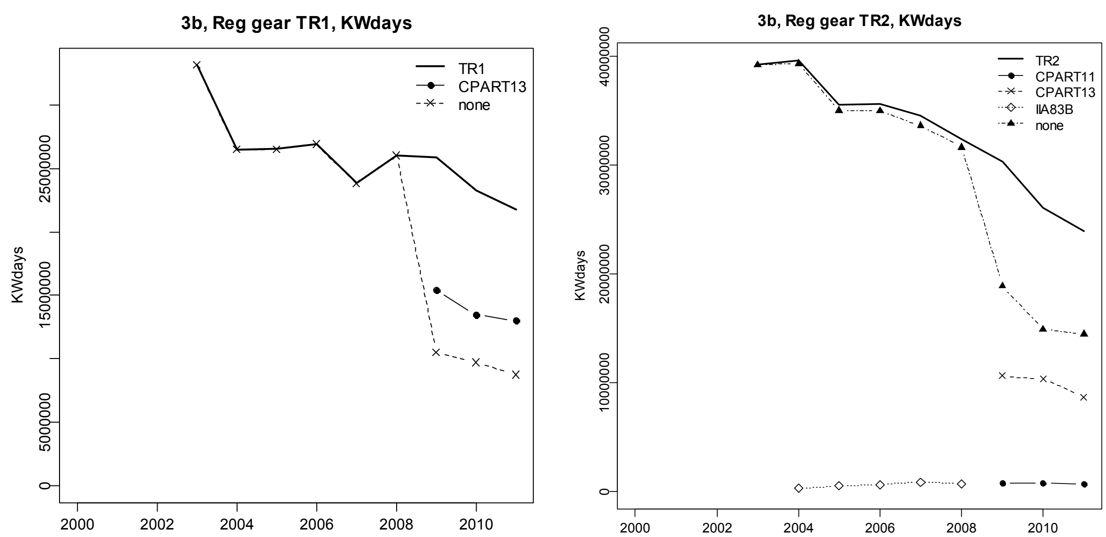


Figure 5.3.1.3. Effort trends for TR1 and TR2 disaggregated by special condition.

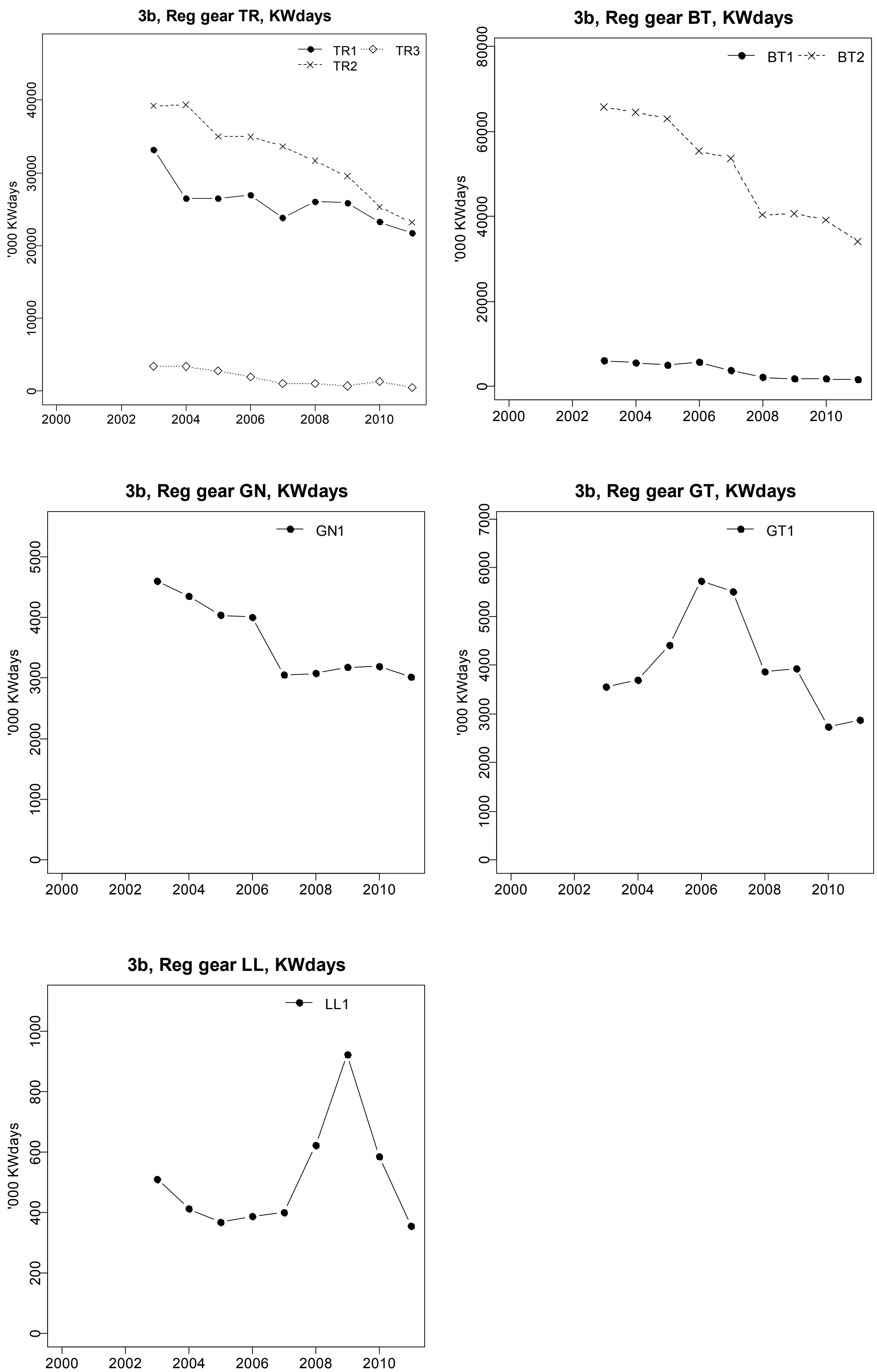


Figure 5.3.1.2. Effort separated by each individual regulated gear type.

5.3.1.1 Fishing effort of unregulated gears, management area 3b

Effort trends by unregulated gears (including CPArt11 and SPECON IIA83b) are given in Table 5.3.1.1.1 and shown in Figure 5.3.1.1. Category 'none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes, and this category less than 1% of the unregulated effort in 2011.

This section provides a breakdown of the main gears within this category in effort (kW*Days at sea). Most of the unregulated effort is performed using pelagic, otter and beam trawls in similar proportions (28%, 26% and 23% of total unregulated effort in 2011 respectively), and also with dredges and pots (around 10% each). The unregulated effort has remained around comparable levels since 2008.

Table 5.3.1.1.1. Effort (Kwdays) of unregulated gear in area 3b 2004-2011. The full time series is available on the STECF website.

REG GEAR COD	SPECON	2004	2005	2006	2007	2008	2009	2010	2011	Rel 04-06	Rel 2010
BEAM	none	13521284	13230382	12938958	13782031	13336844	14047370	12674009	9003515	0.68	0.71
DEM_SEINE	none	9718	23138	2585	13017	5214	14305	43871	2175	0.18	0.05
DREDGE	none	4459314	5986424	3218067	3803033	3139961	3776311	4555360	4305027	0.95	0.95
none	none	385857	251012	308412	720239	773769	926110	203172	303705	0.96	1.49
OTTER	none	14271608	9751513	9155423	6077251	8409456	9496032	9754159	10088642	0.91	1.03
PEL_SEINE	none	2721915	2720802	1998040	1417010	1153077	1432037	1134323	1028205	0.41	0.91
PEL_TRAWL	none	25504989	21648998	18949191	17435181	11441037	12315789	11522732	11113899	0.50	0.96
POTS	none	3127845	3242515	3523180	3610120	3516290	3642381	3999459	3717444	1.13	0.93
TR2	CPART11						766754	796519	734243		0.92
	IIA83B	308459	542007	664971	894575	735039					
Grand Total		64310989	57396791	50758827	47752457	42510687	46417089	44683604	40296855	0.70	0.90

5.3.1.2 Uptake of effort baseline

In 2012, the uptake of effort baselines was calculated for the first time (Figure 5.3.1.2.1).

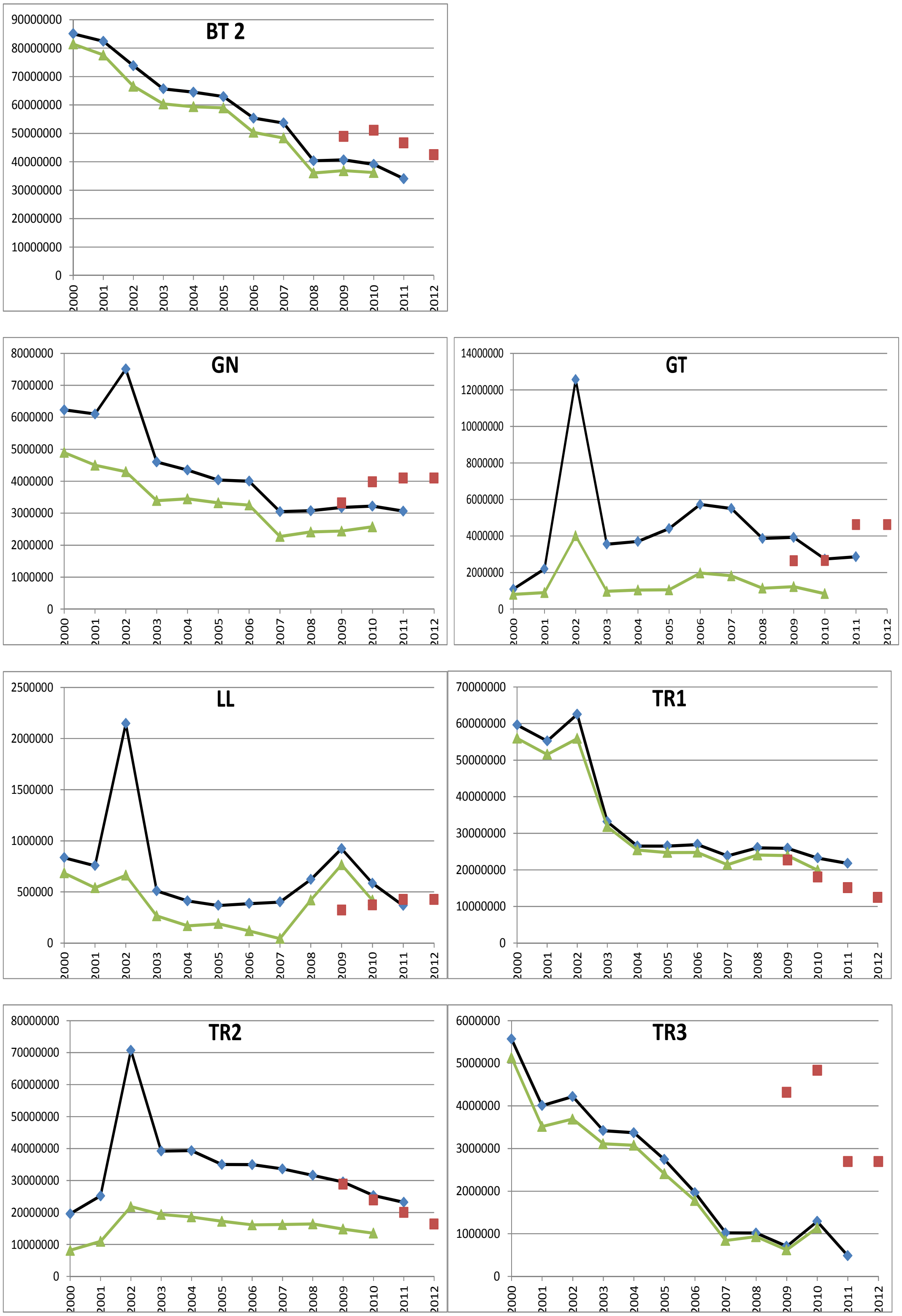


Figure 5.3.1.2.1 Management area 3b. Uptake of effort ceilings. Red squares: effort ceiling. Blue diamonds: regulated effort in whole area 3b (CPart 11 excluded). Green triangles : regulated effort in North Sea (ICES division IV) alone.

5.3.2 ToR 1.b Catches (landings and discards) of cod in weight and numbers at age by fisheries

Estimated landings and discards of cod by cod plan gear category for the whole area are given in Table 5.3.2.1. The same is displayed for unregulated gears (Table 5.3.2.2). Detailed data on age compositions of landings are not given here, but are available on the web site. The same applies to estimates by country.

Information related to the Fully Documented Fishery (FDF) is dealt with specifically in section 5.3.8 further below.

As for the report of 2009, a number of figures are included in this report, displaying total landings (white) and discards (grey – when available) in weight for all regulated gears from 2004 to 2011 (Figures 5.3.2.1)

Because of the limited availability and reliability of discard information for some species and from some countries contributing substantially to landings, care is required in the use of these data to draw firm conclusions about catch composition. In addition, the procedure used to raise discards and explained in section 4.4 may not be fully consistent with the procedures used in other contexts and therefore may not be directly comparable.

In TR1, cod landings have been increasing since 2008, but discards rates have decreased substantially between 2008 and 2011.

Catches from unregulated gears do not play a major role despite some high discard estimates for unregulated otter trawls in some years. Since 2009 no such high discard was observed any more.

Table 5.3.2.1 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Landings (t), discards (t) and relative discard rates in weight for cod by regulated gear, 2005-2011.

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
COD	BT1	none	1122	0	0	1001	335	0.25	688	0	0	337	212	0.39	230	0	0	323	0	0	411	0	0
COD	BT2	none	2197	749	0.25	2258	433	0.16	2085	218	0.09	2620	940	0.26	2332	422	0.15	1849	278	0.13	1357	272	0.17
COD	GN1	none	3741	10	0	3228	0	0	2421	0	0	2519	0	0	2872	0	0	3301	142	0.04	2799	0	0
COD	GT1	none	343	0	0	344	0	0	346	0	0	373	0	0	470	0	0	409	1	0	344	1	0
COD	LL1	none	133	0	0	228	0	0	183	0	0	207	0	0	127	0	0	287	0	0	181	0	0
COD	TR1	CPart13			0			0			0			0	9971	6054	0.38	12626	3097	0.2	11300	1445	0.11
COD		none	12147	2026	0.14	11868	2924	0.2	10956	6887	0.39	12944	17517	0.58	7847	1927	0.2	7716	1848	0.19	6500	526	0.07
COD	TR2	CPart13			0			0			0			0	538	1312	0.71	609	1243	0.67	364	1221	0.77
COD		none	3440	3293	0.49	3071	4756	0.61	3110	8171	0.72	2922	4581	0.61	2789	3516	0.56	2532	3237	0.56	2630	1404	0.35
COD	TR3	none	31	0	0	30	0	0	4	0	0	57	0	0	2	0	0	18	0	0	4	0	0
Total			**23154**	**6078**	**0.21**	**22028**	**8448**	**0.28**	**19793**	**15276**	**0.44**	**21979**	**23250**	**0.51**	**27178**	**13231**	**0.33**	**29670**	**9846**	**0.25**	**25890**	**4869**	**0.16**

Table 5.3.2.2 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Landings (t), discards (t) and relative discard rates in weight for cod by unregulated gear, 2005-2011.

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
COD	BEAM	none	20	0	0	14	0	0	24	0	0	32	0	0	113	0	0	51	0	0	14	0	0
	DEM_SEINE	none	2	1	0.33	3	0	0	1	0	0			0	2	0	0	10	0	0	1	0	0
	DREDGE	none	0	0	0	1	0	0	4	0	0	1	0	0	0	0	0	3	0	0	2	0	0
	none	none	12	0	0	23	0	0	10	0	0	44	0	0	63	0	0	27	0	0	40	0	0
	OTTER	none	300	2706	0.9	220	33	0.13	127	197	0.61	155	3819	0.96	204	3	0.01	262	20	0.07	237	64	0.21
	PEL_SEINE	none	8	4	0.33	1	0	0			0	0	0	0	0	0	0	2	1	0.33			0
	PEL_TRAWL	none	11	0	0	11	0	0	6	0	0	7	0	0	41	0	0	29	0	0	23	0	0
	POTS	none	17	0	0	15	0	0	11	0	0	7	0	0	7	0	0	17	0	0	10	0	0
	TR2	CPART11			0			0			0			0	0	4	1	3	80	0.96	0	1	1
		IIA83b	1	2	0.67	1	4	0.8	1	14	0.93	0	6	1			0			0			0
Total			**371**	**2713**	**0.88**	**289**	**37**	**0.11**	**184**	**211**	**0.53**	**246**	**3825**	**0.94**	**430**	**7**	**0.016**	**404**	**101**	**0.2**	**327**	**65**	**0.17**

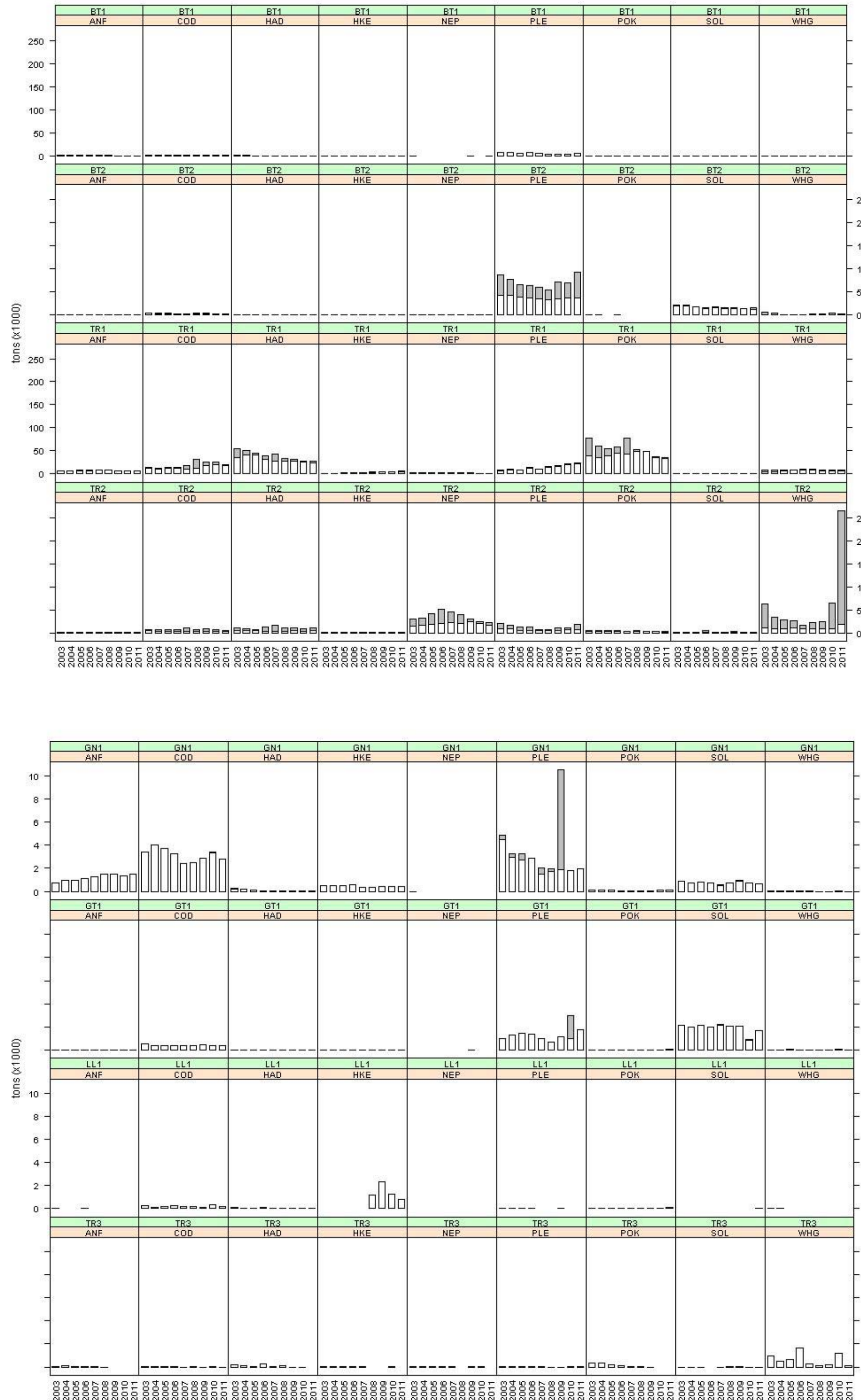


Figure 5.3.2.1; Estimated landings (white bars) and discards (grey bars) of targets species by cod plan gear category in management area 3b (North Sea, Skagerrak, Eastern Channel, 2EU). The upper chart shows the most used gears, the lower chart the remaining gears

5.3.3 ToR 1.c Catches (landings and discards) of non-cod species in weight and numbers at age by fisheries

Estimated landings and discards of haddock, whiting, anglerfish, saithe, hake, Nephrops, plaice and sole by cod plan gear category for the whole area are given in Table 5.3.3.1. The same is given for the unregulated gears in table 5.3.3.2 but for sole and plaice only. Detailed data on age compositions of landings and discards are not given here, but are available on the web site. The same applies to other species.

Information related to the Fully Documented Fishery (FDF) is dealt with specifically in section 5.3.8 further below.

As for the report of 2009, a number of figures are included in this report, displaying total landings (white) and discards (grey – when available) in weight for all regulated gears from 2004 to 2011 (Figures 5.3.3.1). Because of the limited availability and reliability of discard information for some species and from some countries contributing substantially to landings, care is required in the use of these data to draw firm conclusions about catch composition. In addition, the procedure used to raise discards and explained in section 5 may not be fully consistent with the procedures used in other contexts and therefore may not be directly comparable. In particular, the very large whiting discards estimated for 2011 relates to averaged discards rates allocated to the large French landings in area VIId rather than actual observations, which are missing in this area. The discard value for plaice in 2009 is also extraordinary high compared to the other years. This should be investigated during the follow-up meeting STECF EWG 12-12, 24-28 September 2012.

Haddock and saithe landings have slightly decreased. Also discard rates for saithe are much lower compared to former years. Plaice landings have increased and so has discard. Whitefish landings in TR2 are globally low compared to TR1 landings and Nephrops landings have decreased in recent years.

Catches with unregulated gears of sole and plaice are very small compared with the total catch (Table 5.3.3.2).

Table 5.3.3.1 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Landings (t), discards (t) and relative discard rates in weight by species and regulated gear, 2005-2011. DATA FOR OTHER SPECIES ARE AVAILABLE ON STECF WEBSITE.

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
ANF	BT1	none	359	0	0	201	14	0.07	208	0	0	162	1	0.01	110	0	0	91	0	0	113	0	0
ANF	BT2	none	81	14	0.15	69	7	0.09	88	9	0.09	92	7	0.07	90	31	0.26	183	30	0.14	156	22	0.12
ANF	GN1	none	938	0	0	1093	0	0	1289	0	0	1463	0	0	1465	0	0	1354	0	0	1529	0	0
ANF	GT1	none	3	0	0	3	0	0	1	0	0	1	0	0	6	0	0	5	0	0	6	0	0
ANF	LL1	none	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
ANF	TR1	CPart13			0			0			0			0	5738	0	0	4030	0	0	4295	0	0
ANF	TR1	none	7111	722	0.09	6952	494	0.07	7445	443	0.06	7677	346	0.04	1345	12	0.01	1355	15	0.01	1058	2	0
ANF	TR2	CPart13			0			0			0			0	1227	0	0	1224	0	0	949	0	0
ANF	TR2	none	1944	8	0	1861	27	0.01	1730	31	0.02	1857	25	0.01	397	1	0	260	1	0	257	1	0
ANF	TR3	none	27	0	0	11	0	0	11	0	0	2	0	0	0	0	0	0	0	0			0
ANF total			**10463**	**744**	**0.07**	**10191**	**542**	**0.05**	**10772**	**483**	**0.04**	**11254**	**379**	**0.03**	**10378**	**44**	**0.004**	**8502**	**46**	**0.005**	**8364**	**25**	**0.003**
HAD	BT1	none	127	0	0	81	2	0.02	117	0	0	54	0	0	34	0	0	33	0	0	52	1	0.02
HAD	BT2	none	58	15	0.21	15	3	0.17	16	2	0.11	20	9	0.31	11	0	0	19	0	0	58	13	0.18
HAD	GN1	none	97	0	0	78	0	0	58	0	0	47	0	0	36	0	0	66	0	0	57	0	0
HAD	GT1	none	2	0	0	1	0	0	1	0	0	1	0	0	2	0	0	2	0	0	3	0	0
HAD	LL1	none	24	0	0	65	0	0	12	0	0	12	0	0	14	0	0	43	0	0	37	0	0
HAD	TR1	CPart13			0			0			0			0	25116	3612	0.13	22270	2856	0.11	21009	2532	0.11
HAD	TR1	none	40887	4272	0.09	31544	7404	0.19	26491	16331	0.38	26558	6851	0.21	2610	325	0.11	2294	150	0.06	2639	308	0.1
HAD	TR2	CPart13			0			0			0			0	3274	5537	0.63	2621	5128	0.66	2144	5147	0.71
HAD	TR2	none	4825	2750	0.36	3961	8872	0.69	3253	13932	0.81	3414	6583	0.66	711	468	0.4	521	588	0.53	2175	718	0.25
HAD	TR3	none	53	1	0.02	280	0	0	5	0	0	109	0	0	1	0	0	2	0	0			0
HAD total			**46073**	**7038**	**0.13**	**36025**	**16281**	**0.31**	**29953**	**30265**	**0.50**	**30215**	**13443**	**0.31**	**31809**	**9942**	**0.24**	**27871**	**8722**	**0.24**	**28174**	**8719**	**0.24**

Table 5.3.3.1 continued

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
HKE	BT1	none	70	0	0	60	0	0	60	0	0	40	0	0	24	0	0	37	0	0	32	0	0
HKE	BT2	none	20	2	0.09	10	5	0.33	9	0	0	11	0	0	7	0	0	11	0	0	9	0	0
HKE	GN1	none	531	0	0	596	0	0	336	0	0	376	0	0	419	0	0	447	0	0	458	0	0
HKE	GT1	none	2	0	0	1	0	0	1	0	0	17	0	0	6	0	0	18	0	0	4	0	0
HKE	LL1	none	0	0	0	0	0	0			0	1182	0	0	2311	0	0	1224	0	0	767	0	0
HKE	TR1	CPart13			0			0			0			0	2059	90	0.04	1919	460	0.19	2390	139	0.05
HKE		none	1163	468	0.29	1456	412	0.22	2068	405	0.16	3162	439	0.12	1755	199	0.1	1934	320	0.14	2079	1797	0.46
HKE	TR2	CPart13			0			0			0			0	108	0	0	103	66	0.39	91	0	0
HKE		none	317	386	0.55	291	548	0.65	345	619	0.64	575	410	0.42	430	330	0.43	315	139	0.31	343	62	0.15
HKE	TR3	none	33	0	0	12	0	0	8	0	0			0	0	0	0	26	0	0	0	0	0
HKE total			**2136**	**856**	**0.29**	**2426**	**965**	**0.28**	**2827**	**1024**	**0.27**	**5363**	**849**	**0.14**	**7119**	**619**	**0.08**	**6034**	**985**	**0.14**	**6173**	**1998**	**0.24**
NEP	BT1	none	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			0	1	0	0
NEP	BT2	none	76	8	0.1	59	0	0	93	0	0	31	0	0	86	0	0	82	0	0	96	285	0.75
NEP	GN1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEP	GT1	none	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
NEP	LL1	none			0			0			0			0			0	0	0	0			0
NEP	TR1	CPart13			0			0			0			0	950	0	0	597	0	0	712	0	0
NEP	TR1	none	2091	580	0.22	2027	443	0.18	1844	443	0.19	1608	369	0.19	535	196	0.27	433	201	0.32	385	104	0.21
NEP	TR2	CPart13			0			0			0			0	19654	0	0	17093	0	0	12210	0	0
NEP	TR2	none	19012	23497	0.55	20978	30662	0.59	21508	24720	0.53	20287	20301	0.5	4096	6644	0.62	3365	3231	0.49	4088	5227	0.56
NEP	TR3	none	5	0	0	20	0	0	11	0	0			0	10	0	0	35	0	0			0
NEP total			**21184**	**24085**	**0.53**	**23084**	**31105**	**0.57**	**23456**	**25163**	**0.52**	**21926**	**20670**	**0.49**	**25333**	**6840**	**0.21**	**21605**	**3432**	**0.14**	**17492**	**5616**	**0.24**

Table 5.3.3.1 continued

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
PLE	BT1	none	5113	0	0	7712	115	0.01	5241	0	0	3012	63	0.02	3566	0	0	3661	0	0	4102	1189	0.22
PLE	BT2	none	37769	28309	0.43	35840	28073	0.44	34827	25142	0.42	31635	23053	0.42	33858	37410	0.52	36708	32770	0.47	36925	55835	0.6
PLE	GN1	none	2735	528	0.16	2915	0	0	1523	548	0.26	1731	253	0.13	1882	8617	0.82	1790	0	0	1934	1	0
PLE	GT1	none	1462	0	0	1340	0	0	987	0	0	663	9	0.01	1170	0	0	1002	1954	0.66	1748	13	0.01
PLE	LL1	none	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0
PLE	TR1	CPart13			0			0			0			0	5042	1101	0.18	5086	860	0.14	5937	531	0.08
PLE	TR1	none	7904	632	0.07	11390	2115	0.16	9675	1340	0.12	14626	1295	0.08	10878	865	0.07	14034	1121	0.07	16104	603	0.04
PLE	TR2	CPart13			0			0			0			0	1133	2617	0.7	1544	1236	0.44	1671	533	0.24
PLE	TR2	none	5691	6780	0.54	4939	8380	0.63	4377	2783	0.39	4652	2854	0.38	4431	2292	0.34	5100	2127	0.29	5796	9551	0.62
PLE	TR3	none	19	0	0	26	0	0	6	0	0	1	0	0	1	0	0	12	0	0	10	0	0
PLE total			**60694**	**36249**	**0.37**	**64164**	**38683**	**0.38**	**56636**	**29813**	**0.34**	**56320**	**27527**	**0.33**	**61962**	**52902**	**0.46**	**68938**	**40068**	**0.37**	**74228**	**68256**	**0.48**
POK	BT1	none	9	0	0	11	0	0	10	0	0	4	2	0.33	1	0	0	1	0	0	2	0	0
POK	BT2	none	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POK	GN1	none	86	0	0	72	0	0	49	0	0	44	0	0	72	0	0	128	0	0	86	0	0
POK	GT1	none	3	0	0	4	0	0	2	0	0	2	0	0	10	0	0	23	0	0	75	0	0
POK	LL1	none	4	0	0	19	0	0	3	0	0	3	0	0	7	0	0	5	0	0	74	0	0
POK	TR1	CPart13			0			0			0			0	21976	38	0	20116	1492	0.07	16869	1497	0.08
POK	TR1	none	38080	15862	0.29	45528	13392	0.23	42356	35457	0.46	48409	4583	0.09	26903	396	0.01	14462	220	0.01	16114	106	0.01
POK	TR2	CPart13			0			0			0			0	363	0	0	217	127	0.37	232	866	0.79
POK	TR2	none	3464	1238	0.26	3625	767	0.17	2645	650	0.2	3518	677	0.16	2991	237	0.07	2766	274	0.09	1739	99	0.05
POK	TR3	none	170	0	0	132	0	0	47	0	0	17	0	0	1	0	0	0	0	0	0	0	0
POK total			**41817**	**17100**	**0.29**	**49392**	**14159**	**0.22**	**45113**	**36107**	**0.44**	**51997**	**5262**	**0.09**	**52324**	**671**	**0.01**	**37718**	**2113**	**0.05**	**35191**	**2568**	**0.07**

Table 5.3.3.1 continued

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
SOL	BT1	none	43	0	0	52	0	0	30	0	0	24	0	0	26	0	0	15	0	0	15	0	0
SOL	BT2	none	16225	1344	0.08	12920	1419	0.1	15366	862	0.05	13984	605	0.04	14036	1625	0.1	12540	1659	0.12	10492	5252	0.33
SOL	GN1	none	789	0	0	708	0	0	536	36	0.06	712	16	0.02	906	62	0.06	753	0	0	637	0	0
SOL	GT1	none	2169	0	0	2011	0	0	2162	77	0.03	2055	7	0	2068	19	0.01	865	29	0.03	1693	16	0.01
SOL	LL1	none	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	1	0	0
SOL	TR1	CPart13			0			0			0			0	10	0	0	6	0	0	6	0	0
SOL	TR1	none	19	0	0	30	20	0.4	29	0	0	35	0	0	23	0	0	21	0	0	16	0	0
SOL	TR2	CPart13			0			0			0			0	108	8	0.07	56	0	0	74	0	0
SOL	TR2	none	568	4	0.01	727	3619	0.83	775	216	0.22	801	43	0.05	740	2048	0.73	567	0	0	625	110	0.15
SOL	TR3	none	2	0	0	1	0	0	1	0	0	6	0	0	6	0	0	3	0	0	4	0	0
SOL total			**19815**	**1348**	**0.09**	**16449**	**5058**	**0.24**	**18899**	**1191**	**0.06**	**17617**	**671**	**0.04**	**17923**	**3762**	**0.17**	**14826**	**1688**	**0.10**	**13563**	**5378**	**0.28**
WHG	BT1	none	3	0	0	6	1	0.14	3	0	0	1	0	0	1	0	0	1	0	0	0	2	1
WHG	BT2	none	222	317	0.59	214	195	0.48	134	535	0.8	152	727	0.83	509	341	0.4	485	2781	0.85	473	2024	0.81
WHG	GN1	none	8	0	0	10	0	0	15	0	0	3	0	0	5	0	0	9	0	0	4	0	0
WHG	GT1	none	34	0	0	21	2	0.09	13	7	0.35	10	19	0.66	12	0	0	16	45	0.74	20	1	0.05
WHG	LL1	none	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WHG	TR1	CPart13			0			0			0			0	6542	1913	0.23	5726	2041	0.26	6513	709	0.1
WHG	TR1	none	5387	2167	0.29	7510	1604	0.18	8269	1928	0.19	7762	2129	0.22	188	140	0.43	257	226	0.47	289	73	0.2
WHG	TR2	CPart13			0			0			0			0	2005	1168	0.37	1931	3624	0.65	2239	3435	0.61
WHG	TR2	none	8256	20445	0.71	9869	15523	0.61	9376	7685	0.45	8245	14082	0.63	6090	14229	0.7	7553	51964	0.87	15323	243199	0.94
WHG	TR3	none	637	0	0	1632	0	0	311	0	0	129	0	0	196	0	0	1187	0	0	124	0	0
WHG total			**14547**	**22929**	**0.61**	**19262**	**17325**	**0.47**	**18121**	**10155**	**0.36**	**16302**	**16957**	**0.51**	**15548**	**17791**	**0.53**	**17165**	**60681**	**0.78**	**24985**	**249443**	**0.91**

Table 5.3.3.2 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Landings (t), discards (t) and relative discard rates in weight by species and unregulated gear, 2005-2011. DATA FOR OTHER SPECIES ARE AVAILABLE ON STECF WEBSITE.

SPECIES	REG_GEAR	SPECON	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
PLE	BEAM	none	74	0	0	45	0	0	41	0	0	12	0	0	26	0	0	118	0	0	60	0	0
	DEM_SEINE	none	0	0	0	6	0	0			0			0	3	0	0	12	0	0	0	0	0
	DREDGE	none	33	0	0	7	0	0	3	0	0	7	0	0	8	0	0	23	0	0	12	0	0
	none	none	23	0	0	23	0	0	63	0	0	17	0	0	22	0	0	8	0	0	19	0	0
	OTTER	none	120	45	0.27	41	0	0	27	483	0.95	15	0	0	13	5	0.28	252	0	0	22	29	0.57
	PEL_SEINE	none	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0			0
	PEL_TRAWL	none	14	0	0	14	0	0	2	0	0	13	0	0	14	0	0	9	0	0	14	0	0
	POTS	none	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	8	0	0	5	0	0
	TR2	CPART11			0			0			0			0	2	32	0.94	1	58	0.98	1	48	0.98
		IIA83b	8	19	0.7	6	12	0.67	3	69	0.96	2	73	0.97			0			0			0
PLE total			**273**	**64**	**0.19**	**143**	**12**	**0.08**	**140**	**552**	**0.80**	**66**	**73**	**0.53**	**88**	**37**	**0.30**	**431**	**58**	**0.12**	**133**	**77**	**0.37**
SOL	BEAM	none	40	0	0	18	0	0	27	0	0	17	0	0	24	0	0	30	0	0	17	0	0
	DEM_SEINE	none			0			0			0			0			0			0			0
	DREDGE	none	43	0	0	5	0	0	4	0	0	4	0	0	7	0	0	24	0	0	9	0	0
	none	none	1	0	0	2	0	0	2	0	0	11	0	0	11	0	0	0	0	0	0	0	0
	OTTER	none	115	0	0	48	0	0	20	0	0	20	0	0	20	0	0	14	0	0	10	0	0
	PEL_TRAWL	none	15	0	0	14	0	0	5	0	0	17	0	0	17	0	0	12	0	0	15	0	0
	POTS	none	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	5	0	0	3	0	0
	TR2	CPART11			0			0			0			0	1	0	0	0	0	0	1	3	0.75
		IIA83b	1	0	0	1	0	0	2	2	0.5	1	2	0.67			0			0			0
SOL total			**215**	**0**	**0**	**88**	**0**	**0**	**62**	**2**	**0.03**	**70**	**2**	**0.03**	**80**	**0**	**0**	**85**	**0**	**0**	**55**	**3**	**0.05**

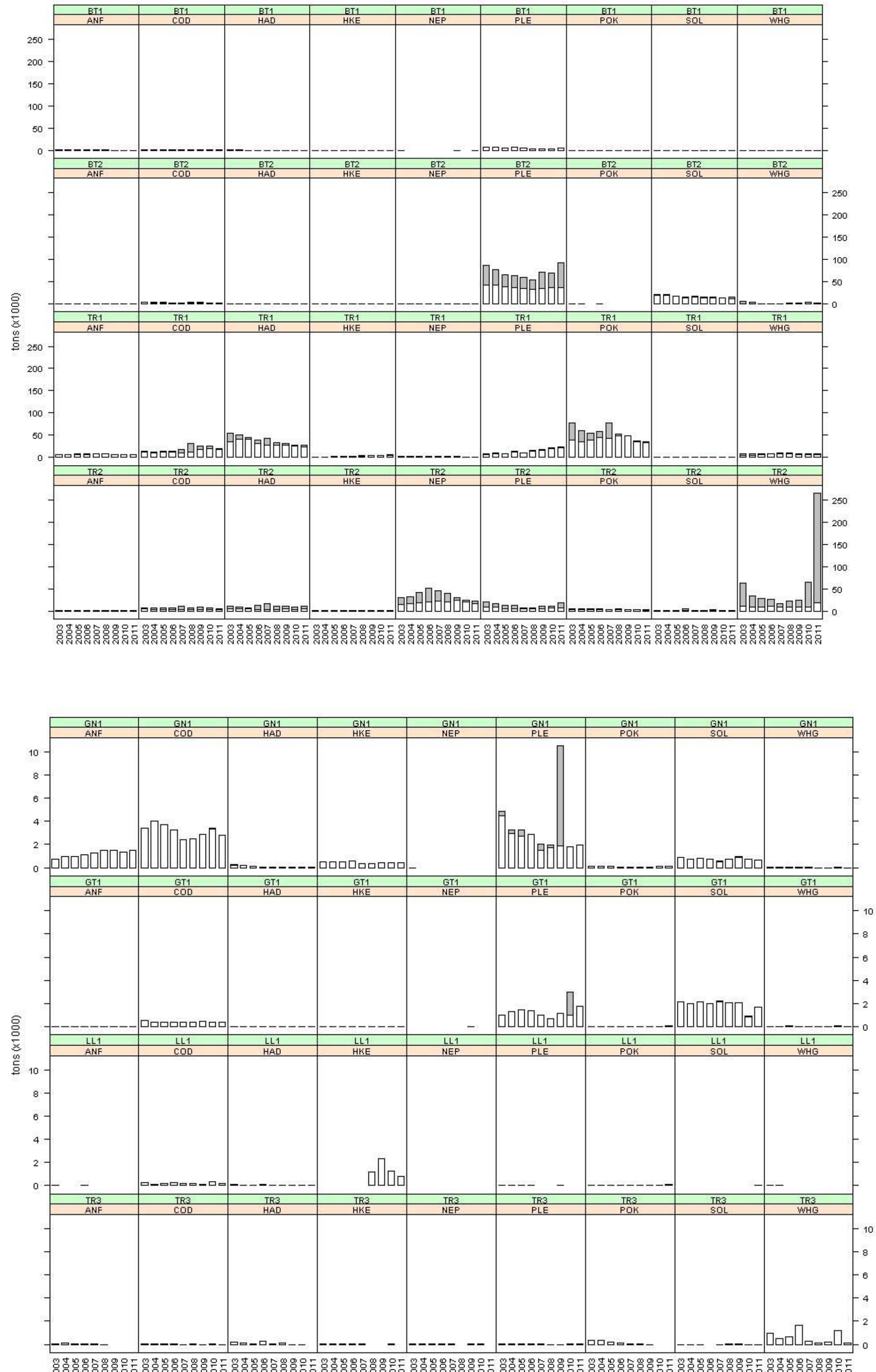


Figure 5.3.3.1; Estimated landings (white bars) and discards (grey bars) of targets species by cod plan gear categories in management area 3b (North Sea, Skagerrak, Eastern Channel, 2EU). The upper chart shows the most used gears, the lower chart the remaining gears.

5.3.4 ToR 1.d CPUE and LPUE of cod, plaice and sole by fisheries

Catch rates for cod, plaice and sole in g/KW-day for the regulated cod categories are given in Tables 5.3.4.1 – 5.3.4.3. In some cases the data refer to landings only, depending on whether discard data were available. In the context of possible effort management measures, it is useful to summarise the impact of each gear category in terms of the relative quantity removed per unit of effort. Using this approach, the CPUE for a given gear, when compared with the CPUE of another gear for the same period, can be used as a proxy for the relative fishing power of the gear. Therefore, the gear categories as ranked with regards to highest 2011 CPUE for cod, plaice and sole are indicated in the Tables. In addition, CPUE and LPUE by year are plotted (Figure 5.3.4.1) by species for the first four gear categories (when ranked by 2007-2011 average).

For cod (Table 5.3.4.1), CPUE for most gears has decreased in 2011 when compared to 2010, following a general increasing trend over recent years. Lower discard estimates in 2011 for the main gear (TR1), lower total landings and an estimated increasing stock size in 2011 from the most recent assessment (ICES, 2012) suggests this decrease in CPUE may be due to increased cod avoidance. CPUE for gillnets (GN1) has been very similar to that of the large mesh otter trawl and seines (TR1) in the past two years, and also mirrors the TR1 decline in CPUE and LPUE in 2011. CPUE for TR1 CPart13 remains the highest of the fleet categories, including higher than the TR1 none category. As noted previously in this report, whilst this appears counter-intuitive it may reflect the fact that the major cod catching fleets (primarily Scotland) are operating in more northerly waters where cod is more abundant, where the TR1 none fleets are operating in more southerly waters where cod is depleted.

Catch rates for LL1 and BT2 have increased slightly, although total landings by both gears are relatively low and have decreased on 2010 (Table 5.3.2.1). Catch rates for TR2 CPart13 have remained stable over recent years, despite a decrease in TR2 none catch rate being observed; this is contrary to expected as increasing cod abundance would suggest an increased catch rates for both categories. The exempt TR2 CPart11 catch rate for 2011 again returned to a very low level, which reflects the fact that the Scottish TR2 fleet associated CPart11 catches are again absent in 2011.

With regards to flatfish, it should be noted that plaice and sole in the Skagerrak (which is categorised as part of management area 3b) are considered as part of the same stocks as plaice and sole in the Kattegat (management area 3a). Both stocks are considered as being distinct from the North Sea stocks, as are plaice and sole in the Eastern Channel (another part of 3b). As a result, the CPUE data for plaice and sole in area 3b cover three different stocks of each species, and so need to be interpreted with care. Notwithstanding this large increases in catch rates have been observed in 2011 for the main gears (BT1, BT2, TR1, TR2; Table 5.3.4.2) which reflects a general increasing trend over the time series which is also supported by a rapidly increasing stock biomass from the assessment (ICES, 2012). Perhaps surprisingly the TR2 CPart13 has seen a decrease in catch rates for plaice; though absolute catch by the main TR2 fleet operating in the north sea (Scotland) is low, reflecting the fact that it is largely a Nephrops targeted fishery in more northerly waters.

CPUE for sole (Table 5.3.4.3) is highest for GT1 again in 2011, following a drop in 2010. CPUE for the dominant gear in terms of absolute landings (BT2; Table 5.3.3.1) has steadily increased over the past few years, whilst LPUE has decreased, suggesting an increase in discarding. This is apparent in the increased discard estimates for the BT2 fleet in 2011 (Table 5.3.3.1); however there are known to be some issues with the discard estimates for the Netherlands and the values may be subject to revision for the September report which would affect CPUE.

Table 5.3.4.1 Skagerrak, North Sea (incl. 2EU) and Eastern Channel. Cod CPUE (g/(kW*days)) by regulated gear category and year, 2003-2011, sorted in descending order with regards to CPUE 2011.

SPECIES	AREA	GEAR	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	2011	2009-2011
COD	3b	TR1	CPART13	0	0	0	0	0	0	1042	1164	980	1062
COD	3b	GN1	none	743	929	929	807	795	819	905	1070	913	964
COD	3b	TR1	none	402	471	534	549	749	1170	930	983	803	909
COD	3b	LL1	none	413	306	362	593	459	333	137	491	494	317
COD	3b	TR2	none	179	186	192	224	336	237	334	386	278	333
COD	3b	BT1	none	111	213	221	234	187	256	132	184	263	190
COD	3b	TR2	CPART13	0	0	0	0	0	0	174	179	182	178
COD	3b	GT1	none	140	92	78	60	63	97	119	150	120	128
COD	3b	BT2	none	52	60	47	49	43	88	68	54	48	57
COD	3b	TR3	none	15	8	11	15	4	57	3	14	8	10
COD	3b	TR2	CPART11	0	0	0	0	0	0	5	103	1	38

Table 5.3.4.2 Skagerrak, North Sea (incl. 2EU) and Eastern Channel. Plaice CPUE (g/(kW*days)) by regulated gear category and year, 2003-2011, sorted in descending order with regards to CPUE 2011.

SPECIES	AREA	GEAR	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	2011	2009-2011
PLE	3b	BT1	none	1213	1111	1008	1374	1420	1434	2041	2094	3395	2477
PLE	3b	BT2	none	1323	1185	1050	1155	1118	1355	1753	1777	2725	2052
PLE	3b	TR1	none	264	352	322	501	462	612	1118	1557	1909	1504
PLE	3b	TR2	none	500	404	356	381	213	237	356	484	1059	606
PLE	3b	GN1	none	1064	758	808	728	679	645	3307	556	632	1504
PLE	3b	GT1	none	282	344	332	234	179	174	298	1080	615	618
PLE	3b	TR1	CPART13	0	0	0	0	0	0	399	440	497	443
PLE	3b	TR2	CPART13	0	0	0	0	0	0	352	268	254	294
PLE	3b	TR2	CPART11	0	0	0	0	0	0	43	74	67	61
PLE	3b	TR3	none	13	6	7	13	6	0	1	9	21	9
PLE	3b	LL1	none	2	27	3	5	0	0	1	0	0	1

Table 5.3.4.3 Skagerrak, North Sea (incl. 2EU) and Eastern Channel. Sole CPUE (g/(kW*days)) by regulated gear category and year, 2004-2010, sorted in descending order with regards to CPUE 2010.

SPECIES	AREA	GEAR	SPECON	2003	2004	2005	2006	2007	2008	2009	2010	2011	2009-2011
SOL	3b	GT1	none	598	527	493	351	407	533	532	326	597	492
SOL	3b	BT2	none	319	339	279	259	302	362	385	363	463	401
SOL	3b	GN1	none	187	164	195	177	188	237	305	234	208	250
SOL	3b	TR2	none	24	33	16	124	29	27	148	38	51	85
SOL	3b	BT1	none	17	13	8	9	8	11	15	9	10	11
SOL	3b	TR2	CPART13	0	0	0	0	0	0	11	5	9	8
SOL	3b	TR3	none	1	0	1	0	1	5	7	2	8	5
SOL	3b	TR2	CPART11	0	0	0	0	0	0	1	0	5	2
SOL	3b	LL1	none	0	0	0	0		0	0	0	3	1
SOL	3b	TR1	none	1	1	1	2	1	1	2	2	2	2
SOL	3b	TR1	CPART13	0	0	0	0	0	0	1	0	0	1

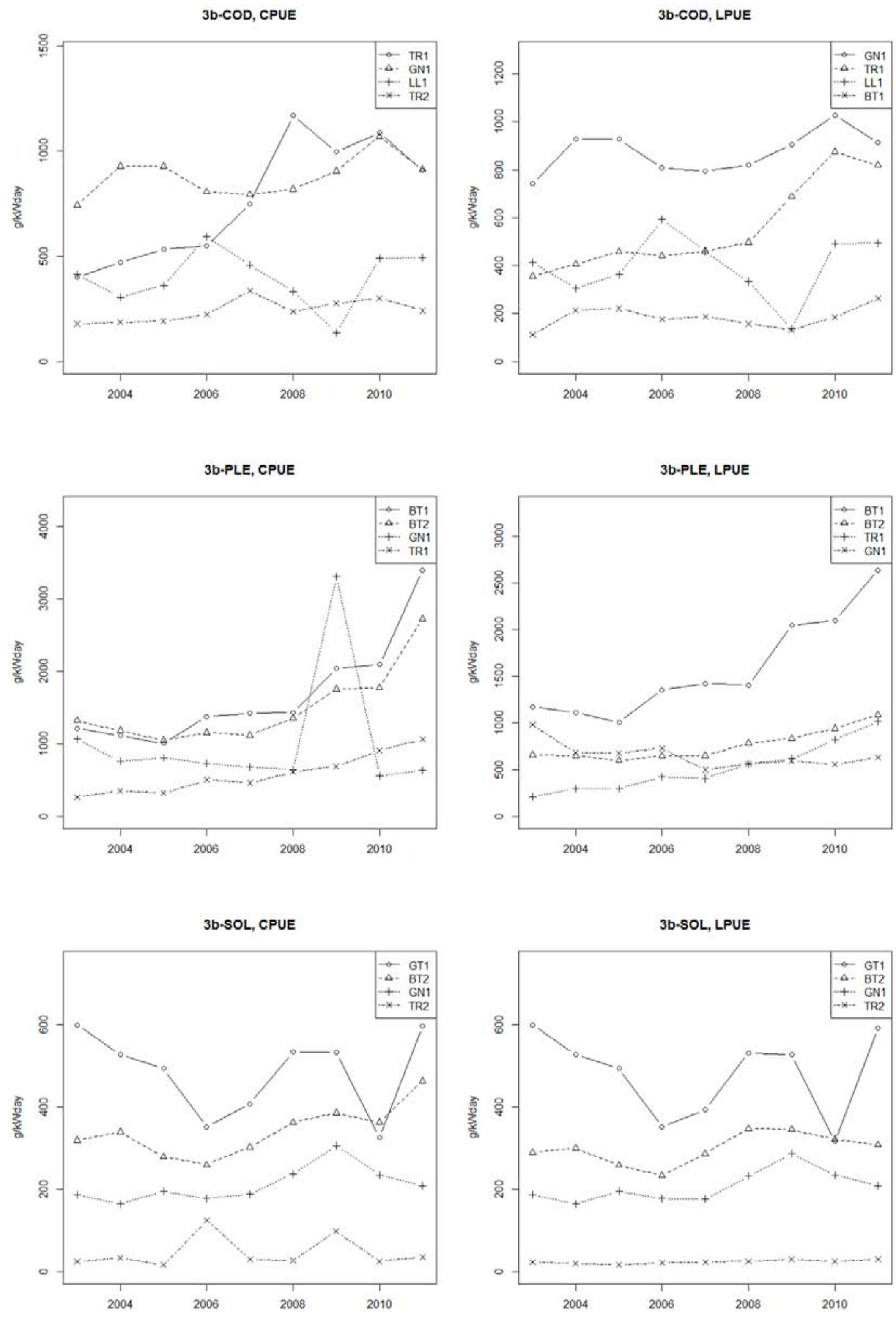


Figure 5.3.4.1 Area 3b. CPUE and LPUE (g/(kW*days) of cod, plaice and sole for the four main cod plan categories.

5.3.5 ToR 2 Rank regulated gear groups on the basis of catches expressed both in weight and in number of cod

Rankings of gears in terms of catches and landings are shown in Tables 5.3.5.1 and 5.3.5.2.

With regards to cod, TR1 and TR2 cumulates to more than 80% of the catches in 2011. The most important gears for plaice are BT2 and TR1, while for sole BT2 alone contributes to more than 80% of the catches.

Table 5.3.5.1. Skagerrak, North Sea including 2 EU and Eastern Channel: Ranked categories according to relative cod, plaice and sole **catches** in weight in area 3b, 2004-2011. Ranking is according to the year 2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Cumul 2011
IIa	3b	COD	TR1	0.42478	0.48485	0.48537	0.50881	0.67349	0.63845	0.63992	0.64274	1.000
IIa	3b	COD	TR2	0.24957	0.23033	0.25683	0.32166	0.16589	0.20181	0.19286	0.18268	0.357
IIa	3b	COD	GN1	0.13761	0.12832	0.10592	0.06904	0.05569	0.07107	0.08713	0.091	0.175
IIa	3b	COD	BT2	0.1309	0.10078	0.0883	0.06567	0.07871	0.06815	0.05383	0.05299	0.084
IIa	3b	COD	BT1	0.04029	0.03838	0.04384	0.01962	0.01214	0.00569	0.00817	0.01336	0.031
IIa	3b	COD	GT1	0.01158	0.01173	0.01129	0.00987	0.00825	0.01163	0.01038	0.01122	0.017
IIa	3b	COD	LL1	0.00433	0.00455	0.00748	0.00522	0.00458	0.00314	0.00726	0.00588	0.006
IIa	3b	COD	TR3	0.00095	0.00106	0.00098	0.00011	0.00126	0.00005	0.00046	0.00013	0.000

ANNEX	REG_AREA	SPECIES	REG_GEAR	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Cumul 2011
IIa	3b	PLE	BT2	0.67977	0.68162	0.62144	0.6937	0.65224	0.62046	0.63737	0.65102	1.000
IIa	3b	PLE	TR1	0.08294	0.08805	0.13131	0.12742	0.18988	0.15571	0.19357	0.16265	0.349
IIa	3b	PLE	TR2	0.14136	0.12864	0.12949	0.08281	0.08952	0.09118	0.09181	0.12318	0.186
IIa	3b	PLE	BT1	0.05499	0.05274	0.0761	0.06063	0.03667	0.03105	0.03358	0.03713	0.063
IIa	3b	PLE	GN1	0.02932	0.03365	0.02834	0.02396	0.02366	0.0914	0.01642	0.01358	0.026
IIa	3b	PLE	GT1	0.01132	0.01508	0.01303	0.01142	0.00801	0.01019	0.02712	0.01237	0.012
IIa	3b	PLE	TR3	0.0002	0.0002	0.00025	0.00007	0.00001	0.00001	0.00011	0.00007	0.000
IIa	3b	PLE	LL1	0.0001	0.00001	0.00002	0	0	0.00001	0.00001	0.00001	0.000

ANNEX	REG_AREA	SPECIES	REG_GEAR	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Cumul 2011
IIa	3b	SOL	BT2	0.84388	0.83018	0.66665	0.80777	0.79769	0.7222	0.85981	0.83117	1.000
IIa	3b	SOL	GT1	0.07509	0.10249	0.0935	0.11145	0.11275	0.09624	0.05414	0.09022	0.169
IIa	3b	SOL	TR2	0.04969	0.02703	0.2021	0.04933	0.04615	0.13396	0.03779	0.04276	0.079
IIa	3b	SOL	GN1	0.02752	0.03728	0.03292	0.02847	0.03981	0.04464	0.0456	0.03363	0.036
IIa	3b	SOL	TR1	0.00089	0.0009	0.00237	0.00144	0.00191	0.00148	0.00157	0.00116	0.002
IIa	3b	SOL	BT1	0.00289	0.00203	0.00242	0.00149	0.00137	0.0012	0.00091	0.00079	0.001
IIa	3b	SOL	TR3	0.00004	0.00009	0.00005	0.00005	0.00033	0.00028	0.00018	0.00021	0.000
IIa	3b	SOL	LL1	0	0	0		0	0	0	0.00005	0.000

Table 5.3.5.2. Skagerrak, North Sea including 2 EU and Eastern Channel: Ranked categories according to relative cod, plaice and sole **landings** in weight in area 3b, 2004-2011. Ranking is according to the year 2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Cumul 2011
IIa	3b	COD	TR1	0.47412	0.52462	0.53877	0.55353	0.58893	0.6556	0.68561	0.68751	1.000
IIa	3b	COD	TR2	0.16651	0.14857	0.13941	0.15713	0.13295	0.12242	0.10586	0.11565	0.313
IIa	3b	COD	GN1	0.17845	0.16157	0.14654	0.12232	0.11461	0.10567	0.11126	0.10812	0.197
IIa	3b	COD	BT2	0.10675	0.09489	0.10251	0.10534	0.1192	0.0858	0.06232	0.05242	0.089
IIa	3b	COD	BT1	0.05229	0.04846	0.04544	0.03476	0.01533	0.00846	0.01089	0.01588	0.036
IIa	3b	COD	GT1	0.01503	0.01481	0.01562	0.01748	0.01697	0.01729	0.01378	0.01329	0.020
IIa	3b	COD	LL1	0.00561	0.00574	0.01035	0.00925	0.00942	0.00467	0.00967	0.00699	0.007
IIa	3b	COD	TR3	0.00124	0.00134	0.00136	0.0002	0.00259	0.00007	0.00061	0.00015	0.000

ANNEX	REG_AREA	SPECIES	REG_GEAR	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Cumul 2011
IIa	3b	PLE	BT2	0.60548	0.62229	0.55857	0.61493	0.5617	0.54642	0.53247	0.49745	1.000
IIa	3b	PLE	TR1	0.11409	0.13023	0.17751	0.17083	0.25969	0.25694	0.27735	0.29694	0.503
IIa	3b	PLE	TR2	0.12839	0.09377	0.07697	0.07728	0.0826	0.0898	0.09639	0.1006	0.206
IIa	3b	PLE	BT1	0.08998	0.08424	0.12019	0.09254	0.05348	0.05755	0.0531	0.05526	0.105
IIa	3b	PLE	GN1	0.04307	0.04506	0.04543	0.02689	0.03074	0.03037	0.02596	0.02605	0.050
IIa	3b	PLE	GT1	0.01852	0.02409	0.02088	0.01743	0.01177	0.01888	0.01453	0.02355	0.024
IIa	3b	PLE	TR3	0.00032	0.00031	0.00041	0.00011	0.00002	0.00002	0.00017	0.00013	0.000
IIa	3b	PLE	LL1	0.00016	0.00002	0.00003	0	0	0.00002	0.00001	0.00001	0.000

ANNEX	REG_AREA	SPECIES	REG_GEAR	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Cumul 2011
IIa	3b	SOL	BT2	0.84427	0.81882	0.78546	0.81306	0.79378	0.78317	0.84581	0.77358	1.000
IIa	3b	SOL	GT1	0.08524	0.10946	0.12226	0.1144	0.11665	0.11539	0.05834	0.12482	0.226
IIa	3b	SOL	TR2	0.03501	0.02867	0.0442	0.04101	0.04547	0.04732	0.04209	0.05154	0.102
IIa	3b	SOL	GN1	0.03124	0.03982	0.04304	0.02836	0.04042	0.05055	0.05079	0.04697	0.050
IIa	3b	SOL	TR1	0.00092	0.00096	0.00182	0.00153	0.00199	0.00179	0.00175	0.00162	0.003
IIa	3b	SOL	BT1	0.00328	0.00217	0.00316	0.00159	0.00136	0.00145	0.00101	0.00111	0.001
IIa	3b	SOL	TR3	0.00004	0.0001	0.00006	0.00005	0.00034	0.00033	0.0002	0.00029	0.000
IIa	3b	SOL	LL1	0	0	0		0	0	0	0.00007	0.000

5.3.6 ToR 3 Remarks on quality of catches and discard estimates

STECF EWG 12-06 has no specific comments in addition to those given in section 4.

5.3.7 ToR 4 Information on small boats (<10m)

5.3.7.1 Fishing effort of small boats by Member State

Effort (Table 5.3.7.1.1) is provided for the vessels under 10m (including Article 11 vessels!) in area 3b, for all countries except Belgium. German data are incomplete as logbook information is not mandatory for vessels under 10m in Germany. UK data are poor until the introduction of registration of buyers and sellers legislation in 2006 after which recording of effort has improved. Danish data are incomplete till 2010. Therefore, up to 2010 data have to be regarded as not representative and should not be interpreted. Especially the increase in effort around 2006 and 2010 does most likely not mean an increase in effort in reality. Between 2010 and 2011 effort was stable. In 2011 around half of the effort is operated with Pots (47%), and secondly GN1 (13%) and TR2 (12%). Unregulated gears account for 60% of total effort from vessels <10m. The highest effort in 2011 was recorded by England, Scotland and France (Table 5.3.7.1.2.)

For the whole area 3b in 2011, the effort from vessels <10m was 10% of the total effort in this area.

Table 5.3.7.1.1 Skagerrak, North Sea and Eastern Channel. Fishing effort (kwDays) by vessels <10m. Data before 2010 are not representative! Data include Art. 11 vessels!

GEAR	2005	2006	2007	2008	2009	2010	2011
BEAM	36682	46668	73298	111725	81100	38393	47716
BT1	4	4				4	4
BT2	45250	35829	62071	65656	58840	51668	30057
DEM_SEINE	301	503	457	679	6052	4971	197
DREDGE	265709	259194	271683	365924	356467	328637	375556
GN1	449130	967760	1795130	1695956	1804621	1679578	1557873
GT1	612516	873714	514275	473795	563927	634550	1019166
LL1	262614	213202	378603	329965	242143	504597	548186
none	126546	98136	106787	84641	186447	838170	909115
OTTER	236578	71367	91865	77770	119320	145596	100782
PEL_SEINE	5461	5540	4176	15475	19220	27581	3466
PEL_TRAWL	11819	5010	11413	19155	31387	28456	27752
POTS	2620079	5289854	5404850	5176992	5654504	6473804	5855289
TR1	71177	99442	184075	322486	256321	258155	265313
TR2	1084900	1312286	1586111	1255512	1175079	1271477	1536192
TR3	128588	170654	128513	53370	55091	58102	69366
Total	5957354	9449163	10613307	10049101	10610519	12343739	12346030

Table 5.3.7.1.2 Skagerrak, North Sea and Eastern Channel. Fishing effort (kwDays) by vessels <10m by country.

COUNTRY	2005	2006	2007	2008	2009	2010	2011
DEU	8359	33326	48357	31085	38899	26849	39088
DNK	3862	6718	3526	2788	4737	660643	721329
ENG	1814928	4599388	5779502	5671978	4988765	4838386	5528687
FRA	1593914	1664842	1498554	892023	889152	1894080	1651056
GBC							
GBG	597	2939		224			
NIR	209	14136	1672	112	371		112
NLD	155640	176535	174381	197396	215075	237511	185237
SCO	2237074	2729893	2959815	3099954	3399031	3491486	3492902
SWE	142771	221386	147500	153541	1074489	1194784	727619
Total	5957354	9449163	10613307	10049101	10610519	12343739	12346030

5.3.7.2 Catches (landings and discards) of cod and associated species by small boats by Member State

Landings are provided for the vessels under 10m in area 3b, for all countries except Belgium, for the top 10 species ranked according to landings in 2011 (Table 5.3.7.2.1). The main fishery is for edible crab, and secondly for cod, Nephrops and plaice. For the whole area 3b in 2011, the landings from vessels<10m represent around 5, 7, 9 and 2% of the total landings of cod, Nephrops, sole and plaice, respectively. Information by country is available from the STECF website.

The details by gear for cod, plaice and sole is given in Table 5.3.7.2.2. From the regulated gears passive gears are most important. However, substantial landings are reported under none for vessels <10m.

Table 5.3.7.2.1 Skagerrak, North Sea and Eastern Channel. Landings (t) by vessels <10m. Only top 10 species according to landings in 2011 are shown. Information for other species is available from the STECF website.

SPECIES	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L	2011 L
CRE	2182	4211	4212	3917	3473	3822	4098
OTH	1678	1796	2103	2166	3389	2076	2296
COD	1863	1843	1400	1558	1574	1530	1483
PLE	1306	1613	1230	1322	1556	1283	1461
NEP	1649	2304	2007	1460	1920	1288	1295
SOL	789	933	1108	1037	1508	1032	1285
MAC	441	523	453	527	551	821	851
HER	505	731	555	517	851	835	647
SCE	559	584	549	569	558	580	632
BSS	254	225	250	287	383	531	414
Total	**11226**	**14763**	**13867**	**13360**	**15763**	**13798**	**14462**

Table 5.3.7.2.2 Skagerrak, North Sea and Eastern Channel. Landings (t) of cod, plaice and sole by vessels under 10m, 2005-2011

SPECIES	REG_GEAR	2005 L	2006 L	2007 L	2008 L	2009 L	2010 L	2011 L
COD	BEAM	0					1	0
COD	BT1							0
COD	BT2	0	0	0	0	36	1	2
COD	DREDGE	0	0	1	0	2	0	4
COD	GN1	640	883	580	660	569	461	372
COD	GT1	66	67	62	67	128	94	102
COD	LL1	108	124	172	262	229	297	161
COD	none	951	600	411	398	370	443	571
COD	OTTER	28	4	1	0	0	1	0
COD	PEL_SEINE					0		
COD	PEL_TRAWL	1	1	0	0	0		0
COD	POTS	11	11	8	18	52	46	58
COD	TR1	34	46	53	77	85	73	76
COD	TR2	24	107	112	76	103	113	137
COD	TR3		0	0	0			
COD total		**1863**	**1843**	**1400**	**1558**	**1574**	**1530**	**1483**
PLE	BEAM	6	0	0	0	0	0	0
PLE	BT2	60	38	41	36	373	23	28
PLE	DREDGE	0	1	3	3	2	0	3
PLE	GN1	299	396	327	368	368	301	334
PLE	GT1	123	136	115	65	78	126	130
PLE	LL1	3	2	1	1	1	2	2
PLE	none	602	582	396	499	394	464	592
PLE	OTTER	81	12	1	0	0	12	9
PLE	PEL_TRAWL	1	0	1	1	1	0	2
PLE	POTS	0	1	2	4	9	6	28
PLE	TR1	80	169	160	249	191	233	175
PLE	TR2	51	276	183	96	139	115	158
PLE	TR3	0	0	0	0		1	
PLE total		**1306**	**1613**	**1230**	**1322**	**1556**	**1283**	**1461**
SOL	BEAM	7	0	0	0	0	0	0
SOL	BT2	40	22	44	42	326	20	16
SOL	DREDGE	0	1	2	3	1	0	11
SOL	GN1	247	398	572	445	597	492	474
SOL	GT1	268	195	119	144	156	149	309
SOL	LL1	2	1	0	3	3	7	2
SOL	none	56	34	38	50	51	27	38
SOL	OTTER	82	34	1	0	1	8	19
SOL	PEL_SEINE					0		
SOL	PEL_TRAWL	0	0	0	0	0	0	0
SOL	POTS	1	0	2	14	6	14	15
SOL	TR1	3	8	24	99	90	60	57
SOL	TR2	83	239	305	237	277	255	344
SOL	TR3	0	1	1			0	
SOL total		**789**	**933**	**1108**	**1037**	**1508**	**1032**	**1285**

5.3.8 ToR 5 Evaluation of fully documented fisheries FDF

5.3.8.1 Fishing effort of FDF by Member State and fisheries in comparison with fisheries not working under FDF provisions

Table 5.3.8.1.1 shows that during 2010 nominal fishing effort (KW*days) by vessels operating in Fully Documented Fisheries (FDF) trials in the Skagerrak, North Sea and Eastern Channel was a small proportion of the total effort (2.2%), but was significant for the main cod gear (14% of effort by otter trawls of ≥120 mm mesh size (TR1)).

In 2011 FDF is still a small proportion of the total effort (4.9%), but it's increasing. The significance for the main cod gear has increased further and is 27.2% now. All FDF countries contributed to this increase.

Table 5.3.8.1.1 Skagerrak, North Sea and Eastern Channel: (A part 1) total fishing effort for countries with Fully Documented Fisheries (FDF, REM/CCTV), (B) FDF (REM/CCTV) nominal fishing effort (KW days) and (A part 2, C) the percentage of total effort attributable to FDFs. The figures for 2010 are slightly changed compared to the ones of last year's report, due to a revision of the Danish and UK FDF data for 2010.

Table A (part 1)

Country	Gear	2010	2011
DNK	BEAM	944206	583866
	BT1	569744	433062
	BT2	3678	440
	DEM_SEINE		104
	DREDGE	263639	396732
	GN1	1567471	1443100
	GT1	178830	223000
	LL1	48293	62587
	none	77474	146197
	OTTER	5540793	5884277
	PEL_SEINE	666954	343153
	PEL_TRAWL	3995534	3596601
	POTS	8460	6205
	TR1	4972090	4582610
	TR2	3199997	3317731
	TR3	1077111	334898
DNK Total		23114274	21354563

Table B

Country	Gear	2010	2011
DNK			
	GN1		12669
	LL1		11445
	none	3170	10560
	OTTER		660
	PEL_TRAWL	2420	
	POTS	983	
	TR1	1038901	2175182
	TR2	10290	22030
DNK Total		1055764	2232546

Table C

2010	2011
0.0%	0.9%
0.0%	18.3%
4.1%	7.2%
0.0%	0.0%
0.1%	0.0%
11.6%	0.0%
20.9%	47.5%
0.3%	0.7%
4.6%	10.5%

Table A (part 1, contd.)

Country	Gear	2010	2011
ENG	BEAM	476966	153483
	BT1	202684	169873
	BT2	3528678	2942307
	DEM_SEINE	4500	946
	DREDGE	876060	778036
	GN1	211651	252170
	GT1	25367	20026
	LL1	57724	44458
	OTTER	15400	182326
	PEL_TRAWL	888582	896373
	POTS	1495974	1610174
	TR1	2110555	2142321
	TR2	1720025	1620355
	TR3	718	621
ENG Total		11614884	10813469
NLD	BEAM	5213264	4126270
	BT1	488309	308958
	BT2	28648855	25777844
	DEM_SEINE	38466	
	DREDGE	462376	497268
	GN1	357091	316070
	GT1	37399	21431
	OTTER	73483	4111
	PEL_SEINE	5453	
	PEL_TRAWL	2522113	2242925
	POTS	12594	6133
	TR1	1415882	1176692
	TR2	1936340	1921901
	TR3	31973	23268
NLD Total		41243598	36422871

Table B (contd.)

Country	Gear	2010	2011
ENG			
	DREDGE	9847	2685
	GN1	22101	31604
	OTTER		3395
	POTS	597	
	TR1	425333	686953
ENG Total		457878	724637
NLD	BEAM		442
	GN1		4862
	GT1		663
	TR1		197344
	TR2		211502
NLD Total			414813

Table C (contd.

2010	2011
1.1%	0.3%
10.4%	12.5%
0.0%	1.9%
0.0%	0.0%
20.2%	32.1%
3.9%	6.7%
0.0%	0.0%
0.0%	1.5%
0.0%	3.1%
0.0%	16.8%
0.0%	11.0%
0.0%	1.1%

Table A (part 1, contd.)

Country	Gear	2010	2011
SCO	BEAM		
	BT1		
	BT2	144306	
	DEM_SEINE	905	1125
	DREDGE	2616884	2204099
	GN1	440579	607650
	LL1	301689	156352
	none	41037	55224
	OTTER	857080	668510
	PEL_SEINE	1006	61300
	PEL_TRAWL	1132259	1283926
	POTS	1053821	1058202
	TR1	10444829	9986666
	TR2	8302801	6807292
	TR3	27524	
SCO Total		25364720	22890346
Grand Total for all FDF countries		101337476	91481249

Table B (contd.)

Country	Gear	2010	2011
SCO			
	TR1	1531775	2869441
	TR2	81403	
SCO Total		1613178	2869441
Grand Total		3126820	6241437

Table C (contd.

	2010	2011
TR1	14.7%	28.7%
TR2	1.0%	0.0%
SCO Total	6.4%	12.5%
Grand Total	3.1%	6.8%

Table A (part 2)

Effort of all IIA 3b countries by gear

Gear	2010	2011
BEAM	12674009	9003515
BT1	1748301	1558336
BT2	39106942	34041779
DEM_SEINE	43871	2175
DREDGE	4555360	4305027
GN1	3217644	3063840
GT1	2736982	2865189
LL1	584119	366261
none	203172	303705
OTTER	9754159	10088642
PEL_SEINE	1134323	1028205
PEL_TRAWL	11522732	11113899
POTS	3999459	3717444
TR1	23237382	21761123
TR2	26091546	23920674
TR3	1291022	486169
Grand Total	141901023	127625983

Gear	2010	2011
BEAM		442
BT1		
BT2		
DEM_SEINE		
DREDGE	9847	2685
GN1	22101	49135
GT1		663
LL1		11445
none	3170	10560
OTTER		4055
PEL_SEINE		
PEL_TRAWL	2420	
POTS	1580	
TR1	2996009	5928920
TR2	91693	233532
TR3		
Grand total	3126820	6241437

Gear	2010	2011
BEAM		0.0%
BT1		
BT2		
DEM_SEINE		
DREDGE		0.1%
GN1		1.6%
GT1		0.0%
LL1		3.1%
none	1.6%	3.5%
OTTER		0.0%
PEL_SEINE		
PEL_TRAWL	0.0%	0.0%
POTS	0.0%	0.0%
TR1	12.9%	27.2%
TR2	0.4%	1.0%
TR3		
Grand total	2.2%	4.9%

5.3.8.2 Catches (landings and discards) of cod and other species taken by FDF fisheries by Member State and fisheries in comparison with fisheries not working under FDF provisions

Cod catches were recorded in fisheries using TR1, TR2, GN1 and Pots (Table 5.3.8.2.1), but most catches (95.3% of total FDF catches) were whilst vessels were using the TR1 gear. In total, 25% of cod catches by EU vessels were taken during FDF trials; 41%, 35%, 30% and 20% of English, Scottish Danish and Dutch cod catches respectively.

Table 5.3.8.2.1 Skagerrak, North Sea and Eastern Channel: (A part 1) total catches for cod for countries with Fully Documented Fisheries (FDF, REM/CCTV) (B) catches (tonnes), and (A part 2, C) the percentage of catches attributed to FDFs.

Table A, part 1

Country	Gear	2010	2011
DNK	BEAM	0	0
	BT1	57	33
	BT2	0	0
	DEM_SEINE	0	1
	DREDGE	1	0
	GN1	2697	2252
	GT1	149	111
	LL1	129	74
	none	5	8
	OTTER	71	54
	PEL_TRAWL	4	1
	POTS	0	0
	TR1	5537	3937
	TR2	2296	1451
	TR3	1	0
DNK Total		10947	7922
ENG	BEAM	0	0
	BT1	1	3
	BT2	96	64
	DEM_SEINE	0	0
	DREDGE	0	0
	GN1	259	207
	GT1	15	9
	LL1	29	7
	OTTER	0	1
	PEL_TRAWL	0	0
	POTS	13	5
	TR1	1500	1365
	TR2	375	421
	TR3	0	0
ENG Total		2288	2082

Table B

Country	Gear	2010	2011
DNK			
	GN1	0	29
	LL1	0	54
	TR1	969	2241
	TR2	0	24
DNK Total		969	2348
ENG			
	DREDGE	0	0
	GN1	132	151
	POTS	5	0
	TR1	288	692
ENG Total		425	843

Table C

2010	2011
0.0%	1.3%
0.0%	73.0%
17.5%	56.9%
0.0%	1.7%
8.9%	29.6%
0.0%	0.0%
51.0%	72.9%
38.5%	0.0%
19.2%	50.7%
18.6%	40.5%

Table A, part 1 (contd.)

Country	Gear	2010	2011
NLD	BEAM	25	6
	BT1	28	18
	BT2	1557	1285
	DEM_SEINE	10	0
	GN1	43	27
	GT1	33	10
	LL1	0	0
	none	0	0
	OTTER	10	1
	PEL_TRAWL	23	10
	TR1	1035	676
	TR2	516	387
	TR3	5	1
NLD Total		3285	2421
SCO	BEAM	0	0
	BT1	0	0
	BT2	9	0
	DEM_SEINE	0	0
	DREDGE	2	1
	GN1	1	1
	LL1	2	0
	none	0	0
	OTTER	1	15
	PEL_SEINE	3	0
	POTS	0	1
	TR1	14065	11182
	TR2	1465	1140
	TR3	0	0
SCO Total		15548	12340
Grand Total		32068	24765

Table B (contd.)

Country	Gear	2010	2011
NLD	BEAM	0	0
	GN1	0	14
	GT1	0	1
	TR1	0	357
	TR2	0	100
NLD Total		0	472
SCO			
		0	0
	TR1	2330	4262
	TR2	16	0
SCO Total		2346	4262
Grand Total		3740	7925

Table C (contd.)

2010	2011
0.0%	0.0%
0.0%	51.9%
0.0%	10.0%
0.0%	52.8%
0.0%	25.8%
0.0%	19.5%
16.6%	38.1%
1.1%	0.0%
15.1%	34.5%
11.7%	32.0%

Table A (part 2)

Catches of all IIA 3b countries by gear

Gear	2010	2011	Gear	2010	2011	2010	2011
BEAM	51	14	BEAM				
BT1	322	410	BT1				
BT2	2127	1630	BT2				
DEM_SEINE	10	1	DEM_SEINE				
DREDGE	3	1	DREDGE				
GN1	3443	2798	GN1	132	194	3.8%	6.9%
GT1	410	345	GT1	0	1	0.0%	0.3%
LL1	287	182	LL1	0	54	0.0%	29.7%
none	27	40	none				
OTTER	282	302	OTTER	0	0	0.0%	0.0%
PEL_SEINE	3	0	PEL_SEINE				
PEL_TRAWL	29	24	PEL_TRAWL				
POTS	17	11	POTS	5	0	29.4%	0.0%
TR1	25288	19768	TR1	3587	7552	14.2%	38.2%
TR2	7705	5621	TR2	16	124	0.2%	2.2%
TR3	18	4	TR3				
Grand Total	40022	31151	Grand Total	3740	7925	9.3%	25.4%

5.3.9 ToR 6 Spatio-temporal patterns in effective effort by fisheries

Figures 5.3.9.1-5.3.9.8 show spatial distribution of effort for the eight cod plan gear categories.

It is to be noted that the display of the maps has changed compared to previous reports, and a display with color categories of equal effort spread was preferred to the previous display of categories with equal number of observations.

Otter trawls with 100+mm mesh (TR1, Figure 5.3.9.1) are the main roundfish gear and are mainly used along the Norwegian trench and the shelf edge. In all years there is a concentration of effort in the Skagerrak area and around the Shetlands, while the area between these two concentrations lose its importance over the years.. Overall, there has been a decrease of effort over the years. Otter trawls with 70-99 mm mesh size (TR2, Figure 5.3.9.2) are the main Nephrops gears. They are now mostly used on the places of the largest Nephrops Functional Units (i.e. in the Fladen ground area and along the English and Scottish coast) as well as in the Skagerrak and in areas where whiting is fished, for example the English Channel. The effort in the Central North Sea and along the Norwegian waters has decreased. This category was previously dealt in two groups, below 90 mm mostly spread on the Western and South-western North Sea, and above 90mm mainly used in Skagerrak. But the grouping of these two distinct groups in a single category does not allow one to observe clear spatial trends. The overall effort with TR3 gears (Figure 5.3.9.3) has declined in the North Sea. In addition, fishing areas in the northern part of the North Sea have lost their importance. Beam trawls with mesh size 120+ (BT1) are mainly used in areas IVa and IVb (Figure 5.3.9.4). There is a concentration of effort at the entrance to the Skagerrak. The extent of the fishery has declined over the years and is now restricted to the south-eastern part of the North Sea. Beam trawls with mesh size 70 to120 mm (BT2) are mainly used in the southern North Sea up to the 50m depth line to fish for flatfish (Figure 5.3.9.5). The distribution of effort moved south in recent years. One explanation could be that fishermen want to target sole and avoid plaice due to low market prices. Static gears (GN1 and GT1) have traditionally been localised closer to the shores, often in patchy fishing grounds (Figure 5.3.9.6 and 5.3.9.7). There are slight indications that fishing grounds for these gears have contracted in recent years. Longlines (LL1) are used mainly at the North East and South East coast of England and Scotland (Figure 5.3.9.8). Long line fisheries in the central North Sea have lost their importance.

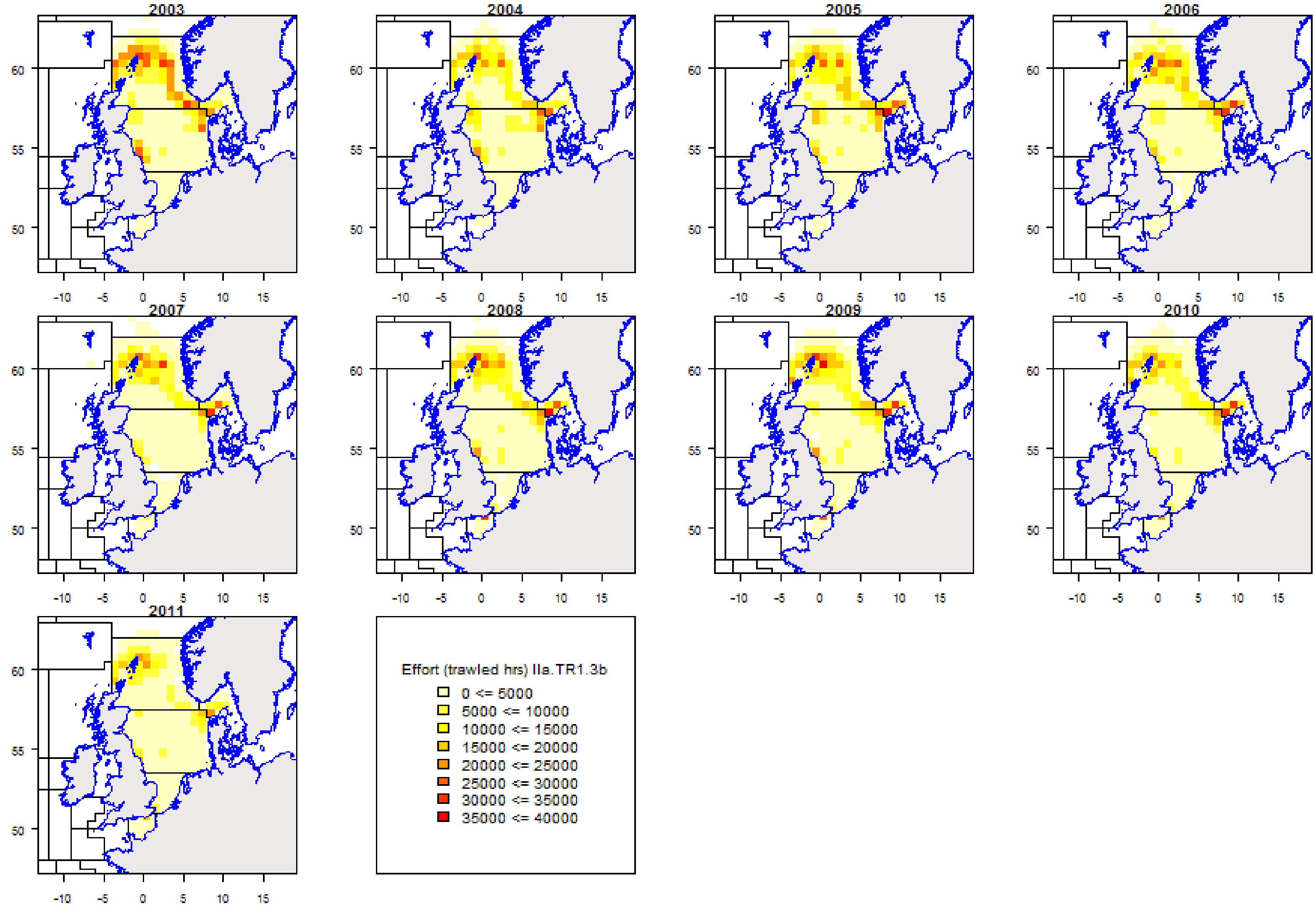


Figure 5.3.9.1 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of TR1 gears 2003-2011.

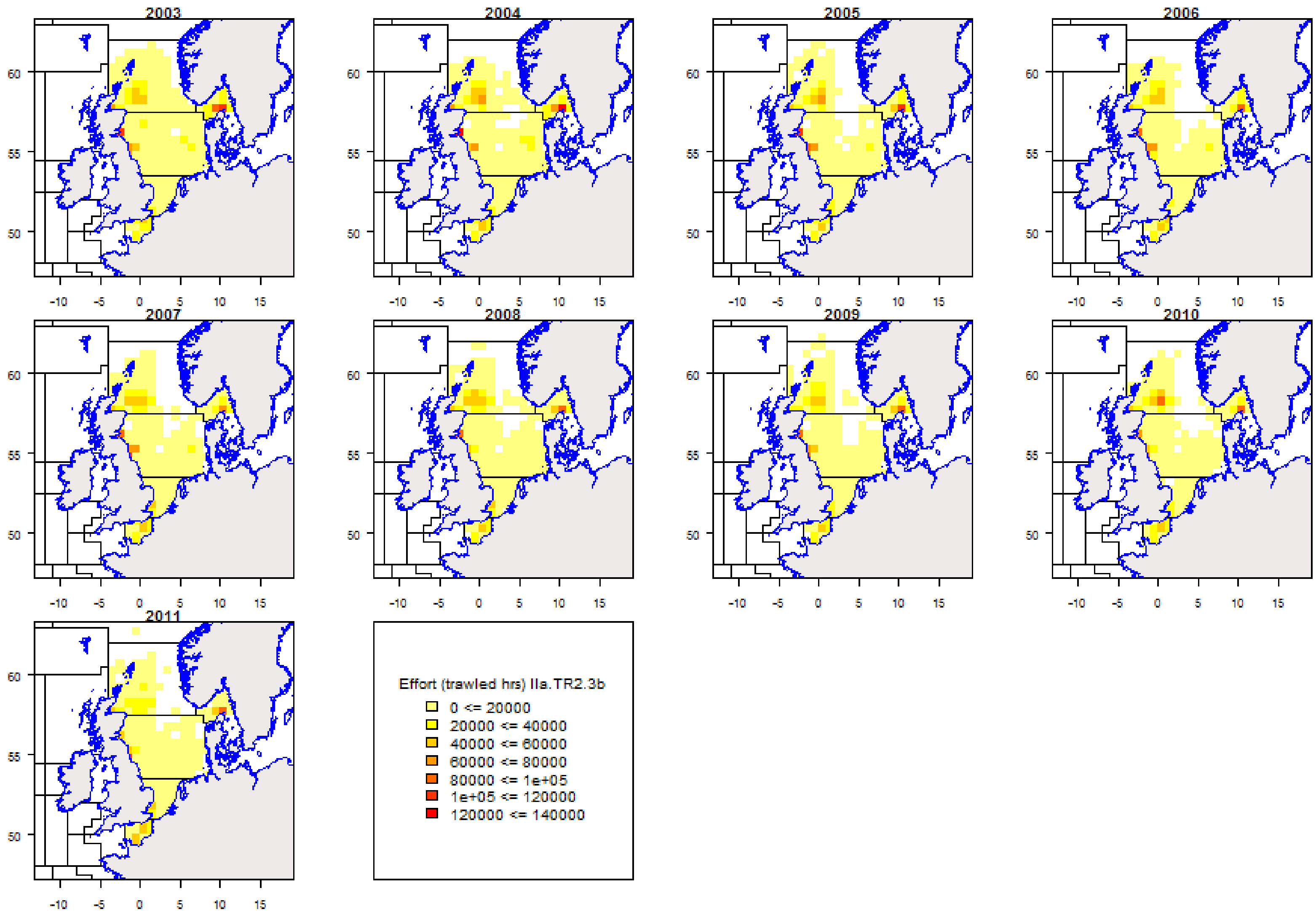


Figure 5.3.9.2 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of TR2 gears 2003-2011.

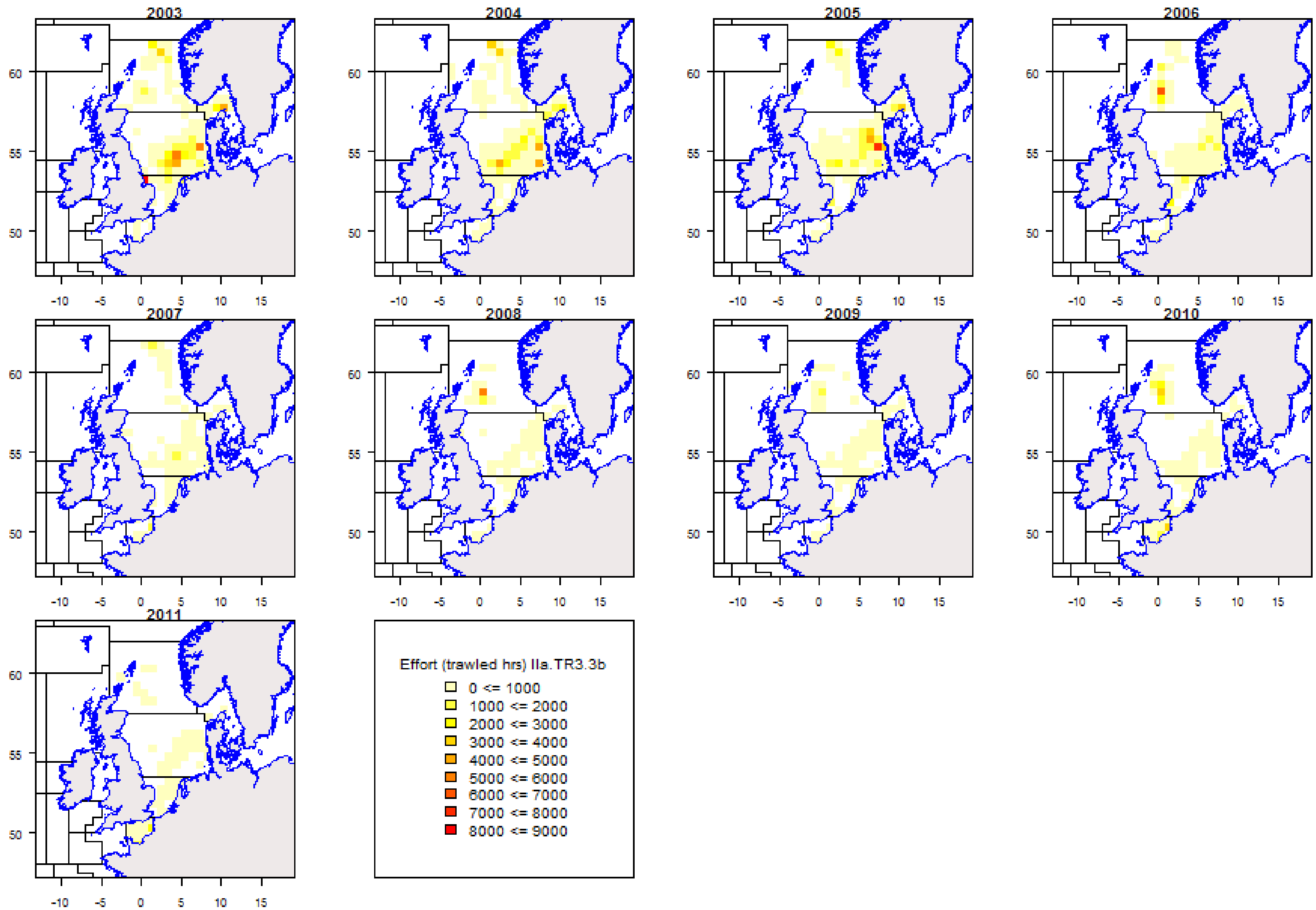


Figure 5.3.9.3 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of TR3 gears 2003-2011.

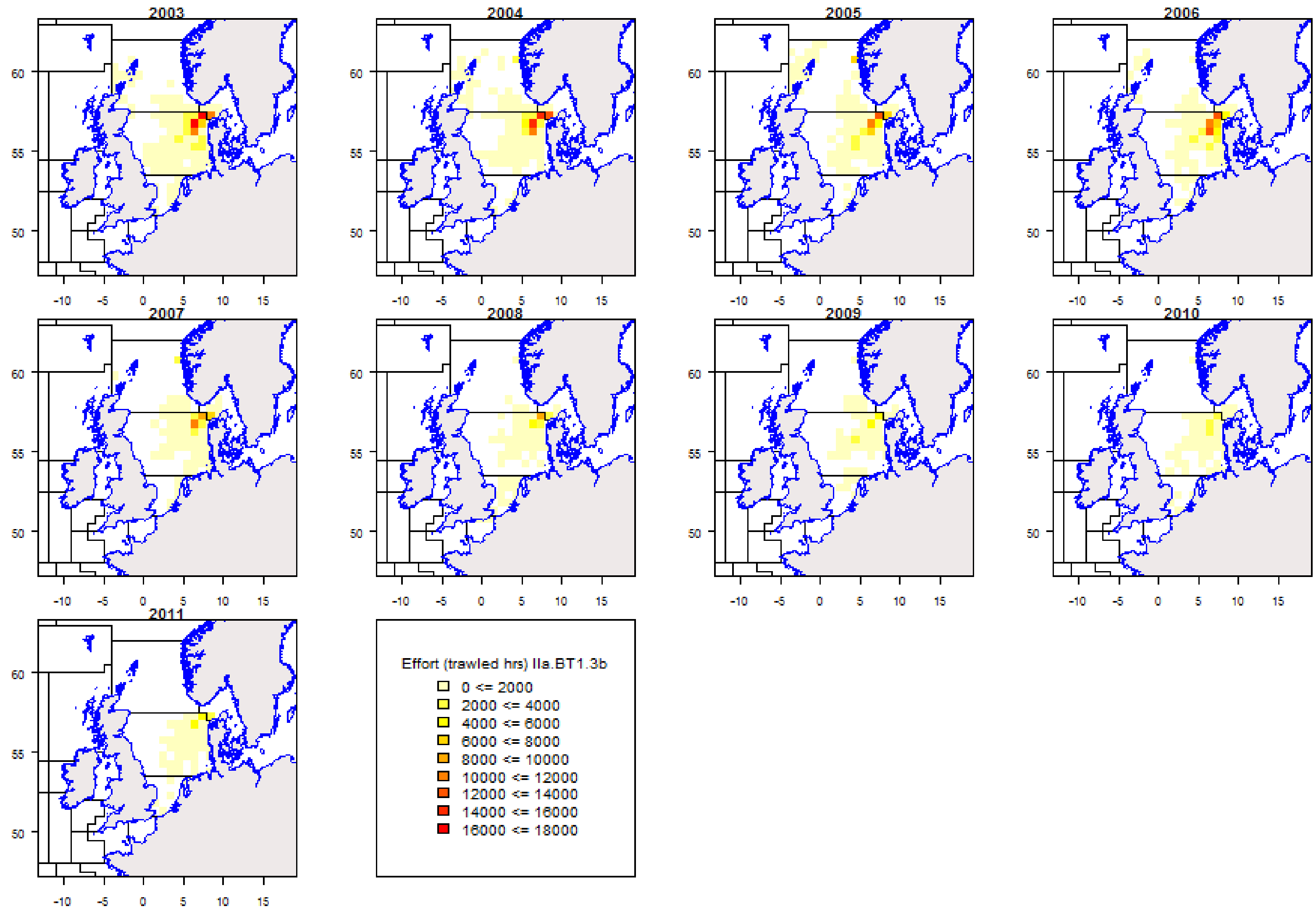


Figure 5.3.9.4 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of BT1 gears 2003-2011.

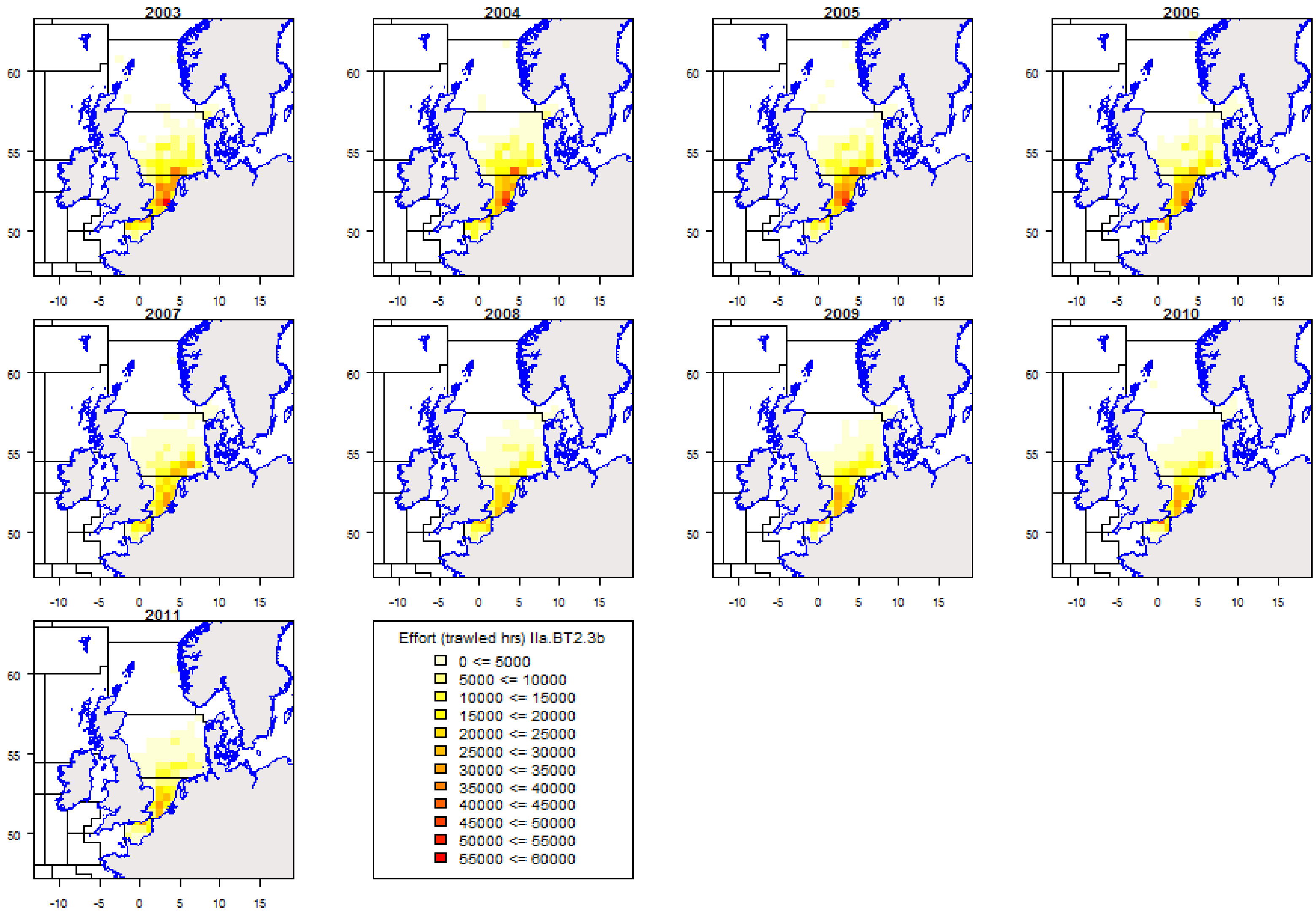


Figure 5.3.9.5 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of BT2 gears 2003-2011.

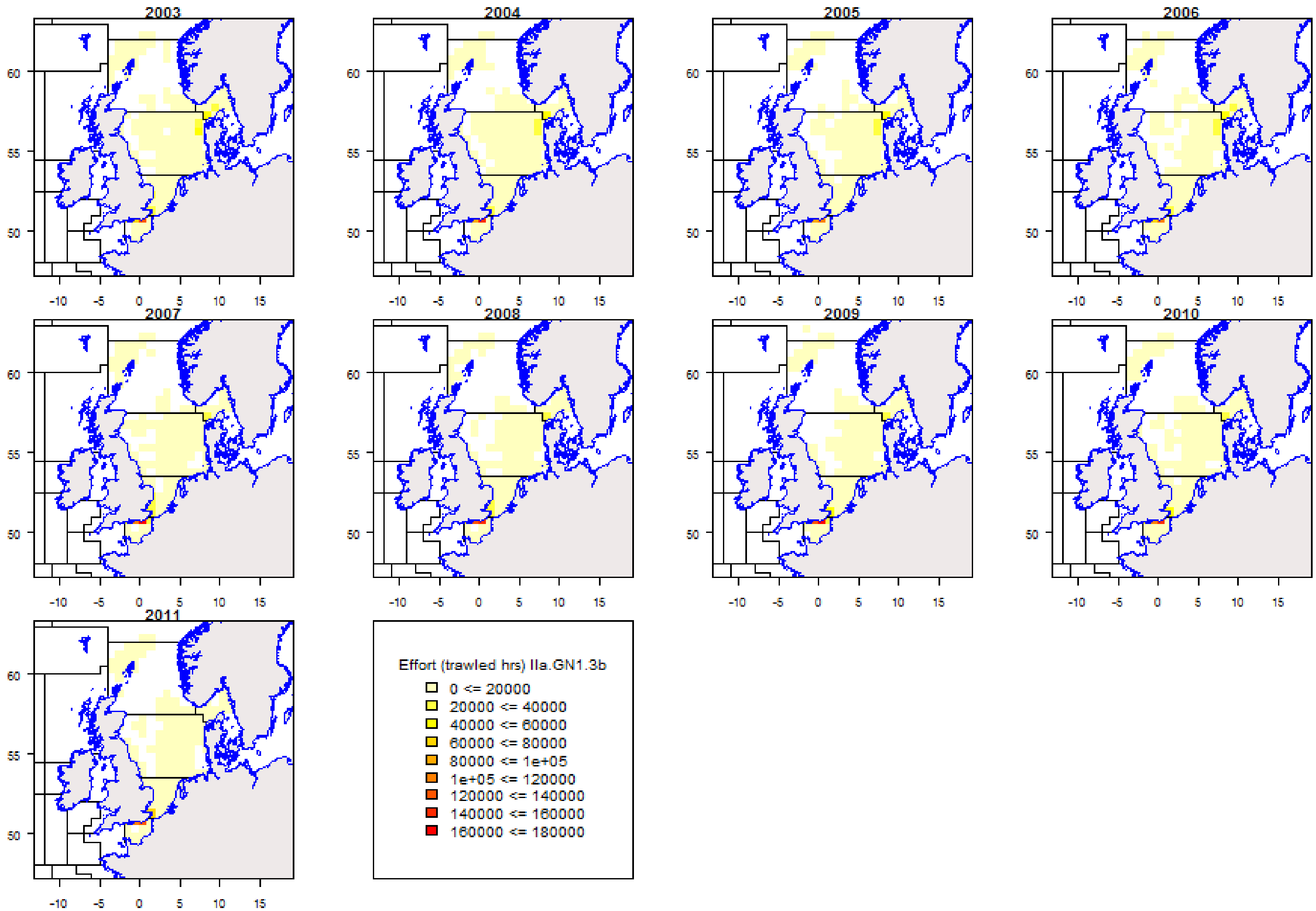


Figure 5.3.9.6 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of GN1 gears 2003-2011.

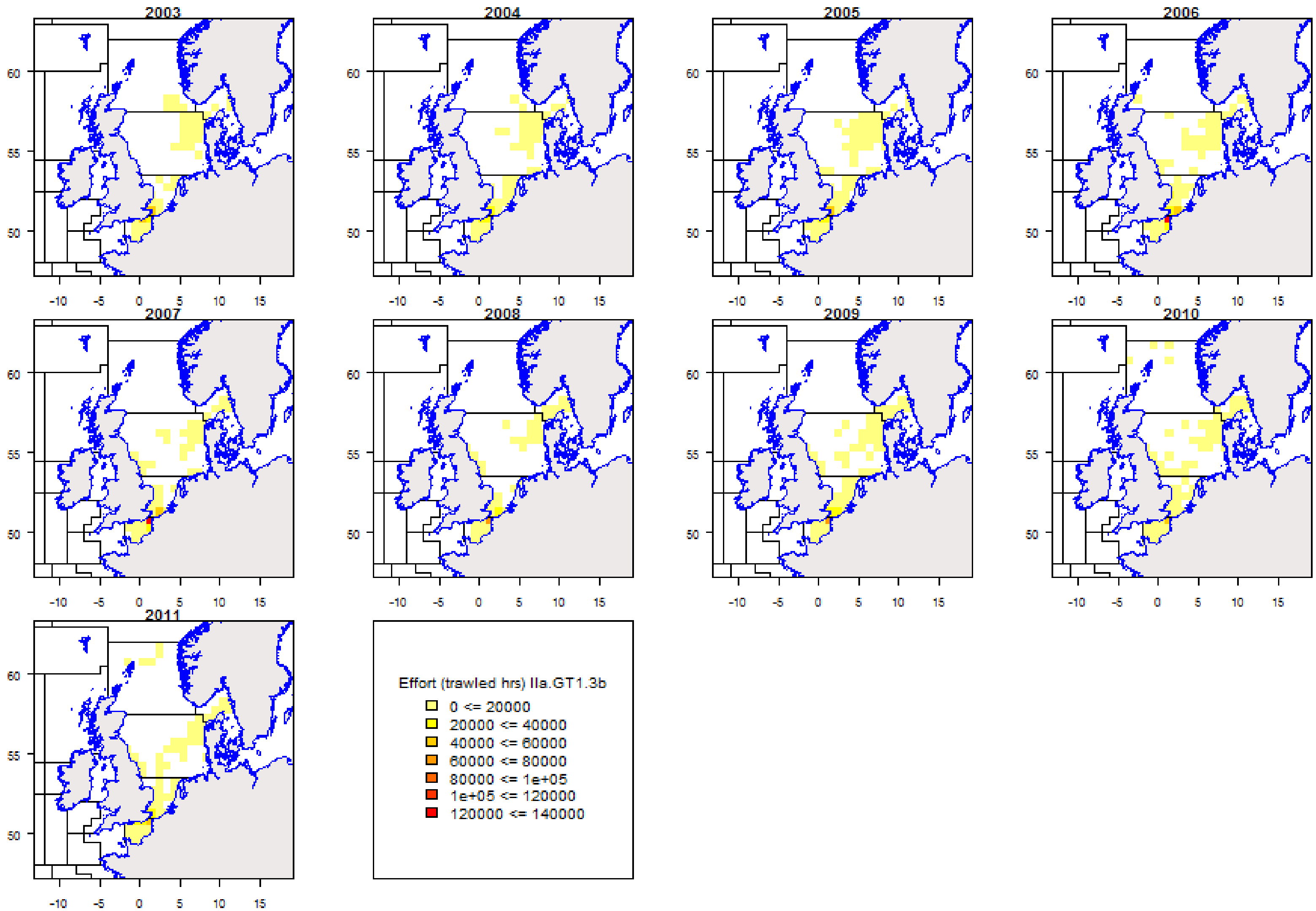


Figure 5.3.9.7 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of GT1 gears 2003-2011.

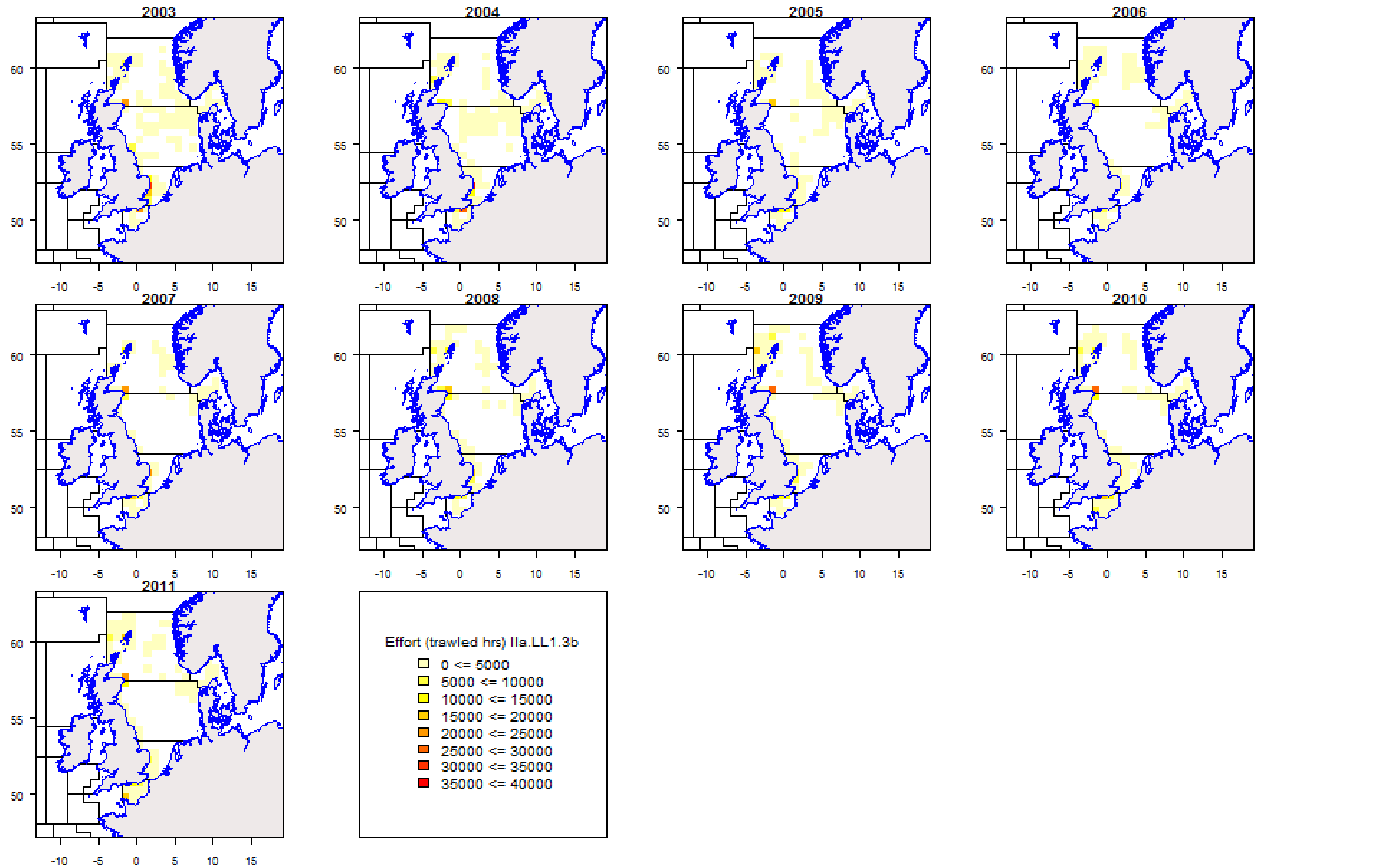


Figure 5.3.9.8 Skagerrak, North Sea including 2 EU and Eastern Channel: Effective effort distribution of LL1 gears 2003-2011.

5.3.10 ToR 7 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

STECF EWG 12-06 has no specific comments.

5.3.11 ToR 8 Correlation between partial cod mortality and fishing effort by Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToRs 10 and 11. The EWG 12-06 analyses and response can be found in chapter 5.3.14.

5.3.12 ToR 9 Estimation of conversion factors to be applied for effort transfers between regulated gear groups

STECF EWG 12-06 presents the estimated cod CPUE and respective effort transfer factors between donor and receiving regulated gear groups. Red cells in Table 5.3.11.1 are indicated to be imprecise due to lack of adequate discard information. Yellow cells indicate sufficient sampling and green cells good sampling information.

Table 5.3.11.1 Cod CPUE (average 2009-2011) and respective effort transfer factors between donor and receiving regulated gear groups. Red cells are indicated to be imprecise due to lack of adequate discard information. Yellow cells are covered by adequate discard information while green cells are considered well representative.

		BT1	BT2	GN1	GT1	LL1	TR1	TR2	TR3		CPUE
3b	BT1		1	0.197	1	0.599	0.19	0.693	1		190
3b	BT2	0.3		0.059	0.445	0.18	0.057	0.208	1		57
3b	GN1	1	1		1	1	0.964	1	1		964
3b	GT1	0.674	1	0.133		0.404	0.128	0.467	1		128
3b	LL1	1	1	0.329	1		0.317	1	1		317
3b	TR1	1	1	1	1	1		1	1		1000
3b	TR2	1	1	0.284	1	0.864	0.274		1		274
3b	TR3	0.053	0.175	0.01	0.078	0.032	0.01	0.036			10

5.3.13 ToR 10 Estimation of partial fishing mortalities of cod by area, Member State and fisheries and correlation between partial cod mortality and fishing effort by area, Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToRs 8 and 11. The EWG 12-06 analyses and response can be found in chapter 5.3.14.

5.3.14 ToR 11 Comparative analyses between trends in fishing mortality and fishing effort by Member State and fisheries and the cod plan (R (EC) No 1342/2008) provisions, in particular with regard to Article 13

The STECF EWG presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discards volumes in relation to the estimated total catch for the year available. The full list of all fisheries can be downloaded from the EWG's web page: Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06. The anticipated trend in fishing mortality as derived from the cod plan is also presented in the following Table 5.3.14.1. The sustainable exploitation target is defined as F=0.2 as long as SSB≤70,000t. The trends in fishing effort in units of kWdays at sea of the relevant fisheries are also presented in Table 5.3.14.1. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded from the estimated F in 2012 (Table 5.3.14.1) that the stock is subject to overfishing and that the annual F reductions are not following the plan. Discard mortality is generally high but has been reduced significantly since 2010. The listed fisheries do contribute about 50% to the total fishing mortality, indicating that many fisheries are actually contributing to the mortality of cod, but with rather low effect. Among the relevant Danish gill net and otter trawl fisheries by Germany, Denmark, England, France and Scotland there are evident also significant partial Fs of under 8m boats from Denmark and England.

STECF EWG 12-06 notes that the correlations between the summed partial Fs for catches of the major fisheries and their estimated fishing efforts are highly significant, but insignificant between landings and discard portions with fishing effort. The partial Fs resulting from landings of Danish gill nets, TR2 from Denmark, France and Scotland are correlated significantly with fishing effort, while the significance of landings of TR1 fisheries from Germany (0.08) and France (0.08) is very close to the threshold of p≤0.05. The major Scottish cod fishery using TR1 gears does not display a significant coincidence between its partial F and its fishing effort. Overall, this indicates that effective fisheries management by fishing effort in units of kWdays at sea shall be possible, also as an auxiliary measure to catch constraints and technical measures. However, management of fishing effort may be difficult at a national level and requires further investigation.

STECF EWG 12-06 notes that there are no indications of reductions in partial Fs from landings of the Danish TR1 fisheries and the Scottish TR1 fisheries operating under the provisions of article 13.2.b and c of the cod plan. However, the reduction in partial F for discards of the Scottish TR1 fishery appears evident for the past three years, as well as for Danish TR1 in 2011, resulting in a reduction in partial Fs by 22 and 33% from 2010 to 2011, respectively. The German and French fisheries operating under the provision of article 13.2.b are either negligible or have reduced their effect in cod fishing mortalities substantially.

The following tables 5.3.14.2-5 list the partial Fs of major fisheries for haddock 3an, saithe 3an 4 and 6, as well as plaice and sole in 4.

Table 5.3.14.1 North Sea cod. The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

2008 fixed baseline annual F reductions by 10 percent as F<=0.2 and SSB below Blim												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan												0.63	0.473	0.41	0.347	0.284
reduction F plan													-0.25	-0.35	-0.45	-0.55
F estimated							0.901	0.857	0.8	0.723	0.669	0.63	0.602	0.583	0.572	
reduction F estimated													-0.04	-0.07	-0.09	
													not following the provision of Article 8			
F par estimated as F*landings or discards(fishery)/Catch(t							2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3b	DEU	TR1	none	COD	landings	0.024	0.033	0.037	0.038	0.022	0.016	0.022	0.023	0.017	
IIa	3b	DEU	TR1	none	COD	discards	0.002	0.003	0.004	0.008	0.007	0.011	0.004	0.004	0.002	
IIa	3b	DNK	GN1	none	COD	landings	0.037	0.061	0.052	0.045	0.024	0.021	0.024	0.027	0.023	
IIa	3b	DNK	GN1	none	COD	discards	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	
IIa	3b	DNK	TR1	none	COD	landings	0.029	0.036	0.047	0.036	0.026	0.026	0.039	0.046	0.037	
IIa	3b	DNK	TR1	none	COD	discards	0.009	0.013	0.013	0.015	0.017	0.017	0.011	0.012	0.002	
IIa	3b	DNK	TR2	none	COD	landings	0.021	0.030	0.021	0.019	0.009	0.008	0.011	0.010	0.010	
IIa	3b	DNK	TR2	none	COD	discards	0.012	0.026	0.022	0.027	0.021	0.015	0.017	0.014	0.005	
IIa	3b	ENG	TR1	CPart13	COD	landings	0.015	0.019	0.011	0.014	0.011	0.009	0.013	0.014	0.013	
IIa	3b	ENG	TR1	CPart13	COD	discards	0.002	0.002	0.001	0.005	0.002	0.004	0.001	0.001	0.001	
IIa	3b	FRA	TR1	CPart13.2.b	COD	landings	0.001	0.001	0.007	0.008	0.003	0.015	0.015	0.000	0.002	
IIa	3b	FRA	TR1	CPart13.2.b	COD	discards	0.000	0.000	0.000	0.002	0.002	0.010	0.004	0.000	0.000	
IIa	3b	FRA	TR2	CPart13.2.b	COD	landings	0.018	0.013	0.013	0.013	0.017	0.012	0.013	0.010	0.011	
IIa	3b	FRA	TR2	CPart13.2.b	COD	discards	0.012	0.009	0.013	0.027	0.047	0.016	0.011	0.014	0.006	
IIa	3b	SCO	TR1	CPart13.2.b-c	COD	landings	0.094	0.105	0.095	0.101	0.075	0.068	0.098	0.116	0.100	
IIa	3b	SCO	TR1	CPart13.2.b-c	COD	discards	0.009	0.013	0.013	0.018	0.057	0.117	0.067	0.031	0.014	
IIa	3b	SCO	TR2	CPart13.2.b-c	COD	landings	0.014	0.014	0.013	0.011	0.008	0.006	0.004	0.004	0.002	
IIa	3b	SCO	TR2	CPart13.2.b-c	COD	discards	0.009	0.006	0.008	0.012	0.028	0.011	0.010	0.010	0.009	
IIa	3b	DNK	u10m	none	COD	landings	0.013	0.026	0.023	0.021	0.011	0.009	0.007	0.007	0.008	
IIa	3b	ENG	u10m	none	COD	landings	0.009	0.007	0.006	0.010	0.007	0.006	0.009	0.011	0.010	
sum							0.308	0.384	0.370	0.399	0.376	0.382	0.364	0.337	0.254	
landings							0.253	0.312	0.296	0.285	0.195	0.181	0.239	0.25	0.215	
discards							0.055	0.072	0.074	0.114	0.181	0.201	0.125	0.087	0.039	
rel. contribution to F estimated							0.342	0.448	0.463	0.552	0.562	0.606	0.605	0.578	0.444	

Effort kW days running previous year baseline														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations						141839816	116879249	110269253	99129418	88522742				
reduction	not following the provision of Article 12.2 and 4 (base line revisions						-0.18	-0.06	-0.10	-0.11				
Effort estimatec	156186752	147705349	141095369	135039296	124767454	108731863	106559973	97217419	87326881					
							-0.02	-0.09						
											2004-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	1895838	1719696	2166578	2436727	2041064	1774792	891953	912558	805546		0.654	8	2.118	0.079
kW days at sea	1895838	1719696	2166578	2436727	2041064	1774792	891953	912558	805546		0.549	8	1.609	0.159
kW days at sea	2556357	2503663	2355996	2086597	1234706	1328785	1475494	1567471	1443100		0.984	8	13.528	0.000
kW days at sea	2556357	2503663	2355996	2086597	1234706	1328785	1475494	1567471	1443100		0.149	8	0.369	0.725
kW days at sea	8054769	7154017	7853341	7402801	5385763	5347921	5120432	4972090	4582610		0.270	8	0.687	0.518
kW days at sea	8054769	7154017	7853341	7402801	5385763	5347921	5120432	4972090	4582610		0.376	8	0.994	0.359
kW days at sea	7650904	8088391	5913518	4689098	3433945	3310190	3394115	3199997	3317731		0.980	8	12.063	0.000
kW days at sea	7650904	8088391	5913518	4689098	3433945	3310190	3394115	3199997	3317731		0.656	8	2.129	0.077
kW days at sea	2375456	1498089	1256186	1824680	1501767	1851664	2145727	2110555	2142321		0.000	8	0.000	1.000
kW days at sea	2375456	1498089	1256186	1824680	1501767	1851664	2145727	2110555	2142321		0.073	8	0.179	0.864
kW days at sea	3485216	2348974	1961936	2724981	2642190	2787798	2696190	2004742	1841280		0.647	8	2.078	0.083
kW days at sea	3485216	2348974	1961936	2724981	2642190	2787798	2696190	2004742	1841280		0.704	8	2.428	0.051
kW days at sea	14154807	14841436	13427913	15043571	14787652	12000527	11759062	8070194	7727033		0.755	8	2.820	0.030
kW days at sea	14154807	14841436	13427913	15043571	14787652	12000527	11759062	8070194	7727033		0.527	8	1.519	0.180
kW days at sea	16080003	12684328	12158294	11661338	11022980	12176291	12245575	10444829	9986666		0.219	8	0.550	0.602
kW days at sea	16080003	12684328	12158294	11661338	11022980	12176291	12245575	10444829	9986666		0.237	8	0.598	0.572
kW days at sea	10011344	9486074	9108230	8677821	8887263	9195955	8344074	8205442	6768863		0.765	8	2.910	0.027
kW days at sea	10011344	9486074	9108230	8677821	8887263	9195955	8344074	8205442	6768863		0.084	8	0.206	0.844
												0		
												0		
	66264694	60324668	56201992	56547614	50937330	49773923	48072622	41487878	38615150		0.820	8	3.509	0.013
	63708337	57821005	53845996	54461017	49702624	48445138	46597128	39920407	37172050		0.576	8	1.726	0.135
	63708337	57821005	53845996	54461017	49702624	48445138	46597128	39920407	37172050		0.190	8	0.474	0.652
rel effort	0.424	0.408	0.398	0.419	0.408	0.458	0.451	0.427	0.442					

Table 5.3.14.2 Haddock 3an4. The left part of the table lists estimated F trajectories (ICES 2012 assessment), as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

F <=Fmsy=0.3												Reference year			
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan																
reduction F plan																
F estimated							0.201	0.263	0.31	0.511	0.398	0.227	0.209	0.233	0.298	
reduction F estimated													-0.08	0.11	0.28	
F par estimated as F*landings or discards(fishery)/Catch(tc							2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3b	DEU	TR1	none	HAD	landings	0.005	0.005	0.004	0.008	0.006	0.002	0.003	0.003	0.005	
IIa	3b	DEU	TR1	none	HAD	discards	0.001	0.001	0.000	0.003	0.005	0.000	0.000	0.000	0.001	
IIa	3b	DNK	TR1	none	HAD	landings	0.008	0.009	0.008	0.011	0.006	0.005	0.006	0.008	0.013	
IIa	3b	DNK	TR1	none	HAD	discards	0.003	0.003	0.003	0.003	0.003	0.001	0.001	0.001	0.000	
IIa	3b	ENG	TR1	CPart13	HAD	landings	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.008	0.011	
IIa	3b	ENG	TR1	CPart13	HAD	discards	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	
IIa	3b	ENG	TR1	none	HAD	landings	0.004	0.004	0.003	0.003	0.006	0.006	0.000	0.000	0.000	
IIa	3b	ENG	TR1	none	HAD	discards	0.001	0.001	0.000	0.000	0.001	0.001	0.000	0.000	0.000	
IIa	3b	FRA	TR2	CPart13.2.b	HAD	landings	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.012	
IIa	3b	FRA	TR2	CPart13.2.b	HAD	discards	0.000	0.000	0.000	0.000	0.010	0.001	0.000	0.001	0.004	
IIa	3b	SCO	TR1	CPart13.2.b-c	HAD	landings	0.080	0.149	0.207	0.265	0.146	0.115	0.112	0.106	0.147	
IIa	3b	SCO	TR1	CPart13.2.b-c	HAD	discards	0.048	0.036	0.020	0.060	0.091	0.031	0.017	0.014	0.017	
IIa	3b	SCO	TR2	CPart13.2.b-c	HAD	landings	0.011	0.016	0.023	0.029	0.013	0.012	0.014	0.012	0.014	
IIa	3b	SCO	TR2	CPart13.2.b-c	HAD	discards	0.014	0.011	0.013	0.074	0.072	0.027	0.025	0.025	0.036	
sum							0.175	0.235	0.281	0.456	0.360	0.201	0.184	0.180	0.262	
landin	EU						0.108	0.183	0.245	0.316	0.178	0.140	0.141	0.138	0.202	
discar	EU						0.067	0.052	0.036	0.140	0.182	0.061	0.043	0.042	0.060	
rel. contribution to F estimated							0.871	0.894	0.906	0.892	0.905	0.885	0.88	0.773	0.879	

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations														
reduction														
Effort estimate	154883860	146266627	140033707	133681471	123451870	107481650	105302288	96487667	86625242					
							-0.02	-0.08	-0.10					
											2004-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	1895838	1719696	2166578	2436727	2041064	1774792	891953	912558	805546		0.536	8	1.555	0.171
kW days at sea	1895838	1719696	2166578	2436727	2041064	1774792	891953	912558	805546		0.500	8	1.414	0.207
kW days at sea	8054769	7154017	7853341	7402801	5385763	5347921	5120432	4972090	4582610		0.135	8	0.334	0.750
kW days at sea	8054769	7154017	7853341	7402801	5385763	5347921	5120432	4972090	4582610		0.824	8	3.562	0.012
kW days at sea							2145727	2110555	2142321		0.027	3	0.027	0.983
kW days at sea							2145727	2110555	2142321		0.088	3	0.088	0.944
kW days at sea	2375456	1498089	1256186	1824680	1501767	1851664					0.298	5	0.541	0.626
kW days at sea	2375456	1498089	1256186	1824680	1501767	1851664					0.168	5	0.295	0.787
kW days at sea	14154807	14841436	13427913	15043571	14787652	12000527	11759062	8070194	7727033		0.645	8	2.067	0.084
kW days at sea	14154807	14841436	13427913	15043571	14787652	12000527	11759062	8070194	7727033		0.049	8	0.120	0.908
kW days at sea	16080003	12684328	12158294	11661338	11022980	12176291	12245575	10444829	9986666		0.146	8	0.361	0.730
kW days at sea	16080003	12684328	12158294	11661338	11022980	12176291	12245575	10444829	9986666		0.009	8	0.022	0.983
kW days at sea	10011344	9486074	9108230	8677821	8887263	9195955	8344074	8205442	6768863		0.196	8	0.490	0.642
kW days at sea	10011344	9486074	9108230	8677821	8887263	9195955	8344074	8205442	6768863		0.129	8	0.319	0.761
sum	52572217	47383640	45970542	47046938	43626489	42347150	40506823	34715668	32013039		0.465	8	1.287	0.246
	52572217	47383640	45970542	47046938	43626489	42347150	40506823	34715668	32013039		0.453	8	1.245	0.260
	52572217	47383640	45970542	47046938	43626489	42347150	40506823	34715668	32013039		0.308	8	0.793	0.458
rel effort	0.339	0.324	0.328	0.352	0.353	0.394	0.385	0.36	0.37					

Table 5.3.14.3 Saithe 3an4 6. The left part of the table lists estimated F trajectories (ICES 2012 assessment), as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

F <=Fmsy=0.3												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan																
reduction F plan																
F estimated							0.224	0.189	0.25	0.266	0.252	0.344	0.388	0.289	0.284	
reduction F estimated													0.13	-0.26	-0.02	
F par estimated as F*landings or discards(fishery)/Catc							2003	2004	2005	2006	2007	2008	2009	2010	2011	
Norway					POK	landings	0.125	0.111	0.145	0.135	0.117	0.175	0.19	0.156	0.147	
area VI total					POK	none	0.011	0.008	0.012	0.019	0.018	0.02	0.023	0.02	0.023	
IIa	3b	DEU	TR1	CPart13.2.b	POK	landings	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.024	0.021	
IIa	3b	DEU	TR1	none	POK	landings	0.013	0.013	0.023	0.029	0.025	0.038	0.013	0.009	0.010	
IIa	3b	DNK	TR1	none	POK	landings	0.005	0.006	0.008	0.007	0.006	0.014	0.019	0.015	0.013	
IIa	3b	ENG	TR1	CPart13	POK	landings	0.003	0.002	0.006	0.007	0.005	0.009	0.012	0.012	0.011	
IIa	3b	FRA	TR1	CPart13.2.b	POK	landings	0.028	0.019	0.022	0.035	0.030	0.045	0.053	0.015	0.024	
IIa	3b	SCO	TR1	CPart13.2.b-c	POK	landings	0.006	0.006	0.010	0.010	0.011	0.022	0.028	0.022	0.019	
sum							0.191	0.165	0.226	0.242	0.212	0.323	0.370	0.273	0.268	
land	EU						0.180	0.157	0.214	0.223	0.194	0.303	0.347	0.253	0.245	
rel. contribution to F estimated							0.853	0.873	0.904	0.91	0.841	0.939	0.954	0.945	0.944	

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations														
reduction														
Effort estimate	########	99468700	93590041	92041930	83520343	78690639	75531586	66796002	60126366					
							-0.04	-0.12	-0.10					
											2004-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea							927872	918707	846030		0.779	3	1.242	0.432
kW days at sea	1895838	1719696	2166578	2436727	2041064	1774792	891953	912558	805546		0.734	8	2.647	0.038
kW days at sea	8054769	7154017	7853341	7402801	5385763	5347921	5120432	4972090	4582610		0.682	8	2.284	0.062
kW days at sea	2375456	1498089	1256186	1824680	1501767	1851664	2145727	2110555	2142321		0.865	8	4.223	0.006
kW days at sea	3485216	2348974	1961936	2724981	2642190	2787798	2696190	2004742	1841280		0.768	8	2.937	0.026
kW days at sea	16080003	12684328	12158294	11661338	11022980	12176291	12245575	10444829	9986666		0.234	8	0.590	0.577
sum	15945641	12702552	12698168	13025264	11296882	11969233	12013875	10681741	10102227		0.230	8	0.579	0.584
	15945641	12702552	12698168	13025264	11296882	11969233	12013875	10681741	10102227		0.195	8	0.487	0.644
rel effort	0.152	0.128	0.136	0.142	0.135	0.152	0.159	0.16	0.168					

Table 5.3.14.4 Plaice 4. The left part of the table lists estimated F trajectories (ICES 2012 assessment), as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

10% annual reduction in 2008 and therafter until F <=Fmsy=0.3 running year													Reference year			
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan							0.61	0.481	0.41	0.375	0.317	0.3	0.3	0.3	0.3	
reduction F plan																
F estimated							0.61	0.481	0.41	0.375	0.317	0.237	0.211	0.206	0.229	
reduction F estimated													-0.11	-0.02	0.11	
F par estimated as F*landings or discards(fisher							2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3b	BEL	BT2	none	PLE	landings	0.016	0.013	0.009	0.006	0.006	0.005	0.004	0.005	0.004	
IIa	3b	BEL	BT2	none	PLE	discards	0.019	0.004	0.001	0.001	0.001	0.002	0.001	0.002	0.002	
IIa	3b	DEU	BT2	none	PLE	landings	0.007	0.008	0.008	0.005	0.003	0.003	0.002	0.003	0.003	
IIa	3b	DEU	BT2	none	PLE	discards	0.010	0.014	0.011	0.009	0.004	0.002	0.003	0.005	0.002	
IIa	3b	DEU	TR2	none	PLE	landings	0.011	0.008	0.007	0.005	0.004	0.003	0.002	0.003	0.002	
IIa	3b	DEU	TR2	none	PLE	discards	0.013	0.007	0.006	0.008	0.002	0.001	0.001	0.001	0.004	
IIa	3b	DNK	GN1	none	PLE	landings	0.020	0.012	0.010	0.010	0.004	0.003	0.002	0.003	0.002	
IIa	3b	DNK	GN1	none	PLE	discards	0.002	0.001	0.002	0.000	0.001	0.000	0.012	0.000	0.000	
IIa	3b	DNK	TR1	none	PLE	landings	0.024	0.024	0.021	0.023	0.018	0.018	0.010	0.012	0.013	
IIa	3b	DNK	TR1	none	PLE	discards	0.006	0.004	0.001	0.003	0.002	0.001	0.001	0.001	0.000	
IIa	3b	DNK	TR2	none	PLE	landings	0.011	0.010	0.006	0.004	0.003	0.002	0.001	0.001	0.001	
IIa	3b	DNK	TR2	none	PLE	discards	0.014	0.011	0.012	0.011	0.003	0.001	0.000	0.000	0.000	
IIa	3b	ENG	BT2	none	PLE	landings	0.018	0.023	0.021	0.013	0.017	0.012	0.009	0.016	0.013	
IIa	3b	ENG	BT2	none	PLE	discards	0.010	0.007	0.010	0.004	0.008	0.005	0.011	0.015	0.021	
IIa	3b	NLD	BT2	none	PLE	landings	0.151	0.119	0.109	0.101	0.093	0.069	0.046	0.050	0.043	
IIa	3b	NLD	BT2	none	PLE	discards	0.167	0.121	0.095	0.091	0.079	0.059	0.055	0.045	0.073	
IIa	3b	SCO	BT2	none	PLE	landings	0.024	0.028	0.022	0.014	0.014	0.008	0.003	0.001	0.000	
IIa	3b	SCO	BT2	none	PLE	discards	0.013	0.016	0.012	0.007	0.009	0.006	0.003	0.001	0.000	
sum							0.536	0.430	0.363	0.315	0.271	0.200	0.166	0.164	0.183	
landings							0.282	0.245	0.213	0.181	0.162	0.123	0.079	0.094	0.081	
discards							0.254	0.185	0.150	0.134	0.109	0.077	0.087	0.070	0.102	
rel. contribution to F estimated							0.879	0.894	0.885	0.84	0.855	0.844	0.787	0.796	0.799	

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations														
reduction														
Effort estimate	124861239	116095478	112540213	103726248	94247087	83114600	81622521	77158414	68962390					
							-0.02	-0.05	-0.11					
											2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	4241216	4294884	3884007	3418751	2707991	3536979	3327143	2464058	1704406		0.752	9	3.018	0.019
kW days at sea	4241216	4294884	3884007	3418751	2707991	3536979	3327143	2464058	1704406		0.451	9	1.337	0.223
kW days at sea	1669870	2060092	2212397	1927398	1590823	1464163	1666322	1801775	1240530		0.724	9	2.777	0.027
kW days at sea	1669870	2060092	2212397	1927398	1590823	1464163	1666322	1801775	1240530		0.827	9	3.892	0.006
kW days at sea	1013535	893439	704404	771597	680681	457259	470754	420345	408157		0.936	9	7.035	0.000
kW days at sea	1013535	893439	704404	771597	680681	457259	470754	420345	408157		0.875	9	4.782	0.002
kW days at sea	2075696	2156817	2028558	1790218	951521	1003280	1077380	1210450	1136119		0.879	9	4.877	0.002
kW days at sea	2075696	2156817	2028558	1790218	951521	1003280	1077380	1210450	1136119		0.167	9	0.448	0.668
kW days at sea	7382060	6518731	6531993	6132460	3930744	4055532	3813528	3610543	3663000		0.884	9	5.003	0.002
kW days at sea	7382060	6518731	6531993	6132460	3930744	4055532	3813528	3610543	3663000		0.786	9	3.364	0.012
kW days at sea	2597952	2578679	1917844	1398062	1077046	702937	563009	431525	370536		0.985	9	15.103	0.000
kW days at sea	2597952	2578679	1917844	1398062	1077046	702937	563009	431525	370536		0.931	9	6.748	0.000
kW days at sea	2739407	3559561	4046340	2974409	3251512	1975399	2491105	3257607	2741314		0.793	9	3.444	0.011
kW days at sea	2739407	3559561	4046340	2974409	3251512	1975399	2491105	3257607	2741314		0.040	9	0.106	0.919
kW days at sea	47724234	44669317	44478122	38820726	37931313	27646215	28696410	28508780	25776297		0.961	9	9.194	0.000
kW days at sea	47724234	44669317	44478122	38820726	37931313	27646215	28696410	28508780	25776297		0.861	9	4.479	0.003
kW days at sea	3766255	4610314	4185264	3109683	2790865	1351721	554376	144306			0.978	8	11.484	0.000
kW days at sea	3766255	4610314	4185264	3109683	2790865	1351721	554376	144306			0.956	8	7.982	0.000
sum	73210225	71341834	69988929	60343304	54912496	42193485	42660027	41849389	37040359		0.944	9	7.570	0.000
	73210225	71341834	69988929	60343304	54912496	42193485	42660027	41849389	37040359		0.970	9	10.557	0.000
	73210225	71341834	69988929	60343304	54912496	42193485	42660027	41849389	37040359		0.872	9	4.713	0.002
rel effort	0.586	0.615	0.622	0.582	0.583	0.508	0.523	0.542	0.537					

Table 5.3.14.5 Sole 4. The left part of the table lists estimated F trajectories (ICES 2012 assessment), as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

10% annual reduction in 2008 and therafter until F <=Fmsy=0.2 running year												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan							0.59	0.514	0.584	0.455	0.466	0.419	0.377	0.339	0.305	
reduction F plan																
F estimated							0.59	0.514	0.584	0.455	0.466	0.369	0.364	0.355	0.296	
reduction F estimated													-0.01	-0.02	-0.17	
F par estimated as F*landings or discards(fishe							2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3b	BEL	BT2	none	SOL	landings	0.044	0.033	0.041	0.029	0.026	0.030	0.026	0.027	0.014	
IIa	3b	BEL	BT2	none	SOL	discards	0.004	0.003	0.004	0.002	0.003	0.004	0.003	0.003	0.004	
IIa	3b	DEU	BT2	none	SOL	landings	0.017	0.020	0.020	0.011	0.010	0.008	0.007	0.009	0.003	
IIa	3b	DEU	BT2	none	SOL	discards	0.002	0.003	0.002	0.001	0.001	0.000	0.001	0.001	0.001	
IIa	3b	DNK	GN1	none	SOL	landings	0.015	0.010	0.017	0.016	0.010	0.010	0.008	0.009	0.005	
IIa	3b	DNK	GN1	none	SOL	discards	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	
IIa	3b	ENG	BT2	none	SOL	landings	0.007	0.007	0.010	0.008	0.011	0.005	0.009	0.014	0.007	
IIa	3b	ENG	BT2	none	SOL	discards	0.001	0.003	0.001	0.001	0.001	0.000	0.001	0.001	0.002	
IIa	3b	FRA	GT1	none	SOL	landings	0.017	0.013	0.020	0.020	0.015	0.018	0.016	0.006	0.008	
IIa	3b	FRA	GT1	none	SOL	discards	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	
IIa	3b	NLD	BT2	none	SOL	landings	0.404	0.338	0.393	0.285	0.331	0.253	0.220	0.225	0.145	
IIa	3b	NLD	BT2	none	SOL	discards	0.045	0.049	0.036	0.036	0.019	0.009	0.026	0.033	0.087	
IIa	3b	SCO	BT2	none	SOL	landings	0.007	0.009	0.012	0.011	0.015	0.006	0.002	0.001	0.000	
IIa	3b	SCO	BT2	none	SOL	discards	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	
IIa	3b	ENG	u10m	none	SOL	landings	0.006	0.006	0.007	0.008	0.009	0.009	0.007	0.007	0.007	
sum							0.570	0.495	0.564	0.429	0.454	0.352	0.326	0.336	0.283	
landings							0.517	0.436	0.520	0.388	0.427	0.339	0.295	0.298	0.189	
discards							0.053	0.059	0.044	0.041	0.027	0.013	0.031	0.038	0.094	
rel. contribution to F estimated							0.966	0.963	0.966	0.943	0.974	0.954	0.896	0.946	0.956	

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations														
reduction														
Effort estimate	124600639	115855282	112322861	103441295	93880282	82746594	81249324	76654046	68329407					
							-0.02	-0.06	-0.11					
											2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	4241216	4294884	3884007	3418751	2707991	3536979	3327143	2464058	1704406		0.871	9	4.691	0.002
kW days at sea	4241216	4294884	3884007	3418751	2707991	3536979	3327143	2464058	1704406		0.018	9	0.048	0.963
kW days at sea	1669870	2060092	2212397	1927398	1590823	1464163	1666322	1801775	1240530		0.823	9	3.833	0.006
kW days at sea	1669870	2060092	2212397	1927398	1590823	1464163	1666322	1801775	1240530		0.637	9	2.186	0.065
kW days at sea	2075696	2156817	2028558	1790218	951521	1003280	1077380	1210450	1136119		0.695	9	2.557	0.038
kW days at sea	2075696	2156817	2028558	1790218	951521	1003280	1077380	1210450	1136119		0.399	9	1.151	0.288
kW days at sea	2739407	3559561	4046340	2974409	3251512	1975399	2491105	3257607	2741314		0.524	9	1.628	0.148
kW days at sea	2739407	3559561	4046340	2974409	3251512	1975399	2491105	3257607	2741314		0.461	9	1.374	0.212
kW days at sea	830136	793053	813190	1785801	1703889	1010253	1010253	634781	690428		0.511	9	1.573	0.160
kW days at sea	830136	793053	813190	1785801	1703889	1010253	1010253	634781	690428		0.595	9	1.959	0.091
kW days at sea	47724234	44669317	44478122	38820726	37931313	27646215	28696410	28508780	25776297		0.936	9	7.035	0.000
kW days at sea	47724234	44669317	44478122	38820726	37931313	27646215	28696410	28508780	25776297		0.010	9	0.026	0.980
kW days at sea	3766255	4610314	4185264	3109683	2790865	1351721	554376	144306			0.731	8	2.624	0.039
kW days at sea	3766255	4610314	4185264	3109683	2790865	1351721	554376	144306			0.922	8	5.833	0.001
kW days at sea														
sum	63046814	62144038	61647878	53826986	50927914	37988010	38822989	38021757	33289094		0.968	9	10.206	0.000
	63046814	62144038	61647878	53826986	50927914	37988010	38822989	38021757	33289094		0.931	9	6.748	0.000
	63046814	62144038	61647878	53826986	50927914	37988010	38822989	38021757	33289094		0.014	9	0.037	0.972
rel effort	0.506	0.536	0.549	0.52	0.542	0.459	0.478	0.496	0.487					

5.3.15 ToR 12 Considerations in order to accomplish spatio-temoral patterns in standardized catchability indices for cod

The STECF EWG 12-06 discussed this task and elaborated generic ideas given in section 4.9 of the present report.

5.3.16 ToR 13 Discard estimates of cod in 2011 for specific fisheries with additional quota allocations

STECF EWG 12-06 notes that discard information is often scarce and inadequate to support provision of the requested 2011 discard estimates for specific fisheries with additional quota allocations. The landings and discards for cod by the regulated gear for the countries and areas are estimated as:

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	2EU & 4	UK (incl SCO)	TR1	11145.244	1402.372	0.112

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	4	DNK	TR1	2789.625	225.694	0.075

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	3an	DNK	TR2	938.181	480.905	0.339

ANNEX	SPECIES	YEAR	AREA	COUNTRY	REG_GEAR	LANDINGS (t)	DISCARDS (t)	DISC RATE
IIA	COD	2011	3an & 4	DNK	GN	2252.196	unknown	unknown

5.4 West of Scotland effort regime evaluation in the context of Annex IIA to Council Regulation (EC) No 57/2011)

5.4.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member State and fisheries

According to the data provided by Member States in 2012 aggregated by categories in Coun. Reg. (EC) 1342/2008 (cod plan) the fishery West of Scotland is primarily an otter trawl fishery; beam trawls and static gears are hardly used. When Spanish data was made available in 2009, longline gears were clearly the second most important gear category; however Spanish data is not available for division VIa this year.

In terms of kWdays the overall nominal effort in ICES division VIa displays a decrease of 43% since 2003. The majority of that reduction took place between 2003 and 2005. Effort within regulated gears is 50% less in 2011 compared to 2003. Effort by trawl and seine gears (TR gears under Coun. Reg. (EC) 1342/2008) shows a long term decrease in effort and has fallen to its lowest level in the time series in 2011 (Table 5.4.1.3 and Figure 5.4.1.1). Recorded effort in 2011 was 52% lower than that in 2003 and 14% lower than in 2010. Without Spanish data the trend in long line (LL1) effort is uncertain but it is still the most important gear type after TR gears in this area.

Within the trawl gear categories it can be seen from Figure 5.4.1.2 that effort is only significant in the categories TR1 and TR2. TR3 effort is very low (with no effort recorded in 2010; Table 5.4.1.3). There is a clear contrast in effort trend between the TR1 and TR2 categories; effort using TR1 gears declined markedly between 2003 and 2006, was relatively stable from 2006 to 2009 before falling again. Effort for TR2 gears fell more slowly between 2003 and 2006 and then stabilised. Total effort expended by fisheries using these two mesh ranges is now very similar.

Three years of data are now available regarding TR effort under articles 11 and 13 of Coun. Reg. (EC) 1342/2008. Figure 5.4.1.3 shows a sharp decline in TR1 ‘none’ effort in 2009, but this was more than compensated for by effort now categorised under CPART13 leading to a small increase in overall TR1 effort. Effort under TR1, CPART13 increased again in 2010 but the fall in TR1 ‘none’ effort between 2009 and 2010 was bigger. Effort in both categories fell in 2011 such that overall TR1 effort is at a new low for the time series. Very small quantities of effort under TR1, CPART11 are recorded. Figure 5.4.1.4 shows a very large decline in TR2 ‘none’ effort in 2009 which was bigger than the effort recorded for TR2, CPART13 in 2009. In 2010 and 2011 approximately 1m kWdays was recorded under TR2, CPART11. Vessels transferred from CPART13 to CPART11 in 2010 but there was also an overall reduction in effort. There was a further modest reduction in overall TR2 effort in 2011 with effort decreases for CPART11 and CPART13, but TR2, ‘none’ effort has increased slightly in the last two years.

Effort which could not be assigned to any existing derogation (none) has fallen by 35% in 2011 compared to 2003 (Table 5.4.1.3). Effort not assigned to a regulated gear type comprises mesh size groups 32-54mm and 55-69mm targeting pelagic resources, effort where mesh size was not identified in the data provided and unregulated gear types such as pots and dredges. Figure 5.4.1.5 illustrates the importance of unregulated gear effort within the area. Between 2004 and 2006 total effort recorded for unregulated gears exceeded that of regulated gears and this is again the case for 2011. Between 2004 and 2010 however unregulated effort decreased in line with regulated effort.

Table 5.4.1.2 shows the percentage change in effort totals supplied by Member States compared to data submitted in 2011 (and as available on the STECF website). There were revisions to all years from 2003 from Ireland although revisions to years prior to 2010 are minor (except for percentage change in GT1 effort in 2005).

Tables showing effort in terms of gross tonnage days at sea (GT*days at sea) and number of vessels by derogation are not presented in this report but are available on the JRC website: Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

It should be noted that to record an annual number of vessels the maximum number from any of the four quarters within the year is chosen. Because vessels are not necessarily assigned exclusively to a single derogation, some multiple counting may occur if summing across derogations.

Table 5.4.1.1 West of Scotland. Trend in nominal effort (kW*days at sea) by derogations existing in Appendix 1 of Annex IIA of Coun. Reg. 43/2012 and Member State, 2000-2011. Derogations are sorted by gear type and country.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIA	3d	BT1	none	FRA				1519	15327							
IIA	3d			SCO	4894			60296	151480	119958	81195	1803				
IIA	3d	BT2	none	BEL	27240	10308	5595	19005	18103	8566	4415	2356				
IIA	3d			ENG	2294	1550	861	1274	12067	1810						
IIA	3d			FRA		1472		25827	34218							
IIA	3d			GBJ	1857											
IIA	3d			IRL					28827	5068	6335					
IIA	3d			SCO	97861	84675	103897									
IIA	3d	GN1	none	DEU	37830	37059	5292	113084	79545	26780			37334	29088	36132	21816
IIA	3d			ENG	358510	414572	399429	471808	309423	201100	23028	36174		13832	2540	
IIA	3d			FRA	103163	148158	770080	130216	169758	145478	129344	230271	572425	572425	294925	241877
IIA	3d			IRL	3734	19636	8258	19967	20763	192	3554	13346	9949	3275	551	2075
IIA	3d			NIR									3564			
IIA	3d			SCO	13446	14196	7097	47095	66913	38855	1044	553	6155			11972
IIA	3d	GT1	none	FRA	564	156032										
IIA	3d			IRL						12000	448					359
IIA	3d			SCO	2265	1416		636	435							
IIA	3d	LL1	none	ENG	675637	671367	550463	370933	459841	317428	284497	325325	28103			
IIA	3d			FRA	52948						163130	445344	277750	277750	189072	172250
IIA	3d			IRL	3693	44550	9450	7200	18400	3000		9750			1397	7263
IIA	3d			NIR	562					1574						
IIA	3d			SCO	73802	88275	181600	124695	148430	306947	371404	518887	378736	703396	723065	694992
IIA	3d	TR1	CPART11	IRL												213774
IIA	3d			SCO											44284	20755
IIA	3d		CPART13	DEU											4530	
IIA	3d			IRL										551302	754458	353477
IIA	3d			SCO										2228713	2315824	2079554
IIA	3d		none	DEU	66862	45127	23580	19191	12530	35586	27897	23652	3060	4854	2427	
IIA	3d			ENG	727872	705017	363993	319445	145914	85851	48469	8711	17020	24446	14062	12979
IIA	3d			FRA	7285816	7796882	28235453	6010785	5807538	6038254	5193815	5058616	4486887	4482329	3469228	2149300
IIA	3d			IOM	5070											
IIA	3d			IRL				496439	316477	308681	325597	530740	435661			
IIA	3d			NIR	497801	367439	300806	338394	162967	87191	29352	33609	38338	45378	23859	3160
IIA	3d			SCO	7453114	8522924	7565712	5722626	4502155	2635381	2099672	1986484	1990142			
IIA	3d	TR2	CPART11	SCO											1054957	932746
IIA	3d		CPART13	SCO										4524898	2731450	2637238
IIA	3d		none	BEL							1766	795			1176	
IIA	3d			ENG	31896	12554	35937	106861	66311	57345	63616	58724	87267	15721	14802	21642
IIA	3d			FRA	7206	10106	30278	43098	12350			883	269645	274203		
IIA	3d			IOM		562		181	1172	181	894		649			
IIA	3d			IRL				1130195	977557	767211	712325	388727	205082	17989	9150	17532
IIA	3d			NIR	328049	354350	391238	280147	353158	350269	453556	758258	652352	523976	874397	944199
IIA	3d			NLD												5464
IIA	3d			SCO	5065442	4903162	4796552	5760859	5335231	4586126	4380883	4692157	4804497			
IIA	3d	TR3	none	DNK	46920	47565	130437	156828	91088		11520					
IIA	3d			IRL				2198		342	160	317	11321	1323		5915
IIA	3d			NIR					317							
IIA	3d			SCO	14189	3775	1747	29877	6880	41202		256				
Total of regulated gears					22990537	24462729	43917755	21810679	19325175	16182376	14417916	15125738	14315937	14294898	12562286	10550339
IIA	3d		none	DEU	666036	759653	590791	729409	767344	720815	1066842	1057879	700908	490212	430923	1081790
IIA	3d			DNK	151351	78011	28933	62183	264885	157518	556042	135713	93959			119982
IIA	3d			ENG	563129	739599	660116	763289	597101	529340	1101891	1187425	746498	870027	632396	453397
IIA	3d			FRA	352507	243553	1342869	434384	453248	215280	361858	354281	275460	275460	233392	235080
IIA	3d			GBJ			10252							321		1043
IIA	3d			IOM	23922	2541	8344	8144	13229	2722	9133	11285	35882	15984	8010	18251
IIA	3d			IRL	4123007	3604844	3995866	3254759	3603506	2137558	2210269	2153596	2188949	2083459	1873475	2021702
IIA	3d			LTU										29520		150400
IIA	3d			NIR	274378	305302	543148	454206	708614	496663	477614	584492	420274	284696	386759	709247
IIA	3d			NLD	3335277	4343285	3371770	2170705	6497392	5592136	4295071	4118663	3873076	2839787	1564318	1258498
IIA	3d			SCO	7067739	7523617	8562814	8904499	9410186	8208630	5548926	4992356	4676514	5194373	5040689	4935110
Total of unregulated gears					16557346	17600405	19114903	16781578	22315505	18060662	15627646	14595690	13011520	12083839	10169962	10984500
Grand Total					39547883	42063134	63032658	38592257	41640680	34243038	30045562	29721428	27327457	26378737	22732248	21534839

Table 5.4.1.2 West of Scotland. Relative change in nominal effort (kW*days at sea) reported by Member State compared to the data submitted in 2011; by derogations existing in Appendix 1 of Annex IIA of Coun. Reg. 43/2012.

COUNTRY	ANNEX	REG AREA (	REG GEAR (	SPECON	VESSEL_LEI	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BEL	IIa	3d	BT2	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
BEL	IIa	3d	TR2	none	O15M							0.0%	0.0%			0.0%
DEU	IIa	3d	GN1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
DEU	IIa	3d	TR1	CPART13	O15M											0.0%
DEU	IIa	3d	TR1	IIA83D	O15M		0.0%	0.0%			0.0%	0.0%	0.0%			
DEU	IIa	3d	TR1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DNK	IIa	3d	TR3	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%				
ENG	IIa	3d	BT2	none	O10T15M	0.0%			0.0%							
ENG	IIa	3d	BT2	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
ENG	IIa	3d	GN1	none	O10T15M		0.0%									
ENG	IIa	3d	GN1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%
ENG	IIa	3d	LL1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
ENG	IIa	3d	TR1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ENG	IIa	3d	TR2	none	O10T15M	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ENG	IIa	3d	TR2	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FRA	IIa	3d	BT1	none	O15M				0.0%	0.0%						
FRA	IIa	3d	BT2	none	O15M		0.0%		0.0%	0.0%						
FRA	IIa	3d	GN1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FRA	IIa	3d	GT1	IIA83G	O15M		0.0%									
FRA	IIa	3d	GT1	none	O10T15M	0.0%										
FRA	IIa	3d	GT1	none	O15M		0.0%									
FRA	IIa	3d	LL1	none	O15M	0.0%						0.0%	0.0%	0.0%	0.0%	0.0%
FRA	IIa	3d	TR1	IIA83D	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
FRA	IIa	3d	TR1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FRA	IIa	3d	TR2	IIA83D	O10T15M				0.0%							
FRA	IIa	3d	TR2	IIA83D	O15M	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%		
FRA	IIa	3d	TR2	none	O10T15M				0.0%							
FRA	IIa	3d	TR2	none	O15M		0.0%								0.0%	
GBJ	IIa	3d	BT2	none	O15M	0.0%										
IOM	IIa	3d	TR1	none	O15M	0.0%										
IOM	IIa	3d	TR2	none	O10T15M									0.0%		
IOM	IIa	3d	TR2	none	O15M		0.0%		0.0%	0.0%	0.0%	0.0%				
IRL	IIa	3d	BT2	none	O15M					0.0%	0.0%	0.0%				
IRL	IIa	3d	GN1	none	O10T15M	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-30.5%
IRL	IIa	3d	GN1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	
IRL	IIa	3d	GT1	none	O10T15M							0.0%				
IRL	IIa	3d	GT1	none	O15M						121.8%					
IRL	IIa	3d	LL1	none	O10T15M											-57.3%
IRL	IIa	3d	LL1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%			
IRL	IIa	3d	TR1	CPART13	O10T15M										0.0%	-21.0%
IRL	IIa	3d	TR1	CPART13	O15M										0.4%	-7.1%
IRL	IIa	3d	TR1	none	O10T15M				0.0%				0.0%	0.0%		
IRL	IIa	3d	TR1	none	O15M				0.0%	0.0%	0.0%	0.5%	0.1%	0.1%		
IRL	IIa	3d	TR2	none	O10T15M				-0.8%	-0.5%	-1.3%	-2.3%	-2.0%	0.0%	0.0%	-27.3%
IRL	IIa	3d	TR2	none	O15M				9.6%	1.1%	0.0%	0.0%	1.2%	4.4%	0.0%	-19.4%
IRL	IIa	3d	TR3	none	O10T15M							0.0%				
IRL	IIa	3d	TR3	none	O15M				0.0%		0.0%		0.0%	0.0%	0.0%	
NIR	IIa	3d	GN1	none	O10T15M									0.0%		
NIR	IIa	3d	LL1	none	O10T15M	0.0%					0.0%					
NIR	IIa	3d	TR1	none	O10T15M							0.0%				
NIR	IIa	3d	TR1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NIR	IIa	3d	TR2	none	O10T15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NIR	IIa	3d	TR2	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NIR	IIa	3d	TR3	none	O15M					0.0%						
SCO	IIa	3d	BT1	none	O15M	0.0%			0.0%	0.0%	0.0%	0.0%	0.0%			
SCO	IIa	3d	BT2	none	O15M	0.0%	0.0%	0.0%								
SCO	IIa	3d	GN1	none	O10T15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	GN1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%		
SCO	IIa	3d	GT1	none	O10T15M	0.0%	0.0%		0.0%	0.0%						
SCO	IIa	3d	LL1	none	O10T15M			0.0%								
SCO	IIa	3d	LL1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SCO	IIa	3d	TR1	CPART11	O15M											0.0%
SCO	IIa	3d	TR1	CPART13	O10T15M										0.0%	0.0%
SCO	IIa	3d	TR1	CPART13	O15M										0.0%	0.0%
SCO	IIa	3d	TR1	IIA83C	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR1	IIA83D	O10T15M	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%			
SCO	IIa	3d	TR1	IIA83D	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR1	none	O10T15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR1	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR2	CPART11	O10T15M											0.0%
SCO	IIa	3d	TR2	CPART11	O15M											0.0%
SCO	IIa	3d	TR2	CPART13	O10T15M										0.0%	0.0%
SCO	IIa	3d	TR2	CPART13	O15M										0.0%	0.0%
SCO	IIa	3d	TR2	IIA83C	O15M	0.0%	0.0%	0.0%								
SCO	IIa	3d	TR2	IIA83D	O10T15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR2	IIA83D	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR2	none	O10T15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR2	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
SCO	IIa	3d	TR3	none	O10T15M		0.0%			0.0%						
SCO	IIa	3d	TR3	none	O15M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%			

Table 5.4.1.3 West of Scotland. Trend in nominal effort (kW*days at sea) by derogation as defined by Coun. Reg. 43/2012, 2003-2011.

REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	rel chng 03	rel chng 04-06	rel chng 10
3d	BT1	none	4894			61815	166807	119958	81195	1803					-100%	-100%	
	BT2	none	129252	98005	110353	46106	93215	15444	10750	2356					-100%	-100%	
	GN1	none	516683	633621	1190156	782170	646402	412405	156970	280344	629427	618620	334148	277740	-64%	-31%	-17%
	GT1	none	2829	157448		636	435	12000	448					359	-44%	-92%	
	LL1	none	806642	804192	741513	502828	626671	628949	819031	1299306	684589	981146	913534	874505	74%	26%	-4%
	TR1	CPART11											44284	234529			430%
		CPART13										2780015	3074812	2433031			-21%
		FDFIIA											126775	402802			218%
		none	16036535	17437389	36489544	12906880	10947581	9190944	7724802	7641812	6971108	4557007	3509576	2165439	-83%	-77%	-38%
	TR2	CPART11											1054957	932746			-12%
		CPART13										4524898	2731450	2637238			-3%
		none	5432593	5280734	5254005	7321341	6745779	5761132	5613040	5899544	6019492	831889	899525	988837	-86%	-84%	10%
	TR3	none	61109	51340	132184	188903	98285	41544	11680	573	11321	1323		5915	-97%	-88%	
Total regulated gears			22990537	24462729	43917755	21810679	19325175	16182376	14417916	15125738	14315937	14294898	12689061	10953141	-50%	-34%	-14%
3d	none	none	16557346	17600405	19114903	16781578	22315505	18060662	15627646	14595690	13011520	12083839	10169962	10984500	-35%	-41%	8%
Total			39547883	42063134	63032658	38592257	41640680	34243038	30045562	29721428	27327457	26378737	22859023	21937641	-43%	-38%	-4%

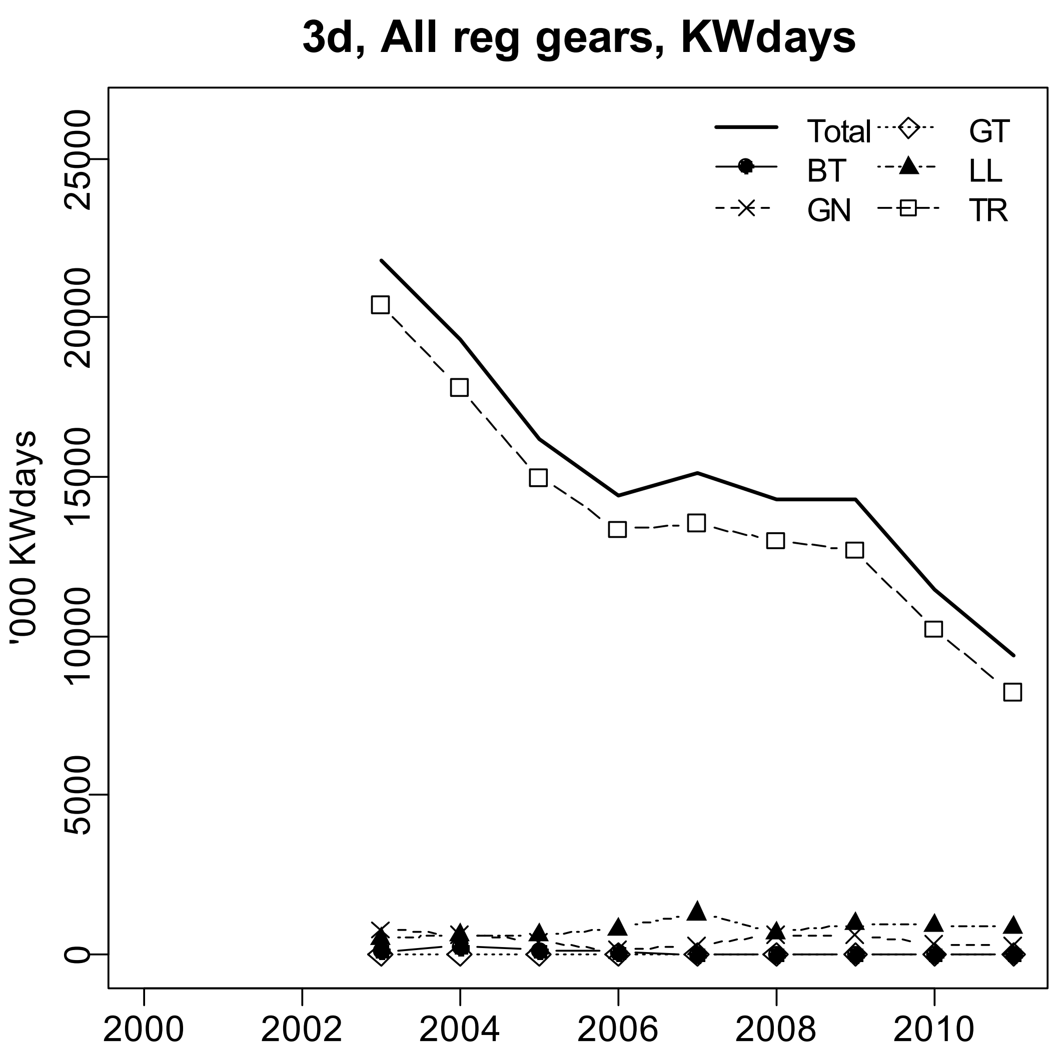


Figure 5.4.1.1 West of Scotland. Trend in nominal effort (kW*days at sea) by gear types as defined by Coun. Reg. 43/2012, 2000-2011. Values exclude effort in categories exempted from effort control (CPart11).

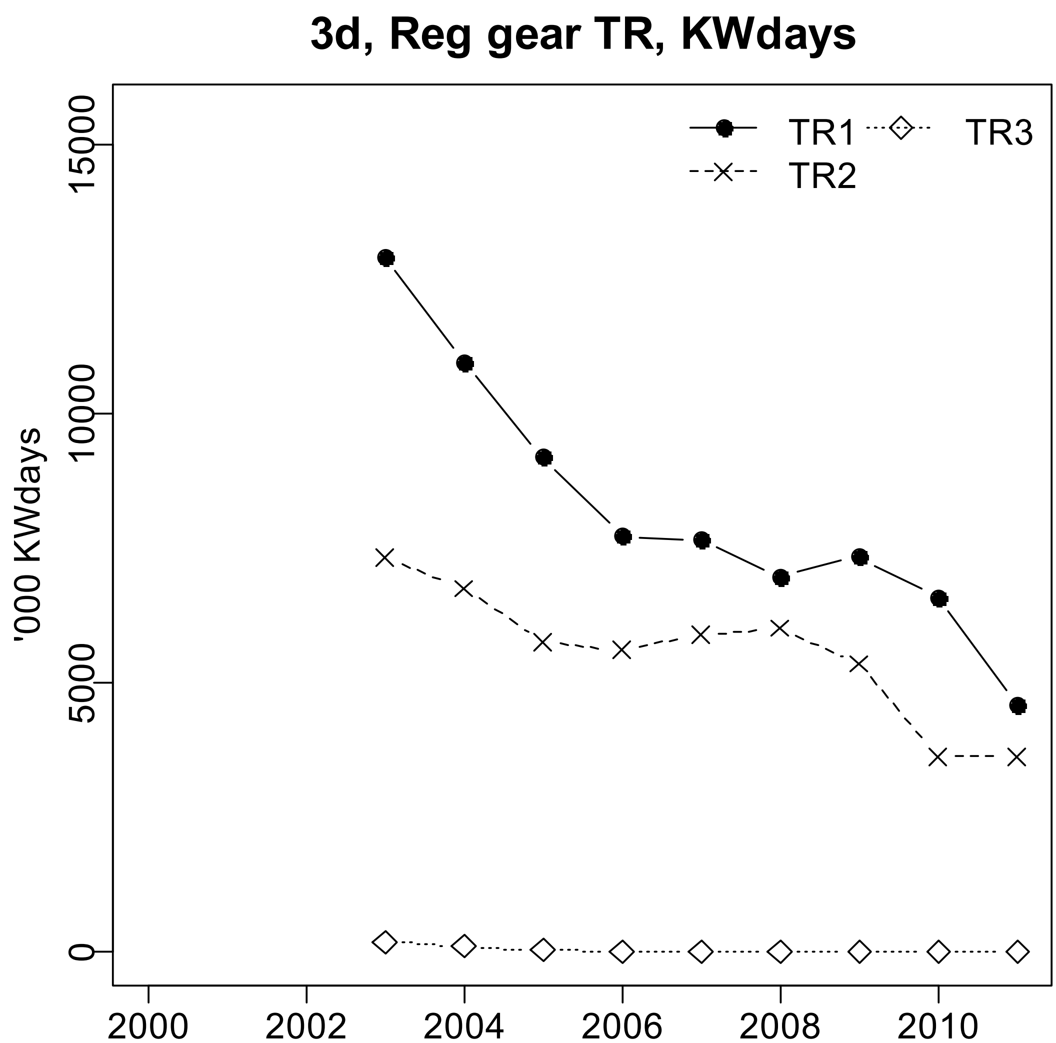


Figure 5.4.1.2 West of Scotland. Trend in nominal effort (kW*days at sea) by TR gear groups as defined by Coun. Reg. 43/2012, 2000-2011. Values exclude effort in categories exempted from effort control (CPart11).

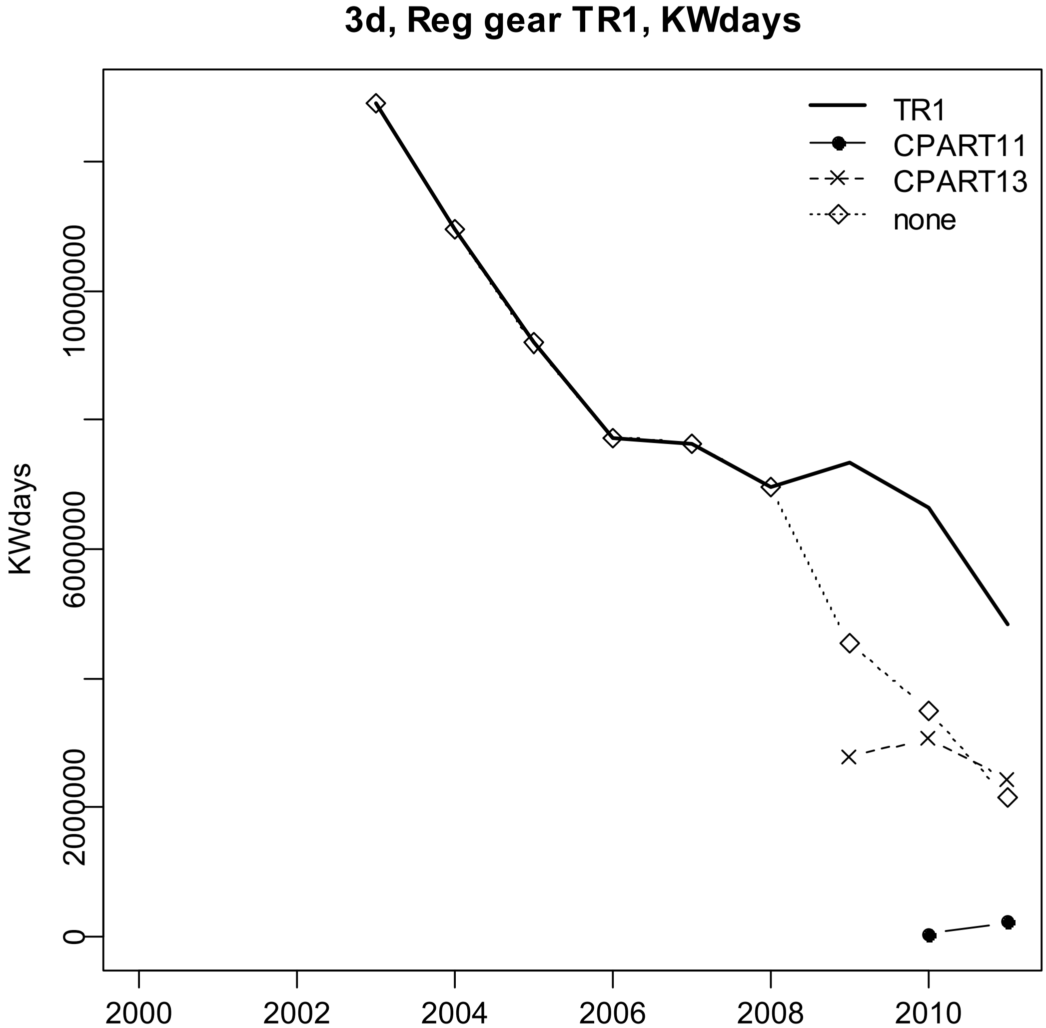


Figure 5.4.1.3 West of Scotland. Trend in nominal effort (kW*days at sea) by specon for regulated gear TR1. Line labelled TR1 represents the sum of the other lines.

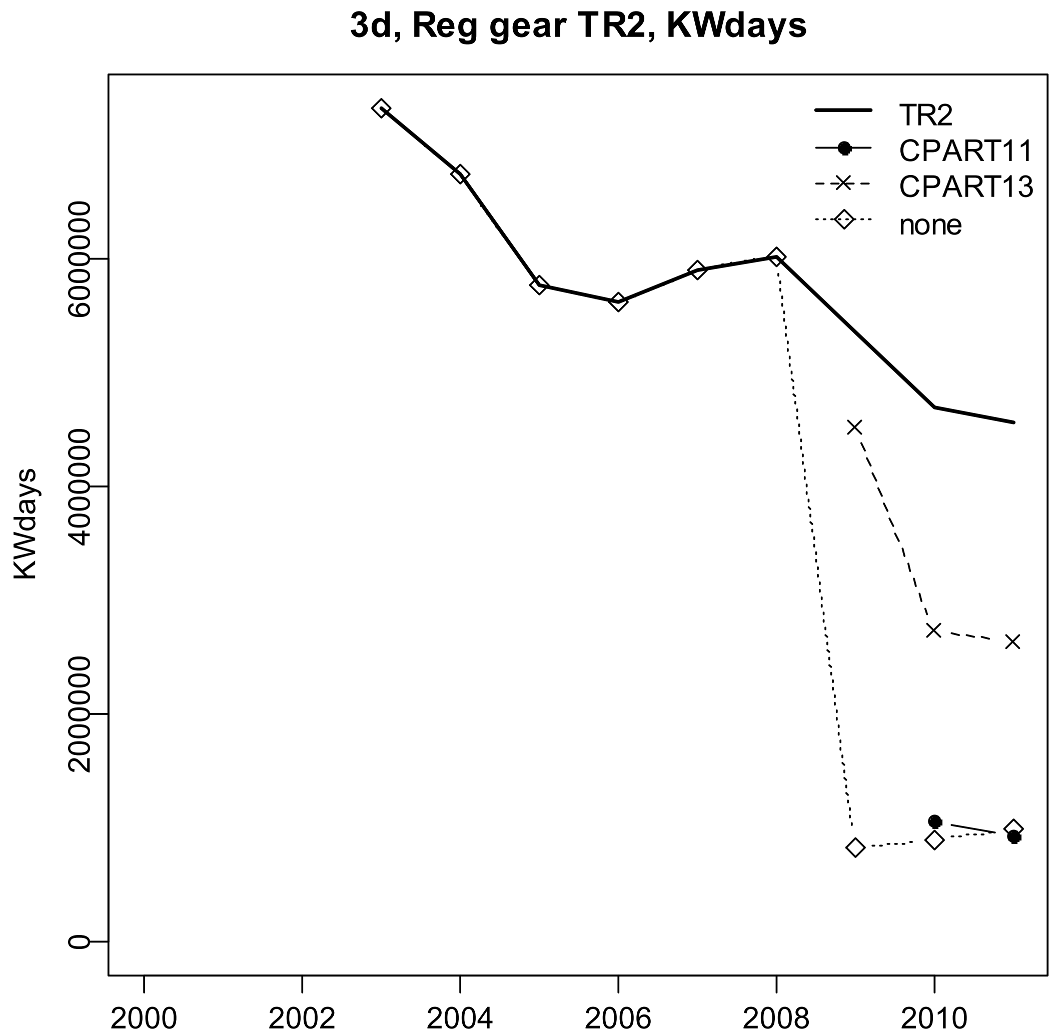


Figure 5.4.1.4 West of Scotland. Trend in nominal effort (kW*days at sea) by specon for regulated gear TR2. Line labelled TR2 represents the sum of the other lines.

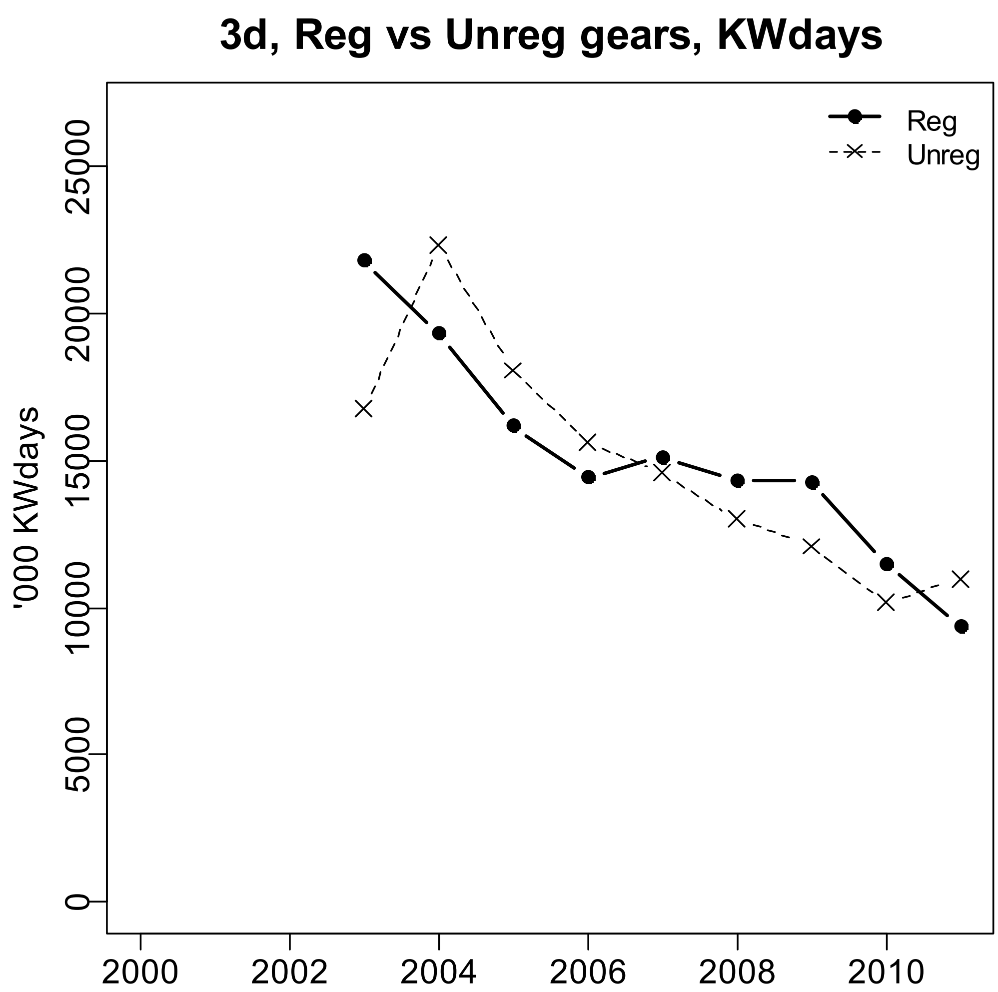


Figure 5.4.1.5 West of Scotland. Trend in nominal effort (kW*days at sea) by regulated gear groups (combined) as defined by Coun. Reg. 1342/2008 compared to unregulated gear groups (combined), 2000-2011.

5.4.2 ToR 1.b and c Catches (landings and discards) of cod and non-cod species in weight and numbers at age by fisheries

Table 5.4.2.1 lists the landings and discards for the main species by derogations according to Coun. Reg. (EC) 1342/2008. The data given in Table 5.4.2.1 forms the basis of Figure 5.4.2.1 displaying the relative catch compositions by derogations for the years 2003-2011. For brevity, the Figure 5.4.2.1 only presents results for anglerfish (ANF), cod (COD), haddock (HAD), hake, (HKE), Nephrops (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). Discard information on Nephrops for any gear and for all other species for non-trawl gears was not available for this report. Therefore the lack of the dark bars representing discards in these figures indicates a lack of observations for non-trawl gears and a lack of information for Nephrops rather than an absence of discards.

A description of the catch compositions of the derogations relevant to the area follows:-

TR1 -- The main species caught are haddock, saithe and anglerfish. The catches of hake have been steadily rising. The landings of both hake and anglerfish now well exceed those of cod; the landings of the latter reflect the steady reduction in the cod TAC. Catches of cod have remained much higher than landings because of increased discards.

TR2 – Landings are dominated by Nephrops. Considering landings across all gear categories this species contributes the greatest contribution to landings among the demersal species. Bycatch of the finfish occur with historically high discard rates of haddock and whiting, however whiting catches are recorded as low in recent years.

TR3 – Landings for this gear category are negligible for this region.

GN1 – This category lands anglerfish, hake and saithe. The landings of hake and saithe increased rapidly to 2008 but the overall quantities are still small.

LL1 – The longline fishery lands hake almost exclusively. Landings of hake are up to 6 times that from the gillnet fishery.

Unregulated (POTS) – Of those gears not regulated under Coun. Reg. (EC) 1342/2008 the most significant landings of the species considered come from pots – in this case Nephrops (although the gear takes numerous other species).

It can be seen that landings of plaice and sole are negligible across all gear categories and west of Scotland it is only relevant to consider age specific data for cod for this region. Also, only trawl gears catch enough cod to merit a catch at age analysis. No age specific data was available for TR2 gear in 2010.

From Figure 5.4.2.2 it can be seen that catch and landings in the TR2 gear group are predominantly of fish at age two. For the larger TR1 mesh category landings are more evenly spread across ages two to four. Until 2005 discards from the TR gears were almost exclusively at ages one and two (with discards generally exceeding landings for fish at age one). In 2006 noticeable discards at age 3 were recorded against the TR1 gears. There was also greatly increased catch and discarding of cod at age one across both TR gear categories in 2006. This is believed to reflect new UK and Irish legislation successfully curtailing illegal landings. It is also considered evidence of a strong 2005 year class as is discards across gear categories of cod age two in 2007 and age 3 in 2008. In the TR1 gear category the majority of the catch of age two cod in 2007, age three cod in 2008 and cod at ages 2 to 4 in 2009 was discarded. This is believed to be because cod quota restrictions prevent a greater proportion being landed. Also for gear TR1 catches of age one cod in 2009 and age two cod in 2010 are consistent with ICES assessments for division VIa cod which indicated a relatively strong 2008 year class.

The overall discard rate of cod (by weight) has increased in years subsequent to 2003 (Table 5.4.2.1). This was due initially to higher discard rates in the smaller meshed category (TR2) but in 2006 the recorded discard rate for the TR1 gear group leapt from 1% to 49% (reflecting legislation successfully curtailing illegal landings). The rate of discarding in the TR1 gears has been between 70 and 90% in 2008-2011. Catches of cod by TR2 'none' have been negligible since 2009 but the discard rates recorded for TR2 CPART13 and CPART11 are still very high (although low sampling coverage of TR2 vessels lead to high annual variation). As mentioned above it is believed the present high discard rates result from a combination of restrictive quotas, fishing opportunities for other species and year classes of cod (2005 and 2008 year classes) large enough to allow catches over and above the cod quota.

Age specific landings and discard figures can be downloaded from the EWG's web page: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

Table 5.4.2.1 West of Scotland. Landings (t), discards (t) and relative discard rates by species (ANF, COD, HAD, HKE, NEP, PLE, POK, SOL, WHG) and derogation existing in Table 1 of Annex IIA of Coun. Reg. (EU) 43/2012 and (EU) 44/2012, 2003-2011.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2003 L	2003 D	2003 R	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	ANF	3d	BT1	none	FRA			0	0	0	0			0			0			0			0			0			0			0
IIa	ANF	3d	BT1	none	SCO	1	0	0	14	0	0	3	0	0	1	0	0			0			0			0			0			0
IIa	ANF	3d	BT2	NONE	BEL	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	ANF	3d	BT2	none	ENG	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	ANF	3d	BT2	none	FRA	0	0	0	1	0	0			0			0			0			0			0			0			0
IIa	ANF	3d	BT2	NONE	IRL			0	0	0	0			0	0	0	0			0			0			0			0			0
IIa	ANF	3d	GN1	none	DEU	29	0	0	47	0	0	39	0	0			0			0	54	0	0	75	0	0	86	0	0	59	0	0
IIa	ANF	3d	GN1	none	ENG	16	0	0	10	0	0	21	0	0	30	0	0	21	0	0			0	8	0	0	0	0	0			0
IIa	ANF	3d	GN1	none	FRA	79	0	0	237	0	0	294	0	0	212	0	0	189	0	0	401	0	0	401	0	0	1	0	0	3	0	0
IIa	ANF	3d	GN1	NONE	IRL	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0			0
IIa	ANF	3d	GN1	none	SCO	5	0	0	2	0	0	3	0	0			0			0			0			0			0	7	0	0
IIa	ANF	3d	GT1	NONE	IRL			0			0			0	1	0	0			0			0			0			0			0
IIa	ANF	3d	LL1	none	ENG			0	0	0	0	0	0	0	0	0	0	0	0	0			0			0			0			0
IIa	ANF	3d	LL1	none	SCO	0	0	0			0			0			0			0			0			0			0			0
IIa	ANF	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	59	4	0.06
IIa	ANF	3d	TR1	CPart11	SCO			0			0			0			0			0			0			0	0	0	0	0	0	0
IIa	ANF	3d	TR1	CPart13	DEU			0			0			0			0			0			0			0	0	0	0			0
IIa	ANF	3d	TR1	CPART13	IRL			0			0			0			0			0			0	313	1	0	516	9	0.02	411	6	0.01
IIa	ANF	3d	TR1	CPart13	SCO			0			0			0			0			0			0	797	2	0	999	15	0.01	953	11	0.01
IIa	ANF	3d	TR1	none	DEU			0			0	0	0	0	1	0	0	0	0	0	0	0	0			0			0			0
IIa	ANF	3d	TR1	none	ENG	19	57	0.75	26	20	0.43	14	0	0	12	0	0	1	0	0	5	0	0	2	0	0	0	0	0	0	0	0
IIa	ANF	3d	TR1	none	FRA	1111	310	0.22	1144	20	0.02	1437	0	0	1239	0	0	1769	7	0	1820	0	0	1820	0	0	292	3	0.01	910	0	0
IIa	ANF	3d	TR1	NONE	IRL	83	28	0.25	65	25	0.28	138	4	0.03	189	0	0	234	30	0.11	196	6	0.03	0	0	0			0			0
IIa	ANF	3d	TR1	none	NIR	5	16	0.76	2	1	0.33	1	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IIa	ANF	3d	TR1	none	SCO	535	588	0.52	652	268	0.29	850	18	0.02	756	0	0	862	79	0.08	986	21	0.02			0			0			0
IIa	ANF	3d	TR2	CPart11	SCO			0			0			0			0			0			0			0	0	0	0	0	0	0
IIa	ANF	3d	TR2	CPart13	SCO			0			0			0			0			0			0	67	0	0	40	0	0	51	0	0
IIa	ANF	3d	TR2	NONE	BEL			0			0			0	0	0	0			0			0			0			0			0
IIa	ANF	3d	TR2	none	ENG	4	17	0.81	6	3	0.33	6	0	0	6	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0
IIa	ANF	3d	TR2	none	FRA	27	0	0	12	0	0			0			0	0	0	0	3	0	0	3	0	0			0			0
IIa	ANF	3d	TR2	none	IOM			0			0			0	0	0	0			0			0			0			0			0
IIa	ANF	3d	TR2	NONE	IRL	230	124	0.35	147	125	0.46	219	17	0.07	206	0	0	231	49	0.18	102	5	0.05	15	0	0	0	0	0	8	0	0
IIa	ANF	3d	TR2	none	NIR	3	7	0.7	5	4	0.44	3	0	0	11	0	0	15	2	0.12	3	0	0	1	0	0	2	0	0	3	0	0
IIa	ANF	3d	TR2	none	NLD			0			0			0			0			0			0			0			0	0	0	0
IIa	ANF	3d	TR2	none	SCO	162	45	0.22	174	38	0.18	100	0	0	191	0	0	205	8	0.04	105	1	0.01			0			0			0
IIa	ANF	3d	TR3	none	DNK	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	ANF	3d	TR3	NONE	IRL	0	0	0			0	0	0	0			0	0	0	0	1	0	0			0			0	0	0	0
IIa	COD	3d	BT1	none	SCO	2	0	0	6	0	0	1	0	0	0	0	0			0			0			0			0			0
IIa	COD	3d	BT2	none	ENG	0	0	0			0			0			0			0			0			0			0			0
IIa	COD	3d	GN1	none	ENG			0			0			0	0	0	0			0			0			0			0			0
IIa	COD	3d	GN1	none	FRA	6	0	0	0	0	0	6	0	0	9	0	0	10	0	0	5	0	0	5	0	0	3	0	0	3	0	0
IIa	COD	3d	GN1	NONE	IRL	0	0	0	1	0	0			0			0	4	0	0	5	0	0	1	0	0	0	0	0	1	0	0
IIa	COD	3d	LL1	none	ENG	6	0	0	2	0	0	3	0	0	6	0	0	6	0	0			0			0			0			0
IIa	COD	3d	LL1	none	FRA			0			0			0	6	0	0	0	0	0	0	0	0	0	0	0			0			0
IIa	COD	3d	LL1	NONE	IRL			0			0			0			0			0			0			0	0	0	0			0
IIa	COD	3d	LL1	none	SCO	3	0	0	3	0	0	2	0	0	2	0	0	2	0	0			0			0			0			0
IIa	COD	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	6	0	0
IIa	COD	3d	TR1	CPart13	DEU			0			0			0			0			0			0			0	0	0	0			0
IIa	COD	3d	TR1	CPART13	IRL			0			0			0			0			0			0	21	1	0.05	49	0	0	32	1	0.03

Table 5.4.2.1 continued. West of Scotland. Landings (t), discards (t) and relative discard rates by species (ANF, COD, HAD, HKE, NEP, PLE, POK, SOL, WHG) and derogation existing in Table 1 of Annex IIA of Coun. Reg. (EU) 43/2012 and (EU) 44/2012, 2003-2011.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2003 L	2003 D	2003 R	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	COD	3d	TR1	CPart13	SCO			0			0			0			0			0			0	97	609	0.86	110	463	0.81	100	1103	0.92
IIa	COD	3d	TR1	none	DEU	0	0	0			0	0	0	0	2	2	0.5	2	8	0.8	1	2	0.67	0	0	0	0	0	0			0
IIa	COD	3d	TR1	none	ENG	34	0	0	19	0	0	7	0	0	9	11	0.55	1	1	0.5	4	12	0.75	4	0	0	1	1	0.5	2	0	0
IIa	COD	3d	TR1	none	FRA	162	3	0.02	87	7	0.07	101	0	0	88	84	0.49	83	152	0.65	82	289	0.78	82	0	0	47	133	0.74	38	1	0.03
IIa	COD	3d	TR1	NONE	IRL	29	5	0.15	3	1	0.25	10	1	0.09	7	11	0.61	39	2	0.05	37	7	0.16	0	0	0			0			0
IIa	COD	3d	TR1	none	NIR	43	0	0	33	0	0	21	0	0	7	6	0.46	6	22	0.79	5	10	0.67	8	0	0	1	269	1			0
IIa	COD	3d	TR1	none	SCO	720	5	0.01	337	7	0.02	298	3	0.01	274	263	0.49	226	566	0.71	203	571	0.74			0			0			0
IIa	COD	3d	TR2	CPart11	SCO			0			0			0			0			0			0			0	0	17	1	0	12	1
IIa	COD	3d	TR2	CPart13	SCO			0			0			0			0			0			0	7	47	0.87	5	0	0	7	86	0.92
IIa	COD	3d	TR2	none	ENG	2	0	0	2	0	0	1	0	0	1	0	0	1	1	0.5	2	0	0	0	0	0	0	0	0	0	0	0
IIa	COD	3d	TR2	none	FRA	1	0	0	0	0	0			0			0			0			0			0			0			0
IIa	COD	3d	TR2	none	IOM			0			0			0	0	1	1			0			0			0			0			0
IIa	COD	3d	TR2	NONE	IRL	91	22	0.19	29	4	0.12	18	5	0.22	11	156	0.93	27	3	0.1	17	9	0.35	2	0	0	0	0	0	1	0	0
IIa	COD	3d	TR2	none	NIR	6	0	0	6	2	0.25	2	0	0	4	15	0.79	7	15	0.68	3	6	0.67	1	0	0	1	0	0	1	0	0
IIa	COD	3d	TR2	none	NLD			0			0			0			0			0			0			0			0	0	0	0
IIa	COD	3d	TR2	none	SCO	146	16	0.1	52	32	0.38	25	27	0.52	19	59	0.76	30	125	0.81	25	7	0.22			0			0			0
IIa	COD	3d	TR3	NONE	IRL	0	0	0			0	0	0	0			0	0	0	0	0	0	0			0			0	0	0	0
IIa	HAD	3d	BT1	none	SCO	1	0	0	7	0	0	1	0	0	1	0	0	0	0	0			0			0			0			0
IIa	HAD	3d	BT2	NONE	BEL	0	0	0	0	0	0	0	0	0			0			0			0			0			0			0
IIa	HAD	3d	BT2	none	ENG			0	0	0	0			0			0			0			0			0			0			0
IIa	HAD	3d	BT2	NONE	IRL			0	0	0	0	0	0	0			0			0			0			0			0			0
IIa	HAD	3d	GN1	none	FRA	2	0	0			0	3	0	0	6	0	0	10	0	0	16	0	0	16	0	0	8	0	0	9	0	0
IIa	HAD	3d	GN1	NONE	IRL	1	0	0	0	0	0			0			0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
IIa	HAD	3d	LL1	none	ENG	0	0	0	1	0	0	2	0	0	3	0	0	0	0	0			0			0			0			0
IIa	HAD	3d	LL1	none	FRA			0			0			0			0	2	0	0	0	0	0	0	0	0			0	0	0	0
IIa	HAD	3d	LL1	NONE	IRL			0	0	0	0	0	0	0			0			0			0			0			0			0
IIa	HAD	3d	LL1	none	SCO	1	0	0	0	0	0	3	0	0	2	0	0	2	0	0			0			0			0			0
IIa	HAD	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	156	28	0.15
IIa	HAD	3d	TR1	CPart13	DEU			0			0			0			0			0			0			0	0	0	0			0
IIa	HAD	3d	TR1	CPART13	IRL			0			0			0			0			0			0	286	7	0.02	399	9	0.02	124	45	0.27
IIa	HAD	3d	TR1	CPart13	SCO			0			0			0			0			0			0	2321	1648	0.42	2387	200	0.08	1288	139	0.1
IIa	HAD	3d	TR1	none	DEU			0			0	1	0	0	7	5	0.42	0	0	0	1	0	0	0	0	0	1	0	0			0
IIa	HAD	3d	TR1	none	ENG	84	65	0.44	55	28	0.34	42	17	0.29	11	11	0.5	1	0	0	1	0	0	3	0	0	2	0	0	0	0	0
IIa	HAD	3d	TR1	none	FRA	175	148	0.46	162	225	0.58	266	120	0.31	266	262	0.5	160	151	0.49	104	50	0.32	104	0	0	55	0	0	39	0	0
IIa	HAD	3d	TR1	NONE	IRL	73	209	0.74	31	232	0.88	33	76	0.7	421	475	0.53	609	93	0.13	772	44	0.05	0	0	0			0			0
IIa	HAD	3d	TR1	none	NIR	24	17	0.41	37	35	0.49	30	12	0.29	8	5	0.38	173	180	0.51	62	40	0.39	4	0	0	1	0	0	0	0	0
IIa	HAD	3d	TR1	none	SCO	4168	3155	0.43	2506	1997	0.44	2592	1126	0.3	4803	4131	0.46	2475	2290	0.48	1587	568	0.26			0			0			0
IIa	HAD	3d	TR2	CPart11	SCO			0			0			0			0			0			0			0			0	1	0	0
IIa	HAD	3d	TR2	CPart13	SCO			0			0			0			0			0			0	43	31	0.42	20	2547	0.99	70	1075	0.94
IIa	HAD	3d	TR2	none	ENG	2	5	0.71	7	31	0.82	2	7	0.78	3	10	0.77	0	0	0	2	1	0.33	0	0	0			0	0	0	0
IIa	HAD	3d	TR2	none	FRA	0	1	1	2	5	0.71			0			0	0	0	0	0	0	0	0	0	0			0			0
IIa	HAD	3d	TR2	none	IOM			0			0			0	0	0	0			0			0			0			0			0
IIa	HAD	3d	TR2	NONE	IRL	405	1437	0.78	160	1262	0.89	119	306	0.72	105	508	0.83	151	151	0.5	110	54	0.33	8	0	0	0	0	0	5	2	0.29
IIa	HAD	3d	TR2	none	NIR	17	47	0.73	31	173	0.85	16	92	0.85	20	95	0.83	19	24	0.56	17	14	0.45	6	0	0	4	188	0.98	4	4	0.5
IIa	HAD	3d	TR2	none	NLD			0			0			0			0			0			0			0			0	0	0	0
IIa	HAD	3d	TR2	none	SCO	402	827	0.67	304	931	0.75	102	805	0.89	80	346	0.81	100	295	0.75	106	241	0.69			0			0			0
IIa	HAD	3d	TR3	none	DNK	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	HAD	3d	TR3	NONE	IRL	0	1	1			0	0	0	0			0	0	0	0	0	1	1			0			0	0	0	0
IIa	HAD	3d	TR3	none	NIR			0	0	0	0			0			0			0			0			0			0			0
IIa	HAD	3d	TR3	none	SCO			0	1	0	0			0			0			0			0			0			0			0

Table 5.4.2.1 continued. West of Scotland. Landings (t), discards (t) and relative discard rates by species (ANF, COD, HAD, HKE, NEP, PLE, POK, SOL, WHG) and derogation existing in Table 1 of Annex IIA of Coun. Reg. (EU) 43/2012 and (EU) 44/2012, 2003-2011.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2003 L	2003 D	2003 R	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	HKE	3d	BT1	none	SCO			0	0	0	0	0	0	0	0	0	0			0			0			0			0			0
IIa	HKE	3d	BT2	NONE	BEL			0	0	0	0			0			0			0			0			0			0			0
IIa	HKE	3d	BT2	NONE	IRL			0			0			0	0	0	0			0			0			0			0			0
IIa	HKE	3d	GN1	none	FRA	11	0	0	12	0	0	32	0	0	115	0	0	329	0	0	1122	0	0	1122	0	0	1014	0	0	1246	15	0.01
IIa	HKE	3d	GN1	NONE	IRL	1	0	0	2	0	0			0	0	0	0	9	0	0	1	0	0	1	0	0	3	0	0	0	0	0
IIa	HKE	3d	LL1	none	ENG	91	0	0	118	0	0	0	0	0	22	0	0	314	0	0	34	0	0			0			0			0
IIa	HKE	3d	LL1	none	FRA			0			0			0	253	0	0	675	0	0	334	0	0	334	0	0	432	0	0	528	0	0
IIa	HKE	3d	LL1	none	SCO	53	0	0	189	0	0	699	0	0	851	0	0	950	0	0	561	0	0	1716	0	0	1936	0	0	2840	0	0
IIa	HKE	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	41	94	0.7
IIa	HKE	3d	TR1	CPART13	IRL			0			0			0			0			0			0	361	50	0.12	492	224	0.31	207	154	0.43
IIa	HKE	3d	TR1	CPart13	SCO			0			0			0			0			0			0	285	40	0.12	383	244	0.39	482	1197	0.71
IIa	HKE	3d	TR1	none	DEU			0			0	0	0	0	0	0	0	4	0	0	0	0	0			0			0			0
IIa	HKE	3d	TR1	none	ENG	10	53	0.84	18	45	0.71	20	29	0.59	16	0	0	3	2	0.4	7	2	0.22	1	0	0	1	0	0	2	0	0
IIa	HKE	3d	TR1	none	FRA	149	87	0.37	294	25	0.08	745	40	0.05	588	0	0	667	49	0.07	1061	9	0.01	1061	0	0	1635	0	0	1120	150	0.12
IIa	HKE	3d	TR1	NONE	IRL	19	56	0.75	30	71	0.7	32	51	0.61	38	0	0	146	121	0.45	195	104	0.35	0	0	0			0			0
IIa	HKE	3d	TR1	none	NIR	40	335	0.89	54	140	0.72	32	56	0.64	9	0	0	10	6	0.38	18	8	0.31	18	0	0	17	0	0	1	0	0
IIa	HKE	3d	TR1	none	SCO	122	380	0.76	248	216	0.47	301	228	0.43	269	0	0	264	104	0.28	383	126	0.25			0			0			0
IIa	HKE	3d	TR2	CPart11	SCO			0			0			0			0			0			0			0	0	0	0	0	0	0
IIa	HKE	3d	TR2	CPart13	SCO			0			0			0			0			0			0	43	0	0	23	0	0	25	0	0
IIa	HKE	3d	TR2	none	ENG	1	4	0.8	3	13	0.81	5	12	0.71	3	0	0	0	0	0	1	1	0.5	0	0	0			0	0	0	0
IIa	HKE	3d	TR2	none	FRA	5	0	0	6	0	0			0			0	0	0	0	2	0	0	2	2	0.5			0			0
IIa	HKE	3d	TR2	none	IOM			0			0			0	0	0	0			0			0			0			0			0
IIa	HKE	3d	TR2	NONE	IRL	59	245	0.81	71	350	0.83	74	194	0.72	94	0	0	53	196	0.79	52	100	0.66	4	2	0.33	2	1	0.33	8	6	0.43
IIa	HKE	3d	TR2	none	NIR	10	45	0.82	10	64	0.86	6	15	0.71	7	0	0	13	39	0.75	5	9	0.64	2	0	0	4	3	0.43	3	4	0.57
IIa	HKE	3d	TR2	none	SCO	43	44	0.51	91	123	0.57	64	29	0.31	64	0	0	43	31	0.42	40	26	0.39			0			0			0
IIa	HKE	3d	TR3	NONE	IRL	0	0	0			0	0	0	0			0	0	0	0	1	2	0.67			0			0	0	1	1
IIa	NEP	3d	BT1	none	SCO	2	0	0			0			0			0			0			0			0			0			0
IIa	NEP	3d	GN1	NONE	IRL	0	0	0	1	0	0			0			0			0			0			0			0			0
IIa	NEP	3d	LL1	none	ENG			0	0	0	0			0			0			0			0			0			0			0
IIa	NEP	3d	LL1	NONE	IRL			0			0			0			0			0			0			0			0	0	0	0
IIa	NEP	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	5	0	0
IIa	NEP	3d	TR1	CPart11	SCO			0			0			0			0			0			0			0	84	0	0	50	0	0
IIa	NEP	3d	TR1	CPART13	IRL			0			0			0			0			0			0	36	0	0	27	0	0	13	0	0
IIa	NEP	3d	TR1	CPart13	SCO			0			0			0			0			0			0	336	0	0	235	0	0	322	0	0
IIa	NEP	3d	TR1	none	ENG	2	0	0	0	0	0	0	0	0	0	0	0			0			0			0			0			0
IIa	NEP	3d	TR1	none	FRA	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0			0
IIa	NEP	3d	TR1	NONE	IRL	15	0	0	7	0	0	10	0	0	3	0	0	21	0	0	7	0	0			0			0			0
IIa	NEP	3d	TR1	none	NIR	0	0	0			0	2	0	0	4	0	0			0	4	0	0	24	0	0	1	0	0			0
IIa	NEP	3d	TR1	none	SCO	389	0	0	189	0	0	355	0	0	514	0	0	493	0	0	459	0	0			0			0			0
IIa	NEP	3d	TR2	CPart11	SCO			0			0			0			0			0			0			0	1679	0	0	1748	0	0
IIa	NEP	3d	TR2	CPart13	SCO			0			0			0			0			0			0	8545	0	0	5600	0	0	5974	0	0
IIa	NEP	3d	TR2	none	ENG	143	0	0	91	0	0	83	0	0	115	0	0	148	0	0	203	0	0	41	0	0	33	0	0	70	0	0
IIa	NEP	3d	TR2	none	FRA	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	NEP	3d	TR2	none	IOM			0			0			0			0			0	1	0	0			0			0			0
IIa	NEP	3d	TR2	NONE	IRL	124	0	0	139	0	0	143	0	0	127	0	0	134	0	0	39	0	0	6	0	0	3	0	0	12	0	0
IIa	NEP	3d	TR2	none	NIR	516	0	0	690	0	0	710	0	0	1039	0	0	1895	0	0	1752	0	0	1138	0	0	1875	0	0	2373	0	0
IIa	NEP	3d	TR2	none	NLD			0			0			0			0			0			0			0			0	4	0	0
IIa	NEP	3d	TR2	none	SCO	7282	0	0	6906	0	0	6796	0	0	9052	0	0	10718	0	0	10000	0	0			0			0			0
IIa	NEP	3d	TR3	NONE	IRL			0			0			0			0			0	1	0	0			0			0			0
IIa	NEP	3d	TR3	none	NIR			0	1	0	0			0			0			0			0			0			0			0
IIa	NEP	3d	TR3	none	SCO			0			0	0	0	0			0	1	0	0			0			0			0			0

Table 5.4.2.1 continued. West of Scotland. Landings (t), discards (t) and relative discard rates by species (ANF, COD, HAD, HKE, NEP, PLE, POK, SOL, WHG) and derogation existing in Table 1 of Annex IIA of Coun. Reg. (EU) 43/2012 and (EU) 44/2012, 2003-2011.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2003 L	2003 D	2003 R	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	PLE	3d	BT1	none	SCO	42	0	0	10	0	0	9	0	0	0	0	0			0			0			0			0			0
IIa	PLE	3d	BT2	none	ENG	1	0	0	0	0	0			0			0			0			0			0			0			0
IIa	PLE	3d	BT2	NONE	IRL			0	3	0	0	0	0	0	0	0	0			0			0			0			0			0
IIa	PLE	3d	GN1	NONE	IRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0			0			0			0
IIa	PLE	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	2	5	0.71
IIa	PLE	3d	TR1	CPART13	IRL			0			0			0			0			0			0	9	2	0.18	24	4	0.14	9	8	0.47
IIa	PLE	3d	TR1	CPart13	SCO			0			0			0			0			0			0	32	8	0.2	26	3	0.1	23	27	0.54
IIa	PLE	3d	TR1	none	DEU			0			0			0			0	0	0	0			0			0			0			0
IIa	PLE	3d	TR1	none	ENG	1	5	0.83	1	21	0.95	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	PLE	3d	TR1	none	FRA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	PLE	3d	TR1	NONE	IRL	10	38	0.79	3	70	0.96	3	6	0.67	2	0	0	7	17	0.71	6	2	0.25	0	0	0			0			0
IIa	PLE	3d	TR1	none	NIR	4	31	0.89	3	39	0.93	1	22	0.96	0	0	0	1	0	0	0	0	0			0			0			0
IIa	PLE	3d	TR1	none	SCO	184	906	0.83	100	671	0.87	32	90	0.74	34	0	0	38	118	0.76	26	9	0.26			0			0			0
IIa	PLE	3d	TR2	CPart13	SCO			0			0			0			0			0			0	2	0	0	4	0	0	6	0	0
IIa	PLE	3d	TR2	none	ENG	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
IIa	PLE	3d	TR2	none	FRA	2	2	0.5	1	0	0			0			0			0			0			0			0			0
IIa	PLE	3d	TR2	none	IOM			0			0			0	0	0	0			0			0			0			0			0
IIa	PLE	3d	TR2	NONE	IRL	130	176	0.58	48	362	0.88	39	23	0.37	24	0	0	24	27	0.53	8	2	0.2	0	0	0	0	0	0	1	0	0
IIa	PLE	3d	TR2	none	NIR	1	0	0	1	3	0.75	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0
IIa	PLE	3d	TR2	none	NLD			0			0			0			0			0			0			0			0	0	0	0
IIa	PLE	3d	TR2	none	SCO	23	8	0.26	19	20	0.51	13	1	0.07	9	0	0	6	2	0.25	4	2	0.33			0			0			0
IIa	PLE	3d	TR3	none	DNK	0	0	0			0			0			0			0			0			0			0			0
IIa	PLE	3d	TR3	NONE	IRL	0	0	0			0	0	0	0			0	0	0	0	0	0	0			0			0	0	0	0
IIa	POK	3d	BT1	none	FRA			0	0	0	0			0			0			0			0			0			0			0
IIa	POK	3d	BT1	none	SCO	0	0	0	6	0	0			0	2	0	0	1	0	0			0			0			0			0
IIa	POK	3d	GN1	none	ENG	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	POK	3d	GN1	none	FRA	15	0	0			0	3	0	0	65	0	0	270	0	0	369	0	0	369	0	0	289	0	0	250	16	0.06
IIa	POK	3d	GN1	NONE	IRL	7	0	0	0	0	0			0	3	0	0	10	0	0	1	0	0	1	0	0	1	0	0	1	0	0
IIa	POK	3d	LL1	none	ENG	2	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0			0			0			0
IIa	POK	3d	LL1	none	FRA			0			0			0	0	0	0	4	0	0	2	0	0	2	0	0	1	0	0	2	0	0
IIa	POK	3d	LL1	NONE	IRL			0			0			0			0			0			0			0	1	0	0	2	0	0
IIa	POK	3d	LL1	none	NIR			0			0	0	0	0			0			0			0			0			0			0
IIa	POK	3d	LL1	none	SCO	0	0	0	1	0	0	4	0	0	6	0	0	12	0	0	4	0	0	2	0	0			0	2	0	0
IIa	POK	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	187	7	0.04
IIa	POK	3d	TR1	CPart13	DEU			0			0			0			0			0			0			0	2	0	0			0
IIa	POK	3d	TR1	CPART13	IRL			0			0			0			0			0			0	294	1	0	449	2	0	138	11	0.07
IIa	POK	3d	TR1	CPart13	SCO			0			0			0			0			0			0	2852	14	0	2784	436	0.14	4112	852	0.17
IIa	POK	3d	TR1	none	DEU	54	127	0.7			0	373	375	0.5	542	239	0.31	606	137	0.18	153	8	0.05	302	0	0	273	0	0			0
IIa	POK	3d	TR1	none	ENG	280	549	0.66	143	24	0.14	449	678	0.6	340	172	0.34	94	22	0.19	14	1	0.07	114	0	0	42	0	0	74	0	0
IIa	POK	3d	TR1	none	FRA	3478	5329	0.61	3043	601	0.16	4073	3124	0.43	6079	2901	0.32	4131	886	0.18	2791	1172	0.3	2790	0	0	1336	0	0	1466	3	0
IIa	POK	3d	TR1	NONE	IRL	39	15	0.28	15	3	0.17	52	67	0.56	80	48	0.38	137	49	0.26	79	2	0.02	0	0	0			0			0
IIa	POK	3d	TR1	none	NIR	25	53	0.68	12	3	0.2	2	2	0.5	0	0	0	0	0	0	2	1	0.33	0	0	0	0	0	0	0	0	0
IIa	POK	3d	TR1	none	SCO	1064	1869	0.64	1264	246	0.16	1274	1459	0.53	2188	1280	0.37	1109	363	0.25	2613	1032	0.28			0			0			0
IIa	POK	3d	TR2	CPart13	SCO			0			0			0			0			0			0	2	0	0	1	1	0.5	2	6	0.75
IIa	POK	3d	TR2	none	ENG			0	0	0	0	1	11	0.92	0	0	0			0			0			0			0			0
IIa	POK	3d	TR2	none	FRA	0	0	0	2	3	0.6			0			0			0	14	0	0	16	0	0			0			0
IIa	POK	3d	TR2	NONE	IRL	69	64	0.48	23	17	0.42	24	257	0.91	9	242	0.96	4	78	0.95	3	2	0.4	1	0	0	0	0	0	1	0	0
IIa	POK	3d	TR2	none	NIR	1	1	0.5	0	1	1	0	0	0	0	0	0	0	1	1	0	2	1			0	0	0	0	0	0	0
IIa	POK	3d	TR2	none	SCO	16	45	0.74	14	29	0.67	5	11	0.69	2	37	0.95	3	9	0.75	1	155	0.99			0			0			0
IIa	POK	3d	TR3	NONE	IRL	0	0	0			0	0	0	0			0	0	0	0	0	0	0			0			0	0	0	0

Table 5.4.2.1 continued. West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation existing in Table 1 of Annex IIA of Coun. Reg. (EU) 43/2012 and (EU) 44/2012, 2003-2011.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2003 L	2003 D	2003 R	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	SOL	3d	BT1	none	SCO	0	0	0			0			0			0			0			0			0			0			0
IIa	SOL	3d	BT2	none	ENG	5	0	0	1	0	0			0			0			0			0			0			0			0
IIa	SOL	3d	BT2	NONE	IRL			0	1	0	0	0	0	0	0	0	0			0			0			0			0			0
IIa	SOL	3d	GN1	NONE	IRL	0	0	0	0	0	0	0	0	0	0	0	0			0			0			0			0			0
IIa	SOL	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	0	0	0
IIa	SOL	3d	TR1	CPart11	SCO			0			0			0			0			0			0			0	0	0	0			0
IIa	SOL	3d	TR1	CPART13	IRL			0			0			0			0			0			0	2	0	0	22	0	0	9	0	0
IIa	SOL	3d	TR1	CPart13	SCO			0			0			0			0			0			0	0	0	0	0	0	0			0
IIa	SOL	3d	TR1	none	ENG	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
IIa	SOL	3d	TR1	none	FRA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
IIa	SOL	3d	TR1	NONE	IRL	0	1	1	1	1	0.5	1	0	0	0	0	0	2	3	0.6	2	0	0			0			0			0
IIa	SOL	3d	TR1	none	NIR	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
IIa	SOL	3d	TR1	none	SCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0			0			0
IIa	SOL	3d	TR2	CPart11	SCO			0			0			0			0			0			0			0			0	0	0	0
IIa	SOL	3d	TR2	CPart13	SCO			0			0			0			0			0			0	1	0	0	0	0	0	2	0	0
IIa	SOL	3d	TR2	none	ENG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0			0			0
IIa	SOL	3d	TR2	none	FRA	5	0	0	0	0	0			0			0			0			0			0			0			0
IIa	SOL	3d	TR2	none	IOM			0			0			0	0	0	0			0			0			0			0			0
IIa	SOL	3d	TR2	NONE	IRL	23	2	0.08	17	3	0.15	14	0	0	11	0	0	18	5	0.22	10	0	0	0	0	0	0	0	0	1	0	0
IIa	SOL	3d	TR2	none	NIR	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0
IIa	SOL	3d	TR2	none	SCO	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	2	0	0			0			0			0
IIa	SOL	3d	TR3	NONE	IRL	0	0	0			0			0			0	0	0	0	0	0	0			0			0			0
IIa	WHG	3d	BT1	none	SCO	0	0	0			0			0	0	0	0			0			0			0			0			0
IIa	WHG	3d	BT2	NONE	BEL			0	0	0	0			0			0			0			0			0			0			0
IIa	WHG	3d	BT2	none	ENG	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	WHG	3d	GN1	none	FRA	0	0	0			0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
IIa	WHG	3d	GN1	NONE	IRL			0	1	0	0	0	0	0			0			0			0			0	0	0	0			0
IIa	WHG	3d	LL1	none	ENG	0	0	0			0	0	0	0			0			0			0			0			0			0
IIa	WHG	3d	TR1	CPART11	IRL			0			0			0			0			0			0			0			0	85	9	0.1
IIa	WHG	3d	TR1	CPART13	IRL			0			0			0			0			0			0	125	6	0.05	101	15	0.13	61	15	0.2
IIa	WHG	3d	TR1	CPart13	SCO			0			0			0			0			0			0	328	746	0.69	242	858	0.78	66	29	0.31
IIa	WHG	3d	TR1	none	DEU			0			0	0	0	0	0	0	0	1	0	0			0			0			0			0
IIa	WHG	3d	TR1	none	ENG	3	1	0.25	1	2	0.67	2	2	0.5	2	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
IIa	WHG	3d	TR1	none	FRA	4	4	0.5	2	7	0.78	6	17	0.74	6	1	0.14	1	1	0.5	1	0	0	1	0	0	0	0	0	0	0	0
IIa	WHG	3d	TR1	NONE	IRL	57	140	0.71	96	115	0.55	27	27	0.5	36	6	0.14	35	31	0.47	29	9	0.24	0	0	0			0			0
IIa	WHG	3d	TR1	none	NIR	28	15	0.35	9	155	0.95	1	2	0.67	1	0	0	17	11	0.39	8	1	0.11	0	0	0	0	0	0	0	0	0
IIa	WHG	3d	TR1	none	SCO	597	345	0.37	328	1230	0.79	96	195	0.67	140	55	0.28	361	72	0.17	316	26	0.08			0			0			0
IIa	WHG	3d	TR2	CPart13	SCO			0			0			0			0			0			0	25	57	0.7	3	12	0.8	12	240	0.95
IIa	WHG	3d	TR2	none	ENG	1	1	0.5	1	3	0.75	0	0	0	0	1	1	0	1	1	2	1	0.33			0			0			0
IIa	WHG	3d	TR2	none	FRA	2	14	0.88	1	20	0.95			0			0			0			0			0			0			0
IIa	WHG	3d	TR2	NONE	IRL	506	761	0.6	256	619	0.71	145	121	0.45	160	6050	0.97	22	49	0.69	40	51	0.56	0	0	0	0	0	0	0	1	1
IIa	WHG	3d	TR2	none	NIR	4	6	0.6	4	34	0.89	1	1	0.5	1	11	0.92	3	8	0.73	1	0	0	0	0	0	2	0	0	1	2	0.67
IIa	WHG	3d	TR2	none	NLD			0			0			0			0			0			0			0			0	0	0	0
IIa	WHG	3d	TR2	none	SCO	148	1131	0.88	106	1132	0.91	57	542	0.9	36	548	0.94	44	169	0.79	42	83	0.66			0			0			0
IIa	WHG	3d	TR3	none	DNK	0	0	0	0	0	0			0			0			0			0			0			0			0
IIa	WHG	3d	TR3	NONE	IRL	0	0	0			0	0	0	0			0	0	0	0	0	0	0			0			0	0	0	0
IIa	WHG	3d	TR3	none	SCO			0	0	0	0			0			0			0			0			0			0			0

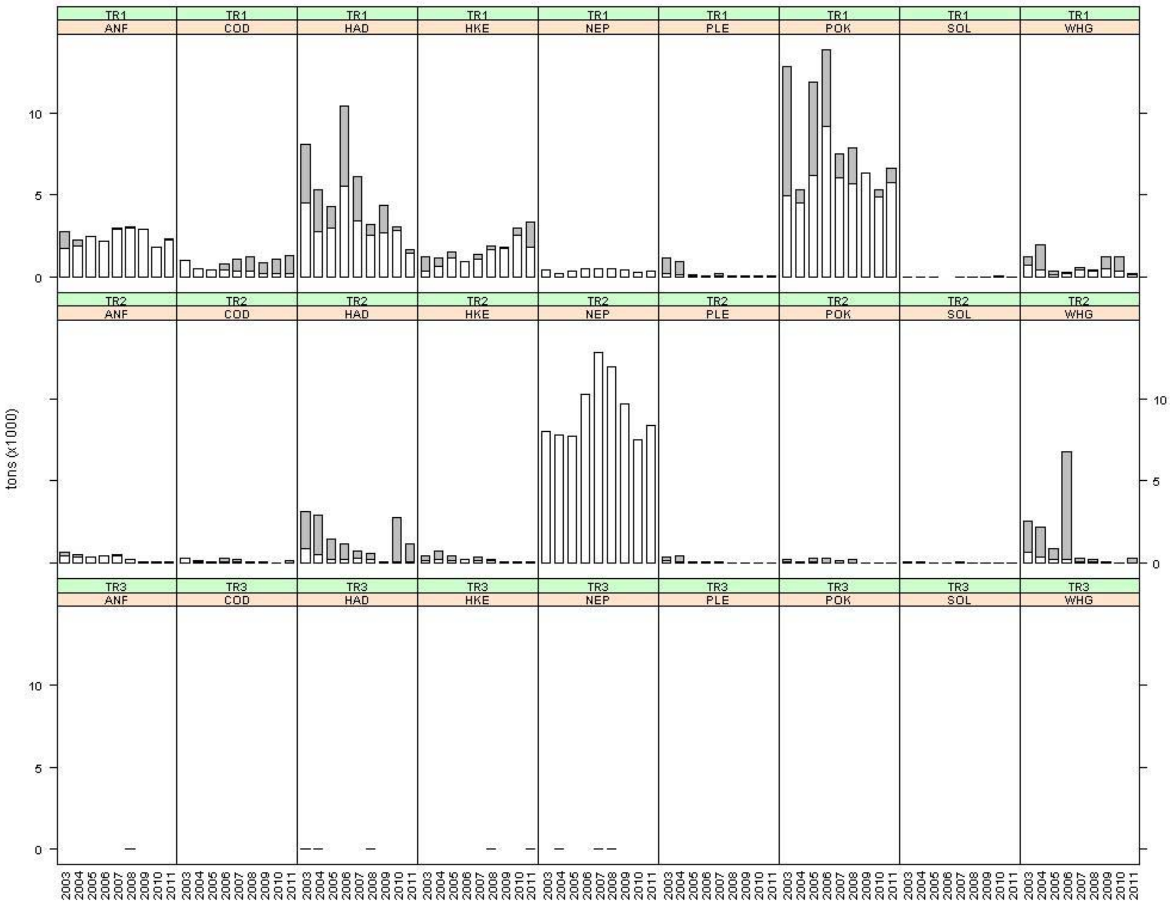


Figure 5.4.2.1 West of Scotland. Landings (t) and discards (t) by derogations in Coun. Reg. (EC) 1342/2008 and species, 2004-2011 (from left to right). White bars represent landings, grey bars discards. Note that discard data are only available for some species and gears. The lack of discard information for a given species/gear in this figure represents no information rather than zero discards.

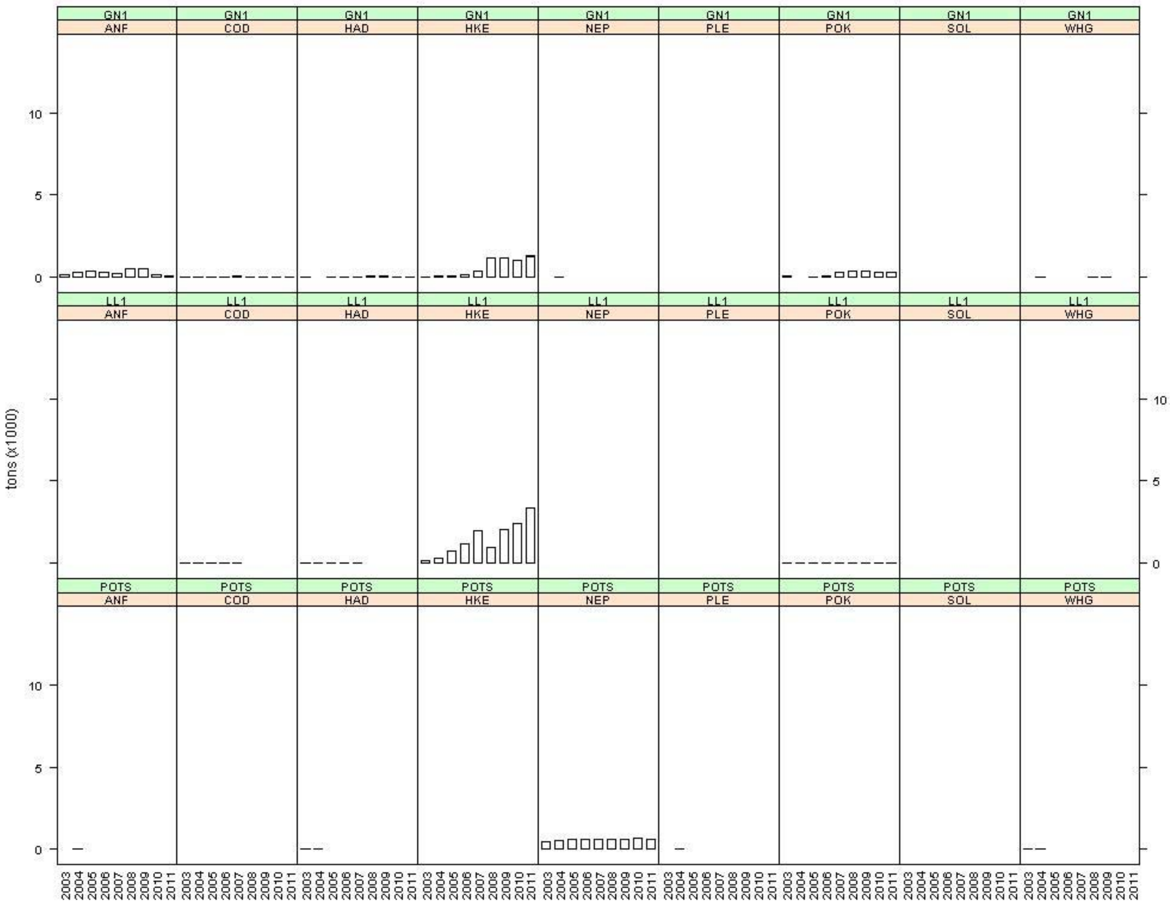


Figure 5.4.2.1 (cont) West of Scotland. Landings (t) and discard (t) by derogations in Coun. Reg. (EC) 1342/2008 (also POTS) and species, 2003-2011 (from left to right). White bars represent landings, grey bars discards. Note that discard data are only available for some species and gears. The lack of discard information for a given species/gear in this figure represents no information rather than zero discards.

5.4.3 ToR 1.d CPUE and LPUE of cod by fisheries

Table 5.4.3.1 shows cod catch per unit effort (CPUE), recorded in g/kWdays for all derogations within Coun. Reg (EC) 1342/2008 while table 5.4.3.2 shows landings per unit effort (LPUE) for the same derogations. Section 5.4.1 showed longlines to be the most significant gear category after trawl and seine gears west of Scotland but the tables show CPUE of cod for this gear type (LL1) to be low with no catch of cod recorded from 2008 onward.

Figures 5.4.3.1 to 5.4.3.2 show cod CPUE and LPUE respectively for the top four gear types under Coun. Reg (EC) 1342/2008, ranked in terms of average value over the years 2003-2011. It should be noted no discard information is available for gill nets (GN1) or the beam trawl categories (BT1 and BT2) such that results for these gear types are effectively LPUE in each table and/or figure. It is clear from Figure 5.4.3.1 that CPUE values have increased considerably for the TR1 gear type since 2005. ICES assessments have estimated the 2005 – and to a lesser extent the 2008 - year classes of cod to be large compared to the norm since 2000, and also a slow increase in SSB since 2006. The pattern of CPUE is consistent with the catchability of fish in the stronger year classes increasing as the fish grow in size (and possibly redistribute from nursery areas) and an increase in overall stock abundance. TACs for cod have declined over the same period and from Figure 5.4.3.2 it can be seen LPUE for the TR1 gears remained constant between 2004-2008 and has fallen again to a new lower level for 2009-2011.

To illustrate the point further Figure 5.4.3.3 shows the ratio of catch to landings for cod for the gear type TR1. Up to 2005 very few discards of cod were recorded for the TR1 gear resulting in a catch/landings value close to 1. Since then this ratio has increased so that by 2011 catch was approximately 7 times landings. Figure 5.4.3.2 suggests the increase in CPUE to be due to the 2005 and 2008 year classes. This result is consistent with results from the ICES division VIa cod assessment. Uncertainty of discard observation data for the TR2 gear mean results for the TR2 gear have not been included in Figure 5.4.3.3.

Table 5.4.3.1 West of Scotland. Cod CPUE (g/(kW*days)) by derogation in Coun. Reg. (EU) 43/2012 and (EU) 44/2012 and year, 2003-2011.

ANNEX	SPECIES	REG AREA COD	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2011	CPUE 2009-2011
IIa	COD	3d	BT1	none	32	36	8	0		0	0	0	0	0
IIa	COD	3d	BT2	none	0					0	0	0	0	0
IIa	COD	3d	GN1	none	8	2	15	57	50	14	10	9	11	10
IIa	COD	3d	LL1	none	18	8	8	17	6	0	0	0	0	0
IIa	COD	3d	TR1	CPART11	0	0	0	0	0	0	0	0	30	25
IIa	COD	3d	TR1	CPART13	0	0	0	0	0	0	262	203	508	312
IIa	COD	3d	TR1	none	78	45	48	99	145	175	21	129	19	57
IIa	COD	3d	TR2	CPART11	0	0	0	0	0	0	0	16	13	15
IIa	COD	3d	TR2	CPART13	0	0	0	0	0	0	12	1	36	15
IIa	COD	3d	TR2	none	39	19	14	47	35	11	4	1	2	2
IIa	COD	3d	TR3	none	0		0		0	0	0	0	0	0

Table 5.4.3.2 West of Scotland. Cod LPUE (g/(kW*days)) by derogation in Coun. Reg. (EC) 43/2012 and year, 2003-2011.

ANNEX	SPECIES	REG AREA	REG GEAR	SPECON	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
IIa	COD	3d	BT1	none	32	36	8	0		0	0	0	0	0
IIa	COD	3d	BT2	none	0					0	0	0	0	0
IIa	COD	3d	GN1	none	8	2	15	57	50	14	10	9	9	10
IIa	COD	3d	LL1	none	18	8	8	17	6	0	0	0	0	0
IIa	COD	3d	TR1	CPART11	0	0	0	0	0	0	0	0	135	22
IIa	COD	3d	TR1	CPART13	0	0	0	0	0	0	42	52	43	49
IIa	COD	3d	TR1	none	77	44	47	50	47	48	21	14	11	18
IIa	COD	3d	TR2	CPART11	0	0	0	0	0	0	0	0	0	0
IIa	COD	3d	TR2	CPART13	0	0	0	0	0	0	2	1	3	2
IIa	COD	3d	TR2	none	34	13	8	6	11	8	4	1	2	2
IIa	COD	3d	TR3	none	0		0		0	0	0	0		0

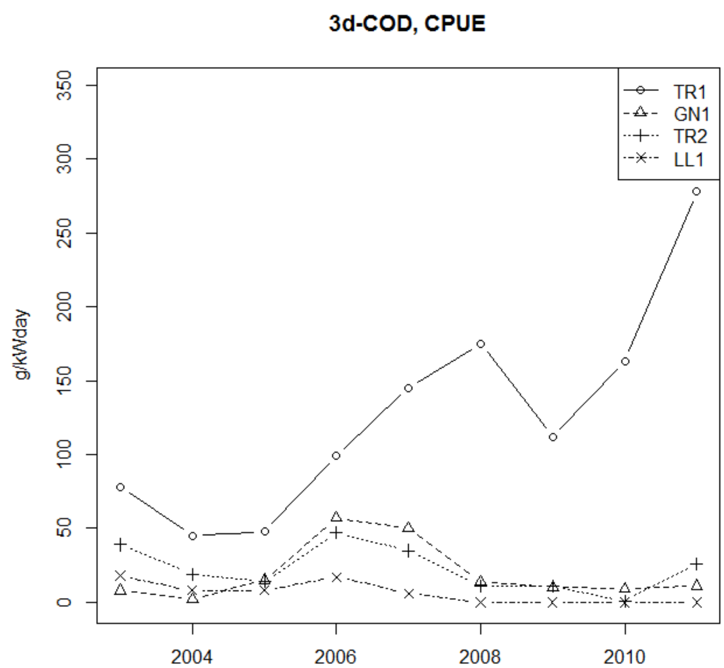


Figure 5.4.3.1 West of Scotland. Cod CPUE for the four gear categories with highest CPUE.

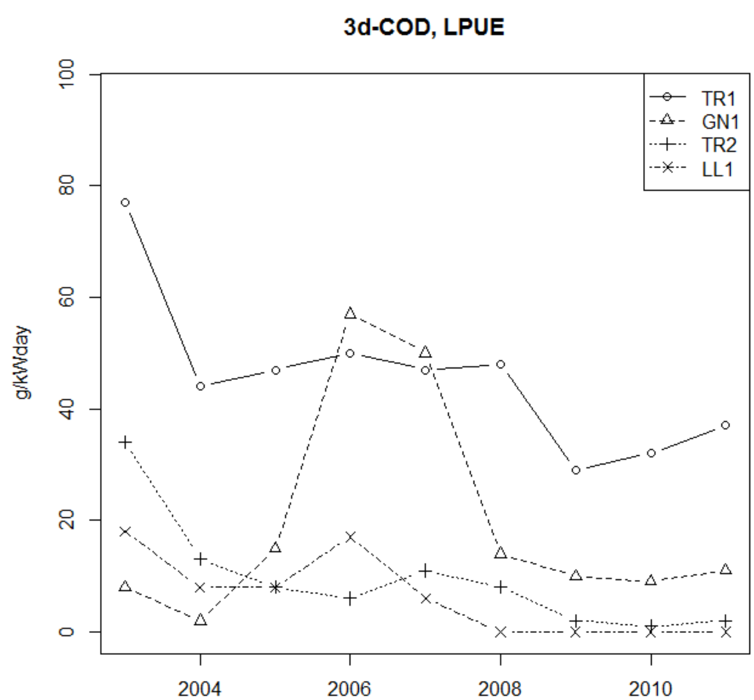


Figure 5.4.3.2 West of Scotland. Cod LPUE for the four gear categories with highest LPUE

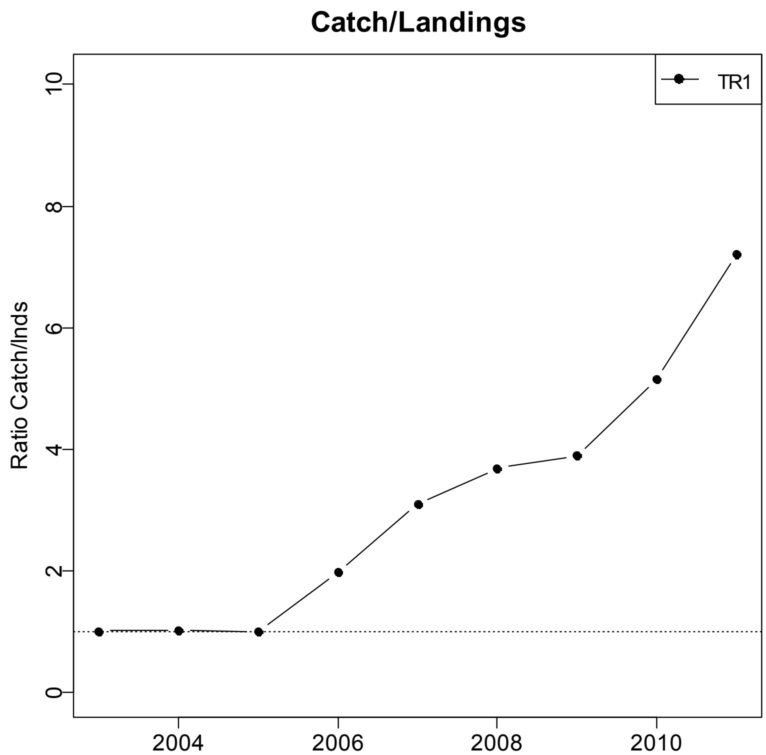


Figure 5.4.3.3 West of Scotland. Ratio of Cod catch to landings for the gear group TR1 under Coun. Reg. 1342/2008.

5.4.4 ToR 2 Rank regulated gear groups on the basis of catches expressed both in weight and in number of cod

Tables 5.4.4.1 and 5.4.4.2 show, respectively, cod catch and cod landings (tonnes) by gear types as specified in Coun. Reg. (EC) 1342/2008, ranked according to their 2011 values. From these Tables the most important category in terms of cod catch and landings is TR1 with a three year average of 94-95% of the VIa cod catch – and landings - total by weight. The second most important gear category is TR2, which from section 5.4.2 can be seen to be a gear category with Nephrops as the primary landed species. The ranking of these two gear types is consistent whether the 2011 values or a three year average is used but the contribution of TR2 gear to catches has noticeably declined starting in 2008 and to landings from 2009. The contribution to catch from all other gear types is less than 1%, but for landings gill nets contribute between 1 and 2%.

Ranking in terms of numbers of fish are available on the JRC website: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

EWG-12-06 notes that the estimation of ranking by numbers of fish uses only categories for which age information is available. Categories without any information about age compositions are disregarded.

Table 5.4.4.1 West of Scotland. Gear derogations (Coun. Reg. 43/2012) ranked according to relative cod catch in tonnes, 2003-2011. Ranking is according to the year 2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Av 09-11
IIa	3d	COD	TR1	0.77	0.78006	0.82863	0.72529	0.82748	0.93928	0.92768	0.9917	0.928	0.95
IIa	3d	COD	TR2	0.21769	0.20095	0.14878	0.25285	0.15609	0.05304	0.06554	0.00554	0.06982	0.05
IIa	3d	COD	GN1	0.00462	0.00158	0.0113	0.00856	0.01046	0.00769	0.00678	0.00277	0.00218	0.00
IIa	3d	COD	TR3	0		0		0	0			0	0.00
IIa	3d	COD	LL1	0.00615	0.00791	0.00942	0.01331	0.00597	0	0	0		0.00
IIa	3d	COD	BT1	0.00154	0.00949	0.00188	0						
IIa	3d	COD	BT2	0									

Table 5.4.4.2 West of Scotland. Gear derogations (Coun. Reg. 43/2012) ranked according to relative cod landings in tonnes, 2003-2011. Ranking is according to the year 2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Av 09-11
IIa	3d	COD	TR1	0.79103	0.82586	0.88259	0.86966	0.80449	0.85309	0.92544	0.95872	0.93443	0.94
IIa	3d	COD	TR2	0.19616	0.15345	0.09312	0.07865	0.14607	0.12113	0.04825	0.02752	0.04918	0.04
IIa	3d	COD	GN1	0.0048	0.00172	0.01215	0.02022	0.03146	0.02577	0.02632	0.01376	0.01639	0.02
IIa	3d	COD	TR3	0		0		0	0			0	0.00
IIa	3d	COD	LL1	0.00641	0.00862	0.01012	0.03146	0.01798	0	0	0		0.00
IIa	3d	COD	BT1	0.0016	0.01034	0.00202	0						
IIa	3d	COD	BT2	0									

5.4.5 ToR 3 Remarks on quality of catches and discard estimates

Spain has been allocated 2,460,000 kW*days for demersal fishing in ICES sub areas V and VI under the Western Waters regulation (Coun. Reg. (EC) 1415/2004). As no data has been supplied by Spain in relation to Annex IIA it is not possible to know whether any activity was conducted in Division VIa, and if so what species were caught.

Irish data was not disaggregated by mesh size before 2003. Irish vessels contribute to the effort total in management area 3d. According to the international data supplied this constitutes approximately 9-13% of overall effort in the region depending on year (see Table 5.4.1.1).

5.4.6 ToR 4 Information on small boats (<10m)

Activity by vessels <10m in area 3d (west of Scotland) was recorded by Denmark, France, IOM, UK(EWNI) and UK(Scotland). Descriptions of the type and quality of data available for assessing effort and landings of vessels <10m can be found in section 4.

5.4.6.1 Fishing effort of small boats by Member State

Effort by nation and gear type is shown in Table 5.4.6.1.

Overall effort is 9% higher in 2011 compared to 2003 although it has been relatively stable since 2006. Greatest effort comes from Scottish vessels deploying pots. The effort employed in this category to a certain extent dictates the perception of overall effort changes in this region. The second largest effort total is for Scottish vessels employing TR2 gear. Effort in this category is roughly one tenth that in pots and has declined from a high in 2006. Although small in absolute terms compared to Scottish effort there have been large increases in Northern Irish effort in pots and dredging in recent years.

Table 5.4.6.1 West of Scotland. Effort (kW*days) of vessels under 10 metres by gear type and Member State, 2000-2011.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	rel chng 03	rel chng 04-06	rel chng 10
3d	DREDGE	none	ENG	205	285		536			2726				825	990	85%	-64%	20%
3d	DREDGE	none	IOM		3100		2728			774						-100%	-100%	NA
3d	DREDGE	none	NIR				252		13886	14934	10218	10819	16248	19622	20018	7844%	39%	2%
3d	DREDGE	none	SCO	33834	56366	44409	84393	104545	66603	19995	31968	57077	34484	33490	40748	-52%	-36%	22%
3d	GN1	none	SCO	101	342				56	468	1800	6493				NA	-100%	NA
3d	GT1	none	SCO								368			610	342	NA	NA	-44%
3d	LL1	none	ENG												10	NA	NA	NA
3d	LL1	none	FRA											1419		NA	NA	-100%
3d	LL1	none	NIR										66			NA	NA	NA
3d	LL1	none	SCO	101			25			51	241	740	664	410	2205	8720%	4224%	438%
3d	none	none	DNK	96	56		111	222	201	204	180	180	36			-100%	-100%	NA
3d	none	none	SCO	432072	324668	87512	110078	125306	120513	163399	124414	116648	162780	170688	207588	89%	52%	22%
3d	OTTER	none	ENG	205		109				783			75			NA	-100%	NA
3d	OTTER	none	NIR											112		NA	NA	-100%
3d	OTTER	none	SCO	8878	5623	4387	9008	7812	18258	20563	5222	5669	2366	4390	5075	-44%	-67%	16%
3d	POTS	none	ENG	21165	36110	642	3380	194	7137	1682	8794	1500	11417	1047	7710	128%	157%	636%
3d	POTS	none	NIR	32589		1540	7518	4192	2700	74352	92327	115948	67827	96875	88041	1071%	225%	-9%
3d	POTS	none	SCO	1652393	1890354	2321198	2743791	2775120	3081361	3690442	3625560	3200012	3350815	3459930	3075476	12%	-3%	-11%
3d	TR1	none	SCO	769	4866	222	1266	496	359	2789	2837	969	1991	5272	2685	112%	121%	-49%
3d	TR2	none	ENG	50582	13608	17658	9260	3987	11052	6941	14620	12354	1343	217	5476	-41%	-25%	2424%
3d	TR2	none	NIR	2386	5634	2960	8934	5756	1379	8873	5427	6125	7857	14427	13695	53%	157%	-5%
3d	TR2	none	SCO	369509	448619	337870	511766	492846	461177	532719	485139	479805	441031	398865	349532	-32%	-29%	-12%
3d	TR3	none	SCO				116									-100%	NA	NA
Total				2604885	2789631	2818507	3493162	3520476	3784682	4541695	4409115	4014339	4099000	4208199	3819591	9%	-3%	-9%

5.4.6.2 Catches (landings and discards) of cod and associated species by small boats by Member State

Table 5.4.6.2.1 summarises landings by vessels under 10m west of Scotland. France, Ireland, UK(EWNI) and UK(Scotland) recorded both effort and landings in area 3d West of Scotland.

Much of the Nephrops and crab catch comes from the creel fishery operating on the west coast while scallops are caught by dredges. Nephrops are also caught by trawls using TR2 mesh size. There are also significant landings of unidentified species (OTH) by Scottish vessels.

Table 5.4.6.2.1 Landings (t) by vessels under 10m west of Scotland by Member State and species.

ANNEX	REG_AREA	VESSEL_LE	COUNTRY	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3d	u10m	ENG	ANF	0.061		0.001						
IIa	3d	u10m	ENG	COD			0.001						
IIa	3d	u10m	ENG	HAD	0.174								
IIa	3d	u10m	ENG	NEP	17.247	4.102	14.67	9.622	29.618	36.04	15.138	0.655	23.795
IIa	3d	u10m	ENG	PLE			0.002						
IIa	3d	U10M	IRL	ANF		0.22				0.16		0.09	0.57
IIa	3d	U10M	IRL	COD	0.02	0.35							0.07
IIa	3d	U10M	IRL	HAD		0.98				0.06			
IIa	3d	U10M	IRL	HKE		0.29				0.17			
IIa	3d	U10M	IRL	NEP						2.34			6.89
IIa	3d	U10M	IRL	PLE	0.4	0.69				1.85		2.05	2.94
IIa	3d	U10M	IRL	POK	6.25	0.75						2.2	0.02
IIa	3d	U10M	IRL	SOL		0.27				1.87		1.18	1.16
IIa	3d	U10M	IRL	WHG	0.36	1.12				0.06			0.88
IIa	3d	u10m	NIR	ANF	0.013	0.023		0.312	0.09	0.014		0.068	0.125
IIa	3d	u10m	NIR	COD			0.053	0.012	0.018	0.011		0.038	0.019
IIa	3d	u10m	NIR	HAD	0.064	0.067		0.019	0.025	0.026		0.017	0.047
IIa	3d	u10m	NIR	HKE	0.015	0.008		0.124	0.011	0.001		0.031	0.012
IIa	3d	u10m	NIR	NEP	19.737	16.057	3.137	22.095	14.694	12.735	5.083	37.243	31.792
IIa	3d	u10m	NIR	PLE			0.048					0.013	0.069
IIa	3d	u10m	NIR	POK			0.053						
IIa	3d	u10m	NIR	SOL				0.128	0.024	0.006		0.001	0.006
IIa	3d	u10m	NIR	WHG			1.08						
IIa	3d	u10m	SCO	ANF	8.0712	11.2357	1.2752	3.6373	0.7697	0.3366	0.4925	0.018	
IIa	3d	u10m	SCO	COD	2.7995	1.0617	0.3754	0.8327	2.3035	0.7876	0.7091	0.1013	
IIa	3d	u10m	SCO	HAD	24.5533	12.0178	2.0757	2.8401	1.3215	0.6258	7.6647		0.1939
IIa	3d	u10m	SCO	HKE	0.5911	0.7369	0.3886	0.471	0.05	0.478	0.1226	0.0921	
IIa	3d	u10m	SCO	NEP	1793.426	1788.192	1745.79	2305.565	2329.797	2168.493	1557.759	2012.27	1775.185
IIa	3d	u10m	SCO	PLE	0.0584	0.0503	0.0535	0.5081	0.0707	0.075	24.4174	0.0525	
IIa	3d	u10m	SCO	POK		0.0119	0.0595				8.7325		
IIa	3d	u10m	SCO	SOL		0.001	0.0326	0.0025	0.0242	0.0005		0.001	
IIa	3d	u10m	SCO	WHG	14.3149	6.0225	2.0574	0.8115	0.0339	0.895	0.3059		

5.4.7 ToR 5 Evaluation of fully documented fisheries FDF

5.4.7.1 Fishing effort of FDF by Member State and fisheries in comparison with fisheries not working under FDF provisions

Fishing effort deployed under the FDF scheme have been received and are listed in units of kWdays at sea in Table 5.4.7.1.1. FDF fishing effort was only deployed by Scottish TR1 gears since 2010.

Table 5.4.7.1.1. FDF fishing effort by gear and country and year in units of kW days at sea.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	VESSEL_LENGTH	2010	2011
FDFIIA	3d	TR1	FDFIIA	SCO	O15M	126775	402802

5.4.7.2 Catches (landings and discards) of cod and other species taken by FDF fisheries by Member State and fisheries in comparison with fisheries not working under FDF provisions

Landings and discards by species caught by FDF fisheries have been received and are listed in Table 5.4.7.2.1. Landings and discards were submitted only for Scottish TR1 gears since 2010. Cod landings are low and cod have not been discarded. The catches were dominated by saithe and haddock.

Table 5.4.7.2.1. FDF fishing effort by gear and country and year in units of kW days at sea.

ANNEX	SPECIES	REG_AREA	REG_GEAR	SPECON	COUNTRY	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
FDFIIA	ANF	3d	TR1	FDFIIA	SCO	6	0	0	94	0	0
FDFIIA	BRF	3d	TR1	FDFIIA	SCO			0	0	0	0
FDFIIA	BSF	3d	TR1	FDFIIA	SCO			0	0	0	0
FDFIIA	CAT	3d	TR1	FDFIIA	SCO	0	0	0	0	0	0
FDFIIA	COD	3d	TR1	FDFIIA	SCO	11	0	0	24	0	0
FDFIIA	COE	3d	TR1	FDFIIA	SCO	0	0	0	2	0	0
FDFIIA	DGS	3d	TR1	FDFIIA	SCO	0	0	0			0
FDFIIA	FLX	3d	TR1	FDFIIA	SCO			0	0	0	0
FDFIIA	FOX	3d	TR1	FDFIIA	SCO			0	1	0	0
FDFIIA	HAD	3d	TR1	FDFIIA	SCO	416	0	0	433	69	0.14
FDFIIA	HAL	3d	TR1	FDFIIA	SCO	0	0	0	0	0	0
FDFIIA	HKE	3d	TR1	FDFIIA	SCO	8	0	0	92	0	0
FDFIIA	JAX	3d	TR1	FDFIIA	SCO	0	0	0			0
FDFIIA	LEM	3d	TR1	FDFIIA	SCO	1	0	0	2	0	0
FDFIIA	LEZ	3d	TR1	FDFIIA	SCO	6	0	0	33	0	0
FDFIIA	LIN	3d	TR1	FDFIIA	SCO	14	0	0	145	0	0
FDFIIA	MAC	3d	TR1	FDFIIA	SCO	1	0	0			0
FDFIIA	OTH	3d	TR1	FDFIIA	SCO	26	0	0	88	0	0
FDFIIA	PLE	3d	TR1	FDFIIA	SCO	1	0	0	6	0	0
FDFIIA	POK	3d	TR1	FDFIIA	SCO	366	0	0	1076	297	0.22
FDFIIA	POL	3d	TR1	FDFIIA	SCO	5	0	0	18	0	0
FDFIIA	RNG	3d	TR1	FDFIIA	SCO			0	0	0	0
FDFIIA	SQS	3d	TR1	FDFIIA	SCO	27	0	0			0
FDFIIA	SRX	3d	TR1	FDFIIA	SCO	1	0	0	11	0	0
FDFIIA	TUR	3d	TR1	FDFIIA	SCO	0	0	0	0	0	0
FDFIIA	USK	3d	TR1	FDFIIA	SCO	0	0	0	8	0	0
FDFIIA	WHG	3d	TR1	FDFIIA	SCO	38	0	0	17	10	0.37
FDFIIA	WIT	3d	TR1	FDFIIA	SCO	0	0	0	0	0	0

5.4.8 ToR 6 Spatio-temporal patterns in effective effort by fisheries

Spatial figures of effort for area 3d concentrate on those categories identified as significant in terms of recorded effort (see previous section 5.4.1) and in terms of catches of cod (section 5.4.2). From section 5.4.2 catches of plaice and sole are shown to be small for all gear categories in the west of Scotland area and these species were not considered when deciding on categories to present here. Figures use a common scale across years for a given category (e.g. TR1) but scales are unique to each category such that the colours assigned to statistical rectangles for category TR1 can not be compared directly to those assigned for category TR2 say. Figures are based on absolute values. This is after data values across all years have been combined for that category. Zero values are removed first.

TR1 (Figure 5.4.8.1) – Effort is greatest in the north of the area with a distinct line of high effort in statistical rectangles straddling or close to the shelf edge. At the start of the time series a rectangle in the far south east of the area (mouth of the Clyde) had one of the highest recorded levels of effort. This area was the location for a specific cod fishery now subject to seasonal closures. The reduction in overall effort within this gear category is clear.

TR2 (Figure 5.4.8.2) – It can be seen that vessels using gear in the TR2 category primarily belong to coastal fisheries. These vessels target Nephrops on well defined fishing grounds with muddy substrate. Highest effort is consistently just north of the boundary between management areas 3d and 3c (mouth of the Clyde).

Remaining important rectangles are adjacent to the Scottish mainland, in particular between the Scottish mainland and the Outer Hebrides (known as the north and south Minches). The time series shows a contraction of effort in towards these areas of greatest activity.

LL1 (Figure 5.4.8.3) – There is a concentration of effort along the continental shelf edge throughout the time series.

GN1 (Figure 5.4.8.4) – Overall effort recorded for this category is low but LPUE of cod is currently the highest behind the TR gears. Until 2005 effort generally took place offshore and was split between an area in the north west of ICES division VIa and an area to the west of Ireland. Subsequently effort shifted until in 2008 there appeared to be a new concentration of effort in the north of area VIa but now located on the continental shelf edge.

The following are unregulated gear types but given the importance of unregulated gear effort relative to regulated gear effort (see Figure 5.4.8.5) they are shown to provide background information on the three unregulated gear types with highest effort.

PEL_TRAWL: (Figure 5.4.8.5) – Primarily an offshore fishery, (targeting herring), between 2003 and 2005 greatest effort was expended in the far north east corner of area VIa. Highest effort is at the shelf edge but overall effort has deceased towards and including 2011.

POTS (Figure 5.4.8.6) – Vessels using pots target Nephrops and edible crabs west of Scotland and effort is concentrated in coastal waters of Scotland from the southern border of area VIa north as far as the North Minch. There is no indication of a spatial shift in effort or of a change in overall effort.

DREDGE (Figure 5.4.8.7) – West of Scotland dredge fishing is used to catch scallops. Greatest effort seems to have shifted from the South Minch area to coastal areas further south (including the Clyde).

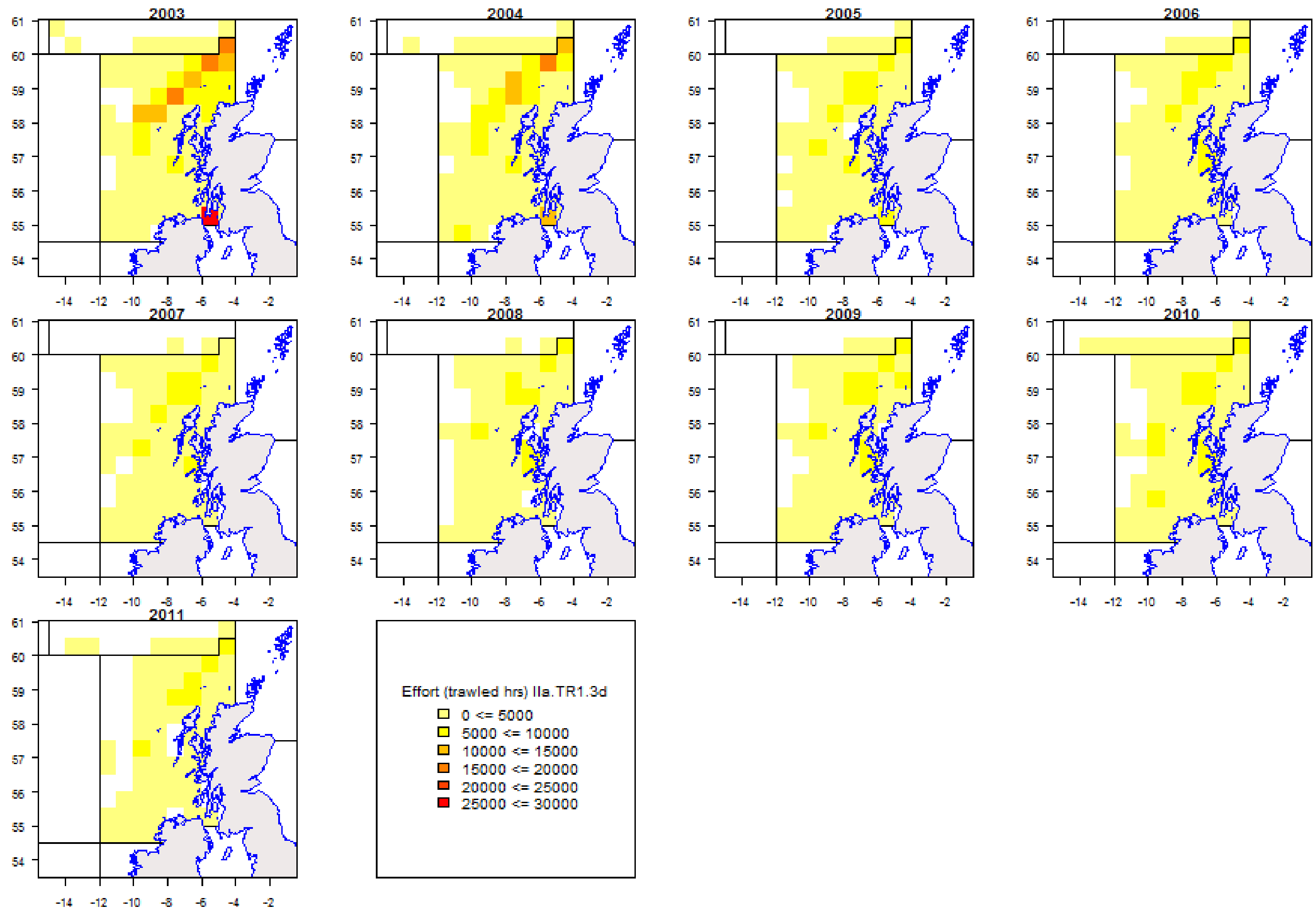


Figure 5.4.8.1 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for TR1, 2003-2011. These figures include effort carried out under special condition CPart11.

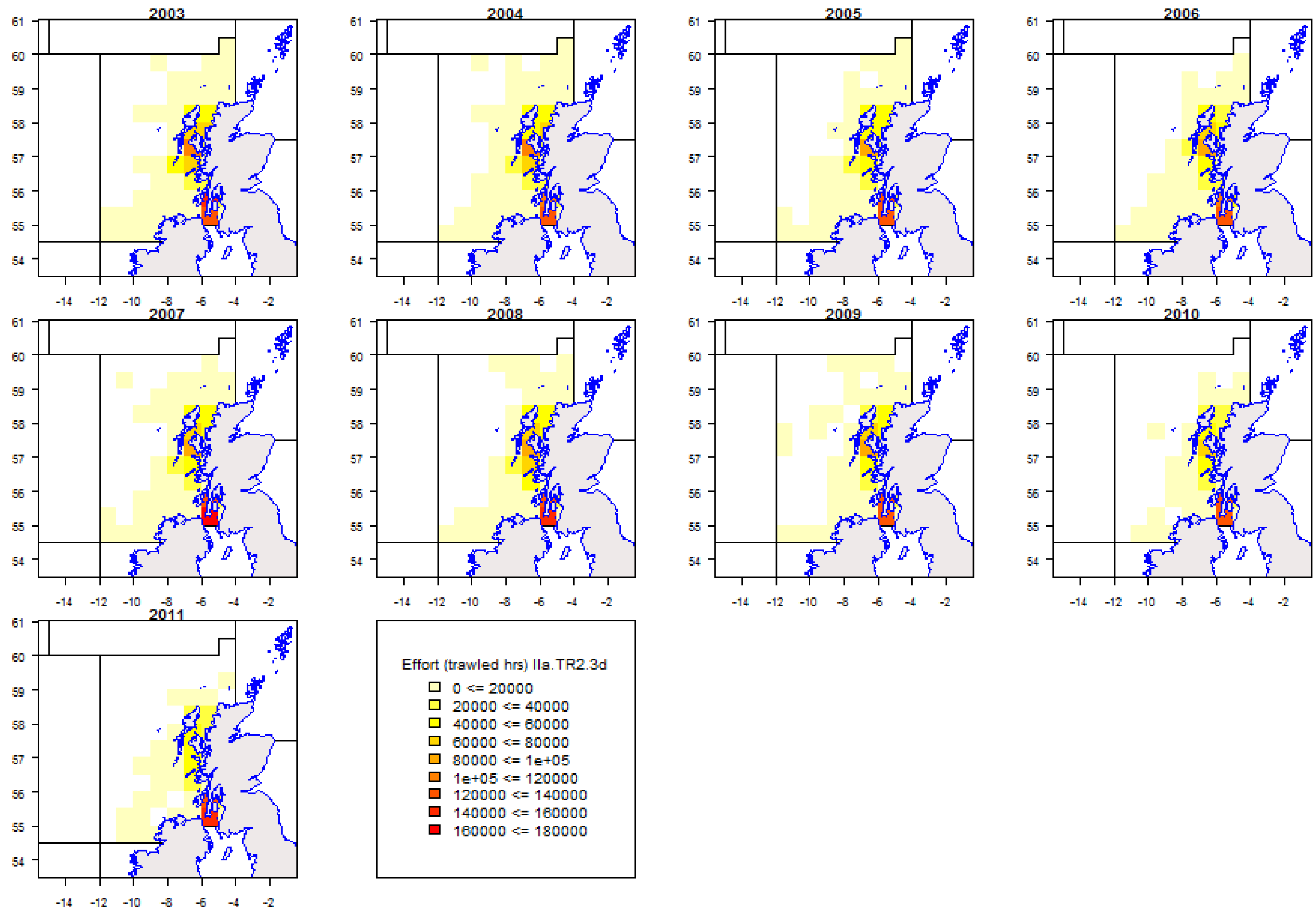


Figure 5.4.8.2 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for TR2, 2003-2011. These figures include effort carried out under special condition CPart11.

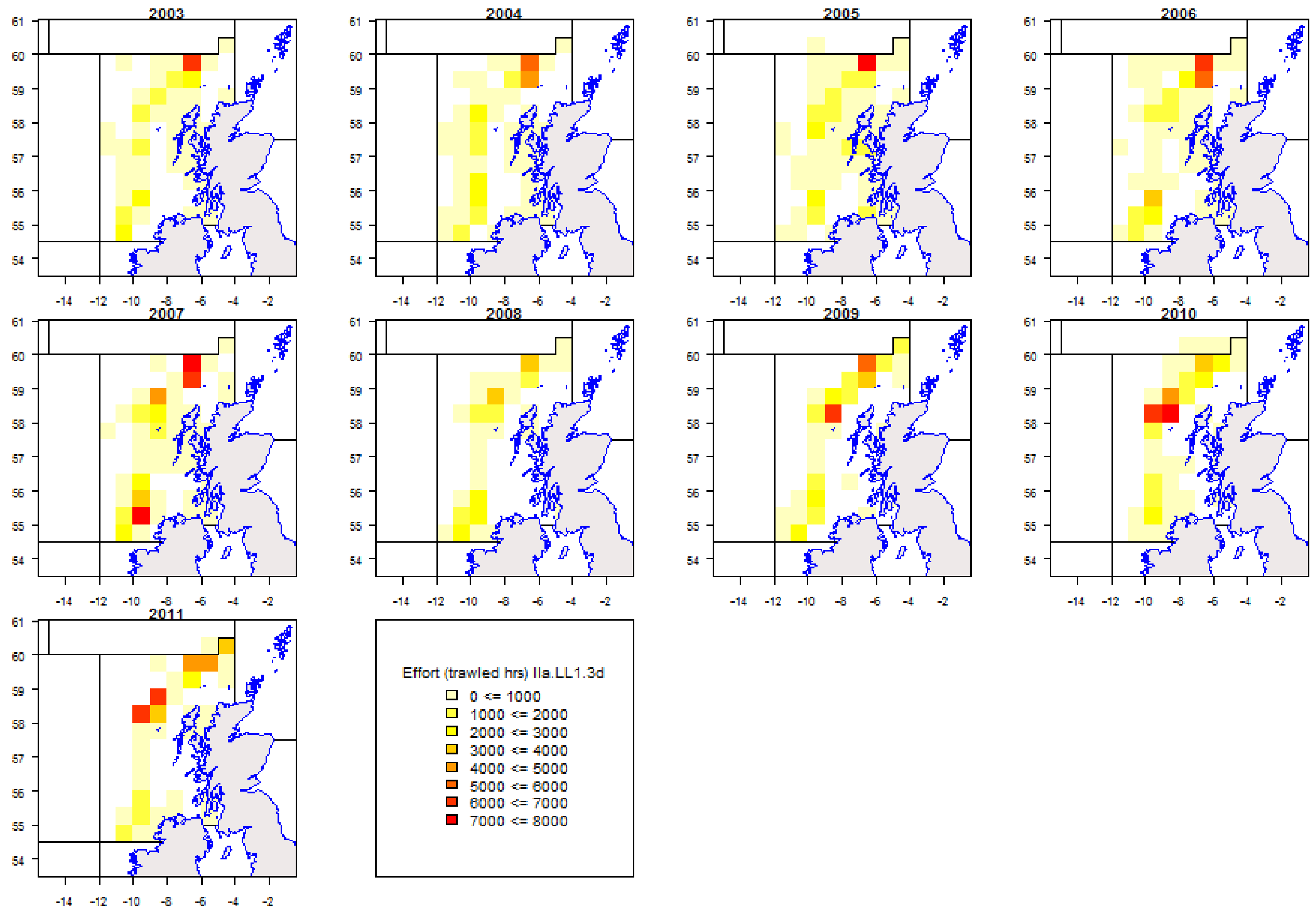


Figure 5.4.8.3 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for LL1, 2003-2011.

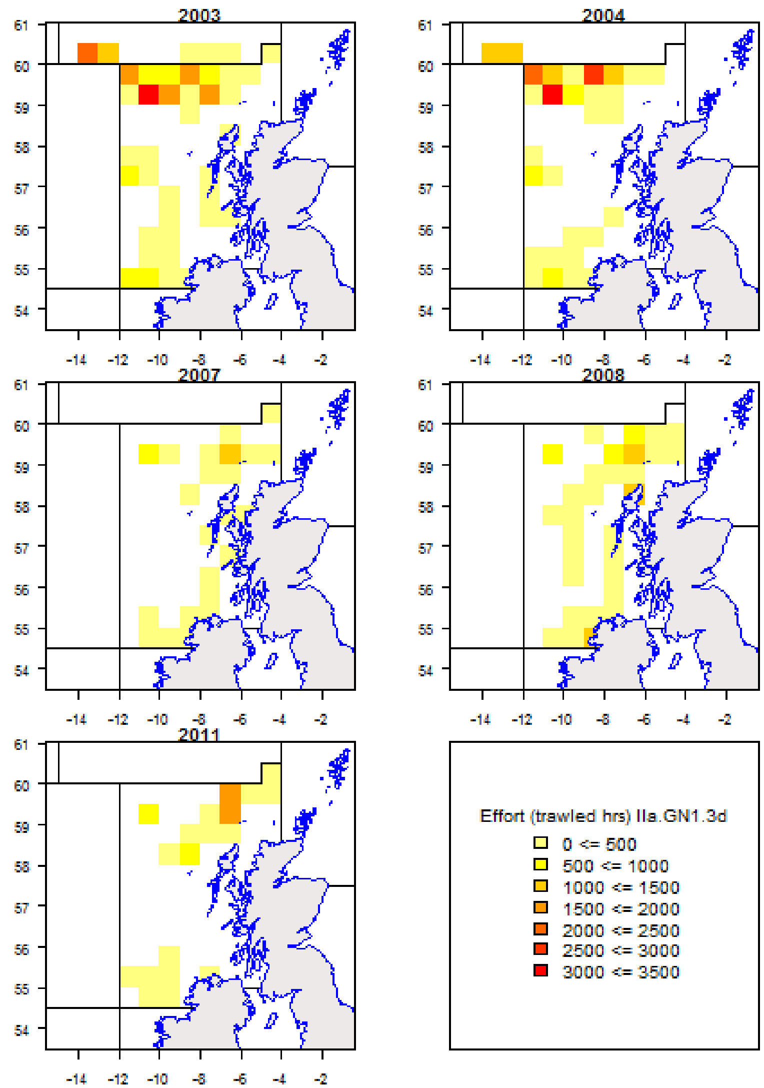


Figure 5.4.8.4 West of Scotland. Effort (hours) by ICES statistical rectangle for GN1, 2003-2011.

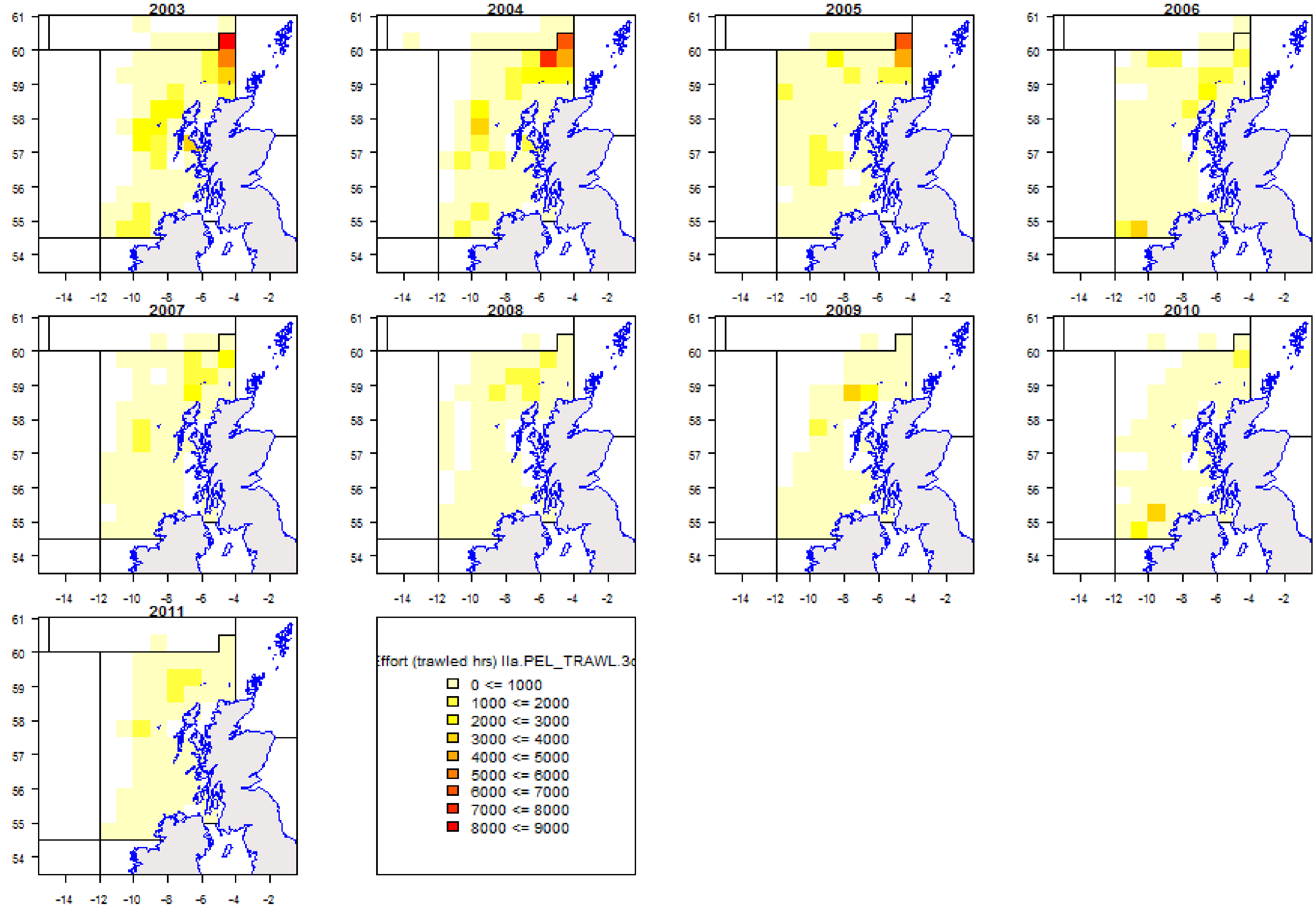


Figure 5.4.8.5 West of Scotland. Effort (hours) by ICES statistical rectangle for unregulated gear PELAGIC TRAWL, 2003-2011

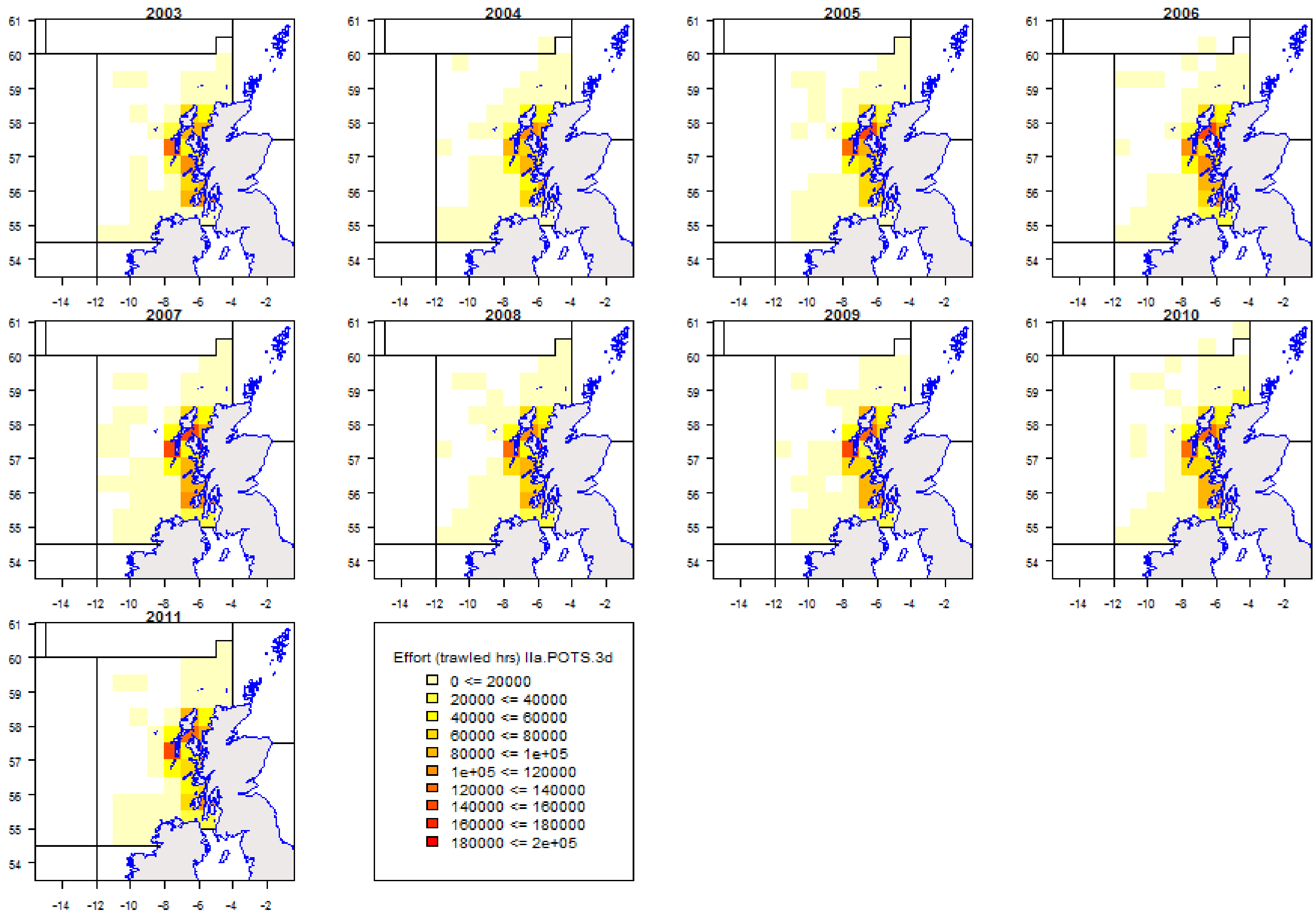


Figure 5.4.8.6 West of Scotland. Effort (hours) by ICES statistical rectangle for unregulated gear POTS, 2003-2011

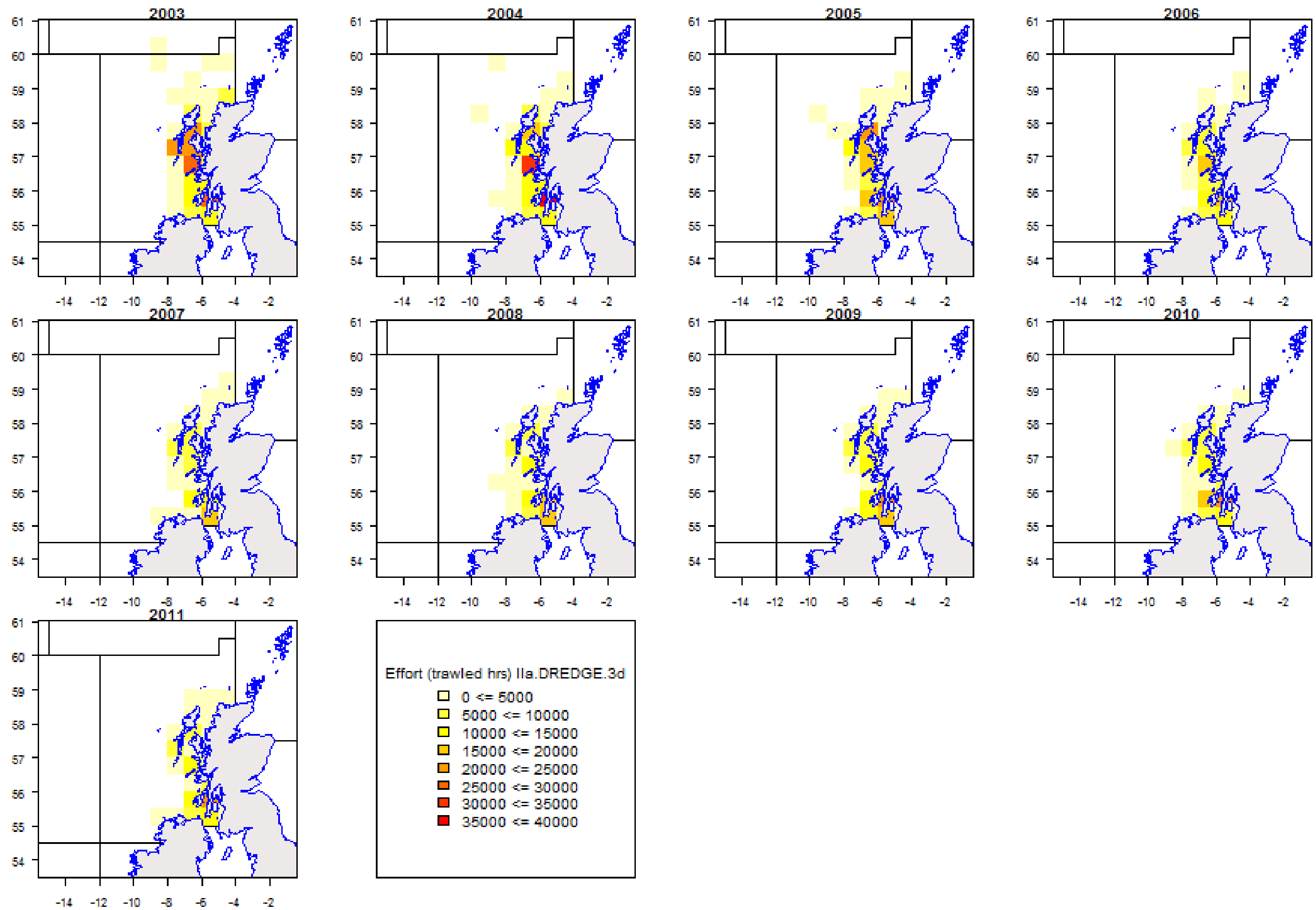


Figure 5.4.8.7 West of Scotland. Effort (hours) by ICES statistical rectangle for unregulated gear DREDGE, 2003-2011

5.4.9 ToR 7 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

STECF EWG 12-06 has no comments.

5.4.10 ToR 8 Correlation between partial cod mortality and fishing effort by Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToR 10 and 11. The EWG 12-06 analyses and response can be found in chapter 5.4.13.

5.4.11 ToR 9 Estimation of conversion factors to be applied for effort transfers between regulated gear groups

The table of international conversion factors (Table 5.4.11.1) is based on average CPUE (2009-2011). Discard data are scarce for many regulated gear groups but have been interpreted as well representative for TR1 and TR2.

Table 5.4.11.1 West of Scotland. Conversion factors for exchange of effort between gears based on average CPUE 2009-2011. Red cells indicate no discard data included and values are estimated based on LPUE; green cells indicate well representative discard information available.

	donor gear	receiving gear							
		BT1	BT2	GN1	LL1	TR1	TR2		CPUE
3d	BT1		1	0.1	1	0.006	0.077		1
3d	BT2	1		0.1	1	0.006	0.077		1
3d	GN1	1	1		1	0.058	0.769		10
3d	LL1	1	1	0.1		0.006	0.077		1
3d	TR1	1	1	1	1		1		171
3d	TR2	1	1	1	1	0.076			13

5.4.12 ToR 10 Estimation of partial fishing mortalities of cod by area, Member State and fisheries and correlation between partial cod mortality and fishing effort by area, Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToR 9 and 11. The EWG 12-06 analyses and response can be found in chapter 5.4.13.

5.4.13 ToR 11 Comparative analyses between trends in fishing mortality and fishing effort by Member State and fisheries and the cod plan (R (EC) No 1342/2008) provisions, in particular with regard to Article 13

The STECF EWG 12-06 presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings and discard volumes in relation to the estimated total landings for the years available. The full list of all fisheries can be downloaded from the EWG's web page. The anticipated trend in fishing mortality as derived from the cod plan is also presented in Table 5.4.13.1. The sustainable exploitation target is defined as F_{MSY}=0.4. The trends in fishing effort (kWdays at sea) of the relevant fisheries are also presented in Table 5.4.13.1. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded from the estimated F (Table 5.4.13.1) that the stock is unsustainably exploited with an F 2 times higher than the target. The fisheries listed within the table contribute around 95% to the total estimated fishing mortality.

The partial Fs of discards from the Scottish TR1 working under the Article 13.2.c are recently increasing and dominating the fishing mortality. The partial Fs of vessels now operating under TR1 13.2.c have been significant since 2003 but the source of the mortality has shifted from landings to discards. There are also no indications that the partial F is decreasing in the Scottish TR2 fishery working under the provisions of the Article 13.2.c.

STECF EWG 12-06 notes that the correlations between the summed partial Fs for landings and discards of the major fisheries and their estimated fishing efforts are not statistically significant. The lack of significant relationships between F and effort for the greatest contributors to cod catches indicates that kWdays at sea may not be an appropriate auxiliary measure to catch constraints and technical measures.

Table 5.5.13.1 West of Scotland. The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

												Reference year				
Runnig previous year annual F reductions by 25 percent as SSB remains below Blim, Fmsy=0.4												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan												1.026	0.77	0.578	0.434	0.326
reduction F plan													-0.25	-0.25	-0.25	-0.25
F estimated							1.044	0.983	1.082	0.9	1.063	1.026	0.885	0.793	0.951	
reduction F estimated													-0.14	-0.1	0.2	
													not following the provision of Article 7			
F par estimated as F*landings or discards(fishery)/Catch(tota							2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3d	ENG	TR1	none	COD	landings	0.027	0.03	0.015	0.007	0	0.003	0.004	0.001	0.001	
IIa	3d	ENG	TR1	none	COD	discards	0	0	0	0.009	0.001	0.009	0	0.001	0	
IIa	3d	FRA	TR1	CPart13.2.b	COD	landings	0.129	0.134	0.205	0.075	0.066	0.064	0.082	0.034	0.026	
IIa	3d	FRA	TR1	CPart13.2.b	COD	discards	0.002	0.011	0	0.071	0.12	0.228	0	0.097	0.001	
IIa	3d	IRL	TR1	Cpart13.2.c	COD	landings	0	0	0	0	0	0	0.005	0.002	0.003	
IIa	3d	IRL	TR1	Cpart13.2.c	COD	discards	0	0	0	0	0	0	0	0	0	
IIa	3d	IRL	TR1	Cpart13.2.d	COD	landings	0	0	0	0	0	0	0.01	0.025	0.015	
IIa	3d	IRL	TR1	Cpart13.2.d	COD	discards	0	0	0	0	0	0	0	0	0	
IIa	3d	IRL	TR1	none	COD	landings	0.023	0.005	0.02	0.006	0.031	0.03	0	0	0	
IIa	3d	IRL	TR1	none	COD	discards	0.004	0.001	0.003	0.009	0.002	0.005	0	0	0	
IIa	3d	IRL	TR2	none	COD	landings	0.072	0.044	0.037	0.009	0.021	0.013	0.002	0	0.001	
IIa	3d	IRL	TR2	none	COD	discards	0.018	0.007	0.01	0.132	0.003	0.007	0	0	0	
IIa	3d	NIR	TR1	none	COD	landings	0.035	0.05	0.042	0.006	0.005	0.004	0.008	0.001	0	
IIa	3d	NIR	TR1	none	COD	discards	0	0	0	0.005	0.017	0.008	0	0.196	0	
IIa	3d	SCO	TR1	CPart13.2.b-c	COD	landings	0.574	0.522	0.606	0.232	0.179	0.16	0.097	0.08	0.068	
IIa	3d	SCO	TR1	CPart13.2.b-c	COD	discards	0.004	0.01	0.005	0.222	0.448	0.45	0.613	0.337	0.756	
IIa	3d	SCO	TR2	CPart13.2.b-c	COD	landings	0.116	0.081	0.051	0.016	0.024	0.02	0.007	0.003	0.005	
IIa	3d	SCO	TR2	CPart13.2.b-c	COD	discards	0.013	0.049	0.056	0.05	0.099	0.005	0.047	0	0.059	
sum							1.017	0.944	1.050	0.849	1.016	1.006	0.875	0.777	0.935	
landings							0.976	0.866	0.976	0.351	0.326	0.294	0.215	0.146	0.119	
discards							0.041	0.078	0.074	0.498	0.690	0.712	0.660	0.631	0.816	
rel. contribution to F estimated							0.974	0.96	0.97	0.943	0.956	0.981	0.989	0.98	0.983	

Effort kW days running previous year baseline														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations	not following the provision of Article 12.2 and 4 (base					17062478	13613227	11874069	9727370	8795565				
reduction	not following the provision of Article 12.2 and 4 (base line revisi						-0.2	-0.13	-0.18	-0.1				
Effort estimated (regulated gear:	21416808	18983522	16048331	14392388	15121778	14268884	14011369	11111226	9227739					
							-0.02	-0.21	-0.17					
											2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	319445	145914	85851	48469	8711	17020	24446	14062	12979		0.866	9	4.582	0.003
kW days at sea	319445	145914	85851	48469	8711	17020	24446	14062	12979		0.282	9	0.778	0.462
kW days at sea	6010785	5807538	6038254	5193815	5058616	4486887	4482329	3469228	2149300		0.823	9	3.833	0.006
kW days at sea	6010785	5807538	6038254	5193815	5058616	4486887	4482329	3469228	2149300		0.125	9	0.333	0.749
kW days at sea							160305	211175	111504		0.339	3	0.360	0.780
kW days at sea							160305	211175	111504		#DIV/0!	3	#DIV/0!	#DIV/0!
							136556	228772	120795		0.892	3	1.973	0.299
							136556	228772	120795		#DIV/0!	3	#DIV/0!	#DIV/0!
kW days at sea	496439	316477	308681	325597	530740	435661					0.784	6	2.526	0.065
kW days at sea	496439	316477	308681	325597	530740	435661					0.184	6	0.374	0.727
kW days at sea	1130195	977557	767211	712325	388727	205082	17989	9150	17532		0.893	9	5.250	0.001
kW days at sea	1130195	977557	767211	712325	388727	205082	17989	9150	17532		0.324	9	0.906	0.395
kW days at sea	338394	162967	87191	29352	33609	38338	45378	23859	3160		0.703	9	2.615	0.035
kW days at sea	338394	162967	87191	29352	33609	38338	45378	23859	3160		0.246	9	0.671	0.524
kW days at sea	5722626	4502155	2635381	2099672	1986484	1990142	2228713	2315824	2079554		0.748	9	2.982	0.020
kW days at sea	5722626	4502155	2635381	2099672	1986484	1990142	2228713	2315824	2079554		0.684	9	2.481	0.042
kW days at sea	5760859	5335231	4586126	4380883	4692157	4804497	4524898	2731450	2637238		0.754	9	3.037	0.019
kW days at sea	5760859	5335231	4586126	4380883	4692157	4804497	4524898	2731450	2637238		0.045	9	0.119	0.909
sum	19778743	17247839	14508695	12790113	12699044	11977627	11620614	9003520	7132062		0.495	9	1.507	0.176
sum	19778743	17247839	14508695	12790113	12699044	11977627	11620614	9003520	7132062		0.886	9	5.055	0.001
sum	19778743	17247839	14508695	12790113	12699044	11977627	11620614	9003520	7132062		0.870	9	4.668	0.002
rel effort	0.924	0.909	0.904	0.889	0.84	0.839	0.829	0.81	0.773					

5.4.14 ToR 12 Considerations in order to accomplish spatio-temoral pattern in standardized catchability indices for cod

Consideration of spatio-temporal pattern in catchability is limited because France has supplied landings by rectangle data for 2011 only. It should also be noted that estimating catchabilities using landings information can only be meaningful if discarding is low. This is not the case for cod west of Scotland.

Figures 5.4.14.1 to 5.4.14.6 consider the spatial pattern attributed to landings in 2011 for key species west of Scotland. TR1 and TR2 trawl gears are the dominant regulated gears west of Scotland (see section 5.4.1) and the most significant landings of cod, haddock, whiting, saithe and anglerfish come from the TR1 gear. The spatial patterns of cod and haddock landings are very similar but that for whiting somewhat different. For whiting, the statistical rectangles providing the greatest amount of landings are those contributing the least landings of cod and haddock.

Compared to cod, haddock and whiting, landings of saithe come more predominantly from the extreme north of the area, although at the resolution of the statistical rectangle there still appears considerable spatial overlap between catches of saithe and cod, haddock and whiting. For anglerfish the pattern of landings very much indicates a fishery mostly conducted at the shelf edge and on the continental slope. Again there are overlaps with cod and haddock but also a region at mid latitudes important for anglerfish but not so much for cod.

Landings of Nephrops are significant and predominantly by vessels using TR2 gear (see also Figure 5.4.2.1). Landings are taken from inshore areas with the highest declared landings from rectangles furthest south. This pattern very much reflects the spatial pattern of effort by TR2 gear (Figure 5.4.8.2).

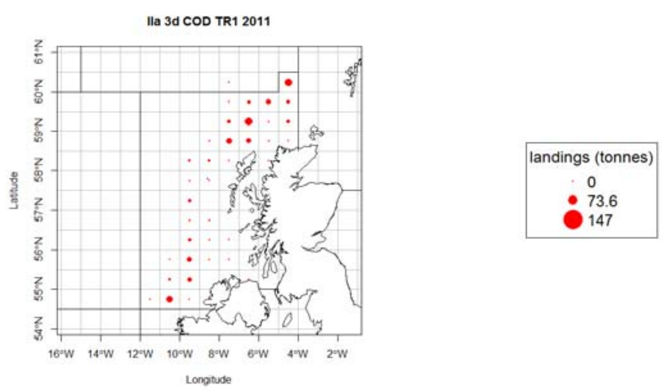


Figure 5.4.14.1 West of Scotland. Landings by rectangle of cod by vessels using TR1 gear.

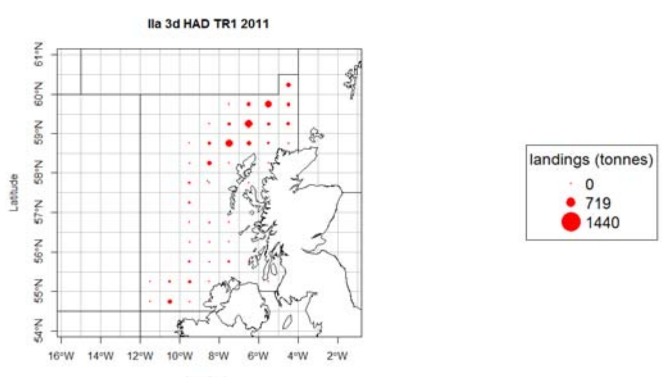


Figure 5.4.14.2 West of Scotland. Landings by rectangle of haddock by vessels using TR1 gear.

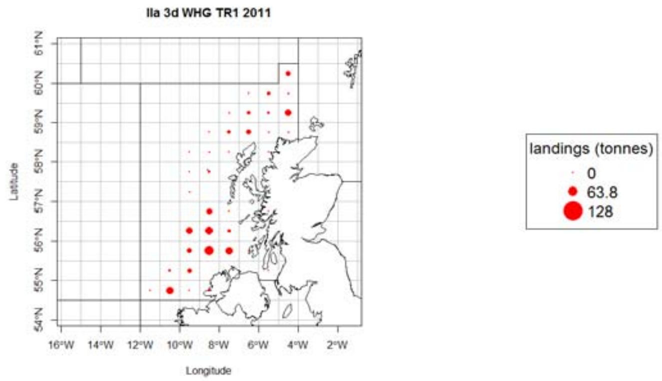


Figure 5.4.14.3 West of Scotland. Landings by rectangle of whiting by vessels using TR1 gear.

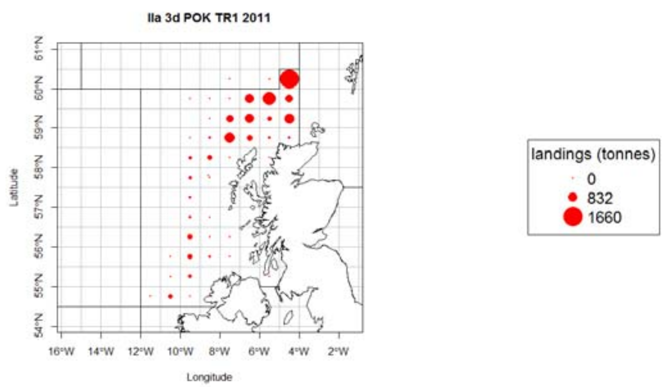


Figure 5.4.14.4 West of Scotland. Landings by rectangle of saithe by vessels using TR1 gear.

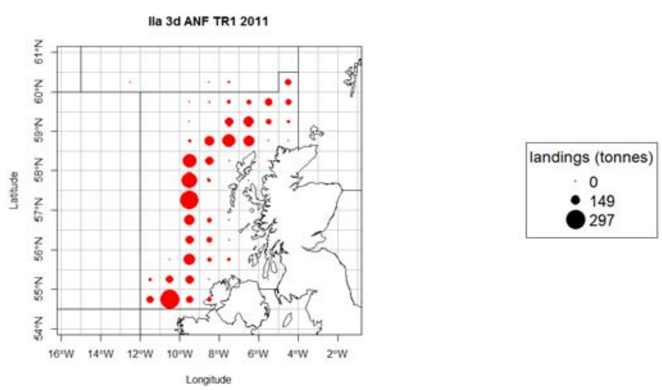


Figure 5.4.14.5 West of Scotland. Landings by rectangle of anglerfish by vessels using TR1 gear.

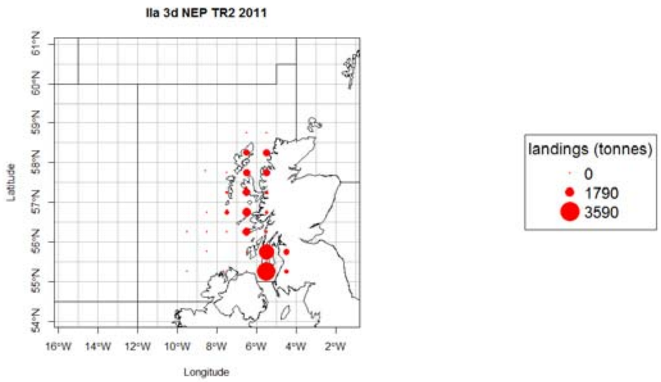


Figure 5.4.14.6 West of Scotland. Landings by rectangle of Nephrops by vessels using TR2 gear.

5.5 Irish Sea effort regime evaluation in the context of Annex IIA to Council Regulation (EC) No 57/2011)

5.5.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member State and fisheries

Effort within the Irish Sea has been compiled for kW*days-at-sea, GT*days-at-sea, and numbers of vessels. Within the report focus is on kW*Days at sea. Information on GT*days at sea and numbers of vessels is available via the website: Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

The majority of submissions included only 2011 data, and therefore the remainder of the time series remains unchanged and consistent (Tables 5.5.1.1). Ireland however re-submitted the full time series due to ongoing improvements of records within the national logbook database. Within some categories/years this has resulted in large variation from those reported in 2011.

Tables 5.5.1.2 and 5.5.1.3 detail nominal effort, in kW*days-at-sea, by nation and then aggregated by gear and special condition according to Annex I of Coun. Reg. 1342/2008 (new cod plan). These tables show a 34% decline in Irish Sea nominal effort since 2000, which has been more gradual since 2004 (down 25%). In the most recent years, 2009-2011, overall effort has become more consistent, and actually increased in 2011.

In relation to effort by gear, discussions are primarily focused on data from 2003 onwards. This is due to the unavailability of Irish mesh size information prior to 2003 resulting in all Irish effort occurring within the 'none' category which encompasses unidentified effort and effort by gears and mesh sizes not regulated under the cod plan. See below for further description of this category.

Irish Sea fisheries are predominantly demersal trawling and seining (TR group), and until 2011 combined TR effort mirrored the overall effort trend (Figure 5.5.1.1). In the three most recent years the proportion of effort within the combined TR effort group has declined from an average of ~60% (2003-2008) to 49% in 2011 (excluding TR CPart11 effort). Within regulated gears, the TR group has accounted for over 80% of the effort in the last four years.

Within the TR group, the TR2 category (70-99mm mesh sizes) dominates (Table 5.5.1.3 and Figure 5.5.1.2), and effort had been relatively stable between 2003 and 2008. An effort reduction occurred in 2009, coinciding with the introduction of the current cod plan, since then effort has remained at the reduced level. The majority of TR2 effort is now carried out under Article 13 of Coun. Reg. 1342/2008 (CPart13; ~80-99% of TR2 effort). A small amount of effort previously incorporated in CPart13 became exempt from the cod plan effort restrictions under Article 11 of the regulation (CPart11) in 2010 (3%), doubling in 2011 to 6%. Effort within TR1 (≥100mm mesh sizes) is currently at a very low level. This group underwent a large decline in effort between 2003 and 2007, since then effort has continued to decline at a slow rate. The majority of TR1 effort is now assigned to CPart13 (~75-85%).

Beam trawling, solely BT2 in the Irish Sea, declined greatly between 2003 and 2008. The group has continued at a low level over the last three years (accounting for 10% of Irish Sea effort), and is currently indicating a slight increase (Table 5.5.1.3). Note, Belgium beam trawl effort within the Irish Sea contains assumed mesh sizes, as described in Section 4.

Of the remaining regulated gears, gillnetting occurs at very low levels <0.5% (Figure 5.5.1.1) while GT1 and LL1 show negligible effort accounting for less than 0.01% of total effort.

Category 'none none' represents gear types and mesh sizes not regulated by Coun. Reg. 1342/2008 effort restrictions. This category includes effort assigned to special condition CPart11 which is exempt from effort restrictions through the use of cod avoidance measures (discussed above).

A large proportion of the 'none none' group prior to 2003 was due to Irish effort reported without mesh size information. Once Irish mesh size information became available in 2003, the 'none' category decreased substantially. Effort within this category has increased over the last five years and currently accounts for

40% of Irish Sea effort. Recent increases results from increased dredge and pot activity (Figure 5.5.5.1). Low levels of effort also occur within the pelagic trawl category.

Table 5.5.1.1. Irish Sea relative differences in nominal effort (kW*days at sea) to 2012 submissions by Member State by Annex I, Coun. Reg. 1342/2008. Only those differing combinations are displayed. Sorted by gear, derogation (SPECON), and country.

ANNEX	REG AREA COD	REG GEAR COD	SPECON	VESSEL LENGTH	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IIa	3c	POTS	none	O10T15M	IRL	0		0	0.349	0	0	0.933	0.053	0.001	0.016	-0.493
IIa	3c	POTS	none	O15M	IRL	0	0	0	0.434	0	0.116	0.234	0	0	0	
IIa	3c	GN1	none	O10T15M	IRL	0	0	0	0.611	0.131	0	0	0.154	0.062	0.096	-0.431
IIa	3c	TR2	none	O10T15M	IRL				0.216	0.063	0	0.166	0.159	0.008	0.003	-0.324
IIa	3c	DREDGE	none	O15M	IRL	0	0	0	0.137	0	0	0.005	0	0	0.03	-0.066
IIa	3c	TR1	none	O15M	IRL				0.062	0.175	0	0	0.008	0.009	0	-0.181
IIa	3c	PEL_TRAWL	none	O15M	IRL	0	0	0	0	0.043	0	0.02	0	0	0	-0.021
IIa	3c	BT2	none	O15M	IRL				0.099	0.008	0.006	0	0.001	0	0	-0.111
IIa	3c	DREDGE	none	O10T15M	IRL	0	0					0.202	0.04	0.046	0.043	-0.369
IIa	3c	GN1	none	O15M	IRL	0	0	0	0.057	0	0	0	0	-0.033	-0.067	-0.033
IIa	3c	TR2	none	O15M	IRL				0.031	0.03	0.007	-0.014	-0.013	-0.009	-0.015	-0.202
IIa	3c	TR1	none	O10T15M	IRL						0	0	0	0	0	-0.189
IIa	3c	PEL_TRAWL	none	O10T15M	IRL	0	0		0	0.367	-0.087	-0.012	0	0	0	-0.466
IIa	3c	TR2	CPART11	O15M	IRL											-0.315
IIa	3c	TR2	CPART13	O15M	IRL										-0.14	-0.296
IIa	3c	OTTER	none	O10T15M	IRL	0	0	0	0	0	0	0			0	-0.5
IIa	3c	LL1	none	O10T15M	IRL									0		-0.567

Table 5.5.1.2. Irish Sea trends in nominal effort (kW*days at sea) by gear groups of Annex I, Coun. Reg. 1342/2008 and Member State, 2000-2011. Sorted by gear, derogation (SPECON), and country. Data qualities are summarised in Section 4.

ANNEX	AREA	GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3c	TR1	CPART13	SCO											1663	407
IIa	3c	TR1	CPART13	ENG										21860	25111	14364
IIa	3c	TR1	CPART13	NIR										384860	350609	171175
IIa	3c	TR1	none	FRA	116211	296262	1411907	264447	167253	180515	109174	67487	19701	19701	6668	6138
IIa	3c	TR1	none	IRL				381119	157955	87263	84550	141442	73625	60348	77897	56161
IIa	3c	TR1	none	NLD									442			
IIa	3c	TR1	none	SCO	111174	119211	84432	92516	32104	3889	3104					
IIa	3c	TR1	none	ENG	255172	363705	299745	399886	197351	94201	68905	16846	5932			
IIa	3c	TR1	none	NIR	1342936	1613525	1846273	2053909	1161889	872476	785380	340235	510151			
IIa	3c	TR1	none	IOM	21107	511	1204	9070	362	172		649	895			
IIa	3c	TR2	CPART13	IRL										30827	115391	838629
IIa	3c	TR2	CPART13	SCO										30815	17981	43748
IIa	3c	TR2	CPART13	ENG										171656	180844	161841
IIa	3c	TR2	CPART13	NIR										3097345	2777583	2674691
IIa	3c	TR2	CPART13	IOM										23022	23928	154907
IIa	3c	TR2	none	BEL					13541	43486	34052	76789	67534	29980	14283	28390
IIa	3c	TR2	none	FRA	25705	9827	4712	588		2352		810				
IIa	3c	TR2	none	IRL				1242769	1386883	1475114	1452830	1583605	1300696	806523	673682	
IIa	3c	TR2	none	SCO	64109	34258	18499	44655	93771	34416	7435	16808	21995			
IIa	3c	TR2	none	ENG	474125	336156	260431	211774	347848	287791	247447	244461	219456			
IIa	3c	TR2	none	NIR	3855689	3869187	2915651	3366613	3110597	3185141	2951782	3125387	3345023			
IIa	3c	TR2	none	GBJ	530											
IIa	3c	TR2	none	IOM	18286	24145	17282	18628	10826	27205	5427	29763	14592			
IIa	3c	TR3	none	DNK				992								
IIa	3c	TR3	none	IRL				900	90	3305	960		436			179
IIa	3c	TR3	none	ENG				134								
IIa	3c	BT2	none	BEL	1273518	1791577	2078795	1884843	1482831	1694567	1153947	956953	554841	624989	649225	660228
IIa	3c	BT2	none	IRL				860849	414446	514653	481404	550975	374494	173927	218054	211367
IIa	3c	BT2	none	NLD	206768		1750			5884						
IIa	3c	BT2	none	SCO								1074	1378			
IIa	3c	BT2	none	ENG	118613	193846	110672	172354	68579	161500	59199	31112	17349	5808	1598	41222
IIa	3c	BT2	none	GBJ	18484	22377	27803	40878	42260	3542						
IIa	3c	GN1	none	FRA						838						
IIa	3c	GN1	none	IRL	11031	27746	57472	92103	63069	26672	29531	47941	40957	22212	22162	20315
IIa	3c	GN1	none	NLD		660					161					
IIa	3c	GN1	none	SCO						895						
IIa	3c	GN1	none	ENG	22741	12716	12438	14872	12326	10011	8378	3930	4297	684	2260	3602
IIa	3c	GN1	none	NIR	1332	2442	4329		222					2140		
IIa	3c	GT1	none	IRL									1327	1237		
IIa	3c	GT1	none	ENG	523						475	656	1066	2788	984	1476
IIa	3c	LL1	none	FRA			1200									
IIa	3c	LL1	none	IRL		955			800				24199		611	146
IIa	3c	LL1	none	SCO		13284		3247								
IIa	3c	LL1	none	ENG	180243	171126	86688	44138	58414	93773	59656	12238	840	924		1543
Total of regulated gears					**8118297**	**8903516**	**9241283**	**11201284**	**8823417**	**8809661**	**7543797**	**7249161**	**6601226**	**5511646**	**5160534**	**5090529**
IIa	3c	none	none	BEL		6808		528					53686		41044	59791
IIa	3c	none	none	FRA				1694				906	2844	2844	1180	4982
IIa	3c	none	none	IRL	3272681	2864252	2912408	611981	830250	417215	436077	445217	396694	432429	627177	672549
IIa	3c	none	none	NLD	3960	7428	4412		14520	12797	525	4725	54075	17118	3960	
IIa	3c	none	none	SCO	703739	1003811	805622	901594	725105	807055	603817	940517	1260522	1371630	1013635	1085741
IIa	3c	none	none	ENG	350180	417861	584819	648435	546205	596426	690431	590740	508704	443313	478027	480676
IIa	3c	none	none	NIR	296728	332759	237965	303426	256628	249139	274800	300976	352645	325338	335529	418379
IIa	3c	none	none	GBJ	113032	33456	72836	74180	76378	17726	11996	35952	53928	78825	62274	52172
IIa	3c	none	none	IOM	11127	7319	7564	10154	6782	5194	10315	13983	47908	32458	51603	341776
IIa	3c	none	none	GBG									397	11116	1119	
IIa	3c	TR2	CPART11	IRL											107511	231706
IIa	3c	TR2	CPART11	SCO											9055	
Total of unregulated gears					**4751447**	**4673694**	**4625626**	**2551992**	**2455868**	**2105552**	**2027961**	**2333016**	**2731403**	**2715071**	**2732114**	**3347772**
Overall total					**12869744**	**13577210**	**13866909**	**13753276**	**11279285**	**10915213**	**9571758**	**9582177**	**9332629**	**8226717**	**7892648**	**8438301**

Table 5.5.1.3 Trend in nominal effort (kW*days at sea) by effort group (Coun. Reg. 1342/2008), 2000-2011.

Annex	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Relative change to 2004	Relative change to 2009
IIa	3c	TR1	CPART13										406720	377383	185946		-0.54
IIa	3c	TR1	none	1846600	2393214	3643561	3200947	1716914	1238516	1051113	566659	610746	80049	84565	62299	-0.96	-0.22
IIa	**3c**	**TR1 Total**		**1846600**	**2393214**	**3643561**	**3200947**	**1716914**	**1238516**	**1051113**	**566659**	**610746**	**486769**	**461948**	**248245**	**-0.86**	**-0.49**
IIa	3c	TR2	CPART13										3353665	3115727	3873816		0.16
IIa	3c	TR2	none	4438444	4273573	3216575	4885027	4963466	5055505	4698973	5077623	4969296	836503	687965	28390	-0.99	-0.97
IIa	**3c**	**TR2 Total**		**4438444**	**4273573**	**3216575**	**4885027**	**4963466**	**5055505**	**4698973**	**5077623**	**4969296**	**4190168**	**3803692**	**3902206**	**-0.21**	**-0.07**
IIa	3c	TR3	none				2026	90	3305	960		436			179		
IIa	**3c**	**TR3 Total**					**2026**	**90**	**3305**	**960**		**436**			**179**	**0.99**	
IIa	3c	BT2	none	1617383	2007800	2219020	2958924	2008116	2380146	1694550	1540114	948062	804724	868877	912817		
IIa	**3c**	**BT2 Total**		**1617383**	**2007800**	**2219020**	**2958924**	**2008116**	**2380146**	**1694550**	**1540114**	**948062**	**804724**	**868877**	**912817**	**-0.55**	**0.13**
IIa	3c	GN1	none	35104	43564	74239	106975	75617	38416	38070	51871	45254	25036	24422	23917		
IIa	**3c**	**GN1 Total**		**35104**	**43564**	**74239**	**106975**	**75617**	**38416**	**38070**	**51871**	**45254**	**25036**	**24422**	**23917**	**-0.68**	**-0.04**
IIa	3c	GT1	none	523						475	656	2393	4025	984	1476		
IIa	**3c**	**GT1 Total**		**523**						**475**	**656**	**2393**	**4025**	**984**	**1476**		**-0.63**
IIa	3c	LL1	none	180243	185365	87888	47385	59214	93773	59656	12238	25039	924	611	1689		
IIa	**3c**	**LL1 Total**		**180243**	**185365**	**87888**	**47385**	**59214**	**93773**	**59656**	**12238**	**25039**	**924**	**611**	**1689**	**-0.97**	**0.83**
IIa	**3c**	**none**	**none**	**4751447**	**4673694**	**4625626**	**2551992**	**2455868**	**2105552**	**2027961**	**2333016**	**2731403**	**2715071**	**2615548**	**3116066**	**0.27**	**0.15**
IIa	3c	TR2	CPART11											116566	231706		
IIa	3c	None Total		4751447	4673694	4625626	2551992	2455868	2105552	2027961	2333016	2731403	2715071	2732114	3347772	**0.36**	**0.23**
Grand Total				**12869744**	**13577210**	**13866909**	**13753276**	**11279285**	**10915213**	**9571758**	**9582177**	**9332629**	**8226717**	**7892648**	**8438301**	**-0.25**	**0.03**

Table 5.5.1.4. Irish Sea trends in unregulated effort (kW*days at sea), according to Annex 1 of Con. Reg. 1342/2008, by major gear type, 2000-2011.

Annex	Area	REG GEAR	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
IIa	3c	BEAM	IRL	792416	652385	772223	23853	159015							
IIa	3c	BEAM	ENG	13534	17018	7906	7360	1966	25324	8221	8992	26350	9124	1788	988
IIa	3c	BEAM	NIR									3639	370		
IIa	3c	DEM_SEINE	IRL	23180	27798	26993		759							
IIa	3c	DEM_SEINE	ENG							142					
IIa	3c	DREDGE	BEL									53686		41044	59791
IIa	3c	DREDGE	FRA											251	4401
IIa	3c	DREDGE	IRL	327890	266554	275994	413698	342029	170130	151968	223441	176175	197563	282282	355481
IIa	3c	DREDGE	NLD							525	4725	54075	17118		
IIa	3c	DREDGE	SCO	654669	856495	802542	894237	724139	777598	572146	905327	1226238	1276319	928322	1011689
IIa	3c	DREDGE	ENG	266534	289651	276745	225232	197412	196296	313285	239832	267755	213853	254895	325412
IIa	3c	DREDGE	NIR	153565	212033	120708	135202	137511	111692	99662	118382	145810	114896	134209	188095
IIa	3c	DREDGE	GBJ	47760		8192	2968								
IIa	3c	DREDGE	IOM	11127	7319	7378	8573	5387	5194	9987	13983	17732	32458	51603	304432
IIa	3c	none	FRA								906				
IIa	3c	none	IRL		709							96			
IIa	3c	none	SCO						2130						
IIa	3c	OTTER	BEL		6808		528								
IIa	3c	OTTER	IRL	1988191	1768311	1767545	24648	99895	4109	3940			455	2380	291
IIa	3c	OTTER	NLD	3960		4412									
IIa	3c	OTTER	SCO				5792	966		414				828	
IIa	3c	OTTER	ENG	246		342	62	76	1416	112	820				188
IIa	3c	OTTER	NIR				696		179	4022			570	3120	
IIa	3c	OTTER	IOM												179
IIa	3c	PEL_SEINE	FRA				1694								285
IIa	3c	PEL_SEINE	IRL				560	5872							
IIa	3c	PEL_SEINE	NIR	20940	22729	29223	45458	22042	61552	34310		1131			
IIa	3c	PEL_TRAWL	FRA											792	
IIa	3c	PEL_TRAWL	IRL	112207	107654	31338	48375	146806	127361	59473	24970	13968	5569	70492	38999
IIa	3c	PEL_TRAWL	NLD		7428			14520	12797					3960	
IIa	3c	PEL_TRAWL	SCO		95622	1033			14700						
IIa	3c	PEL_TRAWL	ENG			23040	12729		7200					13440	
IIa	3c	PEL_TRAWL	NIR	54243	35078	57566	87890	65982	49486	93380	140424	104430	92084	108198	167634
IIa	3c	POTS	FRA									2844	2844	137	296
IIa	3c	POTS	IRL	28797	40841	38315	100847	75874	115615	220696	196806	206455	228842	272023	277778
IIa	3c	POTS	SCO	49070	51694	2047	1565		12627	31257	35190	34284	95311	84485	74052
IIa	3c	POTS	ENG	69866	111192	276786	403052	346751	366190	368671	341096	214599	220336	207904	154088
IIa	3c	POTS	NIR	67980	62919	30468	34180	31093	26230	43426	42170	97635	117418	90002	62650
IIa	3c	POTS	GBJ	65272	33456	64644	71212	76378	17726	11996	35952	53928	78825	62274	52172
IIa	3c	POTS	IOM			186	1581	1395		328		30176			37165
IIa	3c	POTS	GBG									397	11116	1119	
IIa	3c	TR2	IRL											107511	231706
IIa	3c	TR2	SCO											9055	
Grand Total				4751447	4673694	4625626	2551992	2455868	2105552	2027961	2333016	2731403	2715071	2732114	3347772

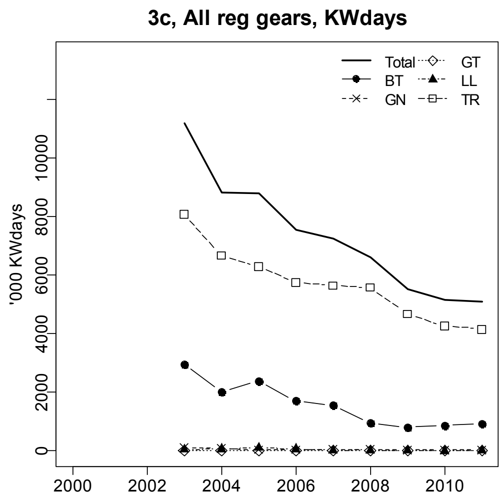


Figure 5.5.1.1. Irish Sea. Trend in regulated gear nominal effort (kW*days-at-sea) by Coun. Reg. 1342/2008, 2003-2011. N.B. CPart11 effort is excluded form this plot.

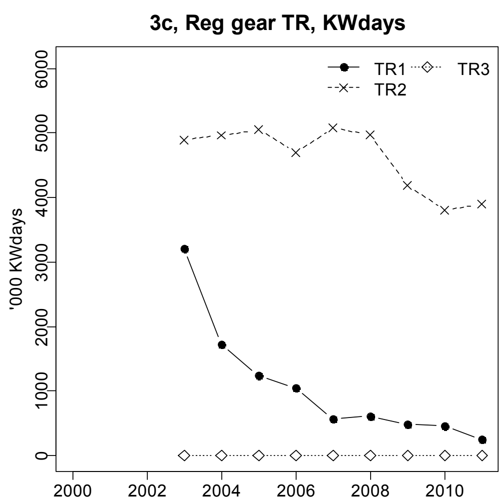


Figure 5.5.1.2. Irish Sea. Trend in regulated gear TR (demersal trawl and Danish seine) nominal effort (kW*days-at-sea) by Coun. Reg. 1342/2008, 2003-2011. N.B. CPart11 effort is excluded from this plot.

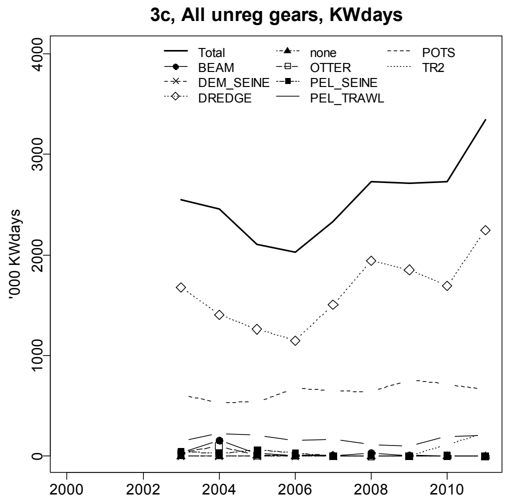


Figure 5.5.1.3. Irish Sea. Effort composition in kW*Days at sea for unregulated gears according to Coun. Reg. 1342/2008 (category none), 2000-2011. N.B. this plot contains TR2 CPart11 effort as TR2.

5.5.2 ToR 1.b and c Catches (landings and discards) of cod and non-cod species in weight and numbers at age by fisheries

Table 5.5.2.1 lists the landings and available discards for the main species by gear groups relating to Coun. Reg. 1342/2008. For the reason of space limitation of this report, the following sections represent the landings in weight and numbers for monkfish (ANF), cod (COD), haddock (HAD), hake, (HKE), Nephrops (NEP), plaice (PLE), saithe (POK), rays (RAJ), sole (SOL), and whiting (WHG). Additional data queries for other species may be provided depending on data provisions of the national catches by the experts or national institutes. The data given in the table forms the basis of Figure 5.5.2.1 displaying the relative landings compositions by gear groups for the years 2003-2011.

Discard information available within the Irish Sea is incomplete. Discard data is not available for all species and/or years within each gear grouping. TR2 and BT2 have the most complete data particularly in more recent years, for species like cod, haddock, hake, plaice, rays, and whiting. Availability of discard information is sporadic in TR1. No gillnet or longline discard information for the Irish Sea was provided to the group.

In relation to overall landings by species, Nephrops dominate Irish Sea landings and have been above 9kt since 2007, peaking in 2008 and 2011 with over 10kt. Plaice and anglerfish landings increased in 2011 following periods of decline. Haddock and sole have fluctuated in the last four years (~850t and 300t respectively). In addition, whiting landings have remained around the same level for the last three years (~105t). Cod landings have continued to follow the declining trend which began in 2009.

Below the primary gear categories with landings from the Irish Sea are discussed. As a first note, inaccurate area reporting of cod from ICES rectangles immediately north of the Irish Sea–Celtic Sea boundary (ICES rectangles 33E2 and 33E3) is known to be an issue for Ireland, with ICES division VIIg cod catches being reported into the southern Irish Sea. This primarily relates to gillnet and otter trawl gear types. WGCSE has reallocated cod from VIIa to the Celtic Sea for a number of years, ranging between ~50t and >500t annually since 2004. This inaccurate reporting has not been corrected for within the data provided to the EWG.

Nephrops are the primary focus of the TR2 category (Figure 5.5.2.1, note the figure excludes CPartII whose target species is Nephrops). Other components of the TR2 category occur at comparatively low levels, including cod, haddock, whiting, plaice, and anglerfish. This category has consistently accounted for around a third (26%-39%) of cod landings from ≥10m vessels. Discarding of haddock, plaice and whiting occurs within this gear category and can be high in some years.

The species composition of TR1, the larger mesh size group, is very different to TR2, containing virtually no Nephrops. Landings primarily consist of cod and haddock, with lower quantities of hake. A variety of other species occur at low levels including, plaice and whiting (Figure 5.5.2.1). Cod landings by this category have declined in recent years, accounting for around a third of cod landings in 2011. TR1 consistently accounts for the majority of both haddock and hake landings (>70% and >69% in the last two years respectively).

Beam trawls operating within the Irish Sea belong solely to the BT2 (80-119mm) category. Belgium (and the Netherlands) beam trawls are assumed to have used the minimum mesh size group 80-89mm (Sec. 4). No assumptions are made for the remaining nations.

The species composition of this category is stable, dominated by sole, plaice, and rays. The proportion of the latter has increased over time. Plaice landings increased in 2011 whilst sole has been stable in most recent years (Figure 5.5.2.1). Low level landings of anglerfish, cod, and haddock (~5%, or less) are also landed. Cod landings by BT2 increased in 2011. Beam trawling accounts for over 50% of plaice landings, as well as the majority of sole landings (~90%) from vessels ≥10m. Although plaice is a target of this gear category, recent discard data shows between 30% and 40% of the catch is discarded, while <10% sole is thrown back.

The primary target of Irish Sea gillnets is cod, which dominate the low level landings (Figure 5.5.2.1). Although the main target of this gear category is cod, landings are low and in most years account for ≤15% of total Irish Sea cod landed. Landings from 2007 and 2008 were over double other years. Minimal levels of other species are landed.

Landings by unregulated gears within the Irish Sea (Table 5.5.2.2) have been minimal since 2005, in most cases <5t per year. Further more, unregulated gears show consistently low to zero landings of cod. Landings associated with the TR2 CPart11 category have high Nephrops landings with little to no landings of other species.

Cod numbers by age are not described or presented within this section, however values for this within the Irish Sea are available from the website.

Table 5.5.2.1 Irish Sea. Landings (t), discards (t) and discard rate by species and gear according to Coun. Reg. 1342/2008, 2004-2011. For landings, discards and discard rates by Country refer to the website.

ANNEX	REG_AREA	SPECIES	REG_GEAR	SPECON	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	3c	ANF	TR1	CPart13																2	0	0	3	0	0	2	0	0
IIa	3c	ANF	TR2	CPart13																91	0	0	64	5	0.07	158	2	0.01
IIa	3c	ANF	BT2	none	175	0	0	184	0	0	123	0	0	115	1	0.01	55	1	0.02	43	0	0	35	0	0	53	4	0.07
IIa	3c	ANF	GN1	none	5	0	0	4	0	0	4	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0	0	0
IIa	3c	ANF	TR1	none	122	0	0	52	0	0	36	0	0	22	0	0	10	7	0.41	6	0	0	7	0	0	6	0	0
IIa	3c	ANF	TR2	none	255	2	0.01	219	13	0.06	243	19	0.07	274	5	0.02	202	1	0	62	0	0	47	1	0.02	2	0	0
IIa	3c	COD	TR1	CPart13																289	0	0	199	0	0	95	0	0
IIa	3c	COD	TR2	CPart13																96	0	0	88	247	0.74	165	7	0.04
IIa	3c	COD	BT2	none	125	0	0	156	0	0	78	0	0	107	20	0.16	31	1	0.03	18	6	0.25	40	15	0.27	71	37	0.34
IIa	3c	COD	GN1	none	117	0	0	55	0	0	131	0	0	329	0	0	392	0	0	78	0	0	78	0	0	70	0	0
IIa	3c	COD	GT1	none										1	0	0	1	0	0	1	0	0	2	0	0	1	0	0
IIa	3c	COD	LL1	none	1	0	0	2	0	0	3	0	0	1	0	0	12	0	0							0	0	0
IIa	3c	COD	TR1	none	445	10	0.02	374	1	0	416	0	0	339	0	0	468	0	0	74	0	0	43	0	0	66	0	0
IIa	3c	COD	TR2	none	397	85	0.18	371	38	0.09	309	6	0.02	427	13	0.03	311	307	0.5	89	5	0.05	122	3	0.02	3	0	0
IIa	3c	HAD	TR1	CPart13																333	0	0	481	0	0	275	0	0
IIa	3c	HAD	TR2	CPart13																106	77	0.42	114	926	0.89	147	798	0.84
IIa	3c	HAD	BT2	none	25	0	0	34	5	0.13	28	0	0	32	13	0.29	9	3	0.25	8	3	0.27	9	7	0.44	16	32	0.67
IIa	3c	HAD	GN1	none	9	0	0	3	0	0	7	0	0	11	0	0	4	0	0	17	0	0	6	0	0	7	0	0
IIa	3c	HAD	TR1	none	366	765	0.68	306	63	0.17	449	1	0	588	4	0.01	472	223	0.32	221	22	0.09	201	0	0	359	2	0.01
IIa	3c	HAD	TR2	none	262	1957	0.88	189	661	0.78	168	1272	0.88	441	466	0.51	387	675	0.64	149	1998	0.93	125	41	0.25	2	0	0
IIa	3c	HKE	TR1	CPart13																138	0	0	132	0	0	71	0	0
IIa	3c	HKE	TR2	CPart13																44	0	0	29	4	0.12	30	62	0.67
IIa	3c	HKE	BT2	none	5	0	0	7	0	0	3	0	0	4	0	0	1	0	0	1	0	0	1	0	0	0	0	0
IIa	3c	HKE	GN1	none	8	0	0	5	0	0	5	0	0	5	0	0	1	0	0	1	0	0	1	0	0	3	0	0
IIa	3c	HKE	TR1	none	231	18	0.07	208	21	0.09	173	0	0	80	0	0	183	0	0	3	0	0	5	0	0	2	0	0
IIa	3c	HKE	TR2	none	85	87	0.51	98	39	0.28	58	3	0.05	68	1	0.01	46	30	0.39	11	8	0.42	10	1	0.09	0	0	0
IIa	3c	NEP	TR1	CPart13																5	0	0	3	0	0	1	0	0
IIa	3c	NEP	TR2	CPart13																7235	0	0	6897	0	0	9418	0	0
IIa	3c	NEP	BT2	none	1	0	0	0	0	0	2	0	0	1	0	0				0	0	0	0	0	0	0	0	0
IIa	3c	NEP	GN1	none				9	0	0																		
IIa	3c	NEP	TR1	none	40	0	0	20	0	0	25	0	0	23	0	0	24	0	0	8	0	0	1	0	0	16	0	0
IIa	3c	NEP	TR2	none	7238	0	0	6936	0	0	7756	0	0	9377	0	0	10854	0	0	2314	0	0	1794	0	0	0	0	0
IIa	3c	PLE	TR1	CPart13																8	0	0	11	0	0	6	0	0
IIa	3c	PLE	TR2	CPart13																118	23	0.16	105	58	0.36	147	451	0.75
IIa	3c	PLE	BT2	none	549	0	0	689	0	0	413	0	0	263	110	0.29	182	100	0.35	212	110	0.34	175	102	0.37	385	263	0.41
IIa	3c	PLE	GN1	none	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	3c	PLE	TR1	none	125	22	0.15	76	2	0.03	112	10	0.08	57	0	0	43	9	0.17	13	2	0.13	12	0	0	11	1	0.08
IIa	3c	PLE	TR2	none	369	706	0.66	409	1081	0.73	333	1203	0.78	378	190	0.33	261	618	0.7	45	299	0.87	38	101	0.73	29	0	0
IIa	3c	POK	TR1	CPart13																13	0	0	3	0	0	1	0	0
IIa	3c	POK	TR2	CPart13																0	0	0	1	0	0	0	1	1
IIa	3c	POK	BT2	none	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IIa	3c	POK	GN1	none	25	0	0	3	0	0	4	0	0	10	0	0	1	0	0	1	0	0	1	0	0	1	0	0
IIa	3c	POK	TR1	none	173	64	0.27	64	14	0.18	20	0	0	3	0	0	9	0	0	0	0	0	2	0	0	4	0	0
IIa	3c	POK	TR2	none	20	0	0	16	0	0	3	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0
IIa	3c	RAJ	TR2	CPart13																0	0	0	2	7	0.78	158	42	0.21
IIa	3c	RAJ	BT2	none	125	0	0	372	0	0	259	0	0	349	0	0	289	236	0.45	219	305	0.58	370	356	0.49	362	496	0.58
IIa	3c	RAJ	GN1	none	3	0	0	28	0	0	1	0	0	0	0	0	4	0	0	2	0	0	15	0	0	3	0	0
IIa	3c	RAJ	GT1	none													2	0	0	1	0	0						
IIa	3c	RAJ	TR1	none	160	0	0	120	0	0	98	0	0	73	0	0	51	717	0.93	47	0	0	103	0	0	50	8	0.14
IIa	3c	RAJ	TR2	none	340	6	0.02	348	17	0.05	297	1	0	307	7	0.02	156	2	0.01	98	11	0.1	130	42	0.24	1	0	0
IIa	3c	SOL	TR2	CPart13																13	0	0	8	0	0	27	0	0
IIa	3c	SOL	BT2	none	657	0	0	801	0	0	516	0	0	401	13	0.03	276	24	0.08	290	15	0.05	248	11	0.04	285	10	0.03
IIa	3c	SOL	TR1	none	7	0	0	6	0	0	3	0	0	3	0	0	1	0	0	2	0	0	1	0	0	1	0	0
IIa	3c	SOL	TR2	none	30	0	0	36	3	0.08	42	24	0.36	77	0	0	38	1	0.03	15	0	0	14	3	0.18	10	0	0
IIa	3c	WHG	TR1	CPart13																6	0	0	5	0	0	1	0	0
IIa	3c	WHG	TR2	CPart13																6	60	0.91	11	740	0.99	16	475	0.97
IIa	3c	WHG	BT2	none	14	0	0	12	14	0.54	4	13	0.76	5	3	0.38	2	14	0.88	2	6	0.75	4	9	0.69	3	37	0.92
IIa	3c	WHG	GN1	none	6	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0
IIa	3c	WHG	TR1	none	72	830	0.92	40	24	0.38	19	2	0.1	90	5	0.05	47	14	0.23	52	226	0.81	48	0	0	85	2	0.02
IIa	3c	WHG	TR2	none	82	2013	0.96	104	354	0.77	61	1974	0.97	99	821	0.89	28	1489	0.98	26	1584	0.98	51	171	0.77	0	0	0

Table 5.5.2.2 Irish Sea. Landings (t), discards (t) and discard rate of unregulated gear (category none) associated with Coun. Reg. 1342/2008 by species and gear, including special condition CPart11. For landings, discards and discard rates by Country refer to the website.

ANNEX	REG_AREA	SPECIES	REG_GEAR	SPECON	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
IIa	3c	ANF	BEAM	none	12	0	0										0	0	0									
IIa	3c	ANF	DREDGE	none	3	0	0	2	0	0	1	0	0	3	0	0	0	0	0				0	0	0	0	24	1
IIa	3c	ANF	none	none										9	0	0												
IIa	3c	ANF	OTTER	none	6	0	0	0	0	0	0	0	0							0	0	0	0	0	0			
IIa	3c	ANF	PEL_SEINE	none	0	0	0																					
IIa	3c	ANF	PEL_TRAW	none	9	0	0				0	0	0	0	0	0										0	0	0
IIa	3c	ANF	POTS	none	2	0	0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	3c	COD	BEAM	none	8	0	0										0	0	0									
IIa	3c	COD	DREDGE	none	1	0	0	0	0	0	0	0	0							0	0	0				0	1	1
IIa	3c	COD	OTTER	none	9	0	0				0	0	0							0	0	0				0	0	0
IIa	3c	COD	PEL_SEINE	none	1	0	0																					
IIa	3c	COD	PEL_TRAW	none	2	0	0							0	0	0										0	0	0
IIa	3c	COD	POTS	none	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
IIa	3c	COD	TR2	CPART11																			0	0	0	0	1	1
IIa	3c	HAD	BEAM	none	5	0	0																					
IIa	3c	HAD	DEM_SEIN	none	2	0	0																					
IIa	3c	HAD	DREDGE	none	0	0	0				0	0	0													0	2	1
IIa	3c	HAD	OTTER	none	15	0	0				0	0	0							0	0	0				0	0	0
IIa	3c	HAD	PEL_SEINE	none	2	0	0																					
IIa	3c	HAD	PEL_TRAW	none	2	0	0							0	0	0												
IIa	3c	HAD	POTS	none	6	1	0.14							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	3c	HAD	TR2	CPART11																			0	6	1	0	80	1
IIa	3c	HKE	OTTER	none	1	0	0				0	0	0							0	0	0						
IIa	3c	HKE	PEL_TRAW	none	1	0	0																					
IIa	3c	HKE	POTS	none	1	4	0.8							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIa	3c	HKE	TR2	CPART11																			0	0	0	0	3	1
IIa	3c	NEP	BEAM	none													0	0	0	2	0	0						
IIa	3c	NEP	DREDGE	none	1	0	0				0	0	0							0	0	0						
IIa	3c	NEP	OTTER	none	211	0	0	0	0	0	5	0	0	0	0	0				1	0	0	2	0	0	0	0	0
IIa	3c	NEP	PEL_SEINE	none	26	0	0										3	0	0									
IIa	3c	NEP	PEL_TRAW	none	7	0	0				1	0	0	3	0	0										7	0	0
IIa	3c	NEP	POTS	none	42	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0				1	0	0
IIa	3c	NEP	TR2	CPART11																			493	0	0	944	0	0
IIa	3c	PLE	BEAM	none	30	0	0																					
IIa	3c	PLE	DREDGE	none	4	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1
IIa	3c	PLE	OTTER	none	5	0	0	1	0	0	0	0	0	0	0	0				0	0	0				0	0	0
IIa	3c	PLE	PEL_TRAW	none	6	0	0							0	0	0												
IIa	3c	PLE	POTS	none	1	4	0.8	0	0	0							0	0	0	0	0	0				0	0	0
IIa	3c	PLE	TR2	CPART11																			0	11	1	1	34	0.97
IIa	3c	POK	DREDGE	none	1	0	0																					
IIa	3c	POK	PEL_TRAW	none	1	0	0																					
IIa	3c	POK	POTS	none	2	0	0																					
IIa	3c	RAJ	BEAM	none	147	0	0																					
IIa	3c	RAJ	DREDGE	none	9	0	0	7	0	0	1	0	0													0	45	1
IIa	3c	RAJ	OTTER	none	18	0	0						0			0										0	0	0
IIa	3c	RAJ	PEL_SEINE	none																								
IIa	3c	RAJ	PEL_TRAW	none	21	0	0							0	0	0										0	0	0
IIa	3c	RAJ	POTS	none	2	0	0	0	0	0	0	0	0				5	0	0	2	0	0	2	0	0			
IIa	3c	RAJ	TR2	CPART11																			0	6	1	0	3	1
IIa	3c	SOL	BEAM	none	8	0	0																					
IIa	3c	SOL	DREDGE	none	2	0	0	4	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	1
IIa	3c	SOL	OTTER	none	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0	0
IIa	3c	WHG	OTTER	none	11	0	0													0	0	0				0	0	0
IIa	3c	WHG	PEL_TRAW	none	4	0	0																					
IIa	3c	WHG	POTS	none	1	24	0.96			0	0	0	0							0	0	0	0	0	0	0	0	0
IIa	3c	WHG	TR2	CPART11																			0	24	1	0	88	1

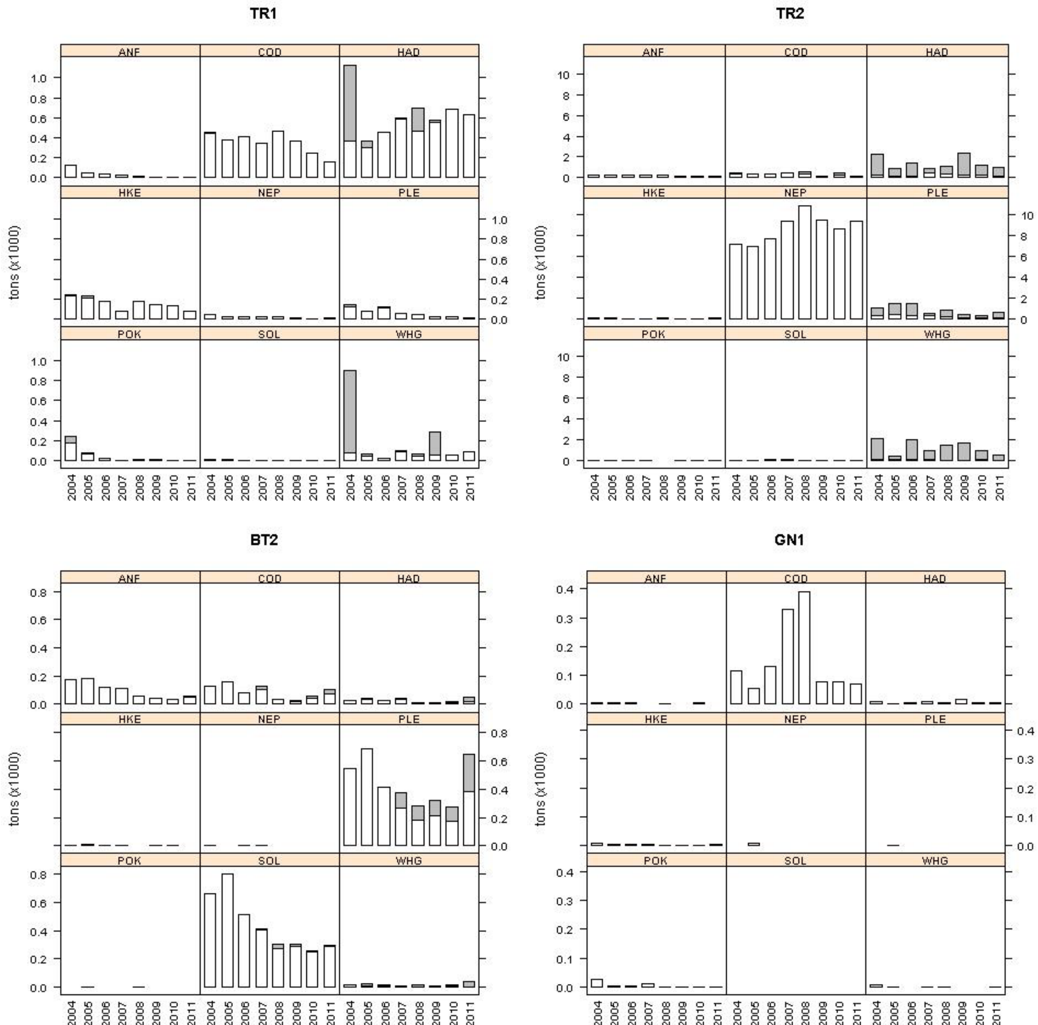


Figure 5.5.2.1 Irish Sea. Landings (t) by gear according to Coun. Reg. 1342/2008 and species, 2004-2011. N.B. CPart11 effort is excluded form this plot.

5.5.3 ToR 1.d CPUE and LPUE of cod by fisheries

Only a LPUE (landings per unit effort) time series is presented for cod (Table 5.5.3.1) as discard data is not consistently available for all years or all categories, resulting in distorted CPUE trends. Catch per unit effort may be available for some years/gears on request. The units used are grams per kW days-at-sea (g/kW*days). Gear groups with little effort, and static gears where the use of kW*days-at-sea as an appropriate indication of effort is debatable, may have unrepresentative values and are not discussed.

Cod LPUE values are highest within the GN1 category, which peaked in 2007-2008 (Table 5.5.3.1 and Figure 5.5.3.1). However, this category may have unrepresentative values given the effort uncertainty, which may also be the explanation for the large LL1 LPUE in 2008.

The most significant cod landings and effort occur within demersal trawl and seine categories TR1 and TR2. Over the period TR1 LPUE had increased until dropping in 2010. LPUE increased again in 2011. The lower and more stable LPUE of TR2 has shown greater fluctuations in most recent years. TR2 by special condition shows the majority of LPUE stems from the now small none group.

Table 5.5.3.1 Irish Sea. Cod LPUE (g/(kW*days)) by gear group according to Coun. Reg. 1342/2008 and year, 2003-2011. CPUE data is limited, but can be made available if requested.

					2003	2004	2005	2006	2007	2008	2009	2010	2011	2009-2011
IIa	COD	3c	TR1	CPART13	0	0	0	0	0	0	713	527	511	602
IIa	COD	3c	TR1	none	177	259	302	394	596	766	912	508	1059	802
IIa	COD	3c	TR2	CPART13	0	0	0	0	0	0	29	28	43	34
IIa	COD	3c	TR2	none	85	80	74	65	84	63	106	177	106	138
IIa	COD	3c	BT2	none	83	62	66	46	70	33	24	46	78	50
IIa	COD	3c	GN1	none	869	1547	1432	3441	6362	8640	3116	3194	2969	3094
IIa	COD	3c	GT1	none	0	0	0		1524	418	248	2033	678	617
IIa	COD	3c	LL1	none	21	17	21	50	82	479	0	0	0	0
IIa	COD	3c	TR2	CPART11	0	0	0	0	0	0	0	0	0	0

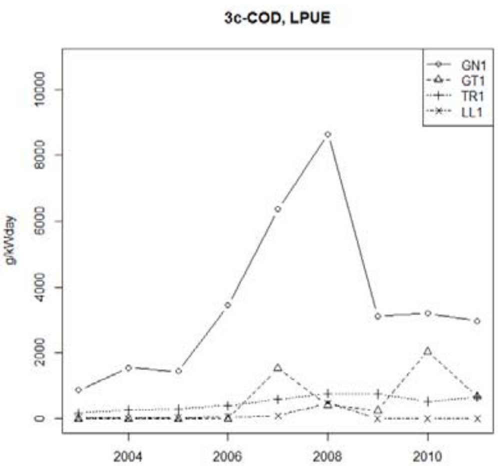


Figure 5.5.3.1. Irish Sea. Trends in cod LPUE (g/kW*days) by the average top four gear groups associated with Coun. Reg. 1342/2008, 2003-2011.

5.5.4 ToR 2 Rank regulated gear groups on the basis of catches expressed both in weight and in number of cod

Ranked landings (Table 5.5.4.1) in weight for cod have been used. Catch rankings have not been presented as discard data are not consistently available for all years or all categories introducing bias into the ranking. Information on ranked catches may be available on request.

Over the majority of the period, TR1 land the greatest proportion of cod (~40%), however this changed in 2011 when the proportion dropped to 35%, following a declining trend, to just below TR2. This placed TR2 as the top ranked gear in 2011 although demonstrating little change to 2010 proportions. Further more, the BT2 contribution increased in 2011 to 15%, just overtaking that of GN1 (0.2% lower) which for the previous 5 years had ranked third.

In the average ranking (2009-2011), the previous order of TR1, TR2, GN1 and BT2 remains unchanged.

Table 5.5.4.1 Irish Sea. Ranked derogations according to relative cod landings in weight (t), 2003-2011. Ranking is according to the year 2011. N.B. CPart11 effort is excluded from this plot.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Average 2009-2011
IIa	3c	COD	TR2	0.31396	0.3659	0.38727	0.32978	0.35465	0.25597	0.28682	0.36713	0.35669	0.34
IIa	3c	COD	TR1	0.42868	0.41014	0.3904	0.44397	0.28156	0.38519	0.56279	0.42308	0.34183	0.44
IIa	3c	COD	BT2	0.18642	0.11521	0.16284	0.08324	0.08887	0.02551	0.02791	0.06993	0.15074	0.08
IIa	3c	COD	GN1	0.07019	0.10783	0.05741	0.13981	0.27326	0.32263	0.12093	0.13636	0.14862	0.14
IIa	3c	COD	GT1					0.00083	0.00082	0.00155	0.0035	0.00212	0.00
IIa	3c	COD	LL1	0.00075	0.00092	0.00209	0.0032	0.00083	0.00988			0	0.00
IIa	3c	COD	TR3			0						0	0.00

5.5.5 ToR 3 Remarks on quality of catches and discard estimates

Discard information is scarce for a number of gear categories. Where discard data is available it is considered to be highly variable and inaccurate.

5.5.6 ToR 4 Information on small boats (<10m)

It should be noted that under 10m vessels are not required to report effort levels in the same way as larger vessels. As such not all nations operating within the Irish Sea have been able to provide this information. Presented is information from England (including Northern Ireland) and Scotland. The methodology for production of this data may vary between nations. For details, refer to the national data descriptions in Section 4.

5.5.6.1 Fishing effort of small boats by Member State

The majority of effort by the under 10m vessels reported here is directed at pots and traps (Table 5.5.6.1.1). The effort levels increased greatly in 2006 due to the introduction of buyers and sellers notes into the UK who have used these to estimate effort. Effort in this group dropped during 2009 and 2010, increasing again in 2011. Dredge effort has been increasing in recent years. TR2 gear is also utilised within the Irish Sea at fluctuating levels well below pots.

Table 5.5.6.1.1. Irish Sea trends in nominal effort (kW*days at sea) of under 10m vessels by gear groups of Annex I, Coun. Reg. 1342/2008 and unregulated gears, 2000-2011. National data qualities are summarised in Section 4.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
TR1	7970	13615	17628	14260	2043	2747	1624	3313	6692	4523	2837	6309
TR2	158716	173141	138478	167801	221123	240943	209409	234762	276763	284805	163444	213884
BT2	1120	6240	2424	1718	2354	9504	10855	2888	1942	627	623	178
GN1	14176	13581	16521	13223	14377	10944	10940	34179	45371	34397	25422	26031
GT1							78	22	424	9	330	4301
LL1						3213	10348	6469	3656	4347	4554	22857
none	23	23		23	30	30	37	455	437	6		726
BEAM	11390	112		414	11750	327	2603	8877	6010	3142	7029	4228
DEM_SEINE										662		75
DREDGE	45045	40805	19222	18631	18749	11709	45984	61441	165152	110014	114208	159976
OTTER	213	246	316	119			311	295	75		637	
PEL_SEINE									142			
POTS	232901	162788	167241	237901	294195	296227	1079422	1130565	1024692	658136	547656	840667
Grand Total	471554	410551	361830	454090	564621	575644	1371611	1483266	1531356	1100668	866740	1279232

5.5.6.2 Catches (landings and discards) of cod and associated species by small boats by Member State

Table 5.5.6.2.1 provides landing, discard and discard rate data for vessels under 10m, including data from Ireland, England (inc Northern Ireland), and Scotland, for the main species. Irish under 10 meter vessel landings are not recorded by gear type, therefore falling into the "none" category. Under 10m vessels in the Irish Sea land edible crab (CRE) in the greatest quantity, previously over 1,000t per year. This was substantially lower in 2009 and 2010. Scallops, Nephrops, herring and spider crabs dominate the remainder of landings reported to the group. Comparatively small, and variable quantities of cod are landed, ~30t in 2010 and 2011. Where gear type is available, landings primarily originate from pots, TR2, and dredges, Irish under 10m vessels are likely to employ a similar gear distribution.

Of all Irish Sea cod landings, 89-99% stem from regulated gears, the remainder originate primarily from under 10m vessels. In recent years, <1% of landings come from unregulated ≥10m vessels.

Table 5.5.6.2.1. Irish Sea. Landings (t), discards (t) and discard rate by species and gear according to Coun. Reg. 1342/2008 categories for under 10m vessels, 2004-2011. For landings, discards and discard rates by Country refer to the website. N.B. this table contains a select list of species.

SPECIES	REG_GEAR	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
ANF	TR2	4	0	0	3	0	0	7	0	0	2	0	0	5	0	0	5	0	0	1	0	0	1	0	0
ANF	none	17	0	0							0	0	0				8	0	0	8	0	0	7	0	0
ANF	DREDGE													0	0	0	1	0	0	0	0	0			
COD	TR1			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COD	TR2	5	0	0	4	0	0	6	0	0	6	0	0	4	0	0	4	0	0	1	0	0	1	0	0
COD	GN1	0	0	0	2	0	0	2	0	0	2	0	0	1	0	0	0	0	0	0	0	0	1	0	0
COD	none	62	0	0			0			0	4	0	0	1	0	0	75	0	0	28	0	0	28	0	0
CRE	TR2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
CRE	GN1	0	0	0	0	0	0	0	0	0	13	0	0	9	0	0	5	0	0	1	0	0	2	0	0
CRE	GT1													1	0	0									
CRE	none	1029	0	0	1107	0	0	70	0	0	293	0	0	262	0	0	251	0	0	684	0	0	1117	0	0
CRE	DREDGE													0	0	0	1	0	0	0	0	0			
CRE	POTS	174	0	0	166	0	0	988	0	0	1233	0	0	806	0	0	120	0	0	115	0	0	222	0	0
HAD	TR2	1	0	0	0	0	0	3	0	0	2	0	0	2	0	0	2	0	0	1	9	0.9	1	0	0
HAD	none	63	0	0							0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
HKE	TR2	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
HKE	none	24	0	0										0	0	0				1	0	0	0	0	0
NEP	TR2	222	0	0	249	0	0	415	0	0	290	0	0	399	0	0	366	0	0	316	0	0	379	0	0
NEP	GN1										0	0	0				2	0	0						
NEP	none	18	0	0							1	0	0				1	0	0	2	0	0	16	0	0
NEP	POTS	1	0	0	4	0	0	13	0	0	14	0	0	15	0	0	104	0	0	2	0	0	0	0	0
PLE	TR1	5	0	0	2	0	0	1	0	0	3	0	0	6	0	0	3	0	0	4	0	0	1	0	0
PLE	TR2	35	0	0	70	0	0	57	0	0	93	0	0	64	0	0	53	0	0	26	2	0.07	10	0	0
PLE	BT2	0	0	0	14	0	0	16	0	0	3	0	0	2	0	0									
PLE	GN1	2	0	0	3	0	0	2	0	0	6	0	0	2	0	0	2	0	0	3	0	0	2	0	0
PLE	none	11	0	0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLE	BEAM				1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLE	POTS				0	0	0				0	0	0				0	0	0				1	0	0
POK	none	16	0	0							0	0	0	0	0	0	0	0	0				0	0	0
RAJ	none	35	0	0							2	0	0	28	0	0	13	0	0	19	0	0	13	0	0
SCE	TR2							0	0	0	0	0	0	0	0	0	5	0	0	2	0	0	1	0	0
SCE	GN1																1	0	0						
SCE	none	0	0	0										36	0	0	3	0	0	2	0	0	58	0	0
SCE	DREDGE	27	0	0	21	0	0	59	0	0	115	0	0	586	0	0	555	0	0	602	0	0	928	0	0
SCE	POTS										2	0	0	3	0	0	2	0	0	0	0	0			
SCR	GN1							2	0	0	6	0	0	38	0	0	14	0	0	7	0	0	13	0	0
SCR	none	55	0	0	20	0	0										119	0	0	179	0	0	85	0	0
SCR	DREDGE							5	0	0	0	0	0	1	0	0	0	0	0						
SCR	POTS							61	0	0	84	0	0	82	0	0	73	0	0	77	0	0	68	0	0
SOL	TR2	1	0	0	1	0	0	2	0	0	5	0	0	4	0	0	2	0	0	1	0	0	4	0	0
SOL	BT2	1	0	0	8	0	0	9	0	0	1	0	0	1	0	0			0			0			0
SOL	GN1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0
SOL	none	2	0	0							0	0	0				0	0	0				0	0	0
WHG	TR2	0	3	1	0	0	0	0	0	0	0	1	1	3	387	0.99	9	0	0	0	14	1	0	0	0
WHG	BT2	0	0	0	0	1	1	0	1	1															
WHG	none	15	0	0										0	0	0	0	0	0				1	0	0
WIT	TR2	4	0	0	2	0	0	2	0	0	1	0	0	1	0	0	1	0	0	0	1	1	0	0	0
WIT	none	3	0	0							0	0	0	0	0	0				0	0	0			

5.5.7 ToR 5 Evaluation of fully documented fisheries FDF

No Fully Documented Fisheries (FDF) were reported as operating within the Irish Sea.

5.5.8 ToR 6 Spatio-temporal patterns in effective effort by fisheries

Spatial figures of effort for the Irish Sea concentrate on those categories identified as significant in recorded effort, and/or cod, plaice and sole catches. Figures use a common scale across years for a given gear group, but scales are unique to each category such that the colours assigned to statistical rectangles for gear group TR1 can not be compared directly to those assigned for TR2 say.

TR1: At the beginning of the presented time series, TR1 effort was focused across the Northern boarder and western Irish Sea. Subsequently effort has declined to an overall low level, limited to the northern and western areas 2011 (Figure 5.5.8.1).

TR2: Clear TR2 effort focal points occur within the Irish Sea, coinciding with areas of mud based substrate, with most effort occurring in the Western Irish Sea across two rectangles. In addition, there is an additional secondary focus in the Eastern Irish Sea. Over the period there has been a reduction in effort, with indications of this in the contraction of both focus areas (Figure 5.5.8.2).

BT2: This gear has shown a marked contraction in fishing areas and effort reduction within the Irish Sea (Figure 5.5.8.3). Two of the three focus areas which were present in 2003 still occur in 2011. The southern most focus reduced to background effort levels a number of years ago.

GN1: The measure of spatial effort submitted in the data call is not considered appropriate for application to static gears. However, the figure for gillnet effort is provided here as an indication of spatial distribution as this gear category can contain relatively high cod catches. Gillnet effort distribution has been changeable over the period, although current focus is suggested in the eastern Irish Sea (Figure 5.5.8.4).

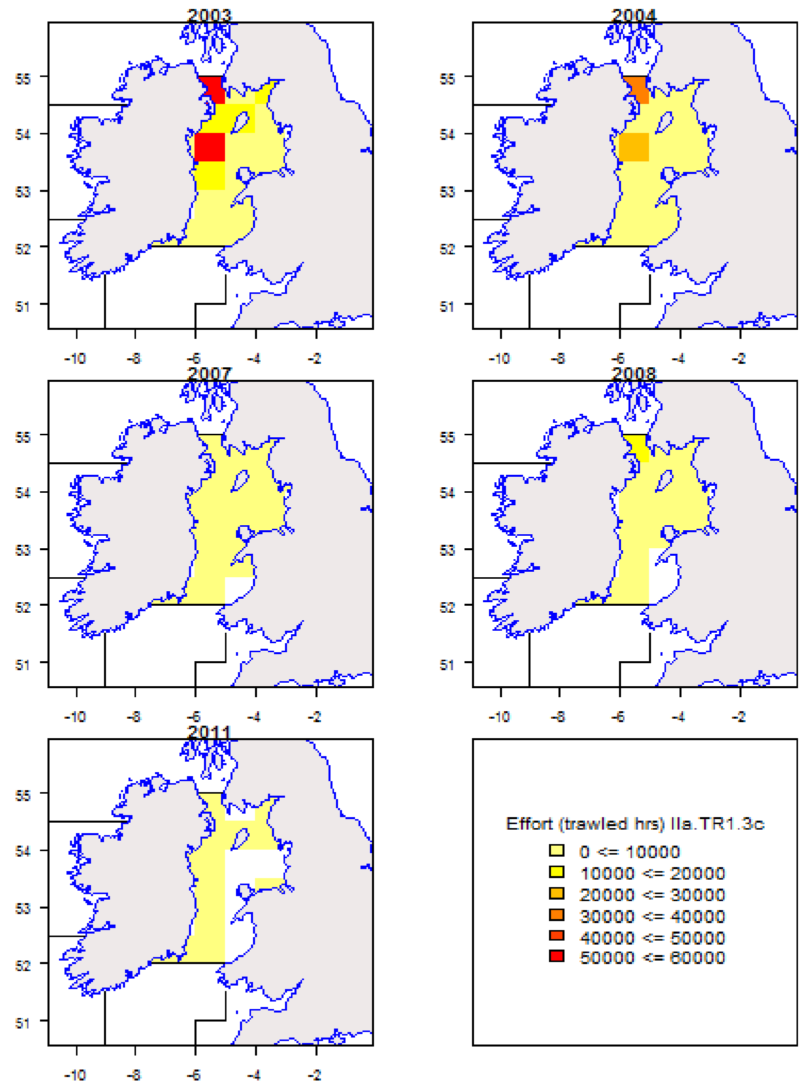


Figure 5.5.8.1. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for TR1, 2003-2011. N.B. These figures include effort carried out under special condition CPart11.

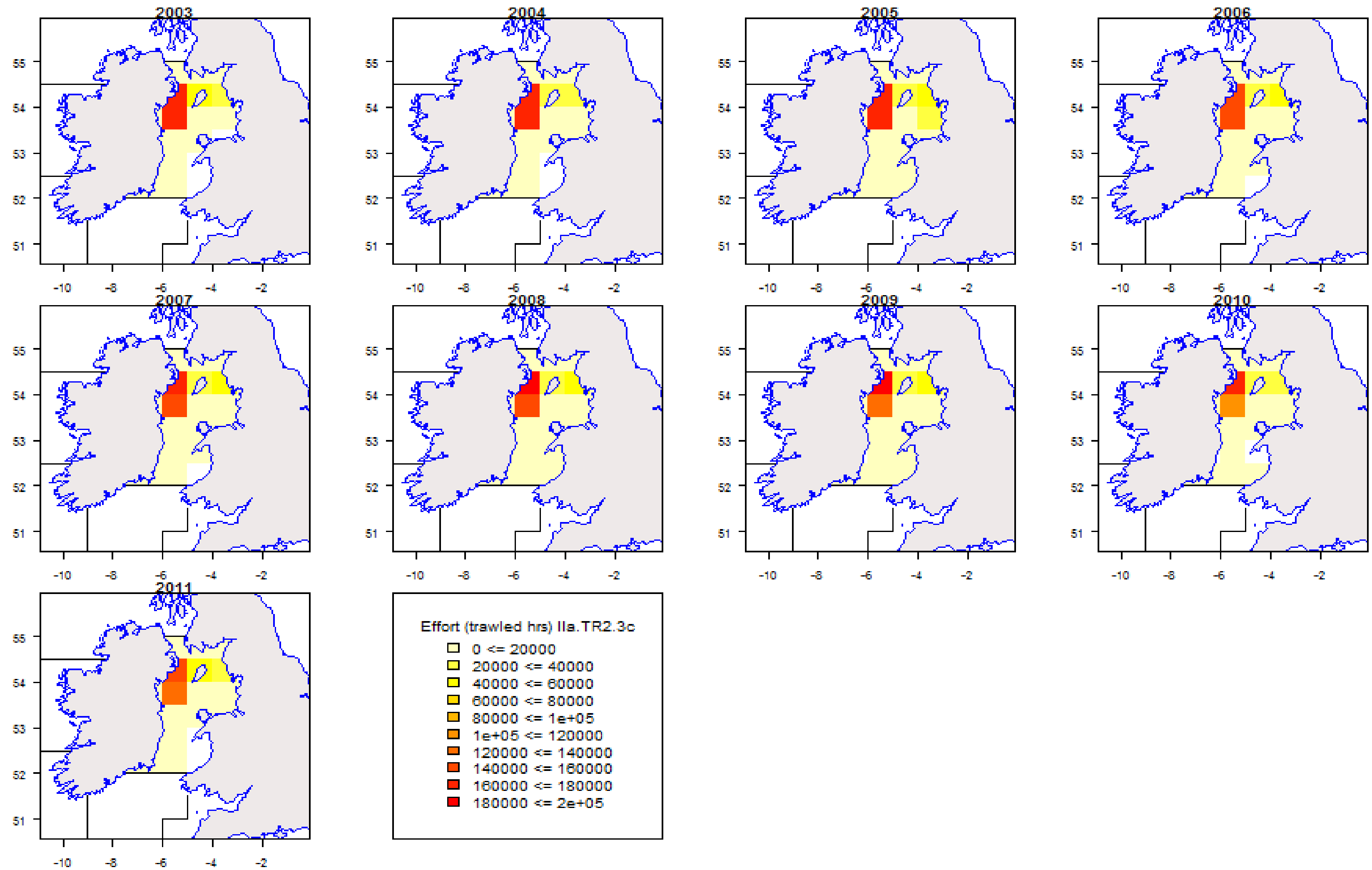


Figure 5.5.8.2. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for TR2, 2003-2011. N.B. These figures include effort carried out under special condition CPart11.

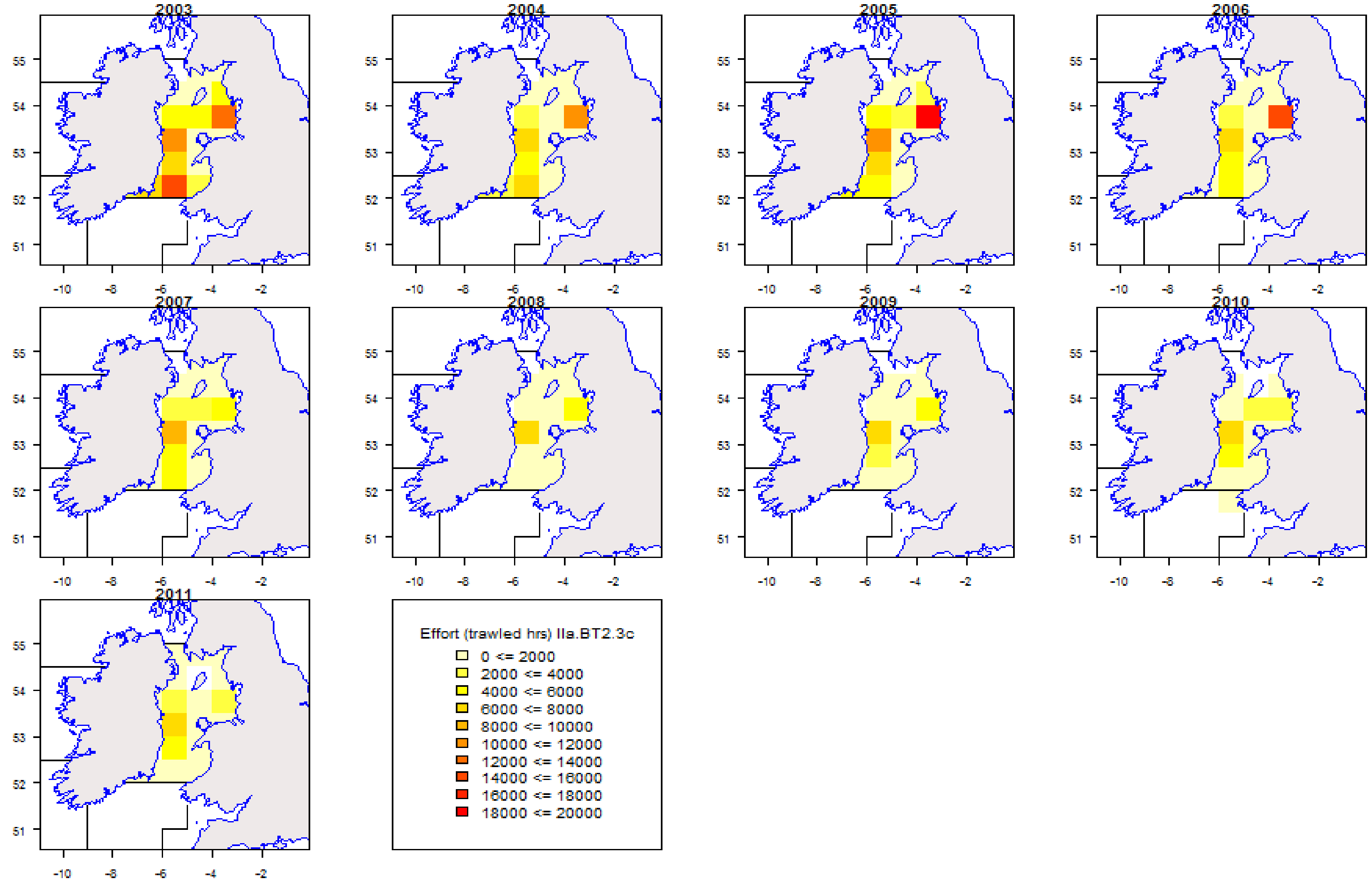


Figure 5.5.8.3. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for BT2, 2003-2011.

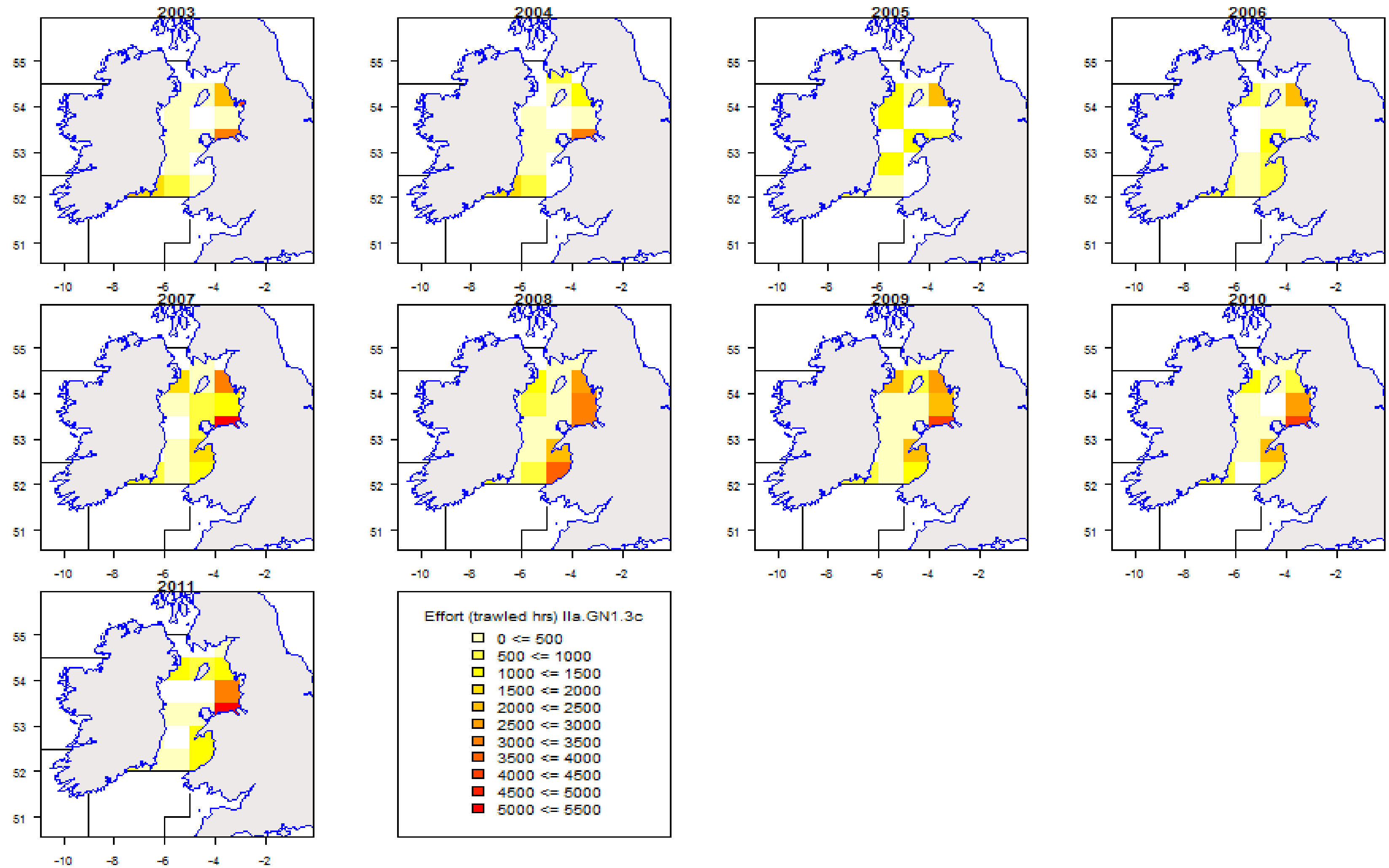


Figure 5.5.8.4. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for GN1, 2003-2011.

5.5.9 ToR 7 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

No unexpected evolutions in effort or catch trends by Member state or fishery were observed in the addition of 2011 data.

5.5.10 ToR 8 Correlation between partial cod mortality and fishing effort by Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToR 10. The EWG 12-06 analyses and response can be found in chapter 5.5.13.

5.5.11 ToR 9 Estimation of conversion factors to be applied for effort transfers between regulated gear groups

The table of international conversion factors (Table 5.5.11.1) is based on average CPUE (2009-2011). LPUEs are used for GN1, GT1, LL1 and TR1 fisheries as no discard data has been available. TR2 and BT2 are the only two gear categories where discard data was available over the three previous years.

Table 5.5.11.1 Irish Sea. Conversion factors for exchange of effort between gears based on average CPUE 2009-2011. Red cells indicate no discard data included and values are estimated based on LPUE; yellow cells indicate discard information available.

	donor gear	receiving gear							
		BT2	GN1	GT1	LL1	TR1	TR2		CPUE
3c	BT2		0.016	0.081	1	0.078	0.725		50
3c	GN1	1		1	1	1	1		3094
3c	GT1	1	0.199		1	0.964	1		617
3c	LL1	0.02	0	0.002		0.002	0.014		1
3c	TR1	1	0.207	1	1		1		640
3c	TR2	1	0.022	0.112	1	0.108			69

5.5.12 ToR 10 Estimation of partial fishing mortalities of cod by area, Member State and fisheries and correlation between partial cod mortality and fishing effort by area, Member State and fisheries

EWG 12-06 interprets this task as largely overlapping with ToR 10. The EWG 12-06 analyses and response can be found in chapter 5.5.13.

5.5.13 ToR 11 Comparative analyses between trends in fishing mortality and fishing effort by Member State and fisheries and the cod plan (R (EC) No 1342/2008) provisions, in particular with regard to Article 13

The STECF EWG 12-06 presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings volumes in relation to the estimated total landings for the years available. The full list of all fisheries can be downloaded from the EWG's web page. The anticipated trend in fishing mortality as derived from the cod plan is also presented in the following Table 5.5.13.1. The sustainable exploitation target is defined as F_{MSY}=0.4. The trends in fishing effort (kWdays at sea) of the relevant fisheries are also presented in Table 5.5.13.1. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded from the estimated F (Table 5.5.13.1) that the stock is unsustainably exploited with an F 3 times then the target without considering discarding. The fisheries listed within the table contribute around 90% (varies between 69-98%) to the total estimated fishing mortality. Aside from the gears regulated by the management plan, there are also significant partial Fs from the Irish under 10m boats (6% 2011).

STECF EWG 12-06 notes that the correlation between the summed partial Fs for landings of the major fisheries and their estimated fishing efforts is not statistically significant. The partial Fs of most Member State fisheries using regulated gears are not significantly correlated with their specific effort estimates (p≤0.05). Three fisheries show a significant correlation between F and effort, the Belgium BT2, English TR1 CPart13, French TR1 CPart13 fleets and the English TR2 CPart13 fleet. However, these fisheries land relatively low levels of cod <1%, with the exception of the Belgium beam trawlers which contribute slightly higher levels (6.6%).

The lack of significant relationships between F and effort for the greatest cod contributors to cod landings indicates that kWdays at sea may not be an appropriate auxiliary measure to catch constraints and technical measures. STECF EWG 12-06 notes that the lack of discards prevents reliable conclusions.

STECF EWG 12-06 notes that there are indications that the Member States fisheries operating under Article 13, regardless of subsection, since 2009 may have contributed to the minor reduction in harvest rate. However, as declines over the period 2003-2011 have been observed in non-Article 13 fisheries, it is unclear whether harvest rate reductions are due to cod avoidance measures.

Table 5.5.13.1 Irish Sea cod. The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. Cod plan article 13 definitions apply since 2009 or 2010.

Runnig previous year annual F reductions by 25 percent as SSB remains below Blim, Fmsy=0.4												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan												1.247	0.935	0.701	0.526	0.395
reduction F plan													-0.25	-0.25	-0.25	-0.25
F estimated							1.286	1.262	1.241	1.263	1.26	1.247	1.232	1.209	1.187	
reduction F estimated													-0.01	-0.03	-0.05	
													not following the provision of Article 7			
EXPLORE LANDINGS ONLY AS DISCARD ESTIMATES ARE ABSENT OR POOR																
F par estimated as F*landings or discards(fis						CATCH	2003	2004	2005	2006	2007	2008	2009	2010	2011	
IIa	3c	BEL	BT2	none	COD	landings	0.164	0.102	0.141	0.074	0.055	0.014	0.021	0.02	0.072	
IIa	3c	BEL	TR2	none	COD	landings	0	0.001	0.002	0.006	0.011	0.008	0.011	0.009	0.007	
IIa	3c	ENG	TR1	CPart13	COD	landings	0.067	0.072	0.03	0.018	0.003	0	0.006	0.013	0.011	
IIa	3c	ENG	TR2	CPart13	COD	landings	0.01	0.018	0.02	0.004	0.004	0.004	0.002	0.002	0.003	
IIa	3c	FRA	TR1	CPart13.2.b	COD	landings	0.13	0.037	0.037	0.023	0.018	0.003	0.005	0	0.008	
IIa	3c	IRL	BT2	none	COD	landings	0.045	0.015	0.044	0.028	0.052	0.011	0.009	0.036	0.082	
IIa	3c	IRL	GN1	none	COD	landings	0.078	0.108	0.063	0.169	0.331	0.32	0.131	0.107	0.142	
IIa	3c	IRL	TR1	none	COD	landings	0.12	0.025	0.011	0.006	0.087	0.093	0.118	0.06	0.135	
IIa	3c	IRL	TR2	Cpart13.2.b	COD	landings	0	0	0	0	0	0	0	0	0.141	
IIa	3c	IRL	TR2	Cpart13.2.c	COD	landings	0	0	0	0	0	0	0	0	0.089	
IIa	3c	IRL	TR2	none	COD	landings	0.199	0.141	0.154	0.161	0.24	0.091	0.137	0.162	0	
IIa	3c	NIR	TR1	CPart13	COD	landings	0.182	0.306	0.385	0.505	0.234	0.286	0.478	0.265	0.196	
IIa	3c	NIR	TR2	CPart13	COD	landings	0.162	0.229	0.277	0.238	0.174	0.151	0.157	0.12	0.124	
IIa	3c	IRL	u10m	none	COD	landings	0.083	0.062	0	0	0.004	0.001	0.125	0.039	0.061	
sum							1.240	1.116	1.164	1.232	1.213	0.982	1.200	0.833	1.071	
landings							1.240	1.116	1.164	1.232	1.213	0.982	1.200	0.833	1.071	
rel. contribution to F estimated							0.964	0.884	0.938	0.975	0.963	0.787	0.974	0.689	0.902	

Effort kW days running previous year baseline														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations						8374231	6926753	5175498	4389292	3763070				
reduction	not following the provision of Article 12.2 and 4 (base line revi						-0.17	-0.25	-0.15	-0.14				
Effort estimated (	11200158	8823417	8802044	7543636	7248087	6599406	5511646	5158870	5090122	0				
							-0.16	-0.06	-0.01					
											2003-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	1884843	1482831	1694567	1153947	956953	554841	624989	649225	660228		0.951	9	8.138	0.000
kW days at sea		13541	43486	34052	76789	67534	29980	14283	28390		0.377	8	0.997	0.357
kW days at sea	399886	197351	94201	68905	16846	5932	21860	25111	14364		0.893	9	5.250	0.001
kW days at sea	211774	347848	287791	247447	244461	219456	171656	180844	161841		0.819	9	3.776	0.007
kW days at sea	264447	167253	180515	109174	67487	19701	19701	6668	6138		0.892	9	5.221	0.001
kW days at sea	860849	414446	514653	481404	550975	374494	173927	218054	211367		0.115	9	0.306	0.769
kW days at sea	92103	63069	26672	29531	47941	40957	22212	22162	20315		0.050	9	0.132	0.899
kW days at sea	381119	157955	87263	84550	141442	73625	60348	77897	56161		0.202	9	0.546	0.602
kW days at sea									465118		#DIV/0!	1	#DIV/0!	#DIV/0!
kW days at sea							30827	115391	373511		0.972	3	4.137	0.151
kW days at sea	1242769	1386883	1475114	1452830	1583605	1300696	806523	673682			0.279	8	0.712	0.503
kW days at sea	2053909	1161889	872476	785380	340235	510151	384860	350609	171175		0.169	9	0.454	0.664
kW days at sea	3366613	3110597	3185141	2951782	3125387	3345023	3097345	2777582	2674691		0.312	9	0.869	0.414
sum	10758312	8503663	8461879	7399002	7152121	6512410	5444228	5111508	4843299		0.558	9	1.779	0.118
sum	10758312	8503663	8461879	7399002	7152121	6512410	5444228	5111508	4843299		0.558	9	1.779	0.118
rel effort	0.961	0.964	0.961	0.981	0.987	0.987	0.988	0.991	0.952					

5.5.14 ToR 12 Considerations in order to accomplish spatio-temoral patterns in standardized catchability indices for cod

The STECF EWG 12-06 discussed this task and elaborated generic ideas given in section 4.9 of the present report.

5.6 Celtic Sea effort regime evaluation for fisheries which will be affected by the extension of the cod management

5.6.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by area, Member state and fisheries

Even though there is at present no effort regulation in the Celtic Sea, the analysis below consideres the same gear and mesh categories as used in the cod plans. Table 5.6.1 lists the trends in effort by gear and mesh categories by country in kW*days. Information on GT*days at sea and the number of vessels active in Celtic sea are not presented in this report but are available on the JRC website: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

STECF EWG 12-06 notes that the Irish resubmission of data causes major changes in the estimated trends of fisheries catches and effort (see section 4).

The following sections are subdivided into the whole Celtic Sea, the ICES sub-divisions 7bcefghjk (Cel1) and the subset of ICES subdivision 7gh (Cel2).

5.6.1.1 ICES sub-divisions 7bcefghjk (Cel1)

Table 5.6.1.1.1 Trend in effort (kW*days at sea), according to cod plan gear definition and Member State, 2000-2011. Note, data for Celtic Sea 7bcefghjk (Cel1)

ANNEX	REG AREA C	REG GEAR C	SPECO	COUNTR	VESSEL_LENG	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BT1	none	BEL	O15M									1766			
Cel1	7bcefghjk	BT1	none	ENG	O15M					52079							
Cel1	7bcefghjk	BT1	NONE	IRL	O15M				14428								
Cel1	7bcefghjk	BT2	none	BEL	O15M	2033531	2038479	2286465	2914644	4568918	3996701	3246205	3351614	2285026	1932211	2392748	2339618
Cel1	7bcefghjk	BT2	none	ENG	O10T15M	56879	169147	144721	168607	72927	57373	53413	68457	68770	39504	57209	50614
Cel1	7bcefghjk	BT2	none	ENG	O15M	5408034	5570946	5247778	5871505	5623896	5626763	5225546	4943815	4253780	3822565	3678346	3831714
Cel1	7bcefghjk	BT2	none	FRA	O10T15M	19608	15582	14707	7217	27252	19355	99790	130720	55970	48196	109999	117351
Cel1	7bcefghjk	BT2	none	FRA	O15M		85561	181057	37869	290521	244545	206042	189856	90473	90473	196958	87754
Cel1	7bcefghjk	BT2	none	GBJ	O15M	173431	277324	278577	284450	365302	202229						
Cel1	7bcefghjk	BT2	NONE	IRL	O10T15M								187				
Cel1	7bcefghjk	BT2	NONE	IRL	O15M				3748872	2331454	2969538	2079409	1767309	1020052	916246	948287	879763
Cel1	7bcefghjk	BT2	none	NLD	O15M	26478			22000							1467	
Cel1	7bcefghjk	BT2	none	SCO	O15M								3666		1396		
Cel1	7bcefghjk	GN1	none	BEL	O15M									2700			
Cel1	7bcefghjk	GN1	none	DEU	O15M	417051	391578	377303	371138	452381	396914	32794	171880	229650	93910	114413	91953
Cel1	7bcefghjk	GN1	none	ENG	O10T15M	286060	342957	344063	368630	408264	321651	303347	273695	241386	271875	263560	257877
Cel1	7bcefghjk	GN1	none	ENG	O15M	1487816	1190148	1402935	1703645	1801520	1361727	664922	710075	482738	364708	458224	360084
Cel1	7bcefghjk	GN1	none	FRA	O10T15M	275261	273569	2213729	740936	1015940	904288	951675	917344	704412	704349	442616	453543
Cel1	7bcefghjk	GN1	none	FRA	O15M	807869	896164	2198446	1042726	1069302	1240069	996131	1258557	1535687	1535360	1791358	1589363
Cel1	7bcefghjk	GN1	none	GBJ	o15m											716	
Cel1	7bcefghjk	GN1	NONE	IRL	O10T15M	73490	48050	33867	66329	74856	63650	82996	92300	115527	147495	123637	88262
Cel1	7bcefghjk	GN1	NONE	IRL	O15M	1544573	1282377	743429	995797	812092	615141	448209	469433	417322	403203	400345	362955
Cel1	7bcefghjk	GN1	none	NIR	O10T15M										2106	1701	891
Cel1	7bcefghjk	GN1	none	SCO	O15M	450872	348860	250000	467260	643185	498868	192066	193116	355646	437451	387259	463248
Cel1	7bcefghjk	GT1	none	ENG	O10T15M	7301	1819		373	243	11051	7204	13030	17085	14082	2188	14617
Cel1	7bcefghjk	GT1	none	ENG	O15M	1709	3120	936	17903	40645	16189	63807	16867	20745	3249	13969	72025
Cel1	7bcefghjk	GT1	none	FRA	O10T15M	362480	428847	1376153	463009	613504	763828	906651	1057950	662533	662382	493742	505116
Cel1	7bcefghjk	GT1	none	FRA	O15M	140184	216520	1121650	299226	358319	438016	465337	471663	381102	381102	498932	494870
Cel1	7bcefghjk	GT1	NONE	IRL	O10T15M				802			6673	18759	21940	29313	30733	27562
Cel1	7bcefghjk	GT1	NONE	IRL	O15M		3885			172	16260	13550	6624	22125	7800	35672	23000
Cel1	7bcefghjk	GT1	none	SCO	O15M	74562	102966	112004	50501	13362							
Cel1	7bcefghjk	LL1	none	DNK	O15M			6993									
Cel1	7bcefghjk	LL1	none	ENG	O10T15M	138391	108211	74205	82631	64003	57687	69608	81526	63299	42273	50388	51934
Cel1	7bcefghjk	LL1	none	ENG	O15M	354301	326937	417981	318021	276751	265897	405536	575325	138810	4194	6800	3781
Cel1	7bcefghjk	LL1	none	FRA	O10T15M	41782	25673	327200	111426	153667	198527	350334	313997	139114	139114	170925	133564
Cel1	7bcefghjk	LL1	none	FRA	O15M	127040	84155	177620	123656	184636	206807	360284	410608	336703	336703	382978	363457
Cel1	7bcefghjk	LL1	NONE	IRL	O10T15M						4074	1265	9962	16325	26309	21174	14284
Cel1	7bcefghjk	LL1	NONE	IRL	O15M	77156	133688	69300	91311	3600	68722		46022	7281	2856	13030	3193
Cel1	7bcefghjk	LL1	NONE	PRT	O15M				3302								
Cel1	7bcefghjk	LL1	none	SCO	O10T15M						221						
Cel1	7bcefghjk	LL1	none	SCO	O15M	196263	298487	286098	136014	6160	50975	249936	257928	811319	194403	261208	147510

Celtic Sea 7bcefghjk (Cel1) continued

ANNE)	REG AREA C(	REG GEAR C(	SPECOI	COUNTI	VESSEL_LENG	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	TR1	none	ENG	O10T15M	17059	54662	65325	51486	24379	12250	18271	30261	68970	105201	173102	439214
Cel1	7bcefghjk	TR1	none	ENG	O15M	389534	1460877	3406325	2383920	2237575	1791918	2209095	2274588	1591367	1245550	1368151	1631550
Cel1	7bcefghjk	TR1	none	FRA	O10T15M		3266	87847	18668	21245	24258	28074	19271	2627	2627	6974	9027
Cel1	7bcefghjk	TR1	none	FRA	O15M	4745042	6521242	31670939	7715939	7767596	7342415	7853011	7400986	6311661	6287869	9424263	10044412
Cel1	7bcefghjk	TR1	none	GBG	O10T15M								328	402			
Cel1	7bcefghjk	TR1	none	GBG	O15M			5811									
Cel1	7bcefghjk	TR1	none	GBJ	O15M		6396	2296									
Cel1	7bcefghjk	TR1	none	IOM	O15M	11967											
Cel1	7bcefghjk	TR1	NONE	IRL	O10T15M				402		4595	32698	12161	18276	26442	67560	120493
Cel1	7bcefghjk	TR1	NONE	IRL	O15M				5847510	5080624	4806489	3850598	4019448	3850262	4152808	4454014	4318224
Cel1	7bcefghjk	TR1	none	NIR	O15M	7897	20675	12016	7641		716	5176		1141	1805	16616	24770
Cel1	7bcefghjk	TR1	none	NLD	O15M		735									6044	221
Cel1	7bcefghjk	TR1	none	SCO	O10T15M				600						36953	58669	6556
Cel1	7bcefghjk	TR1	none	SCO	O15M	162262	347400	792686	802171	879428	1084677	779453	681392	835556	869444	939069	742392
Cel1	7bcefghjk	TR2	none	BEL	O15M					119327	188914	424630	464699	467476	468989	425076	290226
Cel1	7bcefghjk	TR2	none	ENG	O10T15M	1603997	1451287	1314991	1399554	1465978	1433817	1480821	1518102	1475791	1506282	1407067	1071990
Cel1	7bcefghjk	TR2	none	ENG	O15M	5787558	3624454	825033	778265	793106	748269	545935	546165	188851	211851	270932	277086
Cel1	7bcefghjk	TR2	none	FRA	O10T15M	447838	457383	2723095	990647	1170583	934323	1811990	2322695	1359817	1332591	1377589	1450200
Cel1	7bcefghjk	TR2	none	FRA	O15M	6510657	8307813	41088422	9525729	9749701	10606401	9086047	8463099	5978693	5961053	5517774	4618154
Cel1	7bcefghjk	TR2	none	GBG	O10T15M						730	6042	11065	5203	3090	7854	2298
Cel1	7bcefghjk	TR2	none	GBG	O15M	15106	42207	27222				336					
Cel1	7bcefghjk	TR2	none	GBJ	O15M	69291	32364	36663	3557		6745	19360	30580	25740	31020	37620	41195
Cel1	7bcefghjk	TR2	NONE	IRL	O10T15M				306926	257022	350469	334422	459059	451136	543882	534025	414028
Cel1	7bcefghjk	TR2	NONE	IRL	O15M				5209697	5224000	6198534	5446878	5597666	4158601	2979449	3575045	3388717
Cel1	7bcefghjk	TR2	none	NIR	O10T15M										1832	1832	
Cel1	7bcefghjk	TR2	none	NIR	O15M	28717	2620	2184		53672	72432	42938	20658	131938	142224	144625	6852
Cel1	7bcefghjk	TR2	none	NLD	O15M	2847	36507	36223	36589	64393	108566	162551	113851	90839	216240	252472	259559
Cel1	7bcefghjk	TR2	none	SCO	O10T15M				37584	76992	66156	5364	17582	162	9536	17322	20264
Cel1	7bcefghjk	TR2	none	SCO	O15M	1402569	945649	413810	451909	367030	352869	382627	350470	506435	485883	439290	529514
Cel1	7bcefghjk	TR3	none	DNK	O15M	11867		36892		15575							
Cel1	7bcefghjk	TR3	none	ENG	O10T15M	3019	1660	93	1157	559	220	1505	4986	7072	10318	2204	4242
Cel1	7bcefghjk	TR3	none	ENG	O15M	648	216	108	5112	432	2984		660	880			
Cel1	7bcefghjk	TR3	none	FRA	O10T15M		3432	9073	5832	5840	14923	17955	2179	7931	7931	22410	21286
Cel1	7bcefghjk	TR3	none	FRA	O15M	55719	38826			1146		3516	2304	1596	1596	32619	33180
Cel1	7bcefghjk	TR3	NONE	IRL	O10T15M								403	906	4665	1355	97
Cel1	7bcefghjk	TR3	NONE	IRL	O15M				8499	8964	340	10012	3573	11035	12724	8249	21567
Cel1	7bcefghjk	TR3	none	NLD	O15M	28392	5096										
Cel1	7bcefghjk	TR3	none	SCO	O10T15M					1192	4917				894		
Cel1	7bcefghjk	TR3	none	SCO	O15M									5499			

Celtic Sea 7bcefghjk (Cel1) continued

ANNE	REG AREA C	REG GEAR C	SPECO	COUNT	VESSEL_LENG	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEAM	none	BEL	O15M	190	11011								38953	70493	34710
Cel1	7bcefghjk	BEAM	none	ENG	O10T15M				537	232	654						641
Cel1	7bcefghjk	BEAM	none	ENG	O15M		5623		2215	1388	16341	12221	6031	884	2750	6993	5419
Cel1	7bcefghjk	BEAM	none	FRA	O10T15M						52646					1461	441
Cel1	7bcefghjk	BEAM	none	FRA	O15M				2420	5940		1776					
Cel1	7bcefghjk	BEAM	none	GBJ	O15M					1476							
Cel1	7bcefghjk	BEAM	NONE	IRL	NONE												
Cel1	7bcefghjk	BEAM	NONE	IRL	O15M	3225607	3058151	2853771	251944	700722	5372						
Cel1	7bcefghjk	BEAM	none	NLD	O15M		2184	5298									
Cel1	7bcefghjk	DEM_SEINE	none	FRA	o15m											19311	
Cel1	7bcefghjk	DEM_SEINE	NONE	IRL	O10T15M	515	1888	1888									
Cel1	7bcefghjk	DEM_SEINE	NONE	IRL	O15M	494613	665850	1081337	50721	92689	18279			20910			
Cel1	7bcefghjk	DREDGE	none	BEL	O15M									23028	72828	68186	26473
Cel1	7bcefghjk	DREDGE	none	ENG	O10T15M	523422	455883	375311	309060	382001	553035	554194	492392	302335	450903	477963	567161
Cel1	7bcefghjk	DREDGE	none	ENG	O15M	1155117	797511	973965	614408	764430	891393	921527	921550	595747	700967	869100	1091645
Cel1	7bcefghjk	DREDGE	none	FRA	O10T15M	859043	1048444	7828280	2320953	2954269	2755241	3279571	3330398	2518083	2478802	1680444	1676208
Cel1	7bcefghjk	DREDGE	none	FRA	O15M	399764	510343	2543721	631654	904367	644169	719978	852839	788184	788405	664555	540029
Cel1	7bcefghjk	DREDGE	none	GBJ	O15M	116972	115902	67461	54327							440	440
Cel1	7bcefghjk	DREDGE	none	IOM	O10T15M									1689			
Cel1	7bcefghjk	DREDGE	none	IOM	O15M	13000	21775	19240				23622	1488				
Cel1	7bcefghjk	DREDGE	NONE	IRL	O10T15M	505	14758	5518	19763	16170	2686	5237	6625	19361	16193	23843	31788
Cel1	7bcefghjk	DREDGE	NONE	IRL	O15M	510621	355371	332511	653522	775093	414693	55741	135371	117801	162441	167179	157570
Cel1	7bcefghjk	DREDGE	none	NLD	O15M		54426	56253	153790	136772	198540	129990	174403	92329	196579	77210	
Cel1	7bcefghjk	DREDGE	none	SCO	O10T15M			639			20295					7722	
Cel1	7bcefghjk	DREDGE	none	SCO	O15M	509678	644894	545376	585814	606523	820152	716849	509439	532987	545777	495326	162180
Cel1	7bcefghjk	none	none	DNK	O15M	14700											
Cel1	7bcefghjk	none	none	FRA	O10T15M	26031	12208	55474	10756	33746	76396	41748	6979	16784	16784		45498
Cel1	7bcefghjk	none	none	FRA	O15M	205	365	8717	21008		327	858	5495	5849	5849		8828
Cel1	7bcefghjk	none	NONE	IRL	O10T15M			2088					383	275		52	
Cel1	7bcefghjk	none	NONE	IRL	O15M		3872	375									
Cel1	7bcefghjk	OTTER	none	BEL	O15M	39210	30275	36086	21681								
Cel1	7bcefghjk	OTTER	none	DNK	O15M	178155	171401	27518	128226	217953	75248	120115	73624	54619	146213	33000	
Cel1	7bcefghjk	OTTER	none	ENG	O10T15M	587	5783	8397	12522	2308	39153	5023	39319	2922	24642	18573	26944
Cel1	7bcefghjk	OTTER	none	ENG	O15M	190955	42228	60162	40939	110395	224730	82807	35121	61169	41458	243826	78176
Cel1	7bcefghjk	OTTER	none	FRA	O10T15M	11274	40019	289646	200558	245014	357035	187430	132530	72340	71584	66696	78561
Cel1	7bcefghjk	OTTER	none	FRA	O15M	23817	86107	177390	93623	120842	176987	64322	122042	28194	28194	136817	75075
Cel1	7bcefghjk	OTTER	NONE	IRL	NONE												
Cel1	7bcefghjk	OTTER	NONE	IRL	O10T15M	217260	244135	261005	41678	103219	4119	2100		240	145		828
Cel1	7bcefghjk	OTTER	NONE	IRL	O15M	5965040	7399624	8028496	192437	1014106	158922	14130	8602	24074	3425	14674	51226
Cel1	7bcefghjk	OTTER	none	NLD	O15M	20781	173746	167915	219121								
Cel1	7bcefghjk	OTTER	none	SCO	O10T15M				1341		1490				4470		
Cel1	7bcefghjk	OTTER	none	SCO	O15M	184125	145942	145792	58819	106140	333853	25059	22830	64600	97476	453991	101950
Cel1	7bcefghjk	PEL_SEINE	none	ENG	O10T15M	8206											402
Cel1	7bcefghjk	PEL_SEINE	none	ENG	o15m											6750	
Cel1	7bcefghjk	PEL_SEINE	none	FRA	O10T15M	38446	35391	167198	89864	87549	60693	69936	38525	50446	50446	58203	61033
Cel1	7bcefghjk	PEL_SEINE	none	FRA	O15M	11097	39368	182799	128953	106304	126726	228685	169325	124836	124521	259720	281078
Cel1	7bcefghjk	PEL_SEINE	NONE	IRL	O10T15M				5670								
Cel1	7bcefghjk	PEL_SEINE	NONE	IRL	O15M				11896	37748	8338				85		
Cel1	7bcefghjk	PEL_SEINE	none	NIR	O15M		30305	123386	116892	123386	123386						
Cel1	7bcefghjk	PEL_SEINE	none	NLD	O15M		440										
Cel1	7bcefghjk	PEL_SEINE	none	SCO	O15M	43095	10224		50043							36147	7695
Cel1	7bcefghjk	PEL_TRAWL	none	DEU	O15M	1189505	1029246	1168186	1163391	1236846	936424	856734	962635	1191573	1095622	1863980	1718554
Cel1	7bcefghjk	PEL_TRAWL	none	DNK	O15M	468034	342379	386361	165414	329954	519088	433696	894249	388076	624347	2201854	615654
Cel1	7bcefghjk	PEL_TRAWL	none	ENG	O10T15M	11693	11252	6324	7950	19022	13409	21430	55665	83542	76419	81105	65577
Cel1	7bcefghjk	PEL_TRAWL	none	ENG	O15M	396240	1014257	1037552	1107284	909490	593944	1024722	1032729	1239855	1212908	1459339	1168163
Cel1	7bcefghjk	PEL_TRAWL	none	FRA	O10T15M		13962	58361	21534	21456	12171	9745	73230	18571	18571	53128	35608
Cel1	7bcefghjk	PEL_TRAWL	none	FRA	O15M	1094766	1595315	5716572	1637313	1539255	1496366	1487064	1660738	861162	857922	1827724	1426415
Cel1	7bcefghjk	PEL_TRAWL	none	GBG	O10T15M								201		191		
Cel1	7bcefghjk	PEL_TRAWL	none	GBJ	o15m												385
Cel1	7bcefghjk	PEL_TRAWL	NONE	IRL	NONE												
Cel1	7bcefghjk	PEL_TRAWL	NONE	IRL	O10T15M		6272	1911		2370			1627	813	320	444	5480
Cel1	7bcefghjk	PEL_TRAWL	NONE	IRL	O15M	2605433	1845236	2620166	1505626	1576831	1459330	1311817	1987134	2271355	3537821	4240877	2199736
Cel1	7bcefghjk	PEL_TRAWL	none	LTU	O40M										246000		601600
Cel1	7bcefghjk	PEL_TRAWL	none	NIR	O15M	113924	41409	22703	45291	45931	52854	25667	51430	14170	34520	15640	14905
Cel1	7bcefghjk	PEL_TRAWL	none	NLD	O15M	7343001	6131744	5033174	5079963	5212064	4726876	4683381	4252343	5963606	4646318	5976389	4137665
Cel1	7bcefghjk	PEL_TRAWL	none	SCO	O10T15M				2086	5066	1341	596			894		
Cel1	7bcefghjk	PEL_TRAWL	none	SCO	O15M	718204	992814	886291	450188	1092027	1092313	310332	927221	1033393	803582	1099186	105981
Cel1	7bcefghjk	POTS	none	DEU	O15M			48951	79821	22932	67473	37763	49735	33957	45423	41460	63464
Cel1	7bcefghjk	POTS	none	ENG	O10T15M	665636	706700	715907	828542	854630	944496	758847	781712	797875	871928	865375	883572
Cel1	7bcefghjk	POTS	none	ENG	O15M	473687	478562	468758	406946	420885	363252	361554	395238	488690	521421	498515	480839
Cel1	7bcefghjk	POTS	none	FRA	O10T15M	482132	680910	4388916	1048241	1768450	1751646	2194275	1912615	417846	417846	1034732	1251441
Cel1	7bcefghjk	POTS	none	FRA	O15M	358292	301650	957513	206908	310610	331470	383133	367272	147387	147387	372225	385966
Cel1	7bcefghjk	POTS	none	GBG	O10T15M	67655	51787	8646						112		6632	
Cel1	7bcefghjk	POTS	none	GBG	O15M	43977	83277	2686		75868	56398	39402	67026	36910	53973	53544	55728
Cel1	7bcefghjk	POTS	none	GBJ	O15M	10772	30150	19068	984	3772		19963		34730	11426		
Cel1	7bcefghjk	POTS	none	IOM	O15M										9840		25256
Cel1	7bcefghjk	POTS	NONE	IRL	NONE												
Cel1	7bcefghjk	POTS	NONE	IRL	O10T15M	66103	76572	90333	40304	110768	147064	159380	353648	293311	291353	353076	293298
Cel1	7bcefghjk	POTS	NONE	IRL	O15M	1201	3293	46068	16269	10262	37509	31626	17494	9423	26437	33333	18642
Cel1	7bcefghjk	POTS	none	NIR	o10t15m											7833	
Cel1	7bcefghjk	POTS	none	SCO	O10T15M		425	89									3870
Cel1	7bcefghjk	POTS	none	SCO	O15M		3384							15155			

Effort contributions by vessels operating in the entire Celtic Sea 7bcefghjk (Cel1) from different nations are shown in (Figure 5.6.1.1.1). In terms of kW*days, France contributed 38 %, UK 20% Ireland 21%, the Netherlands 7%, Scotland 5% and Belgium 4% (average 2003-2011).

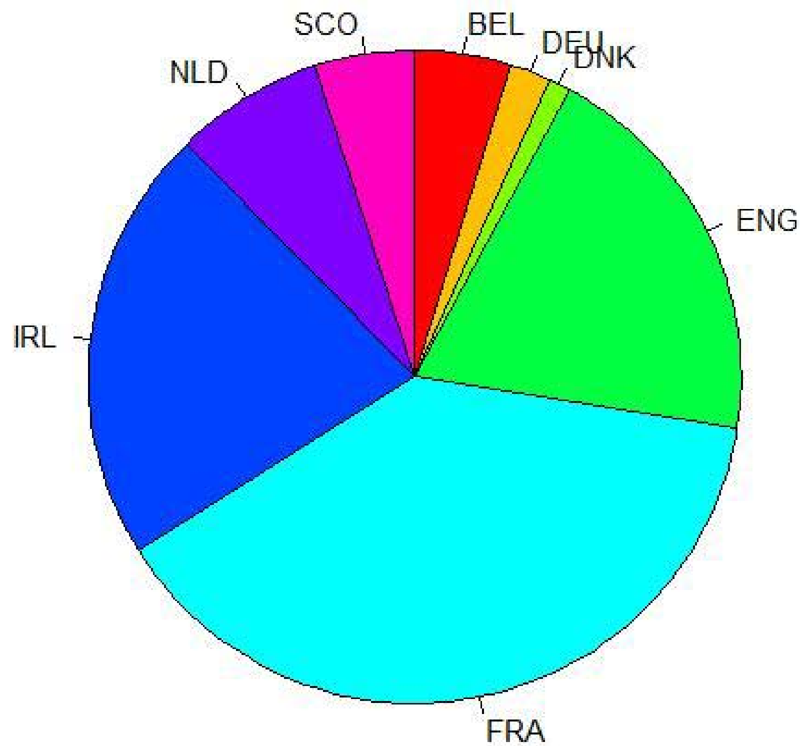


Figure 5.6.1.1.1. Contribution of each country (countries fishing less fishing less than 1% of the total catches were excluded from the figure) to the total effort (kW days at sea) in the Celtic Sea (7bcefghjk (Cel1), mean 2003-2011). **Spanish effort is missing.**

The proportion of defined gear groups in relation to the total effort over the years 2003-2011 (in order to exclude years with no Irish disaggregated data) of each gear category (Figure 5.6.1.1.2) shows that the two main "regulated" categories are TR1 and TR2. BT2 contribute to 14% on average to the reported fishing effort in 2003-2010.

The non-regulated gears are dominated by pelagic trawls and in to a lesser extend dredges and pots.

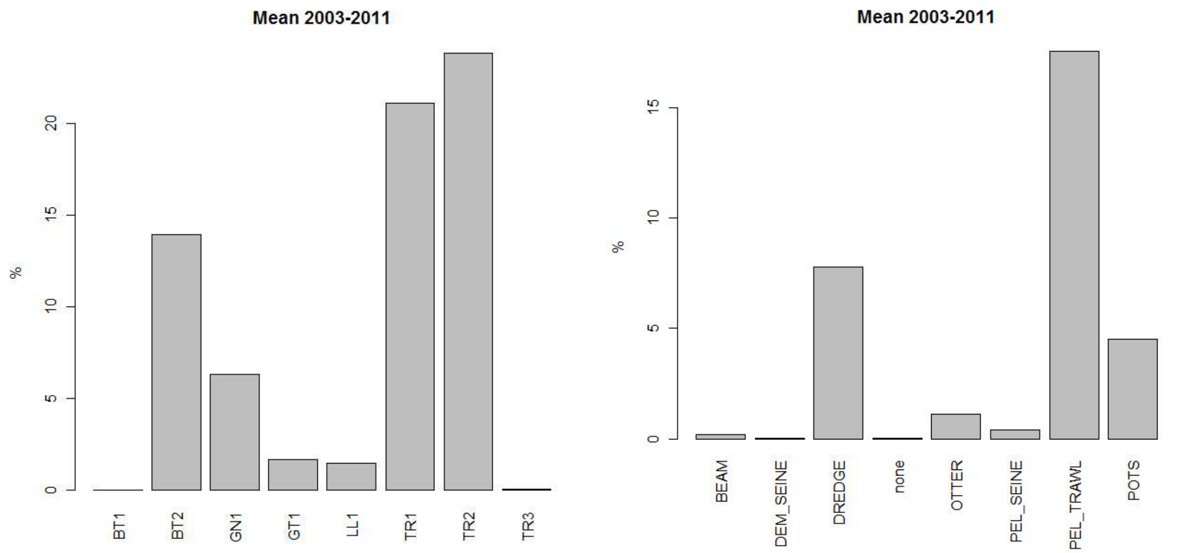


Figure 5.6.1.1.2. Contribution of each gear category to the total effort (kWdays) in the Celtic Sea (ICES Divisions VIIbc,e-k). Mean over 2003-2011. Spanish effort is missing.

The fishing effort in kW days at sea of unregulated gears accounts for about 30% of the total effort in the Celtic Sea. Most of this effort is due to Danish and Irish pelagic fisheries (pelagic boats fishing for boarfish in the Celtic Sea).

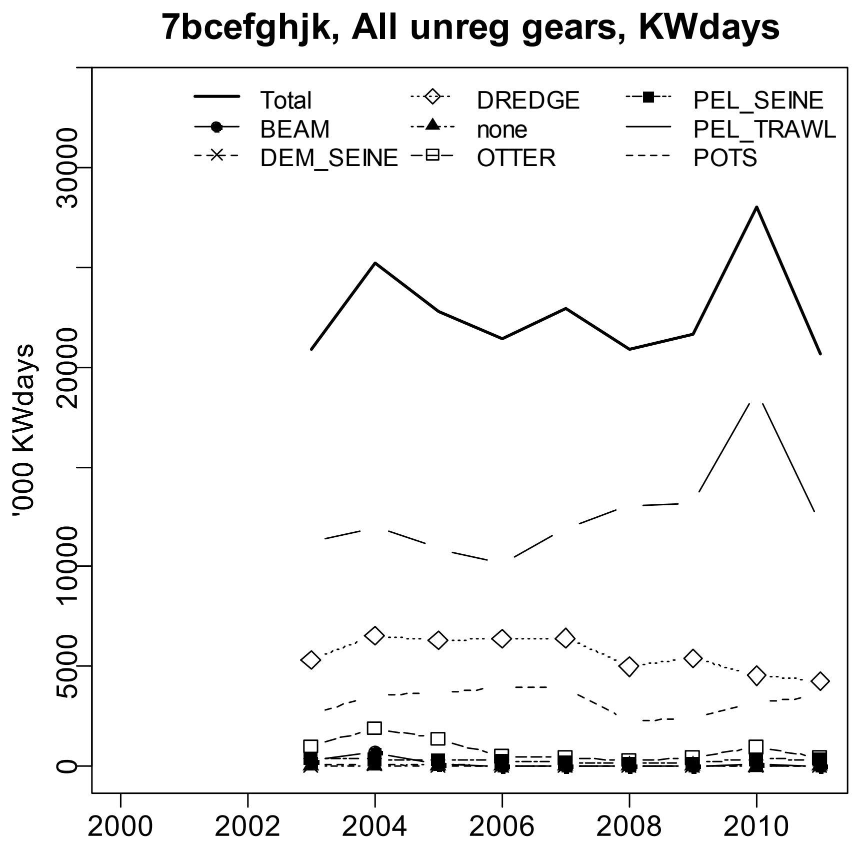


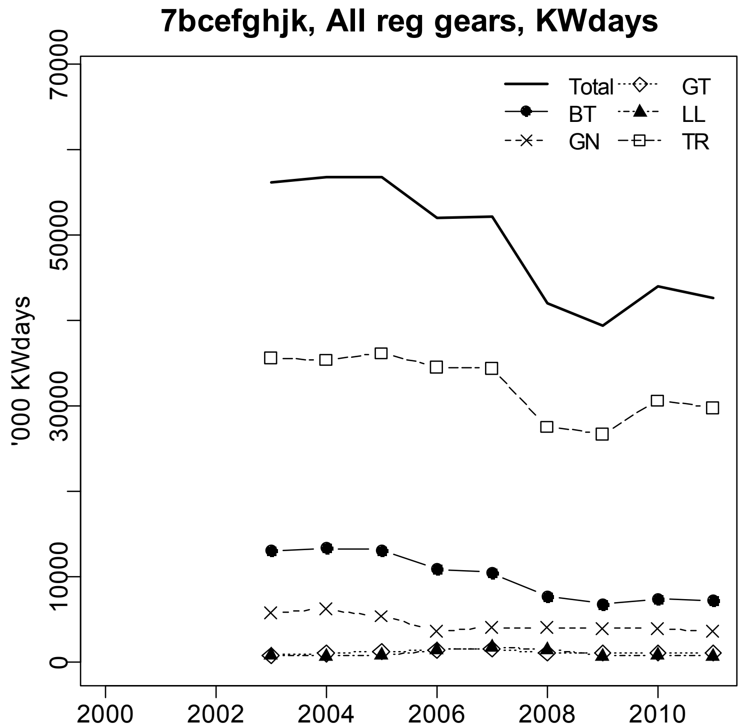
Fig. 5.6.1.1.3. Trend in nominal effort (kW days at sea) for unregulated gears in the Celtic Sea, 2003-2011.

Figures 5.6.1.1.4-7 show the recent trends in nominal effort for the various gear categories and mesh size in the Celtic Sea.

Total effort (Spanish data not available) has been decreasing since the start of the series.

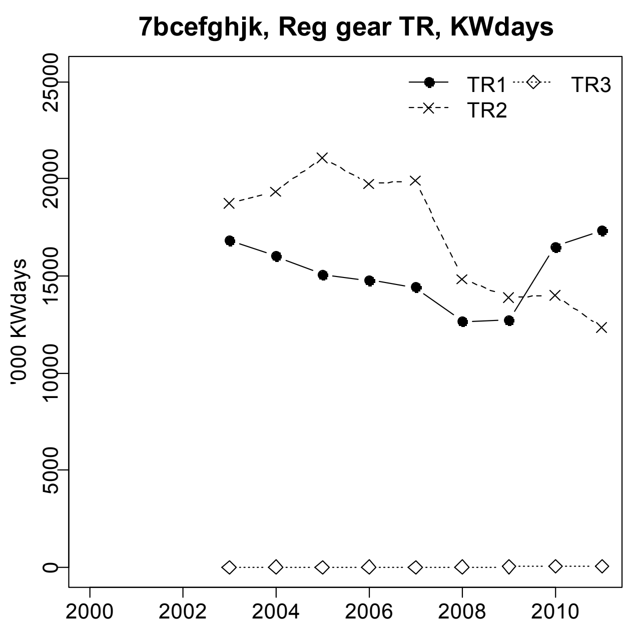
Figures 5.6.1.1.4-7 show the nominal fishing effort for the whole gear categories.

The trend in kW days at sea of the cod sensitive gears shown in Figure 5.6.1.1.4 displays a slight decrease from 2003 to 2011



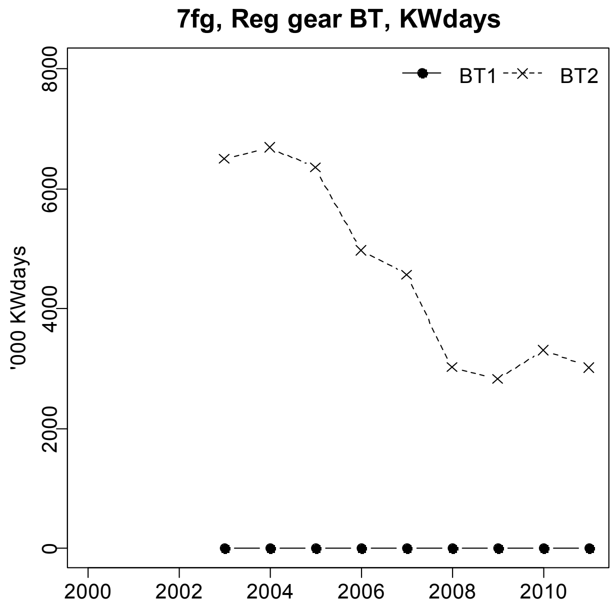
No Spanish data available

Fig. 5.6.1.1.4. Trend in nominal effort by gear types in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2011.



No spanish data available

Fig. 5.6.1.1.5. Trend in nominal effort for demersal trawl (Regulated Gear TR1, TR2 and TR3) in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2011.



No spanish data available

Fig5.6.1.1.6. Trend in nominal effort for beam trawl by mesh size range (Regulated Gear BT1, BT2) in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2011.

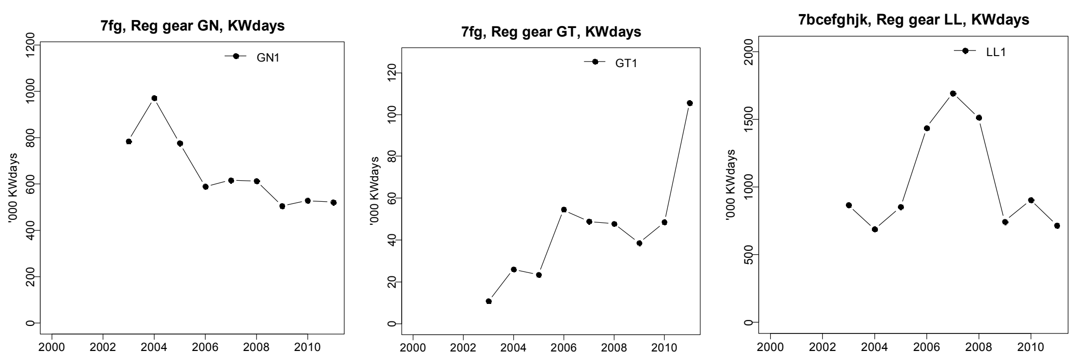


Fig. 5.6.1.1.7. Trend in nominal effort for Regulated Gear GT, GN1, LL1) in the Celtic Sea (ICES Divisions VIIbc,e-k), 2003-2011.

5.6.1.2 ICES sub-divisions 7fg (Cel2)

Table 5.6.1.2.1 Trend in effort (kW*days at sea), according to cod plan gear definition and Member State, 2000-2011. Note, data are for Celtic Sea subdivisions 7fg (Cel2).

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BT1	none	ENG	O15M					8787							
Cel2	7fg	BT1	NONE	IRL	O15M				10273								
Cel2	7fg	BT2	none	BEL	O15M	2010209	1973485	2033727	2419519	3744619	3121706	2534199	2448583	1651116	1570823	1987520	1876094
Cel2	7fg	BT2	none	ENG	O10T15M	13039	54781	43428	60008	42075	9779		676	7691	7891	11403	13165
Cel2	7fg	BT2	none	ENG	O15M	1370570	1416562	884031	990442	970762	775553	645496	569682	403865	408146	392279	265057
Cel2	7fg	BT2	none	FRA	O10T15M						2200					1665	4131
Cel2	7fg	BT2	none	FRA	O15M							15965				486	
Cel2	7fg	BT2	none	GBJ	O15M	73487	86592	97414	151639	145409	46378						
Cel2	7fg	BT2	NONE	IRL	O10T15M								187				
Cel2	7fg	BT2	NONE	IRL	O15M				2877794	1784027	2398012	1779651	1544366	960802	840028	910631	863511
Cel2	7fg	GN1	none	BEL	O15M									1800			
Cel2	7fg	GN1	none	ENG	O10T15M	51225	89853	93277	116140	166518	116219	127376	112183	85832	88748	101641	126513
Cel2	7fg	GN1	none	ENG	O15M	358551	223562	406656	310997	347111	323813	278118	265198	223518	171258	184084	194244
Cel2	7fg	GN1	NONE	FRA	O10T15M												200
Cel2	7fg	GN1	none	FRA	O15M	97635	66740	79912	29862	37833	18804		5908	441	441	4199	6096
Cel2	7fg	GN1	none	GBJ	o15m											716	
Cel2	7fg	GN1	NONE	IRL	O10T15M	59427	34141	30370	36518	54249	44009	54520	48775	62188	86757	69146	54846
Cel2	7fg	GN1	NONE	IRL	O15M	148671	217754	123324	290182	366145	271954	130182	184209	239806	159271	168595	138422
Cel2	7fg	GN1	none	SCO	O15M				689	721	1337						2025
Cel2	7fg	GT1	none	ENG	O10T15M	55	428		373	243	4630	5447	5497	4186	9217	1538	8979
Cel2	7fg	GT1	none	ENG	O15M		1664	936	1197	23676	4647	21344	12802	12273	2052	5572	33508
Cel2	7fg	GT1	none	FRA	O10T15M					1458		7683				11645	8947
Cel2	7fg	GT1	none	FRA	O15M			8064	8456	801	14256	20068	21032	19104	19104	7506	37761
Cel2	7fg	GT1	NONE	IRL	O10T15M				802				4675	4720	7091	8434	10120
Cel2	7fg	GT1	NONE	IRL	O15M								4968	7649	1104	13840	6348
Cel2	7fg	LL1	none	ENG	O10T15M	38531	23718	9636	15155	3743	1093	703	2622	498	4673	3785	3719
Cel2	7fg	LL1	none	ENG	O15M	42597	57931	45243	12907	29331	43411	32066	11479	5879	215	828	909
Cel2	7fg	LL1	none	FRA	O15M			4500			4745		552	883	883		
Cel2	7fg	LL1	NONE	IRL	O10T15M								3583	4986	4137	2208	2935
Cel2	7fg	LL1	NONE	IRL	O15M		1432				2167					2240	
Cel2	7fg	LL1	none	SCO	O10T15M						221						
Cel2	7fg	LL1	none	SCO	O15M		886										

Celtic Sea 7fg (Cel2) Continued

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	TR1	none	ENG	O10T15M	6196	40056	51698	23520	4919	3621	7115	3761	4872	7425	15376	9544
Cel2	7fg	TR1	none	ENG	O15M	18435	90107	112701	88239	117608	76471	79283	70737	96274	107621	147472	129164
Cel2	7fg	TR1	none	FRA	o10t15m											330	1908
Cel2	7fg	TR1	none	FRA	O15M	2614199	3456521	17034562	3460445	3326622	3113639	2740592	2475013	2303217	2295080	3282997	2630843
Cel2	7fg	TR1	none	IOM	O15M	11967											
Cel2	7fg	TR1	NONE	IRL	O10T15M				402		1455	29926	11211	16349	13532	19349	36899
Cel2	7fg	TR1	NONE	IRL	O15M				685730	832656	855906	1022284	1382543	1632837	1965350	1856211	2224975
Cel2	7fg	TR1	none	NIR	O15M	7897	20675	12016	7641		716	5176		1141	1805	16028	23389
Cel2	7fg	TR1	none	SCO	O10T15M										745	894	
Cel2	7fg	TR1	none	SCO	O15M	979	11316	5266	9622	7701		9616	4479	12835	12332	86805	44476
Cel2	7fg	TR2	none	BEL	O15M					110564	168754	400049	443057	434936	449108	379027	250105
Cel2	7fg	TR2	none	ENG	O10T15M	187887	178191	169348	181115	154707	165360	257877	176637	225580	184298	192609	175504
Cel2	7fg	TR2	none	ENG	O15M	211818	146042	75092	96138	80260	86357	50874	55815	33883	40429	79839	29505
Cel2	7fg	TR2	none	FRA	O10T15M									3250	3250	1302	489
Cel2	7fg	TR2	none	FRA	O15M	1016773	1117706	2777768	711296	593609	731407	287766	355358	227706	227706	72113	38972
Cel2	7fg	TR2	none	GBG	O15M			421									
Cel2	7fg	TR2	none	GBJ	O15M	742											
Cel2	7fg	TR2	NONE	IRL	O10T15M				141564	132522	157952	196727	230785	221421	202541	194955	159901
Cel2	7fg	TR2	NONE	IRL	O15M				2312069	2227910	3152039	2603114	2625295	2081110	1658951	1838178	1285268
Cel2	7fg	TR2	none	NIR	O10T15M										1832	1832	
Cel2	7fg	TR2	none	NIR	O15M	28717	2620	2184		52370	72432	42938	20658	127726	141738	144049	6852
Cel2	7fg	TR2	none	SCO	O10T15M									162			
Cel2	7fg	TR2	none	SCO	O15M	4865			4770	12285	4095	2828		2531	29426	3626	17933
Cel2	7fg	TR3	none	ENG	O10T15M		358			373							1890
Cel2	7fg	TR3	none	ENG	O15M						1119						
Cel2	7fg	TR3	none	FRA	o10t15m											212	1163
Cel2	7fg	TR3	none	FRA	O15M	23695	4770										1458
Cel2	7fg	TR3	NONE	IRL	O10T15M									324			
Cel2	7fg	TR3	NONE	IRL	O15M							720			1500		1498
Cel2	7fg	TR3	none	NLD	O15M	4368											

Celtic Sea 7fg (Cel2) Continued

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	VESSEL_LENGTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEAM	none	BEL	O15M		11011								6709	9597	10406
Cel2	7fg	BEAM	none	ENG	O10T15M						214						
Cel2	7fg	BEAM	none	ENG	O15M		369		1967	330	3604	369		884			
Cel2	7fg	BEAM	NONE	IRL	NONE												
Cel2	7fg	BEAM	NONE	IRL	O15M	2481370	2700743	2484287	238874	625594	5372						
Cel2	7fg	DEM_SEINE	NONE	IRL	O15M	334262	495211	683217	15758	76406	7498						
Cel2	7fg	DREDGE	none	BEL	O15M									10708	4429	5958	5229
Cel2	7fg	DREDGE	none	ENG	O10T15M	4771	2316	536	8101	1934	1740	592	2426	8788	3453	34465	45943
Cel2	7fg	DREDGE	none	ENG	O15M	26551	14882	1927	1520	10671	16336	5658	1458	6034	884	1460	5704
Cel2	7fg	DREDGE	none	FRA	o10t15m											1291	2083
Cel2	7fg	DREDGE	none	FRA	O15M				4416		750					1112	1621
Cel2	7fg	DREDGE	none	GBJ	O15M	1492											
Cel2	7fg	DREDGE	none	IOM	O10T15M									911			
Cel2	7fg	DREDGE	none	IOM	O15M		637	2262				3720	372				
Cel2	7fg	DREDGE	NONE	IRL	O10T15M	360								6200	179	1543	
Cel2	7fg	DREDGE	NONE	IRL	O15M	507226	175931	166323	355425	161117	162396	37161	111079	109674	157541	166199	156686
Cel2	7fg	DREDGE	none	NLD	O15M				19854			43017	3728	4725	1628		
Cel2	7fg	DREDGE	none	SCO	O10T15M											6732	
Cel2	7fg	DREDGE	none	SCO	O15M	5651	7323	1354		2000	16246	39971	13036	21843	56181	90166	7184
Cel2	7fg	none	NONE	IRL	O10T15M			2088					233	179			
Cel2	7fg	none	NONE	IRL	O15M			375									
Cel2	7fg	OTTER	none	BEL	O15M	39210	30275	35195	21681								
Cel2	7fg	OTTER	none	ENG	O10T15M	356	4714	7640	10791	642	36523	4432	36302	1860	21806	15590	26191
Cel2	7fg	OTTER	none	ENG	O15M		215	1075	463		1850	1572	17152		6007	12232	4255
Cel2	7fg	OTTER	none	FRA	o10t15m											338	
Cel2	7fg	OTTER	none	FRA	O15M	662	9278			14904						14272	1966
Cel2	7fg	OTTER	NONE	IRL	NONE												
Cel2	7fg	OTTER	NONE	IRL	O10T15M	106395	137414	123735	20639	9912	894	2100		240	145		
Cel2	7fg	OTTER	NONE	IRL	O15M	1535703	1809973	1965956	24150	267713		615	619	1472	1500	8989	8214
Cel2	7fg	OTTER	none	SCO	O10T15M										4470		
Cel2	7fg	OTTER	none	SCO	O15M	12420									798	4796	
Cel2	7fg	PEL_SEINE	none	ENG	O10T15M	8206											179
Cel2	7fg	PEL_SEINE	none	ENG	o15m											5062	
Cel2	7fg	PEL_SEINE	none	FRA	O15M				3087								
Cel2	7fg	PEL_SEINE	NONE	IRL	O10T15M				5670								
Cel2	7fg	PEL_SEINE	NONE	IRL	O15M				11896	37539	8338						
Cel2	7fg	PEL_SEINE	none	NLD	O15M		440										
Cel2	7fg	PEL_SEINE	NONE	SCO	O15M												2430
Cel2	7fg	PEL_TRAWL	none	DEU	O15M										5299	8589	
Cel2	7fg	PEL_TRAWL	none	DNK	o15m											32320	
Cel2	7fg	PEL_TRAWL	none	ENG	O15M	5072											
Cel2	7fg	PEL_TRAWL	none	FRA	o10t15m											294	
Cel2	7fg	PEL_TRAWL	none	FRA	O15M	93021	61568	176198	10238	4097	4585	7331	1851			3310	4196
Cel2	7fg	PEL_TRAWL	NONE	IRL	O10T15M					2370			187	653		265	5211
Cel2	7fg	PEL_TRAWL	NONE	IRL	O15M	408382	357324	249963	262815	293567	119426	161226	152567	131130	192055	263063	420940
Cel2	7fg	PEL_TRAWL	none	NLD	O15M	13194	6600	17237	153230	115456	7210	4853	47101			3960	
Cel2	7fg	PEL_TRAWL	none	SCO	O15M			1842									
Cel2	7fg	POTS	none	ENG	O10T15M	201579	268387	323397	405230	406212	458422	319320	366223	404291	426106	449532	392028
Cel2	7fg	POTS	none	ENG	O15M	96320	118015	52460	42177	98951	94391	82850	115136	160299	171922	209613	216975
Cel2	7fg	POTS	none	FRA	o10t15m											558	1398
Cel2	7fg	POTS	none	FRA	O15M	22144	25949	150187	25296	21435	30680	53838	38996	23492	23492	50447	62606
Cel2	7fg	POTS	none	GBG	O15M	1846	26319						20910	16433	20888		
Cel2	7fg	POTS	none	GBJ	O15M	8384	26568	19068	984	3772				34730	11426		
Cel2	7fg	POTS	none	IOM	O15M										9840		25256
Cel2	7fg	POTS	NONE	IRL	O10T15M			1969	143	733	9459	15246	28421	30421	28253	38378	39674
Cel2	7fg	POTS	NONE	IRL	O15M			15774		1044	1568				15774	30114	18642
Cel2	7fg	POTS	none	NIR	o10t15m											7833	
Cel2	7fg	POTS	none	SCO	O10T15M		425										3870

Contributions by different countries to overall effort in the smaller area, VIIfg are shown in (Figure 5.6.1.2.1). Vessels from Belgium, France, Ireland and UK(E-W) operate in the Divisions VIIfg. In terms of kW*days, Ireland contributes to 43%, France 23%, UK 14% and Belgium 19% (average 2003-2010).

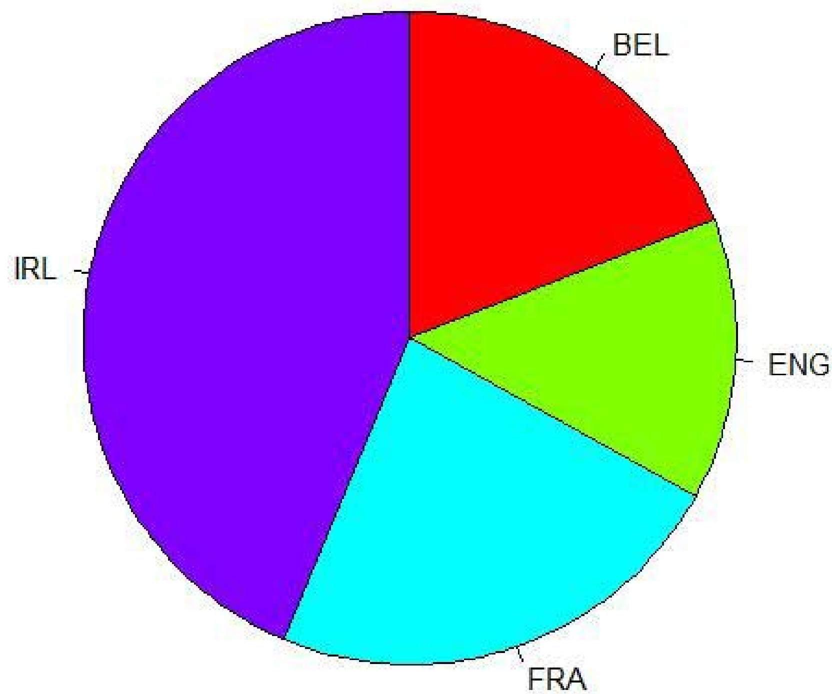
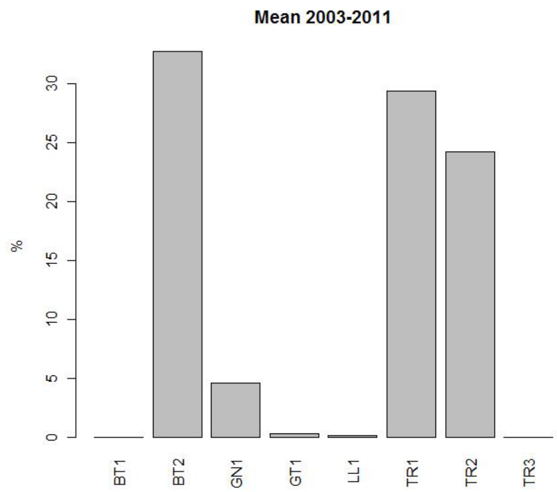


Figure 5.6.1.2.1. Contribution of each country (Countries fishing less fishing less than 1% of the total catches were excluded from the figure) to the total effort in the Divisions VIIfg (mean 2003-2011).



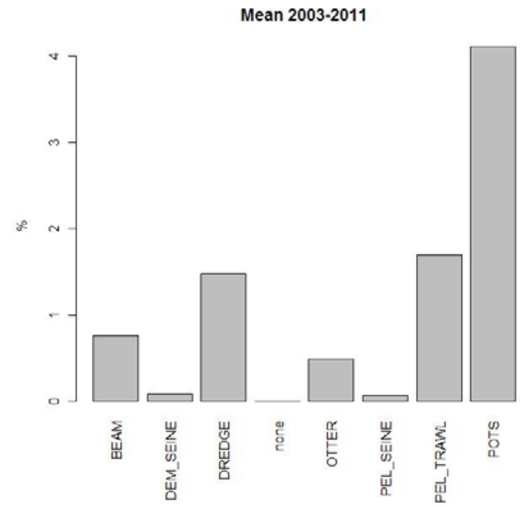


Figure 5.6.1.2.2. Contribution of each gear category to the total effort (kW*days) in the ICES Divisions VIIfg. Mean over 2003-2011.

The mean proportion of total effort over the period 2003-2010 (excluded years with no Irish disaggregated data) of each gear category (Figure 5.6.1.2.2) shows that the fishery in this area is dominated (33%) by the BT2. TR1 and TR2 and contribute a further 29 and 24% respectively.

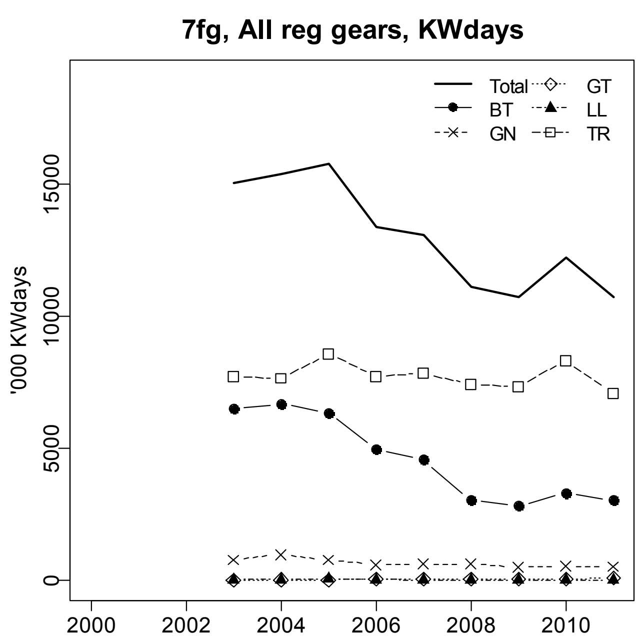
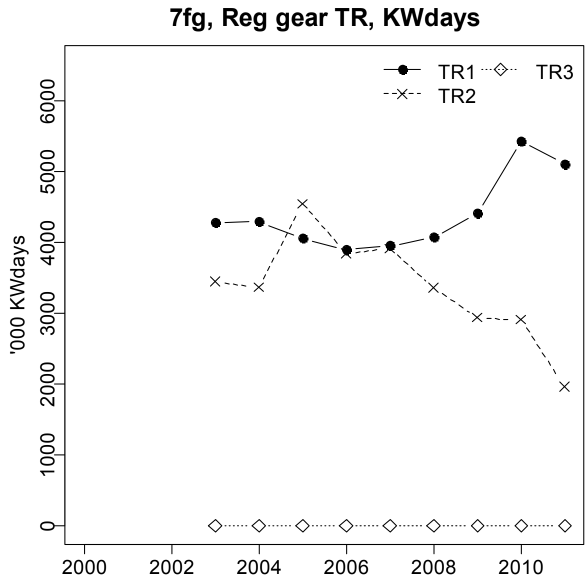
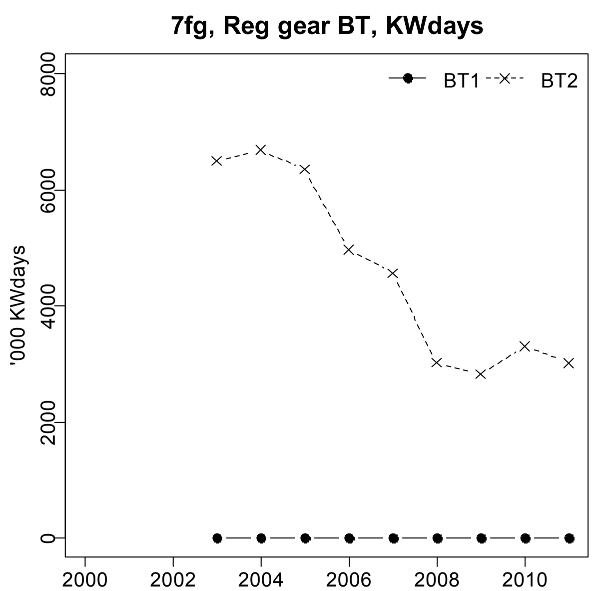


Fig. 5.6.1.2.3. Trend in nominal effort by gear types in the Celtic Sea (ICES Divisions VIIfg), 2003-2011.



No Spanish data available

Fig. 5.6.1.2.4. Trend in nominal effort for demersal trawl (Regulated Gear TR1, TR2 and TR3) in the Celtic Sea (ICES Divisions VIIfg), 2003-2011.



No Spanish data available

Fig. 5.6.1.2.5. Trend in nominal effort for beam trawl by mesh size range (Regulated Gear BT1, BT2) in the Celtic Sea (ICES Divisions VIIfg), 2003-2011.

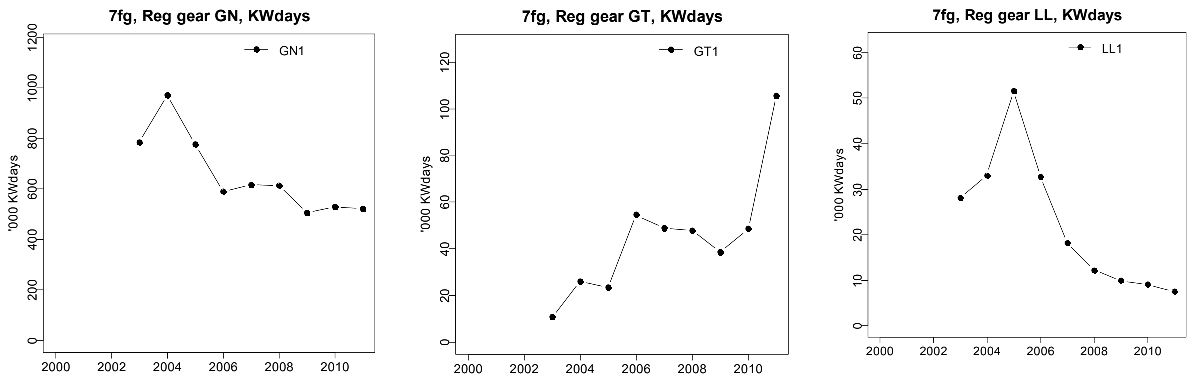


Fig. 5.6.1.2.6. Trend in nominal effort for beam trawl by mesh size range (Regulated Gear GT, GN1, LL1) in the Celtic Sea (ICES Divisions VIIfg), 2003-2011.

The total effort in area VIIfg has decreased by 16% since 2003. This decrease is mostly due to BT2 (a reduction of 29%). However in 2010, mostly all gear categories have increased and especially the gear category TR1 which increased by 30% in the last year.

5.6.2 ToR 1.b Catches (landings and discards) of cod in weight and numbers at age by area, Member State and fisheries

5.6.2.1 ICES sub-divisions 7bcefghjk (Cel1)

STECF EWG 12-06 notes that discard information is scarce and thus presents only landing figures. The same applies for age distributions by fisheries.

Table 5.6.2.1.1 lists the cod landings by Member States and gears, 2003-2011.

Table 5.6.2.1.1 Cod landings by Member States and gears, 2003-2001.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
CeI1	7bcefghjk	BEL	BEAM	COD		0.111	0.217		0.093		0.1	0.068	0.453
CeI1	7bcefghjk	BEL	BT1	COD						0.335			
CeI1	7bcefghjk	BEL	BT2	COD	124.07	147.502	179.323	91.836	92.296	55.547	34.832	37.585	86.957
CeI1	7bcefghjk	BEL	OTTER	COD	8.003								
CeI1	7bcefghjk	BEL	TR2	COD		2.725	4.699	9.77	14.57	8.967	14.188	14.014	35.434
CeI1	7bcefghjk	ENG	BEAM	COD	0.046		0.44	0.172		0.011	0.01	0.016	0.143
CeI1	7bcefghjk	ENG	BT1	COD		1.21							
CeI1	7bcefghjk	ENG	BT2	COD	103.027	85.24	99.455	91.818	111.669	71.749	67.306	65.636	98.897
CeI1	7bcefghjk	ENG	DREDGE	COD	0.035	0.062	0.067	0.091	0.099	0.04	0.096	0.11	0.269
CeI1	7bcefghjk	ENG	GN1	COD	86.212	88.136	96.699	126.721	123.851	71.273	84.579	54.718	72.296
CeI1	7bcefghjk	ENG	GT1	COD		0.003	1.146	1.545	2.293	1.53	0.692	0.699	2.312
CeI1	7bcefghjk	ENG	LL1	COD	6.021	0.042	2.677	2.978	0.72	0.062	0.04	0.117	0.394
CeI1	7bcefghjk	ENG	OTTER	COD	0.009	0.257	0.15	0.004	0.46	0.321	0.03	0.16	0.085
CeI1	7bcefghjk	ENG	PEL_SEINE	COD								0.126	
CeI1	7bcefghjk	ENG	PEL_TRAW	COD	0.104	0.024			0.069	0.007	0.03	0.092	0.073
CeI1	7bcefghjk	ENG	POTS	COD	0.412	0.018	0.011	0.093	0.107	0.178	0.129	0.242	0.37
CeI1	7bcefghjk	ENG	TR1	COD	40.809	26.984	21.295	32.43	21.876	27.349	16.722	24.085	43.595
CeI1	7bcefghjk	ENG	TR2	COD	64.596	40.502	48.635	53.06	79.702	60.178	38.959	52.825	41.573
CeI1	7bcefghjk	ENG	TR3	COD	0.005		0.233			0.011	0.036		
CeI1	7bcefghjk	FRA	BEAM	COD			0.002						
CeI1	7bcefghjk	FRA	BT2	COD	0.002	0.885	0.028	2.974	0.102	0.021	0.021	0.544	0.312
CeI1	7bcefghjk	FRA	DREDGE	COD	0.288	0.034	0.037	0.06	1.075	1.752	1.752	5.327	0.3291
CeI1	7bcefghjk	FRA	GN1	COD	11.279	8.45	4.912	5.478	3.997	5.107	5.107	5.9706	32.6422
CeI1	7bcefghjk	FRA	GT1	COD	13.603	9.215	11.227	5.866	8.448	10.63	10.63	21.3039	35.7527
CeI1	7bcefghjk	FRA	LL1	COD	8.756	4.655	0.633	16.829	2.01	1.818	1.818	2.658	8.261
CeI1	7bcefghjk	FRA	none	COD	0.006				0.012				1.604
CeI1	7bcefghjk	FRA	OTTER	COD	0.7	2.072	0.375	0.031	0.532	0.077	0.077	5.931	6.81238
CeI1	7bcefghjk	FRA	PEL_TRAW	COD	0.838	0.008	0.1	0.3	0.088	0.003	0.003	4.93	2.764
CeI1	7bcefghjk	FRA	POTS	COD		0.002						0.4007	1
CeI1	7bcefghjk	FRA	TR1	COD	2396.257	1118.188	622.914	673.277	790.633	665.85	664.402	1030.795	2467.637
CeI1	7bcefghjk	FRA	TR2	COD	742.602	288.158	353.335	379.731	459.729	359.223	358.789	324.733	383.6435
CeI1	7bcefghjk	FRA	TR3	COD				0.004				3.3532	4.687
CeI1	7bcefghjk	GBG	TR2	COD				0.035	0.017	0.013		0.023	0.002
CeI1	7bcefghjk	GBJ	BEAM	COD		0.046							
CeI1	7bcefghjk	GBJ	BT2	COD	6.487	10.573	4.43						
CeI1	7bcefghjk	GBJ	TR2	COD	0.004			0.011	0.104	0.08	0.028	0.092	0.17
CeI1	7bcefghjk	IRL	BEAM	COD	4.7	26.25	0.52						
CeI1	7bcefghjk	IRL	BT2	COD	68.41	82.18	167.12	165	118	93.6	82.48	100.22	86.54
CeI1	7bcefghjk	IRL	DEM_SEIN	COD	0.6	5.04	1.35						
CeI1	7bcefghjk	IRL	DREDGE	COD	0.91	1.2		0.14					
CeI1	7bcefghjk	IRL	GN1	COD	42.59	79.48	99.04	84.39	93.68	102.28	93.3	92.05	105.06
CeI1	7bcefghjk	IRL	GT1	COD	0.09			0.04	0.08	0.08	0.17	1.88	0.67
CeI1	7bcefghjk	IRL	LL1	COD			0.3	0.13	0.04	0.79	0.09	0	
CeI1	7bcefghjk	IRL	none	COD									0.11
CeI1	7bcefghjk	IRL	OTTER	COD	6.65	36.82	0.05	0.13	0	0	0	0.03	0
CeI1	7bcefghjk	IRL	PEL_SEINE	COD	4.52	4.96	0.53						
CeI1	7bcefghjk	IRL	PEL_TRAW	COD	0.58	4.66	0.85	0.64	0.43				0.69
CeI1	7bcefghjk	IRL	POTS	COD	0.05	0.66	0.17	0.13	0.1		2.7	0.2	1.45
CeI1	7bcefghjk	IRL	TR1	COD	96.05	119.13	164.68	206.38	180.88	209.45	277.96	393.25	423.3
CeI1	7bcefghjk	IRL	TR2	COD	247.36	235.45	369.74	405.41	300.71	278.08	238.03	314.26	239.96
CeI1	7bcefghjk	IRL	TR3	COD	0.04	0.17		0.12		0	0	0	0.32
CeI1	7bcefghjk	NIR	TR1	COD	2.162			0.17			0.027	0.45	14.406
CeI1	7bcefghjk	NIR	TR2	COD		3.025	4.449	4.877	1.899	17.084	16.147	13.349	1.094
CeI1	7bcefghjk	NLD	LL1	COD							0		
CeI1	7bcefghjk	NLD	TR1	COD									1
CeI1	7bcefghjk	NLD	TR2	COD							4	3	7
CeI1	7bcefghjk	SCO	BT2	COD					1.17				
CeI1	7bcefghjk	SCO	DREDGE	COD	0.0568		0.0023	0.0076	0.001	0.0256	0.0166	0.0086	
CeI1	7bcefghjk	SCO	GN1	COD			1.2014	0.2925			0.005		
CeI1	7bcefghjk	SCO	TR1	COD	8.0381	10.9017		3.481	1.6469	6.0306	4.7143	7.7995	28.8105
CeI1	7bcefghjk	SCO	TR2	COD	1.3683	2.4558		1.9023	1.3295	2.5916	0.9137	1.0723	8.1753
sum					4098.346	2447.484	2263.043	2368.354	2414.518	2052.144	2020.93	2584.124	4247.054

5.6.2.2 ICES sub-divisions 7fg (Cel2)

STECF EWG 12-06 notes that discard information is scarce and thus presents only landing figures. The same applies for age distributions by fisheries.

Table 5.6.2.2.1 lists the cod landings by Member States and gears, 2003-2011.

Table 5.6.2.2.1 Cod landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	COD		0.111	0.217		0.093		0.1	0.068	0.453
Cel2	7fg	BEL	BT2	COD	120.328	141.632	171.674	86.044	86.225	50.632	27.826	32.115	80.394
Cel2	7fg	BEL	OTTER	COD	8.003								
Cel2	7fg	BEL	TR2	COD		2.725	4.547	9.617	14.449	8.948	13.088	13.386	29.809
Cel2	7fg	ENG	BEAM	COD	0.027		0.425			0.011			
Cel2	7fg	ENG	BT1	COD		0.221							
Cel2	7fg	ENG	BT2	COD	44.105	35.084	32.418	27.547	33.199	15.183	8.976	12.172	16.12
Cel2	7fg	ENG	DREDGE	COD									0.002
Cel2	7fg	ENG	GN1	COD	42.768	57.018	70.565	98.964	89.124	51.483	49.532	29.824	33.647
Cel2	7fg	ENG	GT1	COD		0	0.231	1.213	1.97	0.934	0.652	0.324	0.596
Cel2	7fg	ENG	LL1	COD	1.033		2.496	1.867	0.133		0.008	0.009	0.188
Cel2	7fg	ENG	OTTER	COD			0.128		0.249	0.012	0.001	0.009	0.076
Cel2	7fg	ENG	POTS	COD	0.013							0.003	
Cel2	7fg	ENG	TR1	COD	8.364	14.676	5.224	5.43	3.627	2.437	2.539	2.933	2.737
Cel2	7fg	ENG	TR2	COD	12.766	8.335	13.039	17.756	15.288	10.074	4.773	9.037	9.461
Cel2	7fg	ENG	TR3	COD			0.103						
Cel2	7fg	FRA	BT2	COD				2.079				0.02	0.025
Cel2	7fg	FRA	GN1	COD	1.722	1.775	0.116		0.228	0.058	0.058	0.28	0.95
Cel2	7fg	FRA	GT1	COD	0.539	0.023	0.533	0.43	0.687	0.612	0.612	0.6	2.73
Cel2	7fg	FRA	LL1	COD			0.025						
Cel2	7fg	FRA	OTTER	COD		1.68						1.75	1.41
Cel2	7fg	FRA	PEL_TRAWL	COD				0.112					1.275
Cel2	7fg	FRA	TR1	COD	2023.918	945.649	519.461	522.138	605.946	443.537	442.621	669.67	1102.708
Cel2	7fg	FRA	TR2	COD	196.071	89.287	84.618	46.927	59.485	20.052	20.052	19.77	8.2589
Cel2	7fg	FRA	TR3	COD									0.763
Cel2	7fg	GBJ	BT2	COD	4.137	6.072	1.256						
Cel2	7fg	IRL	BEAM	COD	4.51	23.74	0.52						
Cel2	7fg	IRL	BT2	COD	54.03	65.9	141.89	153.16	105.15	88.35	77.77	96.93	84.43
Cel2	7fg	IRL	DEM_SEINE	COD	0.37	4.96	1.22						
Cel2	7fg	IRL	DREDGE	COD	0.55	1.03		0.14					
Cel2	7fg	IRL	GN1	COD	31.92	71.59	92.27	71.34	85.45	92.43	83.2	77.44	82.82
Cel2	7fg	IRL	GT1	COD	0.09				0.04	0.04		1.42	0.47
Cel2	7fg	IRL	LL1	COD							0	0	
Cel2	7fg	IRL	OTTER	COD	4.86	30.59	0	0.02	0	0	0	0	0
Cel2	7fg	IRL	PEL_SEINE	COD	4.52	4.81	0.53						
Cel2	7fg	IRL	PEL_TRAWL	COD	0.58	4.47		0.56	0.27				0.69
Cel2	7fg	IRL	POTS	COD		0.66	0.03				0.02	0.16	1.45
Cel2	7fg	IRL	TR1	COD	43.18	62.68	101.39	150.08	143.5	174.31	227.31	298	311.55
Cel2	7fg	IRL	TR2	COD	170.42	187.24	331.29	382.84	272.33	251.17	224.78	294.53	214.09
Cel2	7fg	IRL	TR3	COD				0.12		0	0		0
Cel2	7fg	NIR	TR1	COD	2.162			0.17			0.027	0.45	13.763
Cel2	7fg	NIR	TR2	COD		3.025	4.449	4.877	1.899	17.084	16.044	13.16	1.094
Cel2	7fg	SCO	DREDGE	COD				0.001					
Cel2	7fg	SCO	GN1	COD			1.2014						
Cel2	7fg	SCO	TR1	COD	1.5245	0.4748		0.1477		0.0346	0.1042	2.8326	3.8738
Cel2	7fg	SCO	TR2	COD	1.3619	2.3575		0.0339		0.0768			1.4564
SUM					2783.872	1767.815	1581.866	1583.614	1519.342	1227.468	1200.093	1576.893	2007.29

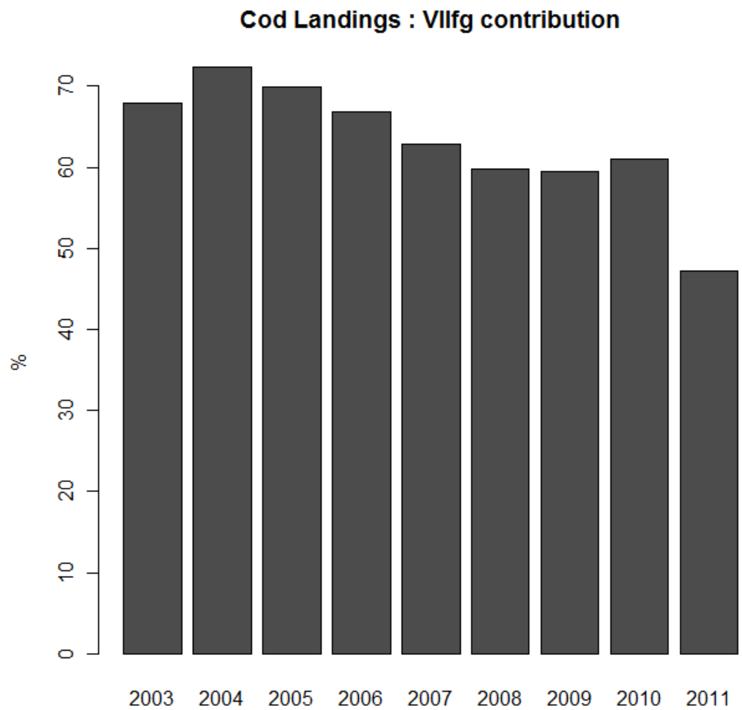


Figure 5.6.2.2.1 Cod: Contribution of the landings from ICES Divisions VIIfg to the total landings from the Celtic Sea (ICES Divisions VIIbc,e-k) over 2003-2011

5.6.3 ToR 1.c Catches (landings and discards) of non-cod species in weight and numbers at age by area, Member State and fisheries

5.6.3.1 ICES sub-divisions 7bcefghjk (Cel1)

STECF EWG 12-06 notes that discard information is scarce and thus presents only landing figures. The same applies for age distributions by fisheries.

Table 5.6.3.1.1-7 lists the anglerfish, haddock, hake, Nephrops, plaice, sole, and whiting landings by Member States and gears, 2003-2011.

Table 5.6.3.1.1 Anglerfish landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEL	BEAM	ANF	1.86	69.384	0.714	0.339	1.725		0.549	1.134	3.225
Cel1	7bcefghjk	BEL	BT2	ANF	730.977	969.75	763.155	755.394	849.828	434.538	373.08	516	785.666
Cel1	7bcefghjk	BEL	DREDGE	ANF						0.237	3.171	2.704	1.731
Cel1	7bcefghjk	BEL	GN1	ANF						0.441			
Cel1	7bcefghjk	BEL	OTTER	ANF	0.888								
Cel1	7bcefghjk	BEL	TR2	ANF		17.925	27.411	57.462	59.676	76.845	69.156	54.045	51.6
Cel1	7bcefghjk	DEU	GN1	ANF	150.032	196.75	142.172	35.373	226.44	248.113	168.485	251.471	184.78
Cel1	7bcefghjk	DEU	POTS	ANF	0.172								
Cel1	7bcefghjk	ENG	BEAM	ANF	0.28	0.125	4.118	4.607	1.629		1.632	3.058	2.294
Cel1	7bcefghjk	ENG	BT1	ANF		10.79							
Cel1	7bcefghjk	ENG	BT2	ANF	1306.206	1556.588	1583.802	1619.029	1986.091	1621.344	1616.624	2070.067	2335.656
Cel1	7bcefghjk	ENG	DREDGE	ANF	29.874	30.681	33.171	60.544	55.966	28.764	47.249	70.39	93.015
Cel1	7bcefghjk	ENG	GN1	ANF	299.437	408.932	593.127	306.081	535.198	293.233	218.626	397.277	198.96
Cel1	7bcefghjk	ENG	GT1	ANF	0.288	8.685	30.48	78.825	12.409	20.819	20.166	15.011	73.592
Cel1	7bcefghjk	ENG	LL1	ANF	8.464	1.142	1.23	0.352	2.478	0.061	0.017	0.057	0.031
Cel1	7bcefghjk	ENG	OTTER	ANF	0.461	0.29	0.322	0.074	0.436	0.157	0.546	0.917	0.333
Cel1	7bcefghjk	ENG	PEL_TRAWL	ANF							0.068	0.019	0.003
Cel1	7bcefghjk	ENG	POTS	ANF	2.955	0.347	0.042	0.115	0.662	0.551	0.105	0.157	0.136
Cel1	7bcefghjk	ENG	TR1	ANF	588.24	512.023	433.874	654.319	827.501	740.172	734.38	975.924	1343.175
Cel1	7bcefghjk	ENG	TR2	ANF	363.065	277.261	345.145	286.182	434.38	295.299	304.062	364.261	282.11
Cel1	7bcefghjk	ENG	TR3	ANF	0.009		0.252				0.006		
Cel1	7bcefghjk	FRA	BEAM	ANF			0.099	0.001					
Cel1	7bcefghjk	FRA	BT2	ANF	0.56	0.731	3.724	9.612	3.185	0.096	0.096	0.037	0.01
Cel1	7bcefghjk	FRA	DREDGE	ANF	7.947	13.77	7.571	5.813	9.913	5.428	5.409	0.24	1.2673
Cel1	7bcefghjk	FRA	GN1	ANF	1203.62	1590.054	1640.339	893.434	1146.897	1961.755	1961.755	268.5335	644.7786
Cel1	7bcefghjk	FRA	GT1	ANF	795.043	1273.253	1417.91	1014.027	1226.742	1218.735	1218.735	157.11	607.4022
Cel1	7bcefghjk	FRA	LL1	ANF	0.129	0.036	0.381	0.206	0.227	0.022	0.022		0.16
Cel1	7bcefghjk	FRA	none	ANF	0.075	0.506	0.916	0.101	0.003	0.049	0.049		2.043
Cel1	7bcefghjk	FRA	OTTER	ANF	15.353	10.9	20.738	1.342	2.223	0.382	0.382	4.22	18.0313
Cel1	7bcefghjk	FRA	PEL_SEINE	ANF									1.5
Cel1	7bcefghjk	FRA	PEL_TRAWL	ANF	0.065	0.136	0.815	8.615	2.314	0.304	0.304		1.564
Cel1	7bcefghjk	FRA	POTS	ANF	2.49	0.773	2.022	0.473	3.105	0.2	0.2	1.76	0.37
Cel1	7bcefghjk	FRA	TR1	ANF	3482.92	3436.553	2633.101	3797.081	3924.894	2866.48	2851.53	1243.376	4975.548
Cel1	7bcefghjk	FRA	TR2	ANF	3382.162	3443.435	3415.986	2697.8	2909.464	2097.271	2094.891	485.4	1167.473
Cel1	7bcefghjk	FRA	TR3	ANF	0.198	0.02		0.066		0.04	0.04		10.126
Cel1	7bcefghjk	GBG	TR2	ANF						0.024	0.003	0.009	
Cel1	7bcefghjk	GBJ	BEAM	ANF		0.007							
Cel1	7bcefghjk	GBJ	BT2	ANF	84.567	94.121	53.737						
Cel1	7bcefghjk	GBJ	DREDGE	ANF	0.167								
Cel1	7bcefghjk	GBJ	TR2	ANF				0.192	0.018	0.079	0.044	0.116	0.058
Cel1	7bcefghjk	IOM	DREDGE	ANF				2.937	0.132				
Cel1	7bcefghjk	IRL	BEAM	ANF	11.16	67.88	0.46						
Cel1	7bcefghjk	IRL	BT1	ANF	0.75								
Cel1	7bcefghjk	IRL	BT2	ANF	214.79	209.34	471.02	557.63	392.86	390.21	476.51	485.2	468.79
Cel1	7bcefghjk	IRL	DEM_SEINE	ANF	4.72	8.81	3.07						
Cel1	7bcefghjk	IRL	DREDGE	ANF	35.26	6.06	4.2	0.44	0.13		0.05		0
Cel1	7bcefghjk	IRL	GN1	ANF	62.28	65.94	64.74	54.74	26.65	20.09	37.37	32.6	47.72
Cel1	7bcefghjk	IRL	GT1	ANF	0.1	0.01		1.22	6.22	13.24	10.29	24.28	17.94
Cel1	7bcefghjk	IRL	LL1	ANF	0.55		5.19		0.1	0.01	0.01		0.05
Cel1	7bcefghjk	IRL	none	ANF			0.14						4.12
Cel1	7bcefghjk	IRL	OTTER	ANF	15.89	146.7	12.7	2.32	0.03	0	0.08	0	4.75
Cel1	7bcefghjk	IRL	PEL_SEINE	ANF	2.97	4.87	0.7						
Cel1	7bcefghjk	IRL	PEL_TRAWL	ANF	0.62	9.29	13.95	2.23	4.36	6.71	10.12	0.38	0.22
Cel1	7bcefghjk	IRL	POTS	ANF	0.19	1.75		3.16	1.02	1.07	0.61	0.56	1.41
Cel1	7bcefghjk	IRL	TR1	ANF	461	479.96	777.64	981.95	1075.38	1014.89	1488.06	2100.14	1641.89
Cel1	7bcefghjk	IRL	TR2	ANF	757.84	798.7	973.93	1132.61	1271.53	919.46	723	828.58	841.89
Cel1	7bcefghjk	IRL	TR3	ANF	1.66	0	0	7.41	0	0.27	0.07	3.19	9.74
Cel1	7bcefghjk	NIR	TR1	ANF	0.058							1.032	1.983
Cel1	7bcefghjk	NIR	TR2	ANF		3.916	4.492	2.465	3.228	8.924	17.402	12.486	0.82
Cel1	7bcefghjk	NLD	DREDGE	ANF							11	4	
Cel1	7bcefghjk	NLD	TR2	ANF							0	1	2
Cel1	7bcefghjk	SCO	BT2	ANF							0.6296		
Cel1	7bcefghjk	SCO	DREDGE	ANF	29.7492	20.8567	36.0017	43.5408	25.689	21.0291	29.2282	41.3517	10.6416
Cel1	7bcefghjk	SCO	GN1	ANF	199.9298	120.2526	383.752	293.4583	325.9237	574.7972	672.8116	662.0727	772.6088
Cel1	7bcefghjk	SCO	GT1	ANF	7.6835	1.683							
Cel1	7bcefghjk	SCO	LL1	ANF				0.2711		0.0576			
Cel1	7bcefghjk	SCO	OTTER	ANF			3.3816				0.0166		
Cel1	7bcefghjk	SCO	TR1	ANF	159.7575	279.2608	276.2105	192.229	219.323	338.8924	429.2462	544.1245	591.3381
Cel1	7bcefghjk	SCO	TR2	ANF	28.2342	49.4383	58.6887	91.3399	41.7941	142.5055	105.7967	161.0798	150.9728
Sum					14453.7	16199.69	16246.62	15657.41	17617.77	15363.59	15703.68	11785.37	17355.52

Table 5.6.3.1.2 Haddock landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEL	BEAM	HAD	0.121		0.157	0.057	0.16		0.174	0.797	1.548
Cel1	7bcefghjk	BEL	BT2	HAD	109.248	129.085	158.561	90.194	98.424	89.725	97.257	123.445	164.368
Cel1	7bcefghjk	BEL	OTTER	HAD	4.041								
Cel1	7bcefghjk	BEL	TR2	HAD		1.693	7.203	8.111	17.643	18.138	34.248	42.307	44.734
Cel1	7bcefghjk	ENG	BEAM	HAD	0.019		0.794	0.071	0.009		0.01	0.052	0.398
Cel1	7bcefghjk	ENG	BT1	HAD		1.075							
Cel1	7bcefghjk	ENG	BT2	HAD	108.07	138.148	116.923	63.397	79.81	72.579	106.4	105.045	183.216
Cel1	7bcefghjk	ENG	DREDGE	HAD		0.001	0.002	0.008	0.001	0.003	0.01	0.003	0.05
Cel1	7bcefghjk	ENG	GN1	HAD	48.843	66.345	69.853	56.025	41.35	37.494	40.594	34.67	52.423
Cel1	7bcefghjk	ENG	GT1	HAD		0.009	0.226	0.41	1.152	0.449	0.082	0.051	0.597
Cel1	7bcefghjk	ENG	LL1	HAD	3.884	5.985	10.702	12.513	6.833	0.32	0	0.002	0.015
Cel1	7bcefghjk	ENG	OTTER	HAD	0.012		0.046		0.243	0.001	0.229	0.183	0.824
Cel1	7bcefghjk	ENG	PEL_SEINE	HAD								2.585	
Cel1	7bcefghjk	ENG	PEL_TRAWL	HAD								0.005	
Cel1	7bcefghjk	ENG	POTS	HAD	0.001		1.017			0.213		0.001	0.036
Cel1	7bcefghjk	ENG	TR1	HAD	74.582	43.489	25.527	32.278	105.448	265.408	273.518	345.022	771.458
Cel1	7bcefghjk	ENG	TR2	HAD	115.33	36.129	47.86	71.174	103.399	116.477	98.702	182.483	191.622
Cel1	7bcefghjk	ENG	TR3	HAD			0.302						
Cel1	7bcefghjk	FRA	BT2	HAD				3.246					
Cel1	7bcefghjk	FRA	DREDGE	HAD			0.002		0.252	0.016	0.016		0.772
Cel1	7bcefghjk	FRA	GN1	HAD	25.784	5.125	12.029	4.478	6.979	3.205	3.205	7.513	6.176
Cel1	7bcefghjk	FRA	GT1	HAD	0.064	0.01	0.045	0.025	0.81	0.037	0.037	2.06	1.168
Cel1	7bcefghjk	FRA	LL1	HAD	3.65	2.684	2.142	1.32	1.027	0.244	0.244	2.4	3.624
Cel1	7bcefghjk	FRA	none	HAD									3.16
Cel1	7bcefghjk	FRA	OTTER	HAD	0.098	3.258	1.009	0.001	0.161			14.3373	9.3587
Cel1	7bcefghjk	FRA	PEL_SEINE	HAD									0.38
Cel1	7bcefghjk	FRA	PEL_TRAWL	HAD				0.224	0.016			0.08	1.445
Cel1	7bcefghjk	FRA	POTS	HAD								0.18	
Cel1	7bcefghjk	FRA	TR1	HAD	2926.505	3721.868	2148.483	1530.511	2110.358	2594.263	2583.607	4504.59	6463.162
Cel1	7bcefghjk	FRA	TR2	HAD	584.152	519.198	384.499	317.941	472.782	501.991	501.861	705.385	900.8327
Cel1	7bcefghjk	FRA	TR3	HAD								6.15	9.69
Cel1	7bcefghjk	GBJ	BEAM	HAD		0.003							
Cel1	7bcefghjk	GBJ	BT2	HAD	5.066	4.612	1.104						
Cel1	7bcefghjk	IRL	BEAM	HAD	15.62	47.37	0.65						
Cel1	7bcefghjk	IRL	BT1	HAD	0.47								
Cel1	7bcefghjk	IRL	BT2	HAD	144.02	137.13	208.32	188.26	166.47	139.88	168.91	170.3	152.63
Cel1	7bcefghjk	IRL	DEM_SEINE	HAD	14.26	33.03	4.81						
Cel1	7bcefghjk	IRL	DREDGE	HAD	0.67	4.11	0.12	0.09					
Cel1	7bcefghjk	IRL	GN1	HAD	67.57	62.65	60.2	41.99	66.59	49.41	58.4	63.48	118.12
Cel1	7bcefghjk	IRL	GT1	HAD				0.01	0.06	0.01	1.07	0.27	0.38
Cel1	7bcefghjk	IRL	LL1	HAD		0.09	2.3				0.08	0.46	0.16
Cel1	7bcefghjk	IRL	none	HAD						0.05			1.18
Cel1	7bcefghjk	IRL	OTTER	HAD	19.56	106.66	4.98	1.33	0.12	0	0.66	0.08	0.8
Cel1	7bcefghjk	IRL	PEL_SEINE	HAD	4.07	42.18	7.1						
Cel1	7bcefghjk	IRL	PEL_TRAWL	HAD	2.08	5.46	2.04	2.47	4.51	0.31	0.45	0.07	8.43
Cel1	7bcefghjk	IRL	POTS	HAD	0.54	1.75	0.28	0.45	0.43	0.04	0.36	0.85	3.28
Cel1	7bcefghjk	IRL	TR1	HAD	357.21	322.45	539.58	641.07	754.96	838.93	1584.33	1409.62	2203.14
Cel1	7bcefghjk	IRL	TR2	HAD	1035.56	951.54	1208.66	977.63	938.46	763.65	1154.57	946.67	820.84
Cel1	7bcefghjk	IRL	TR3	HAD	2.76	0.77	0.72	2.8	3.06	1.63	3.54	2.81	1.2
Cel1	7bcefghjk	NIR	TR1	HAD	4.049					11.578	0.021	41.112	92.499
Cel1	7bcefghjk	NIR	TR2	HAD		2.972	3.969	3.562	0.188	0.655	6.115	7.267	0.675
Cel1	7bcefghjk	NLD	TR2	HAD							1	0	35
Cel1	7bcefghjk	SCO	BT2	HAD							2.9744		
Cel1	7bcefghjk	SCO	DREDGE	HAD			0.0046				0.0017		
Cel1	7bcefghjk	SCO	GN1	HAD		0.1335							
Cel1	7bcefghjk	SCO	LL1	HAD						1.0484			
Cel1	7bcefghjk	SCO	TR1	HAD	5.1569	2.4357	1.0138	4.9778	0.8073	4.1855	144.7077	63.8515	192.3582
Cel1	7bcefghjk	SCO	TR2	HAD	0.8017	2.3925	0.8825	4.3432		1.1843	6.8944	1.5689	61.0729
sum					5683.868	6401.841	5034.116	4060.967	4982.512	5513.124	6874.278	8787.756	12502.82

Table 5.6.3.1.3 Hake landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEL	BEAM	HKE	0.019	0.6			0.073				0.022
Cel1	7bcefghjk	BEL	BT2	HKE	9.605	13.505	10.559	15.036	9.742	5.166	5.412	8.783	9.788
Cel1	7bcefghjk	BEL	OTTER	HKE	1.166								
Cel1	7bcefghjk	BEL	TR2	HKE		0.356	0.464	2.129	1.467	2.213	1.764	3.152	0.469
Cel1	7bcefghjk	DEU	GN1	HKE								0.284	
Cel1	7bcefghjk	ENG	BEAM	HKE	0.001		0.038	0.014	0.001		0.017	0.018	0.02
Cel1	7bcefghjk	ENG	BT1	HKE		0.12							
Cel1	7bcefghjk	ENG	BT2	HKE	24.353	25.448	18.962	15.869	11.515	16.342	25.854	22.548	18.123
Cel1	7bcefghjk	ENG	DREDGE	HKE	0.001	0.004	0.031	0.01	0.001	0.005	0.005	0.007	0.011
Cel1	7bcefghjk	ENG	GN1	HKE	725.543	555.687	551.782	379.932	223.533	230.43	275.812	208.711	290.179
Cel1	7bcefghjk	ENG	GT1	HKE			0.108	3.819	2.594	2.354	0.146	0.163	0.361
Cel1	7bcefghjk	ENG	LL1	HKE	37.198	23.032	4.585	36.032	500.48	150.276	0.002		
Cel1	7bcefghjk	ENG	OTTER	HKE	0.01	0.006	0.216	0	0.011		0.037	9.794	0.004
Cel1	7bcefghjk	ENG	PEL_SEINE	HKE								0.012	
Cel1	7bcefghjk	ENG	PEL_TRAWL	HKE							1.029	16.294	131.798
Cel1	7bcefghjk	ENG	POTS	HKE	0.09				0.003	0.001			
Cel1	7bcefghjk	ENG	TR1	HKE	500.16	519.096	454.899	526.293	560.797	316.313	371.485	330.984	551.282
Cel1	7bcefghjk	ENG	TR2	HKE	61.182	38.249	50.393	28.712	43.707	27.772	33.059	17.219	9.823
Cel1	7bcefghjk	ENG	TR3	HKE			0.038				0.001		
Cel1	7bcefghjk	FRA	BT2	HKE				0.19					
Cel1	7bcefghjk	FRA	DREDGE	HKE	0.004	0.001			0.153	0.023	0.023	2.906	1.127
Cel1	7bcefghjk	FRA	GN1	HKE	911.123	1195.885	1122.62	959.959	785.821	480.665	480.665	3027.439	5237.305
Cel1	7bcefghjk	FRA	GT1	HKE	5.093	2.732	5.352	3.1	2.974	2.076	2.076	2.5112	2.9629
Cel1	7bcefghjk	FRA	LL1	HKE	0.499	0.813	24.829	213.576	352.977	278.113	278.113	584.36	605.747
Cel1	7bcefghjk	FRA	none	HKE					0.292				22.921
Cel1	7bcefghjk	FRA	OTTER	HKE	0.516	0.993	2.994	0.034	0.04			8.86	3.62766
Cel1	7bcefghjk	FRA	PEL_SEINE	HKE	3.047					0.044	0.044		
Cel1	7bcefghjk	FRA	PEL_TRAWL	HKE	0.402	0.02	0.297	0.699	0.199	0.001	0.001	1.23	9.009
Cel1	7bcefghjk	FRA	POTS	HKE				0.028				1.16	0.655
Cel1	7bcefghjk	FRA	TR1	HKE	370.203	463.253	496.439	345.446	311.802	255.655	252.708	873.332	1046.781
Cel1	7bcefghjk	FRA	TR2	HKE	265.004	224.656	295.021	157.625	132.079	126.708	126.577	215.048	184.0246
Cel1	7bcefghjk	FRA	TR3	HKE								0.3173	4.164
Cel1	7bcefghjk	GBJ	BT2	HKE	0.915	1.014	0.492						
Cel1	7bcefghjk	GBJ	TR2	HKE	0.004								0.164
Cel1	7bcefghjk	IRL	BEAM	HKE	7.63	14.02							
Cel1	7bcefghjk	IRL	BT1	HKE	0.11								
Cel1	7bcefghjk	IRL	BT2	HKE	76.65	41.71	47.19	47.03	49.23	25.24	22.78	39.52	33.73
Cel1	7bcefghjk	IRL	DEM_SEINE	HKE	5.46	13.25	0.78						
Cel1	7bcefghjk	IRL	DREDGE	HKE	0.24	0.66							0
Cel1	7bcefghjk	IRL	GN1	HKE	206.53	205.59	219.56	236.2	373.29	437.14	683.31	543.74	560.53
Cel1	7bcefghjk	IRL	GT1	HKE				0	0.02	0.01	0.06	7.03	0.98
Cel1	7bcefghjk	IRL	LL1	HKE	0.02		1.38				1.05		
Cel1	7bcefghjk	IRL	none	HKE			1.78						1.02
Cel1	7bcefghjk	IRL	OTTER	HKE	6.3	33.96	1.19	0	0	0	0	0	0.9
Cel1	7bcefghjk	IRL	PEL_SEINE	HKE	1.92	4.91	0.48						
Cel1	7bcefghjk	IRL	PEL_TRAWL	HKE	2.84	3.34	1.05	0.27	0.78	0.21	1.49	1.38	1.61
Cel1	7bcefghjk	IRL	POTS	HKE	0.6	0.34	0.08	0	0.27	0.01	0.03	0.14	1.72
Cel1	7bcefghjk	IRL	TR1	HKE	382.81	328.31	410.94	450.56	535.5	496.8	390.01	719.13	822.51
Cel1	7bcefghjk	IRL	TR2	HKE	232.76	269.19	220.65	232.02	229.46	194.18	138.02	211.64	195.1
Cel1	7bcefghjk	IRL	TR3	HKE	0.02	0.27	0	0.45	0	0	0.01	0.41	2.39
Cel1	7bcefghjk	NIR	TR1	HKE	0.761			0.008			0.056	5.317	12.011
Cel1	7bcefghjk	NIR	TR2	HKE		1.795	1.335	0.379	0.153	0.559	0.65	1.796	0.01
Cel1	7bcefghjk	NLD	PEL_TRAWL	HKE							13	101	377
Cel1	7bcefghjk	NLD	TR2	HKE							0	1	0
Cel1	7bcefghjk	SCO	BT2	HKE							0.033		
Cel1	7bcefghjk	SCO	DREDGE	HKE			0.0078	0.0021			0.002		
Cel1	7bcefghjk	SCO	GN1	HKE	148.1286	152.6569	14.77	2.4802	0.1914	1.2626	251.5474	88.2136	0.1188
Cel1	7bcefghjk	SCO	LL1	HKE	7.8145	0.7975	37.6718	277.2723	226.5466	959.7347	252.7847	247.5625	114.3202
Cel1	7bcefghjk	SCO	OTTER	HKE			3.4624				0.003		
Cel1	7bcefghjk	SCO	TR1	HKE	257.5786	246.7384	421.6939	300.5239	226.265	211.933	223.3222	195.1496	111.4886
Cel1	7bcefghjk	SCO	TR2	HKE	16.8076	22.9038	26.1396	40.0456	16.7251	40.9549	33.8603	36.2376	20.4441
Sum					4271.118	4405.912	4450.279	4275.744	4598.692	4262.191	3866.849	7534.399	10386.25

Table 5.6.3.1.4 Nephrops landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEL	BEAM	NEP	0.01	0.05						0.055	
Cel1	7bcefghjk	BEL	BT2	NEP	0.12	0.572	1.076	0.721	1.46	0.388	2.645	4.285	4.349
Cel1	7bcefghjk	BEL	TR2	NEP		11.836	5.418	6.491	4.791	8.688	12.278	10.934	3.084
Cel1	7bcefghjk	ENG	BEAM	NEP			0.016						
Cel1	7bcefghjk	ENG	BT2	NEP	4.661	3.908	4.866	2.735	0.29	0.599	2.894	1.085	2.002
Cel1	7bcefghjk	ENG	GN1	NEP					0.003			0.014	
Cel1	7bcefghjk	ENG	GT1	NEP								0.002	
Cel1	7bcefghjk	ENG	POTS	NEP			0.081	0.069				0.002	
Cel1	7bcefghjk	ENG	TR1	NEP	102.376	111.307	181.931	171.328	131.329	42.978	28.629	20.962	28.899
Cel1	7bcefghjk	ENG	TR2	NEP	10.161	5.049	3.1	39.212	13.198	9.772	13.812	44.437	0.024
Cel1	7bcefghjk	FRA	GN1	NEP		0.435	0.481	0.008	0.493	0.022	0.022	0.3859	0.3679
Cel1	7bcefghjk	FRA	GT1	NEP	0.005		0.185	0.305	0.443	0.18	0.18	2.0994	0.47015
Cel1	7bcefghjk	FRA	LL1	NEP								0.14	0.1532
Cel1	7bcefghjk	FRA	none	NEP		0.003							0.031
Cel1	7bcefghjk	FRA	OTTER	NEP			1.183					2.93	0.315
Cel1	7bcefghjk	FRA	PEL_TRAWL	NEP			2.081	0.95					
Cel1	7bcefghjk	FRA	POTS	NEP								0.09	0.131
Cel1	7bcefghjk	FRA	TR1	NEP	705.854	592.193	659.89	427.422	282.523	295.75	295.75	826.8	489.9624
Cel1	7bcefghjk	FRA	TR2	NEP	147.881	41.307	76.376	26.136	20.807	20.817	20.792	13.77	23.821
Cel1	7bcefghjk	FRA	TR3	NEP								0.19	0.145
Cel1	7bcefghjk	IRL	BEAM	NEP	2.4	49.03	6.42						
Cel1	7bcefghjk	IRL	BT1	NEP	0.2								
Cel1	7bcefghjk	IRL	BT2	NEP	73.47	90.9	98.56	89.19	85.73	34.23	27.8	17.25	17.5
Cel1	7bcefghjk	IRL	DREDGE	NEP		4.13							
Cel1	7bcefghjk	IRL	GN1	NEP	0.7	16.18	14.52	5.05		4	2.31	0.09	0.05
Cel1	7bcefghjk	IRL	GT1	NEP	0.74								1.69
Cel1	7bcefghjk	IRL	LL1	NEP	0.87							0.22	
Cel1	7bcefghjk	IRL	none	NEP			5.08			0.03			6.55
Cel1	7bcefghjk	IRL	OTTER	NEP	57.4	259.82	12.39	12.73	1.44	0.1	0.32		
Cel1	7bcefghjk	IRL	PEL_SEINE	NEP	7.59	2.6	0.08						
Cel1	7bcefghjk	IRL	PEL_TRAWL	NEP	3.88	49.48	35.52	1.61	8.77	2.1		2.29	4.61
Cel1	7bcefghjk	IRL	POTS	NEP	3.62	10.35	3.8		3.02	4.45	6.94	10.09	8.36
Cel1	7bcefghjk	IRL	TR1	NEP	438.31	536.04	761.08	727.6	990.33	1319.37	1542.63	1063.14	1129.62
Cel1	7bcefghjk	IRL	TR2	NEP	3215.08	2625.31	3800.2	3173.73	5027.62	4542.47	3105.83	3990.35	3009.99
Cel1	7bcefghjk	IRL	TR3	NEP	9.26			2.06				1.15	
Cel1	7bcefghjk	NIR	TR1	NEP			0.608						
Cel1	7bcefghjk	NIR	TR2	NEP		34.58	65.012	58.484	46.887	345.345	310.42	328.044	7.586
Cel1	7bcefghjk	SCO	GN1	NEP			0.014						
Cel1	7bcefghjk	SCO	TR1	NEP	37.5838	34.5194	84.9729	60.2925	37.197	81.4026	45.5847	71.2688	45.4805
Cel1	7bcefghjk	SCO	TR2	NEP	17.7385	23.5938	121.5133	135.4662	168.5533	102.6871	134.3303	75.7747	131.7718
Sum					4839.91	4503.193	5946.454	4941.59	6824.884	6815.379	5553.167	6487.849	4916.963

Table 5.6.3.1.5 Plaice landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
CeI1	7bcefghjk	BEL	BEAM	PLE	0.149	5.966	1.653	0.322	0.727		1.606	0.405	1.068
CeI1	7bcefghjk	BEL	BT1	PLE						22.773			
CeI1	7bcefghjk	BEL	BT2	PLE	264.672	303.689	209.683	189.647	227.791	172.734	190.624	175.545	292.816
CeI1	7bcefghjk	BEL	DREDGE	PLE							0.177		
CeI1	7bcefghjk	BEL	OTTER	PLE	5.456								
CeI1	7bcefghjk	BEL	TR2	PLE		6.188	35.054	54.046	54.71	79.742	79.736	62.428	58.25
CeI1	7bcefghjk	ENG	BEAM	PLE	0.79	1.177	1.867	1.321	1.667	0.201	0.033	0.457	0.687
CeI1	7bcefghjk	ENG	BT1	PLE		0.341							
CeI1	7bcefghjk	ENG	BT2	PLE	875.248	757.32	753.854	730.124	524.084	509.727	579.729	608.543	629.781
CeI1	7bcefghjk	ENG	DREDGE	PLE	3.078	5.706	9.803	6.059	2.392	1.581	2.165	3.475	6.824
CeI1	7bcefghjk	ENG	GN1	PLE	0.971	2.526	1.446	1.548	1.271	1.052	3.958	3.998	3.907
CeI1	7bcefghjk	ENG	GT1	PLE		0.005	0.081	0.078	0.12	0.165	0.015	0.103	0.14
CeI1	7bcefghjk	ENG	LL1	PLE	0.043	0.039	0.001	0.008	0.071	0.089	0.024	0.063	0.105
CeI1	7bcefghjk	ENG	OTTER	PLE	0.387	0.094	0.612	0.248	0.533	0.168	0.426	0.797	0.211
CeI1	7bcefghjk	ENG	PEL_SEINE	PLE								0.053	
CeI1	7bcefghjk	ENG	PEL_TRAWL	PLE	0.025		0.021		0.01	0.003	0.019	0.004	0.005
CeI1	7bcefghjk	ENG	POTS	PLE	0.033	0.001	0.001	0.082	0.037	0.064	0.006	0.05	0.008
CeI1	7bcefghjk	ENG	TR1	PLE	13.057	10.469	5.013	2.544	3.301	6.439	14.203	21.692	65.901
CeI1	7bcefghjk	ENG	TR2	PLE	148.741	136.433	131.577	185.253	123.196	132.603	128.76	200.382	207.982
CeI1	7bcefghjk	ENG	TR3	PLE	0.034		0.255				0.021	0.027	
CeI1	7bcefghjk	FRA	BEAM	PLE	0.138	0.17	2.043	0.022				0.34	0.045
CeI1	7bcefghjk	FRA	BT2	PLE	1.733	34.04	14.075	6.08	5.19	5.244	5.134	26.295	25.507
CeI1	7bcefghjk	FRA	DREDGE	PLE	4.178	3.374	4.026	3.407	5.103	5.284	5.278	1.21	2.0498
CeI1	7bcefghjk	FRA	GN1	PLE	3.044	5.665	6.343	2.089	0.828	1.131	1.131	0.546	1.585
CeI1	7bcefghjk	FRA	GT1	PLE	9.335	16.117	22.067	12.325	7.549	3.202	3.202	7.164	8.9028
CeI1	7bcefghjk	FRA	LL1	PLE	0.045	0.001	0.014	0.066	0.004	0.006	0.006	0.0031	0.0209
CeI1	7bcefghjk	FRA	none	PLE	0.313	0.614	0.385		0.02	0.007	0.007		0.033
CeI1	7bcefghjk	FRA	OTTER	PLE	4.56	4.569	12.95	3.446	2.279	0.617	0.595	3.107	1.924
CeI1	7bcefghjk	FRA	PEL_SEINE	PLE	0.008				0.022				
CeI1	7bcefghjk	FRA	PEL_TRAWL	PLE	0.022	0.012	0.081	0.109	0.069	0.046	0.046	0.753	1.831
CeI1	7bcefghjk	FRA	POTS	PLE	0.002		0.01		0.114			0.14	0.342
CeI1	7bcefghjk	FRA	TR1	PLE	141.514	112.51	76.909	74.62	63.791	88.882	88.42799	125.246	119.0644
CeI1	7bcefghjk	FRA	TR2	PLE	139.901	120.605	127.629	132.557	138.818	131.548	131.12	105.958	129.7299
CeI1	7bcefghjk	FRA	TR3	PLE	0.038	0.032		0.098	0.002			0.56	1.4827
CeI1	7bcefghjk	GBG	TR2	PLE						0.008	0.001	0.08	0.077
CeI1	7bcefghjk	GBJ	BEAM	PLE		0.2							
CeI1	7bcefghjk	GBJ	BT2	PLE	27.602	43.216	9.946						
CeI1	7bcefghjk	GBJ	TR2	PLE	0.011		0.019	0.575	0.468	0.123	0.12	0.226	0.44
CeI1	7bcefghjk	IRL	BEAM	PLE	0.69	1.79							
CeI1	7bcefghjk	IRL	BT2	PLE	17.51	10.47	13.1	19.39	26.79	15.54	9.95	7.77	7.5
CeI1	7bcefghjk	IRL	DEM_SEINE	PLE	0.85	0.57	0.02						
CeI1	7bcefghjk	IRL	DREDGE	PLE	0.39	0.5	0.46	0.04	0.03				0
CeI1	7bcefghjk	IRL	GN1	PLE	0.28	0.72	0.27	0.35	0.57	0.9	1.81	1.93	2.1
CeI1	7bcefghjk	IRL	GT1	PLE	0.02			0	0.12	0	0.05	0.16	0.32
CeI1	7bcefghjk	IRL	none	PLE						0.02			
CeI1	7bcefghjk	IRL	OTTER	PLE	4.12	10.63	0.58	0	0.01	0	0	0.07	0
CeI1	7bcefghjk	IRL	PEL_SEINE	PLE	0.1	1.26							
CeI1	7bcefghjk	IRL	PEL_TRAWL	PLE		0.25	0.04	0.06				0.13	0.32
CeI1	7bcefghjk	IRL	POTS	PLE	0.05	0.08		0.15	0.25	2.98	12.52	1.77	0.68
CeI1	7bcefghjk	IRL	TR1	PLE	36.38	21.64	21.4	16.04	29.26	42.92	57.22	64.49	85.16
CeI1	7bcefghjk	IRL	TR2	PLE	169.28	125.29	123.4	96.36	95.05	92.79	90.96	76.75	58.29
CeI1	7bcefghjk	IRL	TR3	PLE	0.26	0.21	0.08	1.25	1.6	0.53	4.49	0.68	0.13
CeI1	7bcefghjk	NIR	TR1	PLE	0.164								0.001
CeI1	7bcefghjk	NIR	TR2	PLE		0.586	0.217	0.496		0.213	0.863	0.716	0.034
CeI1	7bcefghjk	NLD	BT2	PLE								2	
CeI1	7bcefghjk	NLD	LL1	PLE							0		
CeI1	7bcefghjk	NLD	TR1	PLE									0
CeI1	7bcefghjk	NLD	TR2	PLE							2	1	3
CeI1	7bcefghjk	SCO	BT2	PLE					0.0963		0.0452		
CeI1	7bcefghjk	SCO	DREDGE	PLE	0.0126	0.0438	0.1206	0.2093	0.0362	1.0366	0.866	0.2669	0.0139
CeI1	7bcefghjk	SCO	OTTER	PLE							0.0349		
CeI1	7bcefghjk	SCO	TR1	PLE	0.6758				0.4334		3.1205	0.5482	6.0717
CeI1	7bcefghjk	SCO	TR2	PLE		0.5287		0.2783	0.1288	0.0267	0.8732	1.0232	1.9894
Sum					1875.91	1745.647	1587.106	1541.298	1318.542	1320.395	1421.373	1508.954	1726.329

Table 5.6.3.1.6 Sole landings (t) by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEL	BEAM	SOL	11.75	1.334	2.138	5.351	21.223	2.563	5.186	12.156	4.709
Cel1	7bcefghjk	BEL	BT2	SOL	845.563	856.256	733.225	590.316	570.521	443.383	458.939	561.876	718.126
Cel1	7bcefghjk	BEL	DREDGE	SOL						0.086	0.96	0.797	0.342
Cel1	7bcefghjk	BEL	OTTER	SOL	0.649								
Cel1	7bcefghjk	BEL	TR2	SOL		15.101	21.575	44.565	46.384	50.121	78.46	80.27	81.749
Cel1	7bcefghjk	ENG	BEAM	SOL	2.139	0.104	2.245	1.044	0.323	0.396	0.516	0.287	0.468
Cel1	7bcefghjk	ENG	BT1	SOL		0.604							
Cel1	7bcefghjk	ENG	BT2	SOL	516.33	415.716	696.347	732.869	729.899	635.432	528.726	501.243	543.707
Cel1	7bcefghjk	ENG	DREDGE	SOL	6.57	6.831	16.786	16.918	15.752	10.213	9.498	19.111	22.94
Cel1	7bcefghjk	ENG	GN1	SOL	1.749	2.097	2.291	1.908	6.033	6.998	10.475	4.338	5.815
Cel1	7bcefghjk	ENG	GT1	SOL		0.014	0.058	0.022	0.047	0.05	0.002	0.004	
Cel1	7bcefghjk	ENG	LL1	SOL	0.005	0.005	0.004	0	0.006	0.03	0.004	0.004	0.002
Cel1	7bcefghjk	ENG	OTTER	SOL	0.073	0.007	0.179	0.028	0.091	0.032	0.139	0.056	0.074
Cel1	7bcefghjk	ENG	PEL_SEINE	SOL								0.003	
Cel1	7bcefghjk	ENG	PEL_TRAWL	SOL		0		0.001		0.003			
Cel1	7bcefghjk	ENG	POTS	SOL	0.022	0.004	0.001	0.043	0.157	0.099	0.018		0.011
Cel1	7bcefghjk	ENG	TR1	SOL	4.184	3.008	3.097	0.94	1.248	4.01	5.571	8.778	9.637
Cel1	7bcefghjk	ENG	TR2	SOL	22.184	22.818	33.967	45.305	39.947	34.615	25.274	24.232	24.762
Cel1	7bcefghjk	ENG	TR3	SOL			0.096			0.001	0.012		
Cel1	7bcefghjk	FRA	BEAM	SOL	0.36	0.74	11.249	0.29				0.67	0.245
Cel1	7bcefghjk	FRA	BT2	SOL	6.017	43.071	32.089	30.695	32.739	33.296	31.846	63.28	62.192
Cel1	7bcefghjk	FRA	DREDGE	SOL	11.798	9.48	10.45	6.765	12.108	19.444	19.331	3.147	6.0846
Cel1	7bcefghjk	FRA	GN1	SOL	10.938	21.021	15.151	4.435	6.146	8.258	8.258	6.0796	8.3322
Cel1	7bcefghjk	FRA	GT1	SOL	39.403	43.097	77.496	40.786	47.242	33.445	33.445	24.2835	55.4362
Cel1	7bcefghjk	FRA	LL1	SOL	0.008	0.006	0.017	0.148	0.022	0.005	0.005	0.029	0.177
Cel1	7bcefghjk	FRA	none	SOL	1.841	2.234	3.999	3.793	0.046	0.057	0.057		0.055
Cel1	7bcefghjk	FRA	OTTER	SOL	16.075	12.092	39.663	14.883	12.406	3.558	3.558	6.2615	5.261
Cel1	7bcefghjk	FRA	PEL_TRAWL	SOL	0.119	0.377	0.249	0.295	0.081	0.206	0.206	0.928	1.834
Cel1	7bcefghjk	FRA	POTS	SOL	0.244	0.442	2.7	0.206	1.078	0.002	0.002	10.45	4.697
Cel1	7bcefghjk	FRA	TR1	SOL	104.063	72.748	62.076	62.621	57.529	56.207	56.19499	62.455	79.14207
Cel1	7bcefghjk	FRA	TR2	SOL	238.117	171.595	211.161	216.443	222.952	179.952	178.252	152.449	175.4369
Cel1	7bcefghjk	FRA	TR3	SOL	0.322	0.17		0.23	0.056	0.041	0.041	1	1.35
Cel1	7bcefghjk	GBG	TR2	SOL						0.013	0.001	0.128	0.062
Cel1	7bcefghjk	GBJ	BEAM	SOL		0.088							
Cel1	7bcefghjk	GBJ	BT2	SOL	68.489	57.523	43.182						
Cel1	7bcefghjk	GBJ	TR2	SOL	0.056			0.453	0.3	0.235	0.173	0.235	
Cel1	7bcefghjk	IOM	DREDGE	SOL					0.012				
Cel1	7bcefghjk	IRL	BEAM	SOL	1.5	6.42	0.04						
Cel1	7bcefghjk	IRL	BT1	SOL	0.04								
Cel1	7bcefghjk	IRL	BT2	SOL	38.39	40.13	45.49	38.83	21.37	16.42	12.84	11.25	7.38
Cel1	7bcefghjk	IRL	DEM_SEINE	SOL			0.11						
Cel1	7bcefghjk	IRL	DREDGE	SOL	1.32	0.92	1.12	0.05	0.08				
Cel1	7bcefghjk	IRL	GN1	SOL	0.82	0.67	0.09	1.46	0.3	0.37	1.14	1.04	0.36
Cel1	7bcefghjk	IRL	GT1	SOL				0.03	0.08			0.04	0.38
Cel1	7bcefghjk	IRL	LL1	SOL	0.04								
Cel1	7bcefghjk	IRL	none	SOL						0.06			0.16
Cel1	7bcefghjk	IRL	OTTER	SOL	3.13	16.36	1.74	0.07	0.04		0.04		
Cel1	7bcefghjk	IRL	PEL_SEINE	SOL		0.79							
Cel1	7bcefghjk	IRL	PEL_TRAWL	SOL		0.62	0.06	0.29	0.12			0.17	
Cel1	7bcefghjk	IRL	POTS	SOL		0.05		0.08	0.02	0.01		0.24	
Cel1	7bcefghjk	IRL	TR1	SOL	18.86	16.51	21.34	10.45	14.35	21.31	16.83	31.64	37.86
Cel1	7bcefghjk	IRL	TR2	SOL	112.5	109.47	99.68	82.3	106.74	93.52	98.68	85.38	68.82
Cel1	7bcefghjk	IRL	TR3	SOL	0.35	0.08		0.08	0.01	0.03	1.42	0.41	0.21
Cel1	7bcefghjk	NIR	TR1	SOL									0.004
Cel1	7bcefghjk	NIR	TR2	SOL		0.593	0.616	0.285	0.151	1.11	1.871	1.67	0.058
Cel1	7bcefghjk	NLD	BT2	SOL								1	
Cel1	7bcefghjk	SCO	DREDGE	SOL	0.6645	1.119	2.8552	4.4666	3.834	9.0508	2.0135	0.9616	0.4283
Cel1	7bcefghjk	SCO	OTTER	SOL							0.0014		
Cel1	7bcefghjk	SCO	TR1	SOL	0.0003	0.05					1.1964	0.5309	2.0866
Cel1	7bcefghjk	SCO	TR2	SOL	0.1623	0.1505					0.0105	0.0003	0.1036
Sum					2086.845	1952.516	2194.632	1959.745	1971.443	1664.632	1591.193	1678.883	1930.497

Table 5.6.3.1.7 (t) Whiting landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	BEL	BEAM	WHG	0.122	0.602	0.129	0.393	0.244		0.073		0.035
Cel1	7bcefghjk	BEL	BT2	WHG	115.541	139.545	180.594	57.864	71.047	75.203	42.184	66.059	68.715
Cel1	7bcefghjk	BEL	OTTER	WHG	8.389								
Cel1	7bcefghjk	BEL	TR2	WHG		35.829	36.866	69.696	54.817	44.728	45.048	34.376	30.505
Cel1	7bcefghjk	ENG	BEAM	WHG	0.074	0.004	0.085	0.13	0.207		0.022	0.072	0.164
Cel1	7bcefghjk	ENG	BT1	WHG		0.019							
Cel1	7bcefghjk	ENG	BT2	WHG	95.887	72.66	66.993	49.449	52.117	58.583	46.796	40.276	41.46
Cel1	7bcefghjk	ENG	DREDGE	WHG	0.019	0.018	0.004	0.023	0.032	0	0.014		0.055
Cel1	7bcefghjk	ENG	GN1	WHG	22.724	18.99	25.149	23.321	15.319	8.072	5.789	6.193	20.376
Cel1	7bcefghjk	ENG	GT1	WHG	0.001	0.126	0.162	0.325	0.29	0.101	0.073	0.02	0.209
Cel1	7bcefghjk	ENG	LL1	WHG	1.689	3.131	1.276	1.999	0.823	0.254	0.007	1.513	1.529
Cel1	7bcefghjk	ENG	OTTER	WHG	0.103	0.734	0.117	0.159	1.345	0.164	1.371	0.865	0.172
Cel1	7bcefghjk	ENG	PEL_SEINE	WHG								0.681	
Cel1	7bcefghjk	ENG	PEL_TRAWL	WHG	6.552	3.805	1.985	3.432	4.157	9.706	3.961	12.237	13.65
Cel1	7bcefghjk	ENG	POTS	WHG	0.051	0.106	0.003	0.014	0.015	0.007	0.002		0.004
Cel1	7bcefghjk	ENG	TR1	WHG	74.368	40.664	52.076	23.33	26.198	42.817	80.752	106.116	176.663
Cel1	7bcefghjk	ENG	TR2	WHG	450.785	337.564	268.205	210.906	337.838	344.46	466.976	392.064	248.846
Cel1	7bcefghjk	ENG	TR3	WHG	0.351	0.03	0.226		0.054	0.001	1.512	0.749	
Cel1	7bcefghjk	FRA	BT2	WHG		0.015		0.665	0.019	0.003	0.003	0.001	0.025
Cel1	7bcefghjk	FRA	DREDGE	WHG	1.834	3.209	2.13	1.914	7.12	3.09	3.087	0.64	2.636
Cel1	7bcefghjk	FRA	GN1	WHG	15.598	5.112	7.595	3.383	2.688	4.468	4.468	8.586	0.396
Cel1	7bcefghjk	FRA	GT1	WHG	1.459	0.062	1.088	0.625	3.869	0.287	0.287	2.39	5.54
Cel1	7bcefghjk	FRA	LL1	WHG	0.52	2.192	3.526	8.959	6.452	1.164	1.164	1.541	6.356
Cel1	7bcefghjk	FRA	none	WHG	0.007	0.02	0.015			0.053	0.053		0.509
Cel1	7bcefghjk	FRA	OTTER	WHG	3.063	20.238	14.246	2.58	2.281	0.525	0.525	8.093	5.9724
Cel1	7bcefghjk	FRA	PEL_TRAWL	WHG	7.841	2.523	0.141	1.701	1.011	1.624	1.624	2.615	12.424
Cel1	7bcefghjk	FRA	POTS	WHG				0.001		1.371	1.371	12.87	28.08
Cel1	7bcefghjk	FRA	TR1	WHG	3493.677	3078.445	4025.512	3032.151	2007.227	1327.353	1320.829	1731.81	2243.936
Cel1	7bcefghjk	FRA	TR2	WHG	1391.58	1137.358	1528.415	1006.229	1037.402	1076.409	1075.558	936.476	989.3073
Cel1	7bcefghjk	FRA	TR3	WHG		0.001		0.004				1.64	7.664
Cel1	7bcefghjk	GBG	PEL_TRAWL	WHG							0.003		
Cel1	7bcefghjk	GBG	TR2	WHG						0.004	0.008	0.008	0.005
Cel1	7bcefghjk	GBJ	BEAM	WHG		0.005							
Cel1	7bcefghjk	GBJ	BT2	WHG	2.341	4.506	1.685						
Cel1	7bcefghjk	GBJ	TR2	WHG	0.006			0.144	0.305	0.067	0.046	0.177	0.131
Cel1	7bcefghjk	IRL	BEAM	WHG	7.15	8.24							
Cel1	7bcefghjk	IRL	BT1	WHG	0.21								
Cel1	7bcefghjk	IRL	BT2	WHG	62.21	35.12	30.08	22.26	24.24	4.01	2.87	4.5	15.12
Cel1	7bcefghjk	IRL	DEM_SEINE	WHG	40.5	54.4	9.56						
Cel1	7bcefghjk	IRL	DREDGE	WHG	0.56	2.16	0.47	0.09	0.12				
Cel1	7bcefghjk	IRL	GN1	WHG	96.9	107.67	60.45	16.07	19.22	23.55	20.43	22.28	35.19
Cel1	7bcefghjk	IRL	GT1	WHG				0	0.06		0.02	0.08	0.19
Cel1	7bcefghjk	IRL	LL1	WHG			0.25						0.16
Cel1	7bcefghjk	IRL	none	WHG			4.77						
Cel1	7bcefghjk	IRL	OTTER	WHG	26.23	414.99	2.34	0.3	0	0	0.44	0.64	0
Cel1	7bcefghjk	IRL	PEL_SEINE	WHG	53.27	79.09	8.68						
Cel1	7bcefghjk	IRL	PEL_TRAWL	WHG	75.45	43.05	0.04	13.25	0.35		0.05		10.08
Cel1	7bcefghjk	IRL	POTS	WHG	1.1	2.04	0.31		0.3		0.28	0.03	1.15
Cel1	7bcefghjk	IRL	TR1	WHG	1179.75	885.29	1013.57	1121.76	1188.42	1166.76	1705.47	2448.38	3156.71
Cel1	7bcefghjk	IRL	TR2	WHG	2747.42	2641.98	4617.16	3333.13	3657.24	1208.32	1065.02	1838.34	1524.73
Cel1	7bcefghjk	IRL	TR3	WHG	0.24	0.39	0.28	0.6	0.19	0.05	0.6	0.64	0.26
Cel1	7bcefghjk	NIR	TR1	WHG	6.478			13.3		0.2		29.061	24.51
Cel1	7bcefghjk	NIR	TR2	WHG		15.628	10.263	8.599	0.685	10.019	11.242	16.655	1.13
Cel1	7bcefghjk	NLD	LL1	WHG							0		
Cel1	7bcefghjk	NLD	PEL_TRAWL	WHG								795	0
Cel1	7bcefghjk	NLD	TR1	WHG								3	
Cel1	7bcefghjk	NLD	TR2	WHG							24	73	152
Cel1	7bcefghjk	SCO	BT2	WHG					1.2204		0.2445		
Cel1	7bcefghjk	SCO	DREDGE	WHG			0.0013				0.002		
Cel1	7bcefghjk	SCO	GN1	WHG		0.0792							
Cel1	7bcefghjk	SCO	LL1	WHG						0.5975			
Cel1	7bcefghjk	SCO	OTTER	WHG	0.0832						0.0135		
Cel1	7bcefghjk	SCO	PEL_TRAWL	WHG	0.0595	5.8561							0.1648
Cel1	7bcefghjk	SCO	TR1	WHG	2.2722	4.5502		0.2372	0.096	4.4564	45.5316	21.2963	28.5048
Cel1	7bcefghjk	SCO	TR2	WHG	2.3721	9.8849	0.0506	5.7703	3.1764	2.1775	13.518	13.0607	58.7021
Cel1	7bcefghjk	SCO	TR3	WHG		0.0401							
sum					9996.837	9217.972	11976.5	9034.764	8528.195	5420.654	5993.338	8634.031	8913.966

5.6.3.2 ICES sub-divisions 7fg (Cel2)

STECF EWG 12-06 notes that discard information is scarce and thus presents only landing figures. The same applies for age distributions by fisheries.

Table 5.6.3.2.1-7 lists the anglerfish, haddock, hake, Nephrops, plaice, sole, and whiting landings by Member States and gears, 2003-2011.

Table 5.6.3.2.1 Anglerfish (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	ANF	1.605	9.951	0.696	0.222	1.725		0.549	1.128	3.225
Cel2	7fg	BEL	BT2	ANF	672.771	760.119	574.269	532.029	605.109	328.602	303.546	419.843	649.535
Cel2	7fg	BEL	DREDGE	ANF						0.018			
Cel2	7fg	BEL	GN1	ANF						0.441			
Cel2	7fg	BEL	OTTER	ANF	0.888								
Cel2	7fg	BEL	TR2	ANF		17.925	27.222	56.967	59.418	76.737	69.156	53.37	50.343
Cel2	7fg	ENG	BEAM	ANF	0.223		1.532						
Cel2	7fg	ENG	BT1	ANF		1.034							
Cel2	7fg	ENG	BT2	ANF	293.644	358.271	219.346	179.904	196.717	106.667	105.256	155.43	128.678
Cel2	7fg	ENG	DREDGE	ANF	0.064	0.03	0.287	0.256	0.086	0.308	0.032	4.33	5.729
Cel2	7fg	ENG	GN1	ANF	72.693	100.238	80.858	50.936	42.145	44.127	61.573	61.483	83.613
Cel2	7fg	ENG	GT1	ANF	0.207	7.081	12.442	12.723	5.232	10.413	15.865	5.797	19.545
Cel2	7fg	ENG	LL1	ANF	0.08	0.092	0.163	0.021	0.001	0.001			
Cel2	7fg	ENG	OTTER	ANF	0.284	0.015	0.251	0.069	0.287	0.001	0.088	0.112	0.067
Cel2	7fg	ENG	POTS	ANF	0.255		0.042		0.026			0.003	
Cel2	7fg	ENG	TR1	ANF	15.422	19.57	16.698	23.109	23.381	32.044	38.382	88.524	83.988
Cel2	7fg	ENG	TR2	ANF	9.826	10.768	6.016	4.785	6.364	4.866	4.026	9.157	3.834
Cel2	7fg	ENG	TR3	ANF			0.099						
Cel2	7fg	FRA	BT2	ANF				2.368					
Cel2	7fg	FRA	GN1	ANF	12.69	24.46	4.643		0.05	0.058	0.058		0.581
Cel2	7fg	FRA	GT1	ANF	5.613	0.024	6.586	17.078	9.805	9.754	9.754	0.39	11.345
Cel2	7fg	FRA	OTTER	ANF		2.33							0.451
Cel2	7fg	FRA	PEL_TRAWL	ANF				1.024					0.535
Cel2	7fg	FRA	TR1	ANF	892.102	719.718	458.888	545.192	552.836	457.792	455.712	285.43	1034.251
Cel2	7fg	FRA	TR2	ANF	131.111	135.585	101.5	53.842	58.562	43.514	43.514	1.95	1.494
Cel2	7fg	FRA	TR3	ANF									0.389
Cel2	7fg	GBJ	BT2	ANF	40.053	29.858	4.163						
Cel2	7fg	IOM	DREDGE	ANF				0.54					
Cel2	7fg	IRL	BEAM	ANF	10.34	61.72	0.46						
Cel2	7fg	IRL	BT1	ANF	0.67								
Cel2	7fg	IRL	BT2	ANF	156.59	162.31	366.35	479.95	346.7	367.84	433.79	461.68	457.58
Cel2	7fg	IRL	DEM_SEINE	ANF	2.94	7.61	0.58						
Cel2	7fg	IRL	DREDGE	ANF	19.86	2.25	0.73	0.44					0
Cel2	7fg	IRL	GN1	ANF	23.98	38.25	49.56	32.22	19.29	15.88	32.96	28.07	32.63
Cel2	7fg	IRL	GT1	ANF	0.1				3.15	6.32	4.41	8.46	9.61
Cel2	7fg	IRL	LL1	ANF						0.01	0.01		
Cel2	7fg	IRL	none	ANF									1.65
Cel2	7fg	IRL	OTTER	ANF	4.18	23.79	0.31	1.21	0	0	0	0	0
Cel2	7fg	IRL	PEL_SEINE	ANF	2.97	4.82	0.7						
Cel2	7fg	IRL	PEL_TRAWL	ANF	0.62	6.21		0.2	0.34				
Cel2	7fg	IRL	POTS	ANF		0.36		3.14	0.23	0.81	0.36	0.07	1.37
Cel2	7fg	IRL	TR1	ANF	55.46	78.45	102.19	165.64	233.42	329.31	421.23	461.67	520.54
Cel2	7fg	IRL	TR2	ANF	261.42	284.53	374.01	383.14	520.75	449.45	351.51	329.72	331.93
Cel2	7fg	IRL	TR3	ANF				0.22		0.26	0		0
Cel2	7fg	NIR	TR1	ANF	0.058							1.032	1.867
Cel2	7fg	NIR	TR2	ANF		3.916	4.492	2.465	3.228	8.663	17.402	12.248	0.82
Cel2	7fg	NLD	DREDGE	ANF							0		
Cel2	7fg	SCO	DREDGE	ANF				2.2914	0.3627	0.6364	3.0391	3.2655	0.5517
Cel2	7fg	SCO	GN1	ANF		0.0307							
Cel2	7fg	SCO	OTTER	ANF							0.0166		
Cel2	7fg	SCO	TR1	ANF	1.6859	1.9236		3.3824	1.53	5.8496	8.168	29.0507	7.4482
Cel2	7fg	SCO	TR2	ANF	0.5209	0.0563		0.8534		1.6223			8.191
Sum					2690.926	2873.296	2415.083	2556.217	2690.745	2301.994	2380.407	2422.213	3451.79

Table 5.6.3.2.2 Haddock (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	HAD	0.121		0.157	0.057	0.16		0.174	0.797	1.548
Cel2	7fg	BEL	BT2	HAD	106.116	127.727	154.824	89.212	97.567	88.419	94.372	119.352	150.395
Cel2	7fg	BEL	OTTER	HAD	4.041								
Cel2	7fg	BEL	TR2	HAD		1.693	7.005	7.991	17.585	18.138	33.972	42.22	42.375
Cel2	7fg	ENG	BEAM	HAD	0.001		0.793						
Cel2	7fg	ENG	BT1	HAD		0.275							
Cel2	7fg	ENG	BT2	HAD	38.613	70.302	48.348	25.01	25.905	17.033	25.71	27.64	11.955
Cel2	7fg	ENG	GN1	HAD	40.882	56.002	55.492	45.736	31.731	34.396	34.916	30.862	49.008
Cel2	7fg	ENG	GT1	HAD		0.001	0.055	0.367	1.075	0.438	0.081	0.012	0.519
Cel2	7fg	ENG	LL1	HAD	0.057	0.747	0.914	0.557	0.002		0		
Cel2	7fg	ENG	OTTER	HAD	0.012				0.023	0.001	0.001	0.027	0
Cel2	7fg	ENG	PEL_SEINE	HAD								0.303	
Cel2	7fg	ENG	POTS	HAD			1.017						
Cel2	7fg	ENG	TR1	HAD	12.56	21.568	2.277	3.561	13.138	36.233	20.654	12.22	7.486
Cel2	7fg	ENG	TR2	HAD	13.521	9.227	7.567	10.59	12.864	11.427	5.348	10.675	7.199
Cel2	7fg	ENG	TR3	HAD			0.242						
Cel2	7fg	FRA	BT2	HAD				2.096					
Cel2	7fg	FRA	GN1	HAD	0.092	0.039	0.115			0.068	0.068	0.02	0.005
Cel2	7fg	FRA	GT1	HAD	0.055		0.004	0.02	0.03	0.013	0.013		0.008
Cel2	7fg	FRA	LL1	HAD			0.002						
Cel2	7fg	FRA	OTTER	HAD		2.745						6.6	2.905
Cel2	7fg	FRA	PEL_TRAWL	HAD				0.097					1.305
Cel2	7fg	FRA	TR1	HAD	1841.537	2845.116	1607.444	1038.685	1462.404	1672.187	1665.277	3006.01	1800.055
Cel2	7fg	FRA	TR2	HAD	129.133	230.535	140.252	69.07	128.009	102.29	102.29	43.03	10.922
Cel2	7fg	FRA	TR3	HAD									0.684
Cel2	7fg	GBJ	BT2	HAD	4.27	3.989	0.373						
Cel2	7fg	IRL	BEAM	HAD	14.93	44.45	0.65						
Cel2	7fg	IRL	BT1	HAD	0.26								
Cel2	7fg	IRL	BT2	HAD	116.49	121.88	192.59	181.71	161.72	135.48	161.36	167.76	150.77
Cel2	7fg	IRL	DEM_SEINE	HAD	3.55	29.5	2.28						
Cel2	7fg	IRL	DREDGE	HAD	0.67	2.26		0.09					
Cel2	7fg	IRL	GN1	HAD	27.1	40.09	35.42	10.86	41.77	33.61	33.24	38.69	69.34
Cel2	7fg	IRL	GT1	HAD								0.14	
Cel2	7fg	IRL	OTTER	HAD	5.27	26.26	0.19	0.77	0	0	0.04	0	0
Cel2	7fg	IRL	PEL_SEINE	HAD	4.07	41.28	7.1						
Cel2	7fg	IRL	PEL_TRAWL	HAD	1.27	4.61		1.48	0.18				4.91
Cel2	7fg	IRL	POTS	HAD		1.49		0.13		0.03		0.09	3.28
Cel2	7fg	IRL	TR1	HAD	128.84	118.84	254.12	257.45	429.02	488.71	1002.84	825	1570.75
Cel2	7fg	IRL	TR2	HAD	423.34	474.78	752.65	635.96	524.79	407.2	672.72	575.32	506.4
Cel2	7fg	IRL	TR3	HAD				0.2		0	0		0
Cel2	7fg	NIR	TR1	HAD	4.049					11.578	0.021	41.055	91.879
Cel2	7fg	NIR	TR2	HAD		2.972	3.969	3.562	0.188	0.655	5.859	7.204	0.675
Cel2	7fg	SCO	TR1	HAD	0.3421	1.038		0.2392		0.0986	1.626	18.282	17.5367
Cel2	7fg	SCO	TR2	HAD	0.7577	2.3608		0.3234		0.116			25.7403
Sum					2921.95	4281.777	3275.85	2385.824	2948.161	3058.121	3860.582	4973.309	4527.65

Table 5.6.3.2.3 Hake (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	HKE		0.411			0.073				0.022
Cel2	7fg	BEL	BT2	HKE	9.147	12.813	9.437	14.341	9.217	4.924	5.065	8.147	9.603
Cel2	7fg	BEL	OTTER	HKE	1.166								
Cel2	7fg	BEL	TR2	HKE		0.356	0.464	1.894	1.389	2.213	1.764	3.152	0.451
Cel2	7fg	ENG	BEAM	HKE	0.001		0.034	0.002					
Cel2	7fg	ENG	BT1	HKE		0.009							
Cel2	7fg	ENG	BT2	HKE	7.804	8.559	5.01	3.302	3.198	2.071	3.945	4.763	3.018
Cel2	7fg	ENG	DREDGE	HKE									0.002
Cel2	7fg	ENG	GN1	HKE	243.42	217.981	231.203	134.527	152.629	176.771	181.938	119.563	271.514
Cel2	7fg	ENG	GT1	HKE			0.039	2.967	2.532	2.306	0.136	0.106	0.266
Cel2	7fg	ENG	LL1	HKE	0.007	5.439	3.073	1.422					
Cel2	7fg	ENG	OTTER	HKE	0.002		0.207	0	0.007		0.01		
Cel2	7fg	ENG	PEL_SEINE	HKE								0.009	
Cel2	7fg	ENG	TR1	HKE	3.51	3.15	5.073	7.308	6.927	13.181	23.392	22.77	17.747
Cel2	7fg	ENG	TR2	HKE	1.946	1.201	1.328	1.387	0.93	0.653	0.657	0.832	0.299
Cel2	7fg	ENG	TR3	HKE			0.01						
Cel2	7fg	FRA	BT2	HKE				0.149					
Cel2	7fg	FRA	GN1	HKE	0.64	0.078	38.951		0.168	0.005	0.005	3.41	9
Cel2	7fg	FRA	GT1	HKE	0.004	0.001	0.052	0.062	0.053			0.04	0.4833
Cel2	7fg	FRA	OTTER	HKE		0.813						1.26	0.348
Cel2	7fg	FRA	PEL_TRAWL	HKE				0.027	0.038				0.58
Cel2	7fg	FRA	TR1	HKE	123.875	103.093	85.706	76.63	86.224	70.667	70.406	299.395	393.1691
Cel2	7fg	FRA	TR2	HKE	22.273	22.459	28.955	7.592	9.002	7.126	7.126	2.757	0.773
Cel2	7fg	FRA	TR3	HKE									0.087
Cel2	7fg	GBJ	BT2	HKE	0.543	0.515	0.103						
Cel2	7fg	IRL	BEAM	HKE	7.25	13.02							
Cel2	7fg	IRL	BT1	HKE	0.07								
Cel2	7fg	IRL	BT2	HKE	59.04	33.15	42.33	43.28	46.59	23.19	19.81	37.53	32.5
Cel2	7fg	IRL	DEM_SEINE	HKE	1.56	11.76	0.24						
Cel2	7fg	IRL	DREDGE	HKE	0.18	0.66							0
Cel2	7fg	IRL	GN1	HKE	64.83	130.08	132.03	56.67	111	233.6	290.03	186.08	233.29
Cel2	7fg	IRL	GT1	HKE					0.02			0.85	0.3
Cel2	7fg	IRL	OTTER	HKE	0.59	8.76	0	0	0	0	0	0	0
Cel2	7fg	IRL	PEL_SEINE	HKE	1.92	4.86	0.48						
Cel2	7fg	IRL	PEL_TRAWL	HKE	0.43	2.33		0.15	0.07				1.61
Cel2	7fg	IRL	POTS	HKE		0.34				0.01			1.64
Cel2	7fg	IRL	TR1	HKE	50.45	64.76	68.24	107.57	143.23	164.84	180.82	283.14	437.09
Cel2	7fg	IRL	TR2	HKE	114.15	113.07	98.93	115.97	106.15	97.08	73.06	108.17	55.26
Cel2	7fg	IRL	TR3	HKE				0.12		0	0		0
Cel2	7fg	NIR	TR1	HKE	0.761			0.008			0.056	5.317	10.694
Cel2	7fg	NIR	TR2	HKE		1.795	1.335	0.379	0.153	0.559	0.645	1.796	0.01
Cel2	7fg	SCO	GN1	HKE	0.4557	0.01							
Cel2	7fg	SCO	OTTER	HKE							0.003		
Cel2	7fg	SCO	TR1	HKE	0.2769	0.7827		0.9708	0.4807	2.7857	2.2064	9.0713	1.6557
Cel2	7fg	SCO	TR2	HKE	0.1133			0.1456		0.6021			0.0044
Sum					716.4149	762.2557	753.23	576.8734	680.0807	802.5838	861.0744	1098.158	1481.416

Table 5.6.3.2.4 Nephrops (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	NEP	0.01							0.055	
Cel2	7fg	BEL	BT2	NEP	0.12	0.572	1.076	0.721	1.46	0.388	2.645	4.285	4.331
Cel2	7fg	BEL	TR2	NEP		11.836	5.418	6.491	4.791	8.688	12.278	10.934	3.084
Cel2	7fg	ENG	BEAM	NEP			0.016						
Cel2	7fg	ENG	BT2	NEP	3.041	2.958	3.148	1.753	0.243	0.598	2.862	0.769	1.168
Cel2	7fg	ENG	GN1	NEP					0.003				
Cel2	7fg	ENG	POTS	NEP			0.081	0.069				0.002	
Cel2	7fg	ENG	TR1	NEP	4.963	1.331	2.076	1.135	0.585	2.966	7.647	4.63	4.636
Cel2	7fg	ENG	TR2	NEP	9.91	0.801	0.003		1.595		8.872	41.921	
Cel2	7fg	FRA	GN1	NEP			0.481						
Cel2	7fg	FRA	OTTER	NEP								1.89	
Cel2	7fg	FRA	PEL_TRAWL	NEP				0.95					
Cel2	7fg	FRA	TR1	NEP	683.549	479.493	479.289	307.541	209.096	284.143	284.143	586.91	309.971
Cel2	7fg	FRA	TR2	NEP	146.341	27.295	45.84	14.184	11.765	12.525	12.525		0.06
Cel2	7fg	FRA	TR3	NEP									0.085
Cel2	7fg	IRL	BEAM	NEP	2.14	38.92	6.42						
Cel2	7fg	IRL	BT1	NEP	0.2								
Cel2	7fg	IRL	BT2	NEP	63.6	75.46	83.9	83.29	83.2	32.38	26.88	16.64	17.5
Cel2	7fg	IRL	DREDGE	NEP		0.9							
Cel2	7fg	IRL	GN1	NEP	0.23	12.51	9.53	3.89		3.97	2.31		0.05
Cel2	7fg	IRL	GT1	NEP	0.74								
Cel2	7fg	IRL	none	NEP									6.55
Cel2	7fg	IRL	OTTER	NEP	35	209.55	0.12	3.04		0.1	0.1		
Cel2	7fg	IRL	PEL_SEINE	NEP	7.59	2.6	0.08						
Cel2	7fg	IRL	PEL_TRAWL	NEP	3.88	47.46		1.16	0.98				
Cel2	7fg	IRL	POTS	NEP		3.54			0.71	0.54			0.1
Cel2	7fg	IRL	TR1	NEP	143.62	214.45	371.18	436.36	675.74	1080.17	1242.14	827.94	861.3
Cel2	7fg	IRL	TR2	NEP	1905.31	1675.39	2415.86	1805.46	3110.87	2916.77	2041.8	2350.57	1501.66
Cel2	7fg	IRL	TR3	NEP				0.3					
Cel2	7fg	NIR	TR1	NEP			0.608						
Cel2	7fg	NIR	TR2	NEP		34.58	65.012	58.484	46.887	338.122	310.42	328.044	7.586
Cel2	7fg	SCO	TR1	NEP	0.0824	0.1096				0.1361	0.066	40.9943	14.3043
Cel2	7fg	SCO	TR2	NEP						0.665			23.634
SUM					3010.326	2839.756	3490.138	2724.828	4147.925	4682.161	3954.688	4215.584	2756.019

Table 5.6.3.2.5 Plaice (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	PLE	0.149	0.763	1.066	0.322	0.727		1.606	0.405	1.068
Cel2	7fg	BEL	BT2	PLE	206.623	197.953	150.713	129.684	138.073	105.029	137.42	125.442	154.468
Cel2	7fg	BEL	OTTER	PLE	5.456								
Cel2	7fg	BEL	TR2	PLE		4.363	14.957	40.588	54.17	79.031	79.566	61.549	51.533
Cel2	7fg	ENG	BEAM	PLE	0.061	0.059	0.016			0.201			
Cel2	7fg	ENG	BT1	PLE		0.021							
Cel2	7fg	ENG	BT2	PLE	65.888	39.437	27.117	27.423	24.032	23.644	28.012	25.234	22.474
Cel2	7fg	ENG	DREDGE	PLE	0.002	0.004			0.001			0.033	0.006
Cel2	7fg	ENG	GN1	PLE	0.227	0.522	0.762	0.887	0.356	0.137	0.199	0.676	0.555
Cel2	7fg	ENG	GT1	PLE		0.001	0.03	0.063	0.011	0.012	0.014	0.056	0.119
Cel2	7fg	ENG	LL1	PLE	0.009					0	0.001		
Cel2	7fg	ENG	OTTER	PLE	0.289	0.007	0.491	0.166	0.361	0.083	0.177	0.131	0.107
Cel2	7fg	ENG	PEL_SEINE	PLE								0.042	
Cel2	7fg	ENG	POTS	PLE			0.001						
Cel2	7fg	ENG	TR1	PLE	3.105	2.568	0.337	0.216	0.985	0.823	1.785	1.253	1.945
Cel2	7fg	ENG	TR2	PLE	28.957	20.504	11.459	23.544	14.542	17.458	12.81	12.55	8.866
Cel2	7fg	ENG	TR3	PLE			0.017						
Cel2	7fg	FRA	BT2	PLE			3.43	0.09				0.235	1.795
Cel2	7fg	FRA	DREDGE	PLE	0.009		0.004					0.065	0.065
Cel2	7fg	FRA	GN1	PLE	0.017	0.008	0.013			0.003	0.003		
Cel2	7fg	FRA	GT1	PLE	0.007	0.153	0.004	0.012				0.39	1.5153
Cel2	7fg	FRA	OTTER	PLE		0.105						2.12	0.034
Cel2	7fg	FRA	PEL_TRAWL	PLE	0.003			0.059				0.05	0.09
Cel2	7fg	FRA	POTS	PLE									0.061
Cel2	7fg	FRA	TR1	PLE	117.392	91.342	64.276	51.687	51.98	72.277	71.83799	91.84	60.79327
Cel2	7fg	FRA	TR2	PLE	18.84	14.018	13.791	5.051	8.354	6.97	6.97	3.07	1.389
Cel2	7fg	FRA	TR3	PLE									0.036
Cel2	7fg	GBJ	BT2	PLE	9.709	11.014	1.739						
Cel2	7fg	IRL	BEAM	PLE	0.26	1.4							
Cel2	7fg	IRL	BT2	PLE	9.22	5.49	10.74	15.54	23.15	14.31	7.88	7.15	6.84
Cel2	7fg	IRL	DEM_SEINE	PLE	0.53	0.53							
Cel2	7fg	IRL	DREDGE	PLE	0.08			0.04					0
Cel2	7fg	IRL	GN1	PLE	0.21	0.39	0.13	0.1	0.32	0.01	0.46	0	
Cel2	7fg	IRL	GT1	PLE	0.02							0.03	0
Cel2	7fg	IRL	OTTER	PLE	0.97	1	0.02	0	0	0	0	0	0
Cel2	7fg	IRL	PEL_SEINE	PLE	0.1	1.22							
Cel2	7fg	IRL	PEL_TRAWL	PLE		0.25							0.18
Cel2	7fg	IRL	POTS	PLE		0.08				0.02		0.04	
Cel2	7fg	IRL	TR1	PLE	14.88	7.52	7.71	5.75	13.7	23.86	28.48	32.7	39.03
Cel2	7fg	IRL	TR2	PLE	24.22	28	26.43	26.67	21.87	24.1	24.88	23.2	21.19
Cel2	7fg	IRL	TR3	PLE						0	0		
Cel2	7fg	NIR	TR1	PLE	0.164								0.001
Cel2	7fg	NIR	TR2	PLE		0.501	0.217	0.496		0.213	0.861	0.716	0.034
Cel2	7fg	SCO	DREDGE	PLE								0.0012	0.0009
Cel2	7fg	SCO	OTTER	PLE							0.0349		
Cel2	7fg	SCO	TR1	PLE	0.0806						0.038	0.3198	0.436
Cel2	7fg	SCO	TR2	PLE		0.2141							0.0931
Sum					507.4776	429.4371	335.47	328.388	352.632	368.181	403.0349	389.298	374.7246

Table 5.6.3.2.6 Sole (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	SOL	0.178	1.289	2.138	0.737	4.979		2.23	4.201	3.811
Cel2	7fg	BEL	BT2	SOL	686.854	693.827	624.618	527.845	522.599	412.171	438.424	534.504	688.257
Cel2	7fg	BEL	OTTER	SOL	0.649								
Cel2	7fg	BEL	TR2	SOL		15.101	15.278	43.165	46.052	49.729	75.219	80.117	80.706
Cel2	7fg	ENG	BEAM	SOL	1.59	0.048	0.21			0.396			
Cel2	7fg	ENG	BT1	SOL		0.384							
Cel2	7fg	ENG	BT2	SOL	264.394	212.959	175.979	181.496	211.838	185.231	171.996	154.503	141.531
Cel2	7fg	ENG	DREDGE	SOL	0.028	0.01	0.209	0.062	0.021	0.007	0.007	0.359	0.286
Cel2	7fg	ENG	GN1	SOL	0.867	0.922	0.894	0.6	0.715	0.25	0.199	0.214	0.274
Cel2	7fg	ENG	GT1	SOL		0.011	0.04	0.001	0.007	0.014		0.001	
Cel2	7fg	ENG	LL1	SOL	0.003		0	0					0.001
Cel2	7fg	ENG	OTTER	SOL	0.068		0.163	0.022	0.061	0.013	0.007	0.024	0.051
Cel2	7fg	ENG	PEL_SEINE	SOL								0.002	
Cel2	7fg	ENG	TR1	SOL	1.639	1.159	0.343	0.07	0.131	0.917	0.924	1.217	0.271
Cel2	7fg	ENG	TR2	SOL	8.726	8.85	10.151	18.125	9.038	10.327	8.91	11.953	16.391
Cel2	7fg	ENG	TR3	SOL			0.021						
Cel2	7fg	FRA	BT2	SOL			2.615	0.021				0.37	1.54
Cel2	7fg	FRA	DREDGE	SOL	0.002		0.004					0.16	0.1
Cel2	7fg	FRA	GN1	SOL		0.287	0.018						
Cel2	7fg	FRA	GT1	SOL		1.846	0.4					1.713	6.1983
Cel2	7fg	FRA	OTTER	SOL		0.123						0.1335	0.018
Cel2	7fg	FRA	PEL_TRAWL	SOL				0.064				0.03	
Cel2	7fg	FRA	POTS	SOL									0.095
Cel2	7fg	FRA	TR1	SOL	73.682	38.95	37.966	30.528	36.219	29.986	29.97899	25.67	29.86504
Cel2	7fg	FRA	TR2	SOL	19.383	10.278	16.998	4.451	14.416	3.982	3.982	0.73	0.619
Cel2	7fg	FRA	TR3	SOL									0.007
Cel2	7fg	GBJ	BT2	SOL	50.138	47.992	20.7						
Cel2	7fg	IOM	DREDGE	SOL					0.001				
Cel2	7fg	IRL	BEAM	SOL	0.98	1.75	0.04						
Cel2	7fg	IRL	BT1	SOL	0.02								
Cel2	7fg	IRL	BT2	SOL	8.96	10.12	15.52	21.69	12.7	12.13	12.02	8.48	6.94
Cel2	7fg	IRL	DREDGE	SOL		0.37		0.05					
Cel2	7fg	IRL	GN1	SOL	0.69	0.11	0.09	0.86	0.09	0.15	0.23	0.14	0.02
Cel2	7fg	IRL	none	SOL									0.16
Cel2	7fg	IRL	OTTER	SOL	0.3	0.47	0.02	0.02	0				
Cel2	7fg	IRL	PEL_SEINE	SOL		0.79							
Cel2	7fg	IRL	PEL_TRAWL	SOL		0.54							
Cel2	7fg	IRL	POTS	SOL						0			
Cel2	7fg	IRL	TR1	SOL	1.42	2.63	1.26	2.08	2.7	2.96	3.44	3.94	7.25
Cel2	7fg	IRL	TR2	SOL	9.63	16.3	17.13	13.41	16.64	12.99	10.32	14.42	15.14
Cel2	7fg	NIR	TR1	SOL									0.004
Cel2	7fg	NIR	TR2	SOL		0.59	0.616	0.285	0.151	1.086	1.869	1.67	0.058
Cel2	7fg	SCO	DREDGE	SOL				0.0481		0.0618		0.0344	0.0087
Cel2	7fg	SCO	OTTER	SOL							0.0014		
Cel2	7fg	SCO	TR1	SOL	0.0003						0.0937	0.0028	0.1771
Cel2	7fg	SCO	TR2	SOL	0.1623	0.0735							0.0993
Sum					1130.364	1067.78	943.421	845.6301	878.358	722.4008	759.8511	844.5887	999.8784

Table 5.6.3.2.7 Whiting (t) landings by Member States and gears, 2003-2011.

ANNEX	REG_AREA	COUNTRY	REG_GEAR	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	BEL	BEAM	WHG	0.122	0.595	0.129	0.393	0.244		0.073		0.035
Cel2	7fg	BEL	BT2	WHG	112.018	136.629	177.846	53.947	67.412	73.184	38.744	64.398	63.663
Cel2	7fg	BEL	OTTER	WHG	8.389								
Cel2	7fg	BEL	TR2	WHG		35.829	36.471	69.641	54.535	43.167	45.048	29.604	24.358
Cel2	7fg	ENG	BEAM	WHG	0.059		0.014	0					
Cel2	7fg	ENG	BT1	WHG		0.001							
Cel2	7fg	ENG	BT2	WHG	21.739	13.129	12.393	7.205	9.845	10.942	9.581	8.951	8.379
Cel2	7fg	ENG	DREDGE	WHG		0.003							
Cel2	7fg	ENG	GN1	WHG	14.478	13.127	17.049	11.215	9.524	4.53	3.408	4.038	8.955
Cel2	7fg	ENG	GT1	WHG		0.097	0.065	0.08	0.225	0.043	0.061	0.017	0.101
Cel2	7fg	ENG	LL1	WHG	0.223	0.066	0.227	0.015	0.002	0.003			
Cel2	7fg	ENG	OTTER	WHG	0.003		0.013		0.033		0.013	0.013	0
Cel2	7fg	ENG	PEL_SEINE	WHG								0.612	
Cel2	7fg	ENG	POTS	WHG		0.106			0.009				
Cel2	7fg	ENG	TR1	WHG	15.847	10.371	3.064	2.025	3.232	4.874	6.762	5.974	7.505
Cel2	7fg	ENG	TR2	WHG	27.997	36.884	27.887	11.535	5.21	4.297	2.717	11.753	2.887
Cel2	7fg	ENG	TR3	WHG			0.074						
Cel2	7fg	FRA	BT2	WHG				0.063					0.025
Cel2	7fg	FRA	GN1	WHG	0.009	0.154	4.701		0.022	0.025	0.025		
Cel2	7fg	FRA	GT1	WHG	0.009		0.014		0.012			0.05	0.066
Cel2	7fg	FRA	OTTER	WHG		10.289						2.5	0.137
Cel2	7fg	FRA	PEL_TRAWL	WHG	7.727	0.18		1.285					0.135
Cel2	7fg	FRA	TR1	WHG	2766.229	2636.194	3577.314	2763.385	1789.324	1098.857	1092.821	1212.74	1141.604
Cel2	7fg	FRA	TR2	WHG	269.742	258.958	460.258	121.41	121.316	84.829	84.829	19.01	10.603
Cel2	7fg	FRA	TR3	WHG									0.733
Cel2	7fg	GBJ	BT2	WHG	1.497	1.475	1.134						
Cel2	7fg	IRL	BEAM	WHG	6.76	8.24							
Cel2	7fg	IRL	BT1	WHG	0.17								
Cel2	7fg	IRL	BT2	WHG	49.43	29.69	27.71	21.5	24.21	3.81	2.73	4.21	14.82
Cel2	7fg	IRL	DEM_SEINE	WHG	6.02	47.02	7.5						
Cel2	7fg	IRL	DREDGE	WHG	0.32	0.72		0.09					
Cel2	7fg	IRL	GN1	WHG	37.87	90.72	16.92	1.99	6.58	8.55	6.69	11.49	14.3
Cel2	7fg	IRL	GT1	WHG								0.06	0.03
Cel2	7fg	IRL	OTTER	WHG	13.18	363.95	0	0	0	0	0	0	0
Cel2	7fg	IRL	PEL_SEINE	WHG	53.27	78.91	8.68						
Cel2	7fg	IRL	PEL_TRAWL	WHG	75.05	42.19		13	0.13				5.06
Cel2	7fg	IRL	POTS	WHG		2.04							1.15
Cel2	7fg	IRL	TR1	WHG	793.4	611.34	641.43	758.07	853.92	814.01	1218.42	1672.12	2519
Cel2	7fg	IRL	TR2	WHG	1875.43	2153.58	4286.66	3141.33	3403.74	1019.6	830.71	1537.7	1304.61
Cel2	7fg	IRL	TR3	WHG				0.6		0	0		0
Cel2	7fg	NIR	TR1	WHG	6.478			13.3		0.2		28.957	24.244
Cel2	7fg	NIR	TR2	WHG		15.573	10.263	8.599	0.685	10.019	11.242	16.655	1.13
Cel2	7fg	SCO	OTTER	WHG							0.0135		
Cel2	7fg	SCO	TR1	WHG	1.5	3.5757					4.5112	1.8351	4.2781
Cel2	7fg	SCO	TR2	WHG	1.2572	6.8365							5.878
SUM					6166.223	6608.472	9317.816	7000.678	6350.21	3180.94	3358.399	4632.687	5163.686

5.6.4 ToR 1.d CPUE and LPUE of cod by area and fisheries

5.6.4.1 ICES sub-divisions 7bcefghjk (Cel1)

STECF EWG 12-06 notes that discard information is scarce. Figure 5.6.4.1.1 displays the trends in cod CPUE and LPUE, 2003-2011. The increasing trends in recent years is consistent with the ICES 2012 stock assessment.

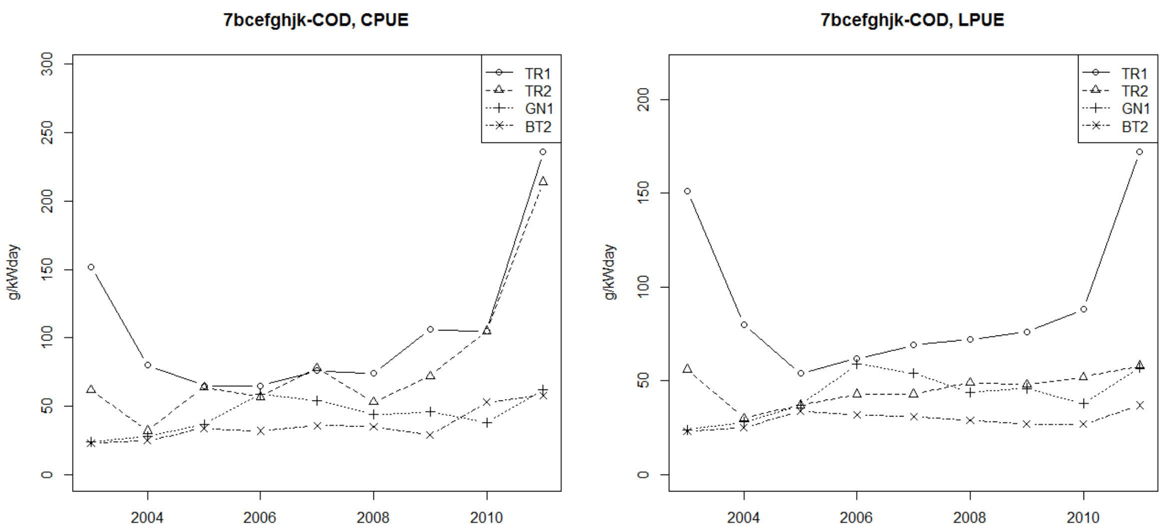


Figure 5.6.4.1.1 CPUE and LPUE for cod and for Celtic Sea and for gear category and years 2003-2011.

Table 5.6.4.1.1 Cod CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2011. Celtic Sea

ANNEX	SPECIES	REG AREA CO	REG GEAR CO	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2011	CPUE 2009-2011
Cel1	COD	7bcefghjk	BEAM	19	37	13	0	0	0	0	0	0	0
Cel1	COD	7bcefghjk	BT1		19	0	0	0	0	0	0	0	0
Cel1	COD	7bcefghjk	BT2	23	25	34	32	36	35	29	53	58	47
Cel1	COD	7bcefghjk	DEM_SEINE	20	54	55	0	0		0	0	0	0
Cel1	COD	7bcefghjk	DREDGE	0	0	0	0	0	0	0	1	0	0
Cel1	COD	7bcefghjk	GN1	24	28	37	59	54	44	46	38	62	49
Cel1	COD	7bcefghjk	GT1	16	9	11	5	6	12	11	106	53	56
Cel1	COD	7bcefghjk	LL1	17	6	4	14	2	2	3	3	11	5
Cel1	COD	7bcefghjk	none	0				0		0	0	18	13
Cel1	COD	7bcefghjk	OTTER	15	21	0	6	2	0	0	12	17	11
Cel1	COD	7bcefghjk	PEL_SEINE	10	14	3				0	0	0	0
Cel1	COD	7bcefghjk	PEL_TRAWL	0	1	0	0	0	0	0	0	0	0
Cel1	COD	7bcefghjk	POTS	0	0	0	0	0	0	1	0	1	1
Cel1	COD	7bcefghjk	TR1	152	80	65	65	76	74	106	105	236	154
Cel1	COD	7bcefghjk	TR2	62	32	64	57	78	53	72	105	214	127
Cel1	COD	7bcefghjk	TR3	0	0	0	0		0	0	45	62	43

Table 5.6.4.1.2 Cod LPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2011. Celtic Sea

ANNEX	SPECIES	REG AREA COI	REG GEAR CO	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
Cel1	COD	7bcefghjk	BEAM	19	37	13	0	0	0	0	0	0	0
Cel1	COD	7bcefghjk	BT1		19	0	0	0	0	0	0	0	0
Cel1	COD	7bcefghjk	BT2	23	25	34	32	31	29	27	27	37	31
Cel1	COD	7bcefghjk	DEM_SEINE	20	54	55	0	0		0	0	0	0
Cel1	COD	7bcefghjk	DREDGE	0	0	0	0	0	0	0	1	0	0
Cel1	COD	7bcefghjk	GN1	24	28	37	59	54	44	46	38	53	47
Cel1	COD	7bcefghjk	GT1	16	9	11	5	6	12	11	23	35	23
Cel1	COD	7bcefghjk	LL1	17	6	4	14	2	2	3	3	9	5
Cel1	COD	7bcefghjk	none	0				0		0	0	19231	13
Cel1	COD	7bcefghjk	OTTER	15	20	0	0	2	0	0	6	7	7
Cel1	COD	7bcefghjk	PEL_SEINE	10	14	3				0	0	0	0
Cel1	COD	7bcefghjk	PEL_TRAWL	0	0	0	0	0	0	0	0	0	0
Cel1	COD	7bcefghjk	POTS	0	0	0	0	0	0	1	0	1	1
Cel1	COD	7bcefghjk	TR1	151	80	54	62	69	72	76	88	180	116
Cel1	COD	7bcefghjk	TR2	56	30	37	43	43	49	48	52	51	52
Cel1	COD	7bcefghjk	TR3	0	0	0	0		0	0	45	75	43

5.6.4.2 ICES sub-divisions 7fg (Cel2)

STECF EWG 12-06 notes that discard information is scarce. Figure 5.6.4.2.1 displays the trends in cod CPUE and LPUE, 2003-2011. The increasing trends in recent years is consistent with the ICES 2012 stock assessment.

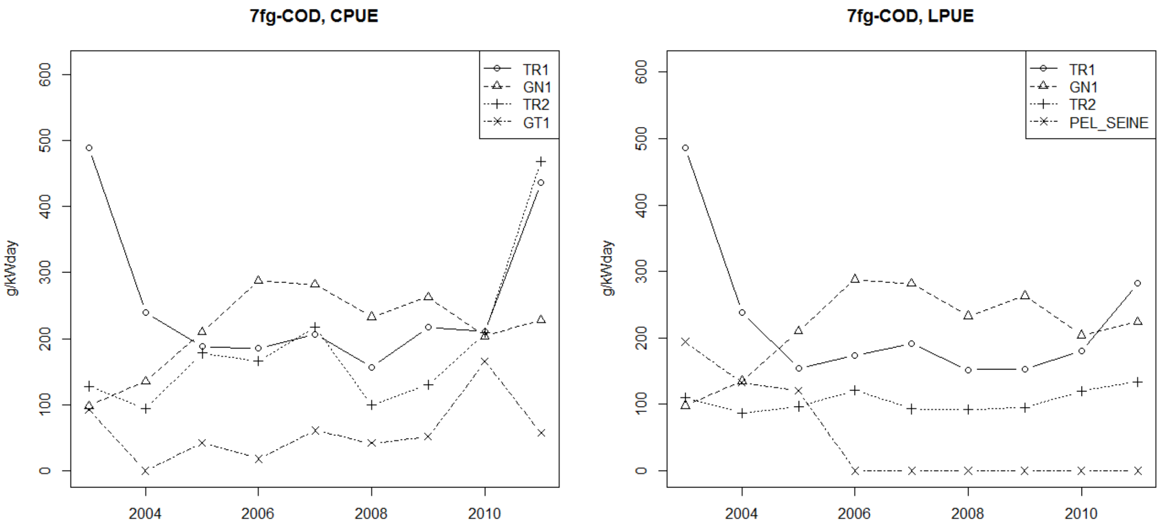


Figure 5.6.4.2.1 CPUE and LPUE for cod and for Divisions VIIfg and for gear category and years 2003-2011.

Table 5.6.4.2.1 Cod CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2011. Divisions VIIfg

ANNEX	SPECIES	REG AREA CO	REG GEAR CO	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007	CPUE 2008	CPUE 2009	CPUE 2010	CPUE 2011	CPUE 2009-2011
Cel2	COD	7fg	BEAM	21	38	109		0	0	0	0	0	0
Cel2	COD	7fg	BT1		0	0	0	0	0	0	0	0	0
Cel2	COD	7fg	BT2	34	38	55	54	59	65	45	66	93	68
Cel2	COD	7fg	DEM_SEINE	0	65	133	0	0	0	0	0	0	0
Cel2	COD	7fg	DREDGE	3	6		0			0	0	0	0
Cel2	COD	7fg	GN1	98	135	210	288	282	233	263	204	228	231
Cel2	COD	7fg	GT1	92	0	42	18	61	42	52	165	57	83
Cel2	COD	7fg	LL1	36		39	61	0		0	0	0	0
Cel2	COD	7fg	OTTER	167	116	0	115	0	0	0	36	25	23
Cel2	COD	7fg	PEL_SEINE	194	133	120	0	0	0	0	0	0	0
Cel2	COD	7fg	PEL_TRAWL	2	14		6	0		0	0	5	2
Cel2	COD	7fg	POTS	0	2	0				0	0	1	0
Cel2	COD	7fg	TR1	489	240	188	185	207	157	217	211	437	290
Cel2	COD	7fg	TR2	128	94	178	166	217	100	130	209	468	245
Cel2	COD	7fg	TR3	0		0	0	0	0	0	0	166	130

Table 5.6.4.2.2 Cod LPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2011. Divisions VIIfg

ANNEX	SPECIES	REG AREA CO	REG GEAR CO	LPUE 2003	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
Cel2	COD	7fg	BEAM	21	38	109		0	0	0	0	0	0
Cel2	COD	7fg	BT1		0	0	0	0	0	0	0	0	0
Cel2	COD	7fg	BT2	34	37	55	54	49	51	41	43	54	48
Cel2	COD	7fg	DEM_SEINE	0	65	133	0	0	0	0	0	0	0
Cel2	COD	7fg	DREDGE	3	6		0			0	0	0	0
Cel2	COD	7fg	GN1	98	135	210	288	282	233	263	204	221	230
Cel2	COD	7fg	GT1	92	0	42	18	61	42	52	41	62	36
Cel2	COD	7fg	LL1	36		39	61	0		0	0	0	0
Cel2	COD	7fg	OTTER	167	113	0	0	0	0	0	36	18	23
Cel2	COD	7fg	PEL_SEINE	194	133	120	0	0	0	0	0	0	0
Cel2	COD	7fg	PEL_TRAWL	2	12		6	0		0	0	6	2
Cel2	COD	7fg	POTS	0	2	0				0	0	1	0
Cel2	COD	7fg	TR1	486	238	154	174	191	152	153	180	265	206
Cel2	COD	7fg	TR2	110	87	97	121	93	92	95	120	90	114
Cel2	COD	7fg	TR3	0		0	0	0	0	0	0	4717	130

5.6.5 ToR 2 and 3 Main species by gear group and remarks on quality of catches and discard estimates

Discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards. Furthermore, due to the limited availability and reliability of discard information for some species and from some countries contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition.

5.6.5.1 ICES sub-divisions 7bcefghjk (Cel1)

Table 5.6.5.1.1 lists the relative landings contributions by major demersal species as caught by the major gears, ranked in ascending order in 2011, 2003-2011.

Table 5.6.5.1.1 Relative landings contributions by major demersal species as caught by the major gears, ranked in ascending order in 2011, 2003-2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Cel1	7bcefghjk	ANF	BT1	0.000	0.001							
Cel1	7bcefghjk	ANF	LL1	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cel1	7bcefghjk	ANF	TR3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Cel1	7bcefghjk	ANF	GT1	0.056	0.081	0.090	0.070	0.071	0.082	0.080	0.017	0.041
Cel1	7bcefghjk	ANF	GN1	0.134	0.151	0.175	0.102	0.129	0.203	0.196	0.138	0.107
Cel1	7bcefghjk	ANF	TR2	0.317	0.290	0.300	0.275	0.270	0.231	0.213	0.164	0.145
Cel1	7bcefghjk	ANF	BT2	0.164	0.179	0.179	0.190	0.185	0.160	0.158	0.264	0.209
Cel1	7bcefghjk	ANF	TR1	0.328	0.298	0.256	0.362	0.345	0.324	0.353	0.417	0.497
Cel1	7bcefghjk	COD	BT1		0.000				0.000			
Cel1	7bcefghjk	COD	TR3	0.000	0.000	0.000	0.000		0.000	0.000	0.001	0.001
Cel1	7bcefghjk	COD	LL1	0.004	0.002	0.002	0.008	0.001	0.001	0.001	0.001	0.002
Cel1	7bcefghjk	COD	GT1	0.003	0.004	0.005	0.003	0.005	0.006	0.005	0.009	0.009
Cel1	7bcefghjk	COD	GN1	0.034	0.074	0.089	0.092	0.092	0.087	0.091	0.060	0.050
Cel1	7bcefghjk	COD	BT2	0.074	0.138	0.199	0.149	0.134	0.108	0.092	0.080	0.065
Cel1	7bcefghjk	COD	TR2	0.259	0.242	0.346	0.361	0.356	0.354	0.333	0.282	0.169
Cel1	7bcefghjk	COD	TR1	0.625	0.539	0.358	0.387	0.413	0.443	0.478	0.567	0.704
Cel1	7bcefghjk	HKE	BT1	0.000	0.000							
Cel1	7bcefghjk	HKE	GT1	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.000
Cel1	7bcefghjk	HKE	TR3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Cel1	7bcefghjk	HKE	BT2	0.026	0.019	0.017	0.018	0.015	0.011	0.014	0.010	0.006
Cel1	7bcefghjk	HKE	TR2	0.136	0.129	0.134	0.108	0.092	0.092	0.087	0.066	0.042
Cel1	7bcefghjk	HKE	LL1	0.011	0.006	0.015	0.123	0.235	0.326	0.138	0.113	0.073
Cel1	7bcefghjk	HKE	TR1	0.356	0.359	0.402	0.380	0.355	0.301	0.321	0.287	0.259
Cel1	7bcefghjk	HKE	GN1	0.469	0.487	0.430	0.369	0.301	0.270	0.439	0.523	0.619
Cel1	7bcefghjk	NEP	BT1	0.000								
Cel1	7bcefghjk	NEP	LL1	0.000							0.000	0.000
Cel1	7bcefghjk	NEP	TR3	0.002			0.000				0.000	0.000
Cel1	7bcefghjk	NEP	GN1	0.000	0.004	0.003	0.001	0.000	0.001	0.000	0.000	0.000
Cel1	7bcefghjk	NEP	GT1	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cel1	7bcefghjk	NEP	BT2	0.016	0.023	0.018	0.019	0.013	0.005	0.006	0.004	0.005
Cel1	7bcefghjk	NEP	TR1	0.269	0.309	0.287	0.282	0.212	0.256	0.345	0.306	0.346
Cel1	7bcefghjk	NEP	TR2	0.712	0.664	0.693	0.698	0.776	0.739	0.649	0.690	0.649
Cel1	7bcefghjk	PLE	BT1		0.000				0.018			
Cel1	7bcefghjk	PLE	LL1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cel1	7bcefghjk	PLE	TR3	0.000	0.000	0.000	0.001	0.002	0.001	0.004	0.001	0.001
Cel1	7bcefghjk	PLE	GN1	0.002	0.005	0.005	0.003	0.002	0.002	0.005	0.004	0.005
Cel1	7bcefghjk	PLE	GT1	0.005	0.009	0.014	0.008	0.006	0.002	0.002	0.005	0.005
Cel1	7bcefghjk	PLE	TR1	0.104	0.085	0.066	0.061	0.074	0.106	0.117	0.142	0.161
Cel1	7bcefghjk	PLE	TR2	0.248	0.228	0.269	0.308	0.315	0.334	0.311	0.300	0.269
Cel1	7bcefghjk	PLE	BT2	0.642	0.672	0.645	0.620	0.600	0.537	0.562	0.548	0.559
Cel1	7bcefghjk	SOL	BT1	0.000	0.001							
Cel1	7bcefghjk	SOL	LL1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cel1	7bcefghjk	SOL	TR3	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001
Cel1	7bcefghjk	SOL	GN1	0.007	0.013	0.009	0.004	0.006	0.010	0.013	0.007	0.008
Cel1	7bcefghjk	SOL	GT1	0.019	0.023	0.037	0.022	0.025	0.020	0.021	0.015	0.030
Cel1	7bcefghjk	SOL	TR1	0.063	0.049	0.041	0.039	0.038	0.051	0.052	0.064	0.068
Cel1	7bcefghjk	SOL	TR2	0.184	0.169	0.175	0.204	0.219	0.222	0.247	0.212	0.186
Cel1	7bcefghjk	SOL	BT2	0.727	0.746	0.738	0.731	0.712	0.697	0.666	0.702	0.706

5.6.5.2 ICES sub-divisions 7fg (Cel2)

Table 5.6.5.2.1 lists the relative landings contributions by major demersal species as caught by the major gears, ranked in ascending order in 2011, 2003-2011.

Table 5.6.5.2.1 Relative landings contributions by major demersal species as caught by the major gears, ranked in ascending order in 2011, 2003-2011.

ANNEX	REG_AREA	SPECIES	REG_GEAF	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel
Cel2	7fg	ANF	LL1	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Cel2	7fg	ANF	BT1	0.000	0.000							
Cel2	7fg	ANF	TR3			0.000	0.000		0.000	0.000		0.000
Cel2	7fg	ANF	GT1	0.002	0.003	0.008	0.012	0.007	0.011	0.013	0.006	0.012
Cel2	7fg	ANF	GN1	0.041	0.059	0.056	0.033	0.023	0.027	0.040	0.037	0.034
Cel2	7fg	ANF	TR2	0.152	0.164	0.213	0.197	0.241	0.254	0.204	0.168	0.115
Cel2	7fg	ANF	BT2	0.439	0.476	0.483	0.469	0.428	0.349	0.355	0.430	0.360
Cel2	7fg	ANF	TR1	0.365	0.298	0.240	0.289	0.302	0.359	0.388	0.359	0.479
Cel2	7fg	COD	BT1		0.000							
Cel2	7fg	COD	LL1	0.000		0.002	0.001	0.000		0.000	0.000	0.000
Cel2	7fg	COD	TR3			0.000	0.000		0.000	0.000		0.001
Cel2	7fg	COD	GT1	0.000	0.000	0.001	0.001	0.002	0.002	0.001	0.001	0.002
Cel2	7fg	COD	GN1	0.028	0.077	0.104	0.107	0.115	0.117	0.111	0.069	0.058
Cel2	7fg	COD	BT2	0.081	0.147	0.220	0.170	0.148	0.126	0.096	0.090	0.090
Cel2	7fg	COD	TR2	0.138	0.173	0.277	0.292	0.239	0.250	0.232	0.222	0.132
Cel2	7fg	COD	TR1	0.753	0.604	0.396	0.428	0.496	0.505	0.560	0.618	0.717
Cel2	7fg	HKE	BT1	0.000	0.000							
Cel2	7fg	HKE	LL1	0.000	0.007	0.004	0.002					
Cel2	7fg	HKE	TR3			0.000	0.000		0.000	0.000		0.000
Cel2	7fg	HKE	GT1	0.000	0.000	0.000	0.005	0.004	0.003	0.000	0.001	0.001
Cel2	7fg	HKE	BT2	0.110	0.077	0.076	0.106	0.087	0.037	0.034	0.046	0.030
Cel2	7fg	HKE	TR2	0.196	0.193	0.174	0.221	0.173	0.135	0.096	0.107	0.039
Cel2	7fg	HKE	GN1	0.440	0.484	0.535	0.332	0.388	0.512	0.548	0.282	0.348
Cel2	7fg	HKE	TR1	0.255	0.239	0.211	0.334	0.348	0.313	0.322	0.565	0.582
Cel2	7fg	NEP	GT1	0.000								
Cel2	7fg	NEP	BT1	0.000								
Cel2	7fg	NEP	GN1	0.000	0.005	0.003	0.001	0.000	0.001	0.001		0.000
Cel2	7fg	NEP	TR3				0.000					0.000
Cel2	7fg	NEP	BT2	0.023	0.031	0.025	0.032	0.021	0.007	0.008	0.005	0.008
Cel2	7fg	NEP	TR1	0.281	0.274	0.245	0.274	0.213	0.292	0.388	0.347	0.433
Cel2	7fg	NEP	TR2	0.696	0.690	0.727	0.693	0.766	0.700	0.603	0.648	0.559
Cel2	7fg	PLE	LL1	0.000					0.000	0.000		
Cel2	7fg	PLE	BT1		0.000							
Cel2	7fg	PLE	TR3			0.000			0.000	0.000		0.000
Cel2	7fg	PLE	GN1	0.000	0.002	0.003	0.003	0.003	0.000	0.002	0.003	0.003
Cel2	7fg	PLE	GT1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Cel2	7fg	PLE	TR2	0.144	0.160	0.201	0.293	0.281	0.348	0.312	0.262	0.222
Cel2	7fg	PLE	TR1	0.273	0.238	0.216	0.177	0.190	0.264	0.254	0.326	0.273
Cel2	7fg	PLE	BT2	0.583	0.599	0.581	0.527	0.526	0.389	0.431	0.409	0.497
Cel2	7fg	SOL	BT1	0.000	0.000							
Cel2	7fg	SOL	TR3			0.000						0.000
Cel2	7fg	SOL	GN1	0.002	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000
Cel2	7fg	SOL	LL1	0.000		0.000	0.000					0.000
Cel2	7fg	SOL	GT1		0.002	0.000	0.000	0.000	0.000		0.002	0.006
Cel2	7fg	SOL	TR1	0.068	0.040	0.043	0.039	0.045	0.047	0.045	0.037	0.038
Cel2	7fg	SOL	TR2	0.034	0.048	0.064	0.094	0.099	0.108	0.132	0.130	0.114
Cel2	7fg	SOL	BT2	0.896	0.909	0.893	0.866	0.856	0.845	0.823	0.831	0.842

5.6.6 ToR 4 Information on small boats (<10m by area)

Information for French, English and Irish under 10m fisheries were available. Irish information was not available in the re-submitted data. Information for other countries is given by gear type, however this information is known to be incomplete.

5.6.6.1 Fishing effort of small boats by area, Member State and fisheries

Table 5.6.6.1.1 Nominal effort (kWdays at sea) by Member State for both areas, the entire Celtic Sea (Cel 1) and the sub-divisions 7fg only (Cel2).

ANNEX	REG AREA	COUNTRY	VESSEL_LE	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel1	7bcefghjk	DNK	U10M	306	270	270	333	270	108	54		
Cel1	7bcefghjk	ENG	U10M	295423	333150	347372	2997500	3719709	3748095	2809864	2850112	2808353
Cel1	7bcefghjk	FRA	U10M	3348095	4481578	3433602	3622042	3016008	1809810	1800372	2990179	3749274
Cel1	7bcefghjk	GBG	U10M						3052	9274	3501	5172
Cel1	7bcefghjk	IOM	U10M						158			
Cel1	7bcefghjk	NIR	U10M				1145		2579	6912	1611	80
Cel1	7bcefghjk	NLD	U10M									
Cel1	7bcefghjk	SCO	U10M			2011	1403	2440	819	345	212	1132
sum				3643824	4814998	3783255	6622423	6738427	5564621	4626821	5845615	6564011

ANNEX	REG AREA	COUNTRY	VESSEL_LE	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cel2	7fg	ENG	U10M	6153	71725	62049	883688	1228406	1220405	724923	762791	785762
Cel2	7fg	FRA	u10m								5451	2395
Cel2	7fg	GBG	U10M							63		
Cel2	7fg	NIR	U10M				1145		2579	3389	1611	80
Cel2	7fg	NLD	U10M									
Cel2	7fg	SCO	U10M					634	180	37		126
sum				6153	71725	62049	884833	1229040	1223164	728412	769853	788363

5.6.6.2 Catches (landings and discards) of small boats by area, Member State and fisheries

Table 5.6.6.2.1 lists the cod landings by Member State for both areas, the entire Celtic Sea (Cel 1) and the sub-divisions 7fg only (Cel2).

Table 5.6.6.2.Cod landings (t) by Member State for both areas, the entire Celtic Sea (Cel 1) and the sub-divisions 7fg only (Cel2).

ANNEX	REG_AREA	VESSEL_LE	COUNTRY	SPECIES	2003	2003	2003	2003	2003	2003	2003	2003	2003
Cel1	7bcefghjk	u10m	ENG	COD	40.594	27.206	32.371	57.662	66.840	38.743	49.836	84.270	131.703
Cel1	7bcefghjk	u10m	FRA	COD	4.078	2.312	1.750	1.516	2.987	1.376	1.361	17.075	43.627
Cel1	7bcefghjk	u10m	GBG	COD						0.174	0.193	0.005	
Cel1	7bcefghjk	U10M	IRL	COD	195.730	17.380	19.190	10.980		1.200	0.420	28.240	34.170
Cel1	7bcefghjk	u10m	NIR	COD				0.105		0.415	0.203	0.239	0.022
Cel1	7bcefghjk	u10m	SCO	COD			0.044			0.001	0.065	0.004	0.007
sum					240.402	46.898	53.355	70.263	69.827	41.909	52.078	129.832	209.529

ANNEX	REG_AREA	VESSEL_LE	COUNTRY	SPECIES	2003	2003	2003	2003	2003	2003	2003	2003	2003
Cel2	7fg	u10m	ENG	COD	3.962	2.838	16.583	18.783	13.422	4.557	4.373	13.729	31.725
Cel2	7fg	u10m	FRA	COD								0.110	
Cel2	7fg	u10m	GBG	COD							0.012		
Cel2	7fg	U10M	IRL	COD	59.880	17.030	18.600	9.450		0.660		26.880	33.700
Cel2	7fg	u10m	NIR	COD				0.105		0.415	0.203	0.239	0.022
Cel2	7fg	u10m	SCO	COD							0.004		
sum					63.842	19.868	35.183	28.338	13.422	5.632	4.592	40.958	65.447

5.6.7 ToR 5 Any unexpected evolutions of the trends in catches and effort by area, Member State and fisheries

The STECF EWG 12-06 has no comments.

5.6.8 ToR 6 Correlation between partial cod mortality and fisheries

The STECF EWG 12-06 defers estimations and presentation of partial fishing mortalities by fisheries to its follow-up meeting STECF EWG 12-12, 24-28 September 2012.

5.7 Southern hake and *Nephrops* effort regime evaluation in the context of Annex IIB to Council Regulation (EC) No 57/2011)

STECF-EWG considers that Annex IIB of Council Reg. 57/2011 represents a fleet specific effort management regime which supports the southern hake and *Nephrops* recovery plan (Council Reg. 2166/2005). Annex IIB excludes the Gulf of Cádiz although this area is included in the recovery plan regulation (EC Reg 2166/2005) and is part of the definition of the stock area of southern hake and Iberian *Nephrops*.

STECF-EWG notes that the classification of the trawl mesh size ≥32mm in point 1 of Annex IIB mixes two clearly defined Portuguese fisheries. One fishery targets demersal fish species with mesh size 65-69mm, and the other targets crustaceans using two different mesh sizes (shrimps with mesh size 55-59mm and *Nephrops* with mesh size ≥70mm) with different licenses, operating in different fishing grounds and depth ranges. A clear identification of these mesh sizes in the effort regulation may provide more focused and efficient effort management. In the EU Data Collection Framework (DCF) regulation, the metiers are defined according to gear, target species and mesh size, with some aggregation for this last characteristic in the sampling programs. Table 5.7.1 summarizes the Portuguese DCF metiers covered by the analysis of Annex IIB.

Table 5.7.1 Portuguese Annex IIB regulated gears and trammel nets.

Effort control regime (Annex IIB)	DCF métier (Acronym)	Description
Bottom trawls, Danish seines and similar trawls of mesh size ≥ 32 mm	OTB_DEF_>=55_0_0	Otter bottom trawl targeting demersal fish using mesh size ≥ 65 mm
	OTB_CRU_>=55_0_0	Otter bottom trawl targeting crustacean species using mesh size ≥ 55 mm
Gill-nets of mesh size ≥ 60 mm	GNS_DEF_60-79_0_0	Set gillnet targeting demersal fish using mesh size of 60-79 mm
	GNS_DEF_80-99_0_0	Set gillnet targeting demersal fish using mesh size of 80-99 mm
	GNS_DEF_>=100_0_0	Set gillnet targeting demersal fish using mesh size ≥ 100 mm
Bottom longlines	LLS_DEF_0_0_0	Set longline targeting demersal fish
Trammel nets (non-regulated)	GTR_DEF_80-99_0_0	Set trammel net targeting demersal fish using mesh size of 80-99 mm
	GTR_DEF_>=100_0_0	Set trammel net targeting demersal fish using mesh size ≥ 100 mm

STECF-EWG notes that under the gears group indicated in point 1 of the Annex IIB there is also a mixture of different Spanish DCF metiers (Table 5.7.2).

The Spanish bottom trawl operating in the Northern coastal waters (ICES Divisions VIIIc and IXa) is prosecuted by vessels with an overall length over 24 m. The minimum trawl depth is 100 m, the maximum activity period is 18 hours per day and they must stop fishing 48 continuous hours per week. This fleet is composed of otter trawlers and pair trawlers.

The coastal otter trawl fleet uses two different types of gear: “baca” and “jurelera”. “Baca” gear, characterized by a vertical opening of 1.2-1.5 m and a wingspread of 22-25 m, is allowed to use a cod end mesh size of 70 mm to catch demersal species, standing out hake (*Merluccis merluccius*), megrims (*Lepidorhombus boscii* and *L. whiffiagonis*) and anglerfish (*Lophius piscatorius and L. budegassa*). “Jurelera” permits a higher vertical opening (5-5.5 m) and is allowed to use a smaller mesh size (55 mm), so it is used to target pelagic fish as horse mackerel (*Trachurus trachurus*) and mackerel (*Scomber scombrus*). As both type of gears can be simultaneously used during the same trip, the respective DCF métiers need to be inferred by multivariate analysis (Punzón et al., 2010), giving OTB_DEF_>=55_0_0, targeting mainly demersal fish, and OTB_ MPD_>=55_0_0, which lands a variety of demersal and pelagic fish.

The pair bottom trawl fleet uses a gear that can reach a vertical opening of 25 m and a wingspread of 65 m. This fleet is allowed to use a minimum mesh size of 55 mm when it is directed to blue whiting (*Micromesistius poutassou*), the main species in landings. However, this mesh size needs to be extended to 70 mm when the hake proportion exceeds 15% in landings (Castro et al., 2010). However, both cod ends are included into the same DCF mesh range, giving an only DCF métier: PTB_DEF_>=55_0_0.

The Northern Spanish gillnet fleet uses three types of nets: “beta”, “volanta” and “rasco” nets (Castro et al., 2011). “Beta” gear uses mesh sizes of 60 mm to target a variety of demersal species as pouting (*Trisopterus luscus*) and mullets (*Mullus spp.*). This fishing activity directly corresponds with DCF métier GNS_DEF_60-79_0_0. “Volanta” gear is a gillnet composed by nets with 10 m high and 50 m length, which is regulated under a mesh size of 90 mm to specifically catch hake (correspond with GNS_DEF_80-99_0_0). “Rasco” gillnet is composed by nets with 3.5 m high and 50 m length, and uses a 280 mm mesh size to target anglerfish (GNS_DEF_>=100_0_0).

The Spanish set longline fleet uses a line with less than 4000 hooks and is used to catch demersal fish as hake, conger (*C. conger*), pollack (*Pollachius pollachius*) and seabass (*Dicentrarchus labrax*), among others (Castro et al., 2011). This fishing activity corresponds with the DCF métier LLS_DEF_0_0_0.

The Northern Spanish trammel net fleet uses a gear made with three walls of netting, the two outer walls being of a larger mesh size (400-500 mm) than the loosely hung inner netting panel (60-90 mm) targeting a variety of demersal fish as hake, monkfish, wrasses (*Labridae*), raja, sole (*Solea solea*) (Castro et al., 2011). This fishing activity is included in the DCF métier GTR_DEF_60-79_0_0.

Table 5.7.2 Spanish Annex IIB regulated gears and trammel nets.

Effort control regime (Annex IIB)	**DCF métier (Acronym)**	**Description**
Trawl, Danish seines or similar gears of mesh size ≥ 32 mm	OTB_DEF_>=55_0_0	Otter bottom trawl targeting demersal fish (hake, megrim, anglerfish…) using 70 mm mesh size
	OTB_ MPD_>=55_0_0	Otter bottom trawl targeting a mixed of demersal (hake) and pelagic fish (horse mackerel, mackerel…) using a minimum mesh size of 55 mm
	PTB_DEF_>=55_0_0	Pair bottom trawl targeting demersal fish (blue whiting, hake) using a minimum mesh size of 55 mm
Gillnets of mesh size ≥ 60 mm	GNS_DEF_60-79_0_0	Set gillnet targeting demersal fish (pouting, mullets…) using 60 mm mesh size
	GNS_DEF_80-99_0_0	Set gillnet targeting demersal fish (hake) using 80 mm mesh size
	GNS_DEF_>=100_0_0	Set gillnet targeting demersal fish (monkfish) using 280 mm mesh size
Bottom longlines	LLS_DEF_0_0_0	Set longline targeting demersal fish (hake, conger, pollack, seabass…)
Trammel nets (non regulated)	GTR_DEF_60-79_0_0	Set trammel net targeting demersal fish (hake, monkfish, wrasses, raja, sole…) using a minimum mesh size of 60 mm in the inner netting panel

STECF-EWG considers that the use of fishing days (or kW*days) to manage effort of static gears such as gillnets and longlines is a very poor approximation of the effective effort and thus may put at risk the management goals. A possible way to improve the impact of the effort management towards an effective reduction in fishing mortality of static gears could be to enforce continuous closed periods so that fishermen will have to bring their gear ashore and stop fishing during certain periods.

Annex IIB of Council Reg. 57/2011 sets the maximum number of days the fishing vessels are allowed to be present in the area carrying the specified regulated gears (Table 5.7.3). The regulated gear types are named as "3a" (bottom trawler mesh size ≥32 mm), "3b" (gillnet ≥60 mm) and "3c" (bottom longline), using the 2006-2007 regulations numbering. Special conditions are applied to vessels that, in the year 2008 or 2009, landed less than 5 tons of hake, vessels which hake landings constitute less than 3% of logbook recorded landings or vessels that landed less than 2.5 tons of Norway lobster. These special conditions, previously referred as IIB72ab according to their numbering in the regulation (Annex IIB, point 7.2 a and b of previous regulations) are updated to IIB52ab since 2010 regulation.

In 2010, additional days were allocated to Spanish and Portuguese vessels on the basis of permanent cessation of vessels from each country. This different allocation is reflected in the 2011 allowed days at sea.

Table 5.7.3 Historic trends in days at sea by vessel specified in the Council Regulations since 2005.

Annex	AREA	REG GEAR	SPECON (**)	Country	2005	2006	2007	2008	2009	2010	2011
IIB	8c9a	3a, 3b & 3c (*)	none	ESP	264	240	216	194	175	158	158
				FRA							142
				PTR							172
			IIB52ab	ESP	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
				FRA							
				PTR							

(*) according to 2006 and 2007 regulations

(**) SPECON IIB52ab and IIB52a corresponds to IIB72ab and IIB72a of the regulations prior to 2010

5.7.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member state and fisheries

Effort information in kW*days, GT*days and number of vessels by quarter, gear, mesh size range, area and special condition was provided by Portugal, France, England, Scotland, Germany, and Ireland in the Divisions 8c and 9a for the years 2000-2011. Spain did not provide any data in 2011 and 2012, therefore the Spanish values presented in this report, corresponding to the period 2002-2009, are those submitted in 2010.

According to Annex IIB of Regulation 57/2011, in the context of the recovery plan for southern hake and *Nephrops* stocks, fishing vessels with overall length above 10 meters that have trawl nets with mesh sizes >32 mm or gillnets > 60 mm or bottom longlines may be present within the area for a maximum of 158 days during 2011 if they have Spanish flag, 142 days if they have French flag and 172 days if they have Portuguese flag (Table I of the Annex II B, Table 5.7.3).

If, during 2008 or 2009 these vessels landed less than 5 tonnes of hake or hake constitutes less than 3% of logbook recorded landings, or less than 2.5 tonnes of *Nephrops* per year, special conditions are applied and they are not covered by the effort limitation (Table 5.7.3), but are obliged not to exceed the same amounts in 2011. The reference periods were 2001 – 2003 for 2005 – 2009 regulations, 2007 or 2008 for 2010 regulation and 2008 or 2009 for 2011 regulation.

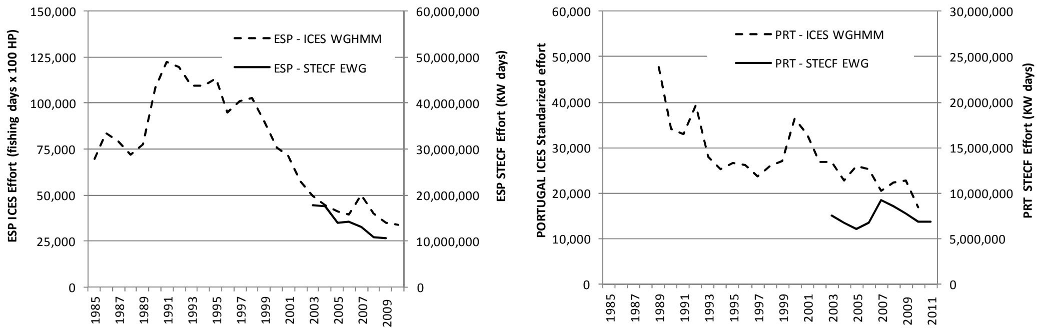


Figure 5.7.1.1 Comparison of trawl effort presented to ICES WGHMM and to STECF EWG data base (this report) (left: Spain, without Gulf of Cádiz, right: Portugal).

Effort estimates provided by Spain (2003-2009) to the EWG database (this report) come from logbooks and have a decreasing trend, while effort estimates provided to ICES WGHMM come from several sources of data and present also a decreasing trend in the same period but with a slight increase in 2007(ICES, 2012; Figure 5.7.1.1, left). Effort estimates provided by Portugal (2003-2011) to the EWG database (this report) present a decreasing trend since 2007. Portuguese data come mostly from logbooks and, for those that do not have logbooks (< 10 m), from sales records. Effort estimates presented by Portugal to the ICES WGHMM come from a standardized effort series based on logbook data (ICES, 2012; Figure 5.7.1.1, right) and have also decreasing trend. Spanish and Portuguese regulated trawls (not including Gulf of Cádiz) land 56% and 5% of 8c9a hake, respectively (see Fig. 5.7.2.3).

The effort data in terms of kW*days by Member State is given in Table 5.7.1.1 (I and II).

Table 5.7.1.1 (I) Trend in nominal effort (kW*days at sea) by Member State and existing derogations given in Table 1 of Annex IIB (Coun. Reg. 57/2011), 2000-2006. Derogations are sorted by gear, special condition (SPECON) and country. Data quality is summarised in section 4. Note that the gear type "3t" denotes the non-regulated effort for trammel gear with all mesh sizes. **No Spanish data in 2010 and 2011.**

ANNEX	AREA	REG_GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006
IIb	8c-9a	3a	IIB52ab	ESP			2,109,760	1,820,929	3,051,855	2,677,605	2,420,208
IIb	8c-9a	3a	IIB52ab	PRT			7,621	2,459,587	1,657,564	1,609,414	560,066
IIb	8c-9a	3a	none	ENG						1,277	
IIb	8c-9a	3a	none	ESP			9,822,108	15,456,694	14,344,840	11,072,135	11,473,544
IIb	8c-9a	3a	none	FRA	63,277	123,663	484,849	120,552	110,098	198,178	345,256
IIb	8c-9a	3a	NONE	IRL				4,208			1,612
IIb	8c-9a	3a	NONE	PRT	3,808,432	1,807,966	1,741,444	5,077,895	5,074,403	4,425,695	6,137,862
IIb	8c-9a	3b	IIB52ab	ESP			671,679	662,947	865,145	1,033,742	916,120
IIb	8c-9a	3b	IIB52ab	PRT			5,884	35,022	2,695	51,269	116,027
IIb	8c-9a	3b	none	ENG							26,652
IIb	8c-9a	3b	none	ESP			438,463	450,978	684,167	787,527	916,038
IIb	8c-9a	3b	none	FRA	4,723	4,750	24,598	5,762	28,023	97,700	69,478
IIb	8c-9a	3b	NONE	PRT	151,503	90,812	162,118	88,641	32,273	144,697	231,204
IIb	8c-9a	3b	none	SCO							3,234
IIb	8c-9a	3c	IIB52ab	ESP			591,039	621,801	692,039	686,974	755,191
IIb	8c-9a	3c	IIB52ab	PRT	45,446	10,923	20,594	328,631	280,951	572,385	869,687
IIb	8c-9a	3c	none	ENG				8,853			4,928
IIb	8c-9a	3c	none	ESP			310,392	344,686	383,472	545,271	830,548
IIb	8c-9a	3c	none	FRA	1,738		3,312	3,318	3,972	2,094	588
IIb	8c-9a	3c	NONE	IRL							1,684
IIb	8c-9a	3c	NONE	PRT		544		56,188	33,808	39,774	95,715
IIb	8c-9a	3c	none	SCO							
IIb	8c-9a	3t	none	ESP			461,705	438,995	736,892	955,031	742,397
IIb	8c-9a	3t	none	FRA	4,108		23,894	3,977	525		1,878
IIb	8c-9a	3t	NONE	PRT	74,911	79,822	89,495	74,729	40,252	253,707	525,524
IIb	8c-9a	none	none	DEU							
IIb	8c-9a	none	none	ENG							3,136
IIb	8c-9a	none	none	ESP			18,346,437	24,809,378	16,299,264	15,443,521	13,662,008
IIb	8c-9a	none	none	FRA	85,431	159,563	1,216,983	224,468	97,130	125,835	318,711
IIb	8c-9a	none	NONE	IRL		1,585	4,281	11,686			6,020
IIb	8c-9a	none	NONE	PRT				11,726	5,402	78,981	159,803

Table 5.7.1.1 (II) Trend in nominal effort (kW*days at sea) by Member State and existing derogations given in Table 1 of Annex IIB (Coun. Reg. 57/2011), 2000-2011. Derogations are sorted by gear, special condition (SPECON) and country. Data quality is summarised in section 4. Note that the gear type "3t" denotes the non-regulated effort for trammel gear with all mesh sizes. **No Spanish data in 2010 and 2011.**

ANNEX	AREA	REG_GEAR	SPECON	COUNTRY	2007	2008	2009	2010	2011
IIb	8c-9a	3a	IIB52ab	ESP	2,458,721	2,478,225	2,403,446		
IIb	8c-9a	3a	IIB52ab	PRT	186,292	195,742	314,693	310,340	887,002
IIb	8c-9a	3a	none	ENG					
IIb	8c-9a	3a	none	ESP	9,902,350	7,975,346	7,959,428		
IIb	8c-9a	3a	none	FRA	274,429	315,954	315,954	47,904	71,646
IIb	8c-9a	3a	NONE	IRL				82	
IIb	8c-9a	3a	NONE	PRT	8,941,196	8,299,895	7,380,318	6,493,382	5,996,917
IIb	8c-9a	3b	IIB52ab	ESP	1,056,900	1,330,193	1,668,152		
IIb	8c-9a	3b	IIB52ab	PRT	152,925	176,029	276,056	248,338	177,501
IIb	8c-9a	3b	none	ENG	1,984				
IIb	8c-9a	3b	none	ESP	1,010,060	1,195,943	1,480,125		
IIb	8c-9a	3b	none	FRA	128,595	296,765	296,765	114,202	61,604
IIb	8c-9a	3b	NONE	PRT	816,228	886,822	763,806	680,987	285,066
IIb	8c-9a	3b	none	SCO					
IIb	8c-9a	3c	IIB52ab	ESP	846,255	897,264	1,099,242		
IIb	8c-9a	3c	IIB52ab	PRT	841,563	750,091	864,313	844,144	897,019
IIb	8c-9a	3c	none	ENG					
IIb	8c-9a	3c	none	ESP	522,362	521,613	728,602		
IIb	8c-9a	3c	none	FRA	700	40,052	40,052	83,794	46,310
IIb	8c-9a	3c	NONE	IRL	2,472				
IIb	8c-9a	3c	NONE	PRT	149,000	139,305	111,767	91,062	91,410
IIb	8c-9a	3c	none	SCO				2,323	3,437
IIb	8c-9a	3t	none	ESP	716,707	917,963	932,788		
IIb	8c-9a	3t	none	FRA		2,823	2,823	5,048	3,686
IIb	8c-9a	3t	NONE	PRT	1,252,867	1,026,614	1,264,013	1,437,577	1,430,235
IIb	8c-9a	none	none	DEU	15,685	23,373	6,174	7,272	4,040
IIb	8c-9a	none	none	ENG					
IIb	8c-9a	none	none	ESP	14,825,151	13,411,326	15,960,434		
IIb	8c-9a	none	none	FRA	317,890	44,551	44,551	47,003	38,166
IIb	8c-9a	none	NONE	IRL					
IIb	8c-9a	none	NONE	PRT	304,567	440,799	393,947	370,203	409,189

Information on trends in GTdays will be made available on the website: Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

In addition to the 2006 and 2007 regulation defined gear types "3a" (bottom trawler mesh size ≥32 mm), "3b" (gillnet ≥60 mm), "3c" (bottom longline) and the undefined ("none"), the tables include trammel nets under the coding "3t", as they were found to contribute significantly to the static effort deployed.

Spain did not submit data for the years 2010 and 2011. Portugal provided 2011 data, not changing previous data, therefore no differences were found between the data submitted in 2011 and 2012 for 2000-2010 data.

Figure 5.7.1.2 shows effort trends for Portugal and Spain, the main players in the area, for the period 2004 – 2011. Spanish data from 2010 and 2011 are not available.

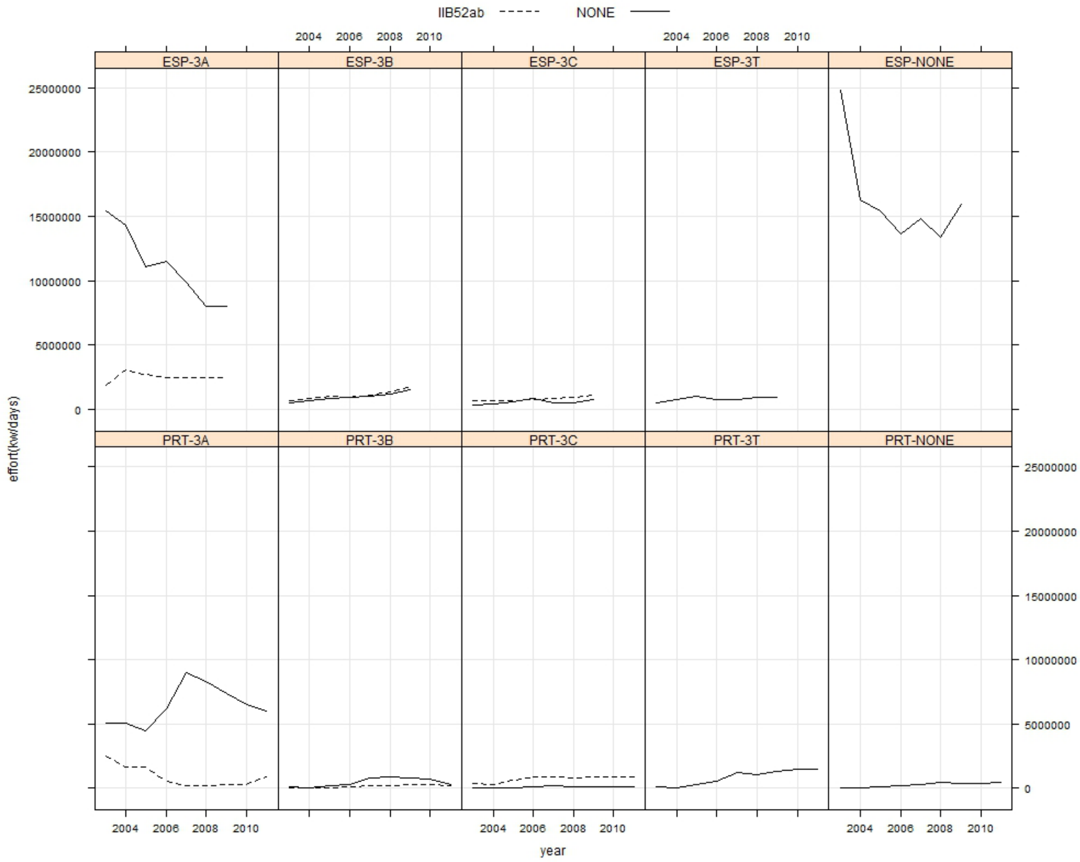


Fig. 5.7.1.2 Effort (KW*days) trends by gear type and Member State. Spanish data from 2010 and 2011 are not available.

The data submitted by the Member States for the years 2000-2003, initial period of the time series, do not seem realistic as several gears present very low effort data and/or gaps. Both Portuguese and Spanish information come from logbooks. Spanish data for 2010 and 2011 were not available. See section 4 for more details in data quality provided by Member States. Spanish unregulated gears (ESP-NONE) and Spanish and Portuguese regulated trawlers (ESP-3A and PRT-3A, respectively) are the gears deploying more effort in the area (2007-2009 average), 34%, 20% and 19% respectively.

Spanish unregulated gears effort (ESP-NONE, Figs. 5.7.1.2 and 5.7.1.3) has been stable in the period 2005-2009. The effort of trawlers (3A) under effort restrictions (continuous line) is decreasing since 2003 in the case of Spain and since 2007 in the case of Portugal (ESP and PRT 3A continuous line). The effort of trawlers (3A) without effort restrictions, i.e. with special conditions (IIB52ab, dashed line) has been stable since 2006 in the case of Spain and in the period 2007-2010 in the Portuguese case, with a slight increase in 2011.

The effort of the Spanish regulated gillnet (ESP-3B) (3%) slightly increased along the time series available, while the effort of the Spanish regulated longline (ESP-3C) and Portuguese regulated gillnet (POR-3B) and longline (POR-3C) (1%, 2% and 0.3%, respectively) has been stable.

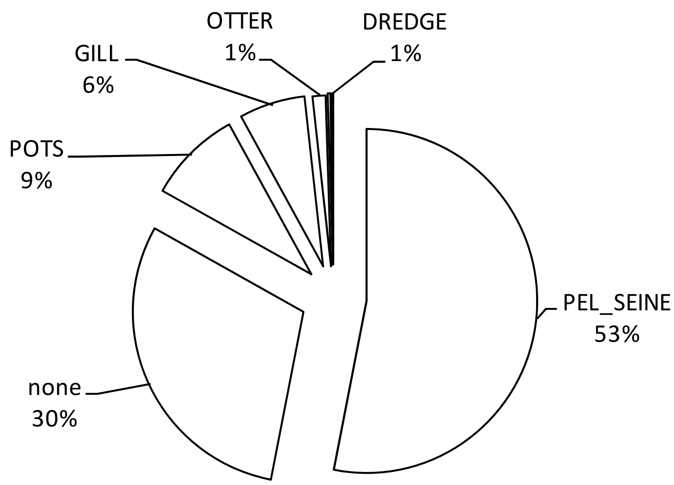


Figure 5.7.1.3.- Spanish non regulated gears (ESP-NONE): effort (KW*day) by gear (2007-2009 average). “none” gears (30%) are composed by tuna and mackerel gears (troll and hand lines).

Figure 5.7.1.3 identifies the Spanish effort composition of unregulated gears (ESP-NONE in Figure 5.7.1.2) (2007-2009 average). “none” information (30%) in the Figure 5.7.1.3 corresponds to tuna and mackerel gears (troll and hand lines), while gillnet and otter information of ESP-NONE (6% and 1%) are from unregulated or not identified mesh sizes.

Table 5.7.1.2 Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2011. Derogations are sorted by gear and special condition (SPECON) (all countries together). Data qualities are summarised in section 4.3. Note that the gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes. **No Spanish data in 2010 and 2011.**

ANNEX	AREA	REG_GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006
IIb	8c-9a	3a	IIB52ab			2,117,381	4,280,516	4,709,419	4,287,019	2,980,274
IIb	8c-9a	3a	NONE	3,871,709	1,931,629	12,048,401	20,659,349	19,529,341	15,697,285	17,958,274
IIb	8c-9a	3b	IIB52ab			677,563	697,969	867,840	1,085,011	1,032,147
IIb	8c-9a	3b	NONE	156,226	95,562	625,179	545,381	744,463	1,029,924	1,246,606
IIb	8c-9a	3c	IIB52ab	45,446	10,923	611,633	950,432	972,990	1,259,359	1,624,878
IIb	8c-9a	3c	NONE	1,738	544	313,704	413,045	421,252	587,139	933,463
IIb	8c-9a	3t	NONE	79,019	79,822	575,094	517,701	777,669	1,208,738	1,269,799
IIb	8c-9a	none	NONE	85,431	161,148	19,567,701	25,057,258	16,401,796	15,648,337	14,149,678

ANNEX	AREA	REG_GEAR	SPECON	2007	2008	2009	2010	2011
IIb	8c-9a	3a	IIB52ab	2,645,013	2,673,967	2,718,139	310,340	887,002
IIb	8c-9a	3a	NONE	19,117,975	16,591,195	15,655,700	6,541,368	6,068,563
IIb	8c-9a	3b	IIB52ab	1,209,825	1,506,222	1,944,208	248,338	177,501
IIb	8c-9a	3b	NONE	1,956,867	2,379,530	2,540,696	795,189	346,670
IIb	8c-9a	3c	IIB52ab	1,687,818	1,647,355	1,963,555	844,144	897,019
IIb	8c-9a	3c	NONE	674,534	700,970	880,421	177,179	141,157
IIb	8c-9a	3t	NONE	1,969,574	1,947,400	2,199,624	1,442,625	1,433,921
IIb	8c-9a	none	NONE	15,463,293	13,920,049	16,405,106	424,478	451,395

Table 5.7.1.2 lists the trend in effort by derogation since 2000 in terms of kW*days at sea. GT*days at sea and number of vessel are available on the web. Due to lack of Spanish data for years 2010 and 2011, nothing can be concluded on global effort changes in the last two years.

Trawl deploys most effort in the area (46%), being most of it (86%) under effort control (2007-2009 average). Between 2007 and 2009, passive gears (3b, 3c and 3t) accounted for approximately 19% of all effort. However, such results have a limited meaning regarding the fishing pressure executed by these fleets, once the unit kW*day does not take into account the number of hooks deployed and area of the nets and hence it is a poor indicator of the fishing activity. In 2007-2009, about 40% of the effort was assigned to other gears than the regulated ones (“3t” and “none” gears), of which trammel nets (“3t”) contribute 5% to the overall effort deployed. Most of this effort is deployed by gears that do not target hake, *Nephrops* or anglerfish.

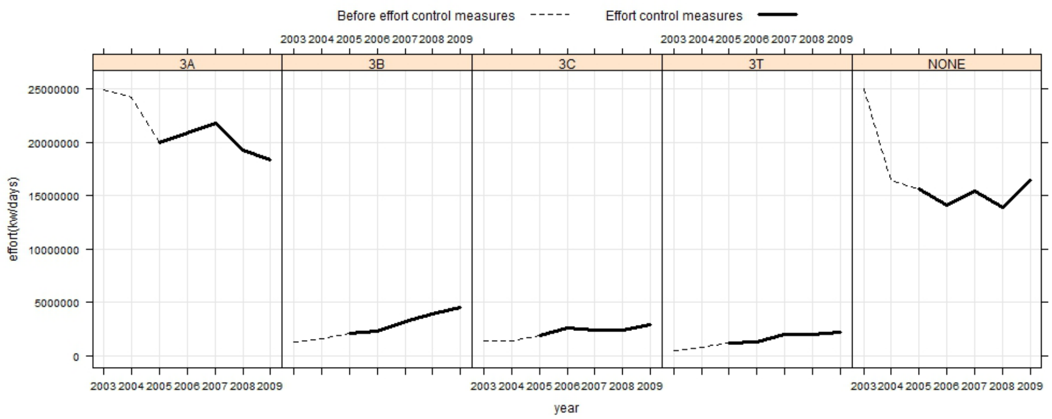


Fig. 5.7.1.4 Effort trends by gear type (Spain and Portugal together). Years 2010 and 2011 points removed from the graph since no Spanish data were available for these years. Period before effort control measures in dashed line.

Figure 5.7.1.4 shows the effort trends by gear type in the period 2002-2009, the dashed line identifying the period before the enforcement of effort control measures. Years 2010 and 2011 were not included due to unavailability of Spanish data. The effort of trawlers (3A) has decreased since 2007, while the effort of gillnets (3B) has slightly increased. The effort of longline (3C), trammel (3T) and unregulated gears (NONE) has been stable since the effort control measures were enforced.

5.7.1.1 Spatial distribution of effective fishing effort by rectangle statistical rectangle

Portugal and Spain submitted effort by ICES rectangle. Figure 5.7.1.1.1 shows the distribution of effort for regulated gears, with effort control (“none”) and without effort restriction (“IIB52ab”) for the period 2003-2009. For the years 2010 and 2011, only the effort from Portuguese fleets is plotted (Figure 5.7.1.1.2).

In these figures, all the Spanish longline effort was misallocated to specon “none”.

As referred in Section 5.7, STECF-EWG considers that the use of fishing days (or kW*days) to manage effort of static gears such as gillnets and longlines is a very poor approximation of the effective effort. Although the figures present the effective effort in the same units, the effort deployed by the different gears is not comparable.

No changes in the effort distribution pattern have been identified since the implementation of the fishing effort regulation.

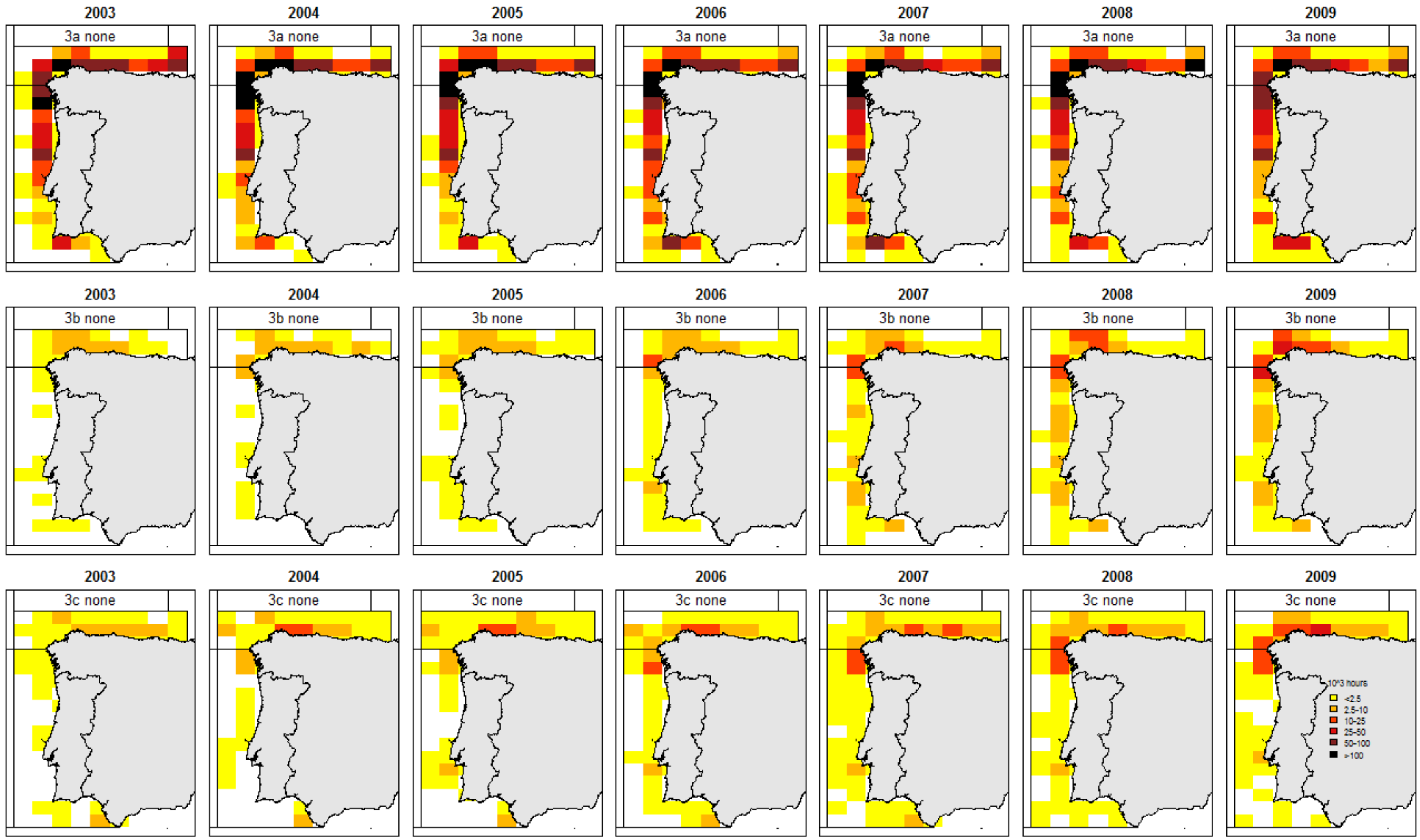


Figure 5.7.1.1.1 (I) Spatial distribution of effort by gear type with no special conditions for the period 2003-2009. By mistake all Spanish effort under category “3c IIB52ab” was included in “3c none”.

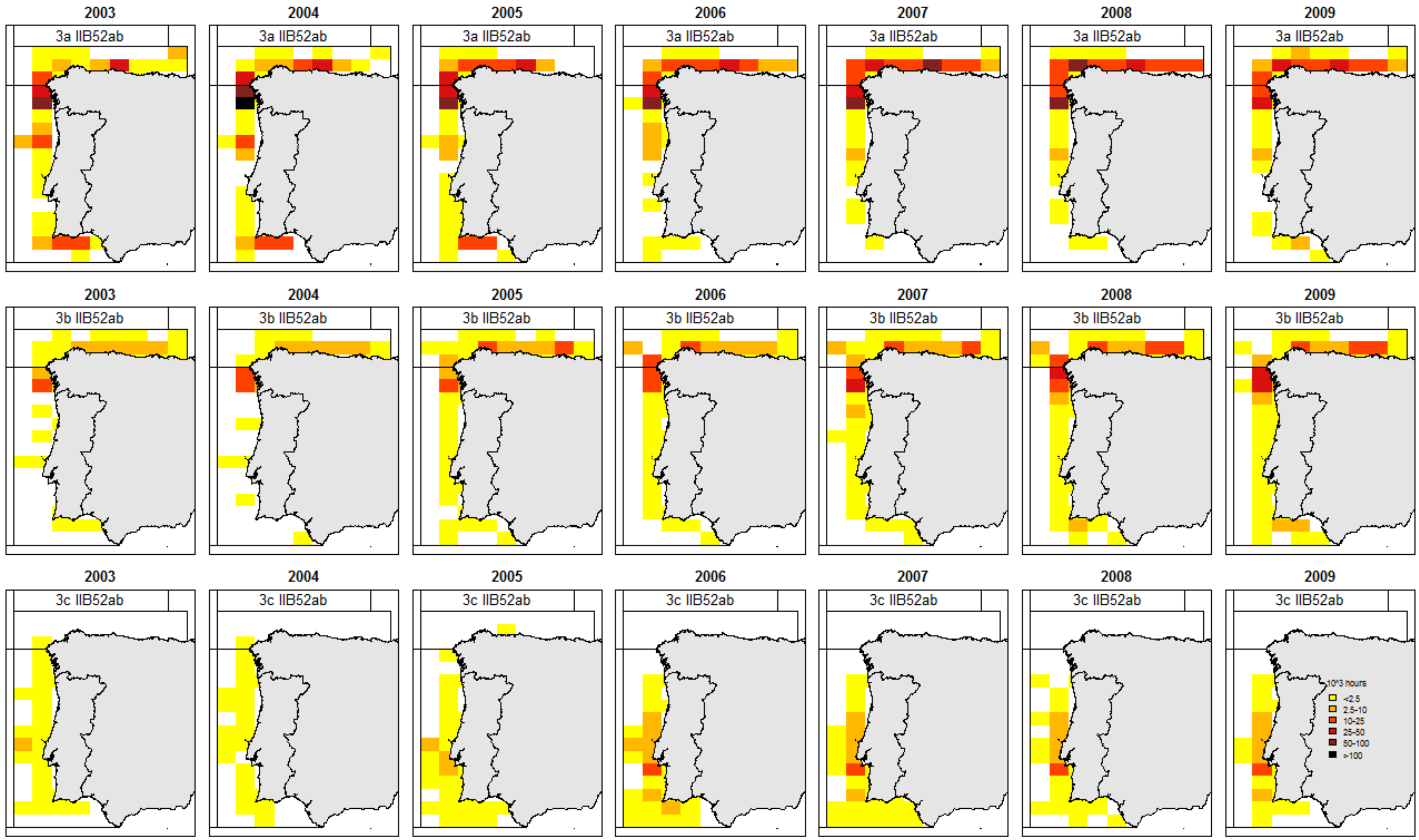


Figure 5.7.1.1.1 (II) Spatial distribution of effort by gear type with special conditions for the period 2003-2009. By mistake all Spanish effort under category "3c IIB52ab" was included in "3c none" in Figure 5.7.1.1.1(II), due to misallocation.

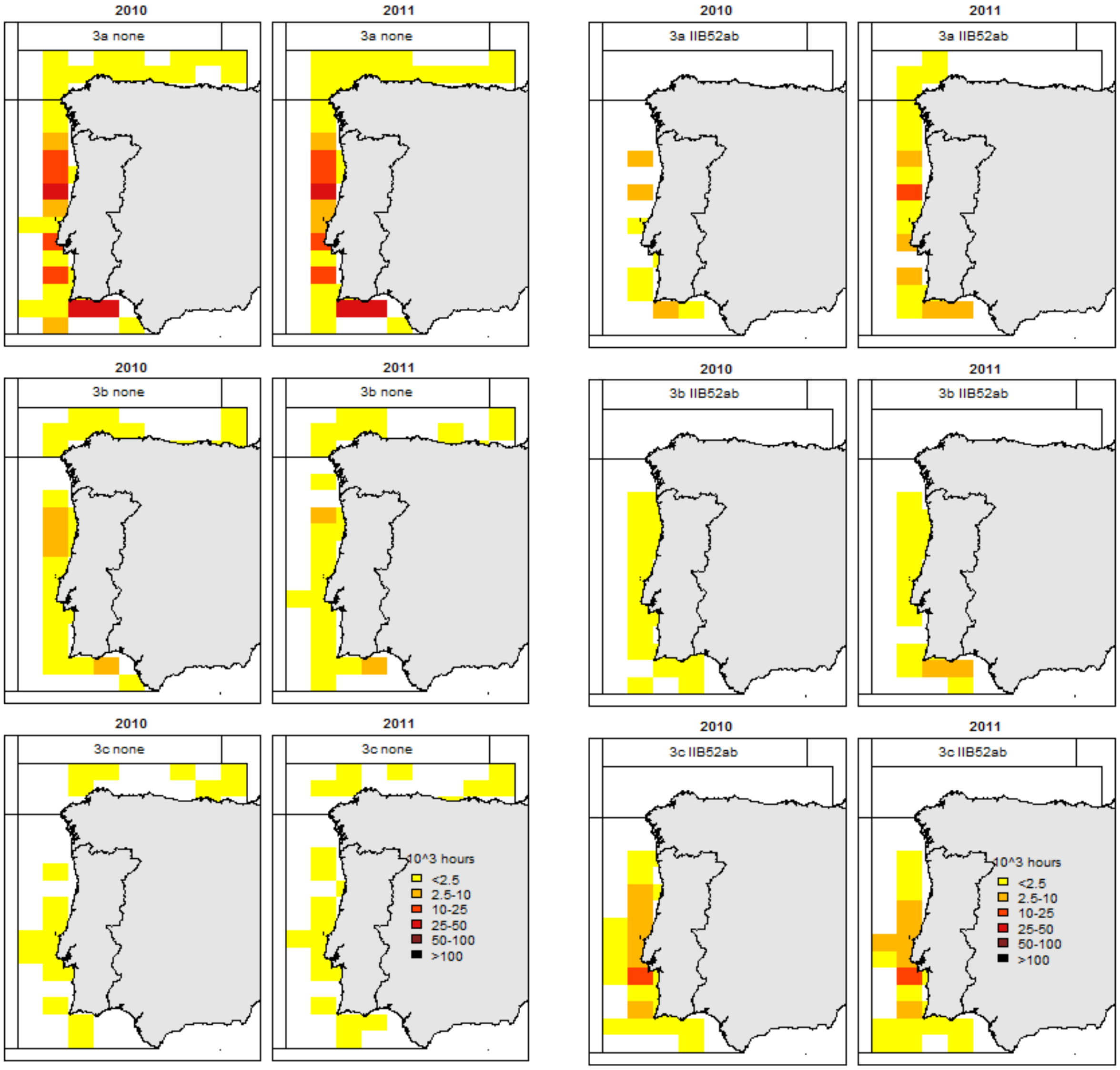


Figure 5.7.1.1.2 Spatial distribution of effort by gear and specon types in the period 2010-2011 for the Portuguese fleets. No Spanish data were available for these years.

5.7.2 ToR 1.b Catches (landings and discards) of hake and Norway lobster in weight and numbers at age by Member State and fisheries

Portugal provided data on 2002-2011 landings. As in 2011, in 2012 Spain did not provide data, so the Spanish 2002-2009 data used in this report are the same reported last two years. Member States (MS) did not provide hake information by age because there are relevant doubts about this species ageing (ICES, 2009, 2010a). For *Nephrops* there is not a standardized ageing methodology. Length composition of the catches presented to ICES assessment working groups are available for the DCF metiers, but could not be uploaded to the database because the database uses only age compositions.

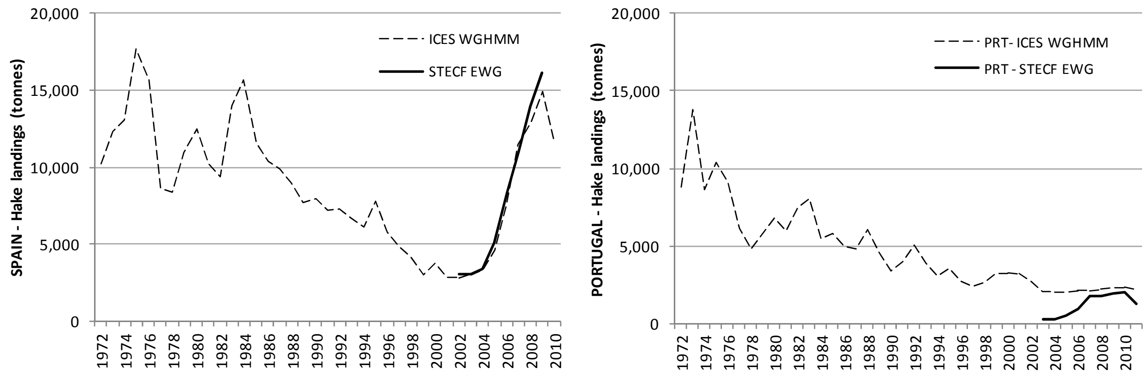


Figure 5.7.2.1 Comparison of the hake landings (tonnes) presented to ICES WGHMM and STECF EWG data base (this report) (left: Spain, right: Portugal).

Hake landings provided to the EWG database (this report) by Spain (2002-2009) come from logbooks and are 5% higher than the landings reported to ICES WGHMM 2011 (ICES, 2011), that come from several sources of data (Figure 5.7.2.1, left). Hake landings provided to the EWG database (this report) by Portugal (2003-2011) come from logbooks for most of the vessels and from sales records for vessels under 10 metres. Portuguese landings until 2007 are lower than the landings reported to WGHMM 2012 (ICES, 2012), which come from landings records (Figure 5.7.2.1, right). This difference is probably due to the low number of logbook records inserted in the database in those years.

Both countries provided discard information for hake. However, the Spanish discards data showed unrealistic values for the years before 2009 (see “Data Quality” section). To overcome this problem, discard ratios from WGHMM 2010 report (ICES, 2010b) have been applied to compute the Spanish hake’s discard time series. In what concerns the Portuguese data, discards data included in the EWG database until 2010 were assigned proportionally to trawl landings, the only gear sampled. However, the data call grouping is not consistent with the DCF metiers sampled and the discards from Portugal were removed from the database. Data on annual discards by species and DCF metier were provided and included in tables and figures in aggregated form.

Taking into consideration on board sampling program and the DCF metiers, the annual discard estimates have high coefficients of variation. The assignment of these data to the data call disaggregated metiers when the metiers do not perfectly match is not possible without making strong assumptions different from those used in the established raising procedures and could lead to completely different total discard estimates.

The contributions of the individual derogations to the overall landings can be taken from Table 5.7.2.1. The following sections represent the landings and discards by derogation in weight for hake (HKE) and *Nephrops* (NEP).

Table 5.7.2.1 (I) Hake and *Nephrops* landings (t) and discards (t) by species and derogation, 2003-2011. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “NONE” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	HKE	2003	3A	IIB72AB	165	--
IIB	8C-9A	HKE	2003	3A	NONE	2070	--
IIB	8C-9A	HKE	2003	3B	IIB72AB	85	--
IIB	8C-9A	HKE	2003	3B	NONE	545	--
IIB	8C-9A	HKE	2003	3C	IIB72AB	22	--
IIB	8C-9A	HKE	2003	3C	NONE	115	--
IIB	8C-9A	HKE	2003	3T	NONE	13	--
IIB	8C-9A	HKE	2003	NONE	NONE	407	--
IIB	8C-9A	HKE	2004	3A	IIB72AB	186	29
IIB	8C-9A	HKE	2004	3A	NONE	2311	344
IIB	8C-9A	HKE	2004	3B	IIB72AB	139	--
IIB	8C-9A	HKE	2004	3B	NONE	623	--
IIB	8C-9A	HKE	2004	3C	IIB72AB	63	--
IIB	8C-9A	HKE	2004	3C	NONE	83	--
IIB	8C-9A	HKE	2004	3T	NONE	20	--
IIB	8C-9A	HKE	2004	NONE	NONE	229	1
IIB	8C-9A	HKE	2005	3A	IIB72AB	398	189
IIB	8C-9A	HKE	2005	3A	NONE	3371	958
IIB	8C-9A	HKE	2005	3B	IIB72AB	224	--
IIB	8C-9A	HKE	2005	3B	NONE	1040	--
IIB	8C-9A	HKE	2005	3C	IIB72AB	134	--
IIB	8C-9A	HKE	2005	3C	NONE	142	--
IIB	8C-9A	HKE	2005	3T	NONE	77	--
IIB	8C-9A	HKE	2005	NONE	NONE	287	2
IIB	8C-9A	HKE	2006	3A	IIB72AB	1301	504
IIB	8C-9A	HKE	2006	3A	NONE	5584	2331
IIB	8C-9A	HKE	2006	3B	IIB72AB	427	--
IIB	8C-9A	HKE	2006	3B	NONE	1231	--
IIB	8C-9A	HKE	2006	3C	IIB72AB	243	--
IIB	8C-9A	HKE	2006	3C	NONE	157	--
IIB	8C-9A	HKE	2006	3T	NONE	94	--
IIB	8C-9A	HKE	2006	NONE	NONE	310	22
IIB	8C-9A	HKE	2007	3A	IIB72AB	1534	233
IIB	8C-9A	HKE	2007	3A	NONE	6843	2316
IIB	8C-9A	HKE	2007	3B	IIB72AB	704	--
IIB	8C-9A	HKE	2007	3B	NONE	2324	--
IIB	8C-9A	HKE	2007	3C	IIB72AB	414	--
IIB	8C-9A	HKE	2007	3C	NONE	210	--
IIB	8C-9A	HKE	2007	3T	NONE	266	--
IIB	8C-9A	HKE	2007	NONE	NONE	455	14
IIB	8C-9A	HKE	2008	3A	IIB72AB	1873	312
IIB	8C-9A	HKE	2008	3A	NONE	7686	1994
IIB	8C-9A	HKE	2008	3B	IIB72AB	873	--
IIB	8C-9A	HKE	2008	3B	NONE	3407	--
IIB	8C-9A	HKE	2008	3C	IIB72AB	1008	--
IIB	8C-9A	HKE	2008	3C	NONE	538	--
IIB	8C-9A	HKE	2008	3T	NONE	233	--
IIB	8C-9A	HKE	2008	NONE	NONE	589	21
IIB	8C-9A	HKE	2009	3A	IIB72AB	2295	471

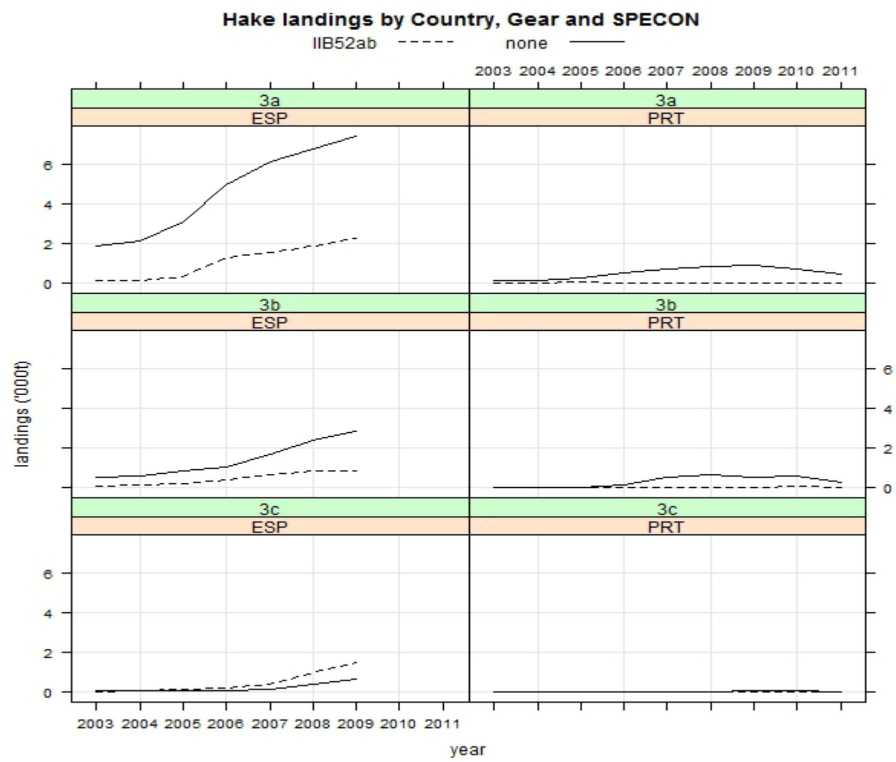
Table 5.7.2.1 (II) Hake and *Nephrops* landings (t) and discards (t) by species and derogation, 2003-2011. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	HKE	2009	3A	NONE	8313	3439
IIB	8C-9A	HKE	2009	3B	IIB72AB	937	--
IIB	8C-9A	HKE	2009	3B	NONE	3698	--
IIB	8C-9A	HKE	2009	3C	IIB72AB	1565	--
IIB	8C-9A	HKE	2009	3C	NONE	864	--
IIB	8C-9A	HKE	2009	3T	NONE	358	--
IIB	8C-9A	HKE	2009	NONE	NONE	524	25
IIB	8C-9A	HKE	2010	3A	IIB72AB	8	6
IIB	8C-9A	HKE	2010	3A	NONE	752	579
IIB	8C-9A	HKE	2010	3B	IIB72AB	73	--
IIB	8C-9A	HKE	2010	3B	NONE	829	--
IIB	8C-9A	HKE	2010	3C	IIB72AB	33	--
IIB	8C-9A	HKE	2010	3C	NONE	182	--
IIB	8C-9A	HKE	2010	3T	NONE	212	--
IIB	8C-9A	HKE	2010	NONE	NONE	5	--
IIB	8C-9A	HKE	2011	3A	IIB72AB	19	28
IIB	8C-9A	HKE	2011	3A	NONE	494	717
IIB	8C-9A	HKE	2011	3B	IIB72AB	37	--
IIB	8C-9A	HKE	2011	3B	NONE	376	--
IIB	8C-9A	HKE	2011	3C	IIB72AB	37	--
IIB	8C-9A	HKE	2011	3C	NONE	109	--
IIB	8C-9A	HKE	2011	3T	NONE	335	--
IIB	8C-9A	HKE	2011	NONE	NONE	22	--
IIB	8C-9A	NEP	2003	3A	IIB72AB	128	0
IIB	8C-9A	NEP	2003	3A	NONE	210	0
IIB	8C-9A	NEP	2003	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2003	3B	NONE	0	0
IIB	8C-9A	NEP	2003	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2003	3C	NONE	0	0
IIB	8C-9A	NEP	2003	3T	NONE	0	0
IIB	8C-9A	NEP	2003	NONE	NONE	8	0
IIB	8C-9A	NEP	2004	3A	IIB72AB	107	0
IIB	8C-9A	NEP	2004	3A	NONE	169	0
IIB	8C-9A	NEP	2004	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2004	3B	NONE	0	0
IIB	8C-9A	NEP	2004	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2004	3C	NONE	0	0
IIB	8C-9A	NEP	2004	3T	NONE	1	0
IIB	8C-9A	NEP	2004	NONE	NONE	6	0
IIB	8C-9A	NEP	2005	3A	IIB72AB	139	0
IIB	8C-9A	NEP	2005	3A	NONE	156	0
IIB	8C-9A	NEP	2005	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2005	3B	NONE	1	0
IIB	8C-9A	NEP	2005	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2005	3C	NONE	0	0
IIB	8C-9A	NEP	2005	3T	NONE	1	0
IIB	8C-9A	NEP	2005	NONE	NONE	15	0
IIB	8C-9A	NEP	2006	3A	IIB72AB	17	0
IIB	8C-9A	NEP	2006	3A	NONE	317	0

Table 5.7.2.1 (III) Hake and *Nephrops* landings (t) and discards (t) by species and derogation, 2003-2011. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	**Area**	**Species**	**Year**	**Gear**	**Specon**	**Landings**	**Discards**
IIB	8C-9A	NEP	2006	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2006	3B	NONE	1	0
IIB	8C-9A	NEP	2006	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2006	3C	NONE	0	0
IIB	8C-9A	NEP	2006	3T	NONE	2	0
IIB	8C-9A	NEP	2006	NONE	NONE	6	0
IIB	8C-9A	NEP	2007	3A	IIB72AB	21	0
IIB	8C-9A	NEP	2007	3A	NONE	386	0
IIB	8C-9A	NEP	2007	3B	IIB72AB	1	0
IIB	8C-9A	NEP	2007	3B	NONE	1	0
IIB	8C-9A	NEP	2007	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2007	3C	NONE	0	0
IIB	8C-9A	NEP	2007	3T	NONE	1	0
IIB	8C-9A	NEP	2007	NONE	NONE	9	0
IIB	8C-9A	NEP	2008	3A	IIB72AB	21	0
IIB	8C-9A	NEP	2008	3A	NONE	294	0
IIB	8C-9A	NEP	2008	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2008	3B	NONE	0	0
IIB	8C-9A	NEP	2008	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2008	3C	NONE	0	0
IIB	8C-9A	NEP	2008	3T	NONE	1	0
IIB	8C-9A	NEP	2008	NONE	NONE	14	0
IIB	8C-9A	NEP	2009	3A	IIB72AB	18	0
IIB	8C-9A	NEP	2009	3A	NONE	197	0
IIB	8C-9A	NEP	2009	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2009	3B	NONE	0	0
IIB	8C-9A	NEP	2009	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2009	3C	NONE	0	0
IIB	8C-9A	NEP	2009	3T	NONE	1	0
IIB	8C-9A	NEP	2009	NONE	NONE	11	0
IIB	8C-9A	NEP	2010	3A	IIB72AB	2	0
IIB	8C-9A	NEP	2010	3A	NONE	139	0
IIB	8C-9A	NEP	2010	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2010	3B	NONE	0	0
IIB	8C-9A	NEP	2010	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2010	3C	NONE	0	0
IIB	8C-9A	NEP	2010	3T	NONE	1	0
IIB	8C-9A	NEP	2010	NONE	NONE	9	0
IIB	8C-9A	NEP	2011	3A	IIB72AB	9	0
IIB	8C-9A	NEP	2011	3A	NONE	114	0
IIB	8C-9A	NEP	2011	3B	IIB72AB	0	0
IIB	8C-9A	NEP	2011	3B	NONE	0	0
IIB	8C-9A	NEP	2011	3C	IIB72AB	0	0
IIB	8C-9A	NEP	2011	3C	NONE	0	0
IIB	8C-9A	NEP	2011	3T	NONE	0	0
IIB	8C-9A	NEP	2011	NONE	NONE	15	0

Figure 5.7.2.2 shows landings of hake and *Nephrops* by Member State and derogation.



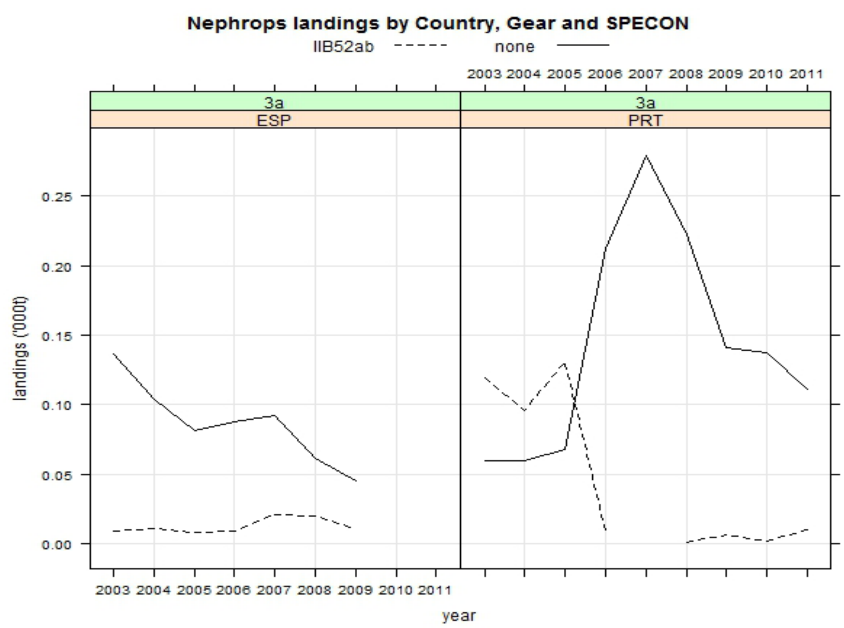


Fig. 5.7.2.2 Trends in landings of hake and *Nephrops* by Member State, regulated gear and specon.

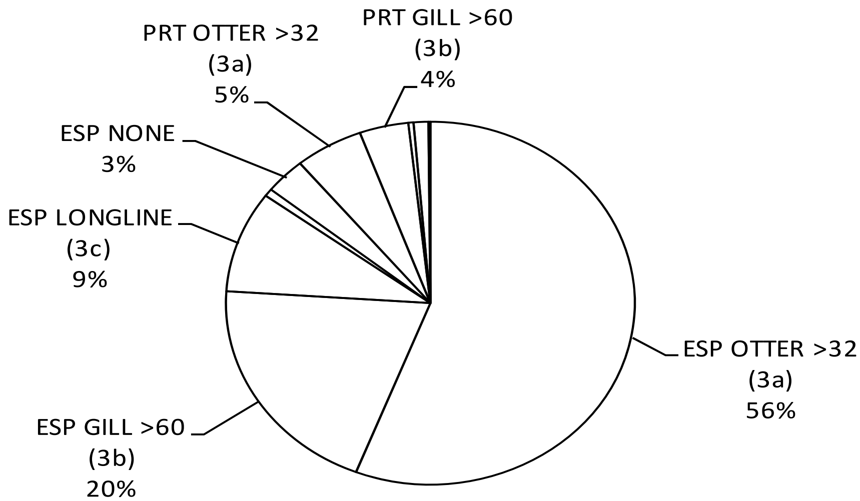


Figure 5.7.2.3 Average 2007-2009 hake landings by fleet in 8c & 9a (excluding Cadiz) (ESP: Spain, PRT: Portugal).

Figure 5.7.2.3 shows the average 2007-2009 hake landings by fleet. The Spanish regulated trawlers (3a) land 56% of hake, followed by Spanish regulated gillnetters (3b, 20%) and Spanish regulated longliners (3c, 9%). Spanish regulated trawlers under effort restrictions (ESP-3a-specon none) land 78% of the Spanish total trawl hake landings.

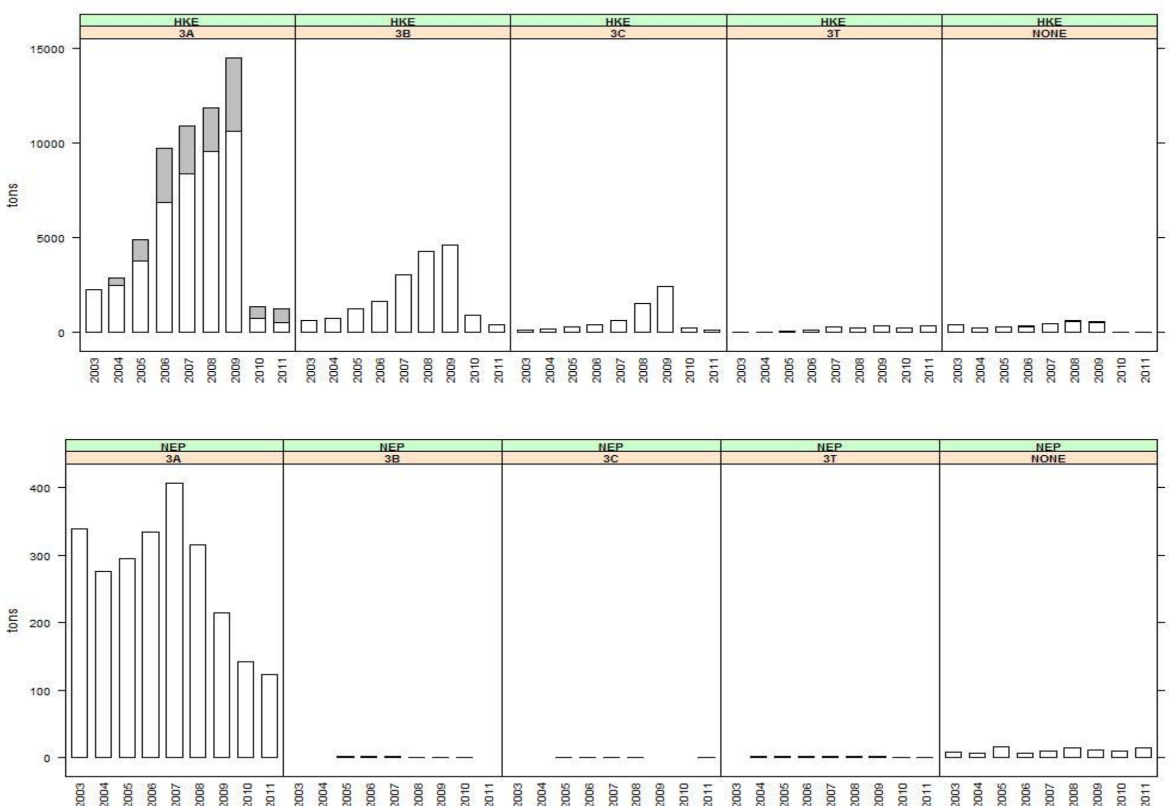


Figure 5.7.2.4 Hake and Norway lobster catches by gear for the years 2003-2011 (discards presented in grey colour), Spanish and Portuguese data together. Spanish data for 2010-2011 not available.

The data given in the Table 5.7.2.1 form the basis of the Figure 5.7.2.4 displaying the relative catch compositions by gear for the years 2003-2011. The lack of grey bars (representing discards) further indicates that either data were not provided or there were no discards. The very low catches in 2010 and 2011 are related to the lack of information from Spanish fleets. Portugal did not assign the discards to the data call reported metiers because the DCF metiers are less disaggregated and there is no perfect match between the two classifications. However, discard data for hake in trawl metiers were made available and were included in the final tables and figures.

Most of hake catch comes from regulated trawlers (3A, Figure 5.7.2.4). Gillnets and longlines also show a higher percentage of hake on their catch composition. In what concerns Norway lobster, the catches come almost exclusively from trawl.

5.7.3 ToR 1.c Catches (landings and discards) of species other than hake and Norway lobster, in particular anglerfish, in weight and numbers at age by Member State and fisheries

Portugal provided data on 2002-2011 landings. Spain did not provide any data for the last two years, so the Spanish 2002-2009 data used in this report are the same reported in 2010. Numbers at age were submitted by Spain in 2010 for anchovy, blue whiting and mackerel for the period 2003-2008. Portugal did not provide age information.

Table 5.7.3.1 (I) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	ANF	2003	3A	IIB72AB	191	--
IIB	8C-9A	ANF	2003	3A	NONE	1338	--
IIB	8C-9A	ANF	2003	3B	IIB72AB	196	--
IIB	8C-9A	ANF	2003	3B	NONE	30	--
IIB	8C-9A	ANF	2003	3C	IIB72AB	0	--
IIB	8C-9A	ANF	2003	3C	NONE	0	--
IIB	8C-9A	ANF	2003	3T	NONE	74	--
IIB	8C-9A	ANF	2003	NONE	NONE	219	--
IIB	8C-9A	ANF	2004	3A	IIB72AB	199	--
IIB	8C-9A	ANF	2004	3A	NONE	1418	--
IIB	8C-9A	ANF	2004	3B	IIB72AB	280	--
IIB	8C-9A	ANF	2004	3B	NONE	243	--
IIB	8C-9A	ANF	2004	3C	IIB72AB	1	--
IIB	8C-9A	ANF	2004	3C	NONE	4	--
IIB	8C-9A	ANF	2004	3T	NONE	182	--
IIB	8C-9A	ANF	2004	NONE	NONE	257	--
IIB	8C-9A	ANF	2005	3A	IIB72AB	249	--
IIB	8C-9A	ANF	2005	3A	NONE	1668	--
IIB	8C-9A	ANF	2005	3B	IIB72AB	507	--
IIB	8C-9A	ANF	2005	3B	NONE	451	--
IIB	8C-9A	ANF	2005	3C	IIB72AB	1	--
IIB	8C-9A	ANF	2005	3C	NONE	0	--
IIB	8C-9A	ANF	2005	3T	NONE	214	--
IIB	8C-9A	ANF	2005	NONE	NONE	360	--
IIB	8C-9A	ANF	2006	3A	IIB72AB	274	--
IIB	8C-9A	ANF	2006	3A	NONE	1735	--
IIB	8C-9A	ANF	2006	3B	IIB72AB	529	--
IIB	8C-9A	ANF	2006	3B	NONE	603	--
IIB	8C-9A	ANF	2006	3C	IIB72AB	4	--
IIB	8C-9A	ANF	2006	3C	NONE	1	--
IIB	8C-9A	ANF	2006	3T	NONE	182	--
IIB	8C-9A	ANF	2006	NONE	NONE	435	--
IIB	8C-9A	ANF	2007	3A	IIB72AB	317	--
IIB	8C-9A	ANF	2007	3A	NONE	1652	--
IIB	8C-9A	ANF	2007	3B	IIB72AB	368	--
IIB	8C-9A	ANF	2007	3B	NONE	417	--
IIB	8C-9A	ANF	2007	3C	IIB72AB	3	--
IIB	8C-9A	ANF	2007	3C	NONE	15	--
IIB	8C-9A	ANF	2007	3T	NONE	241	--
IIB	8C-9A	ANF	2007	NONE	NONE	280	--
IIB	8C-9A	ANF	2008	3A	IIB72AB	332	--
IIB	8C-9A	ANF	2008	3A	NONE	1319	--
IIB	8C-9A	ANF	2008	3B	IIB72AB	401	--
IIB	8C-9A	ANF	2008	3B	NONE	399	--
IIB	8C-9A	ANF	2008	3C	IIB72AB	2	--
IIB	8C-9A	ANF	2008	3C	NONE	4	--
IIB	8C-9A	ANF	2008	3T	NONE	180	--
IIB	8C-9A	ANF	2008	NONE	NONE	217	--
IIB	8C-9A	ANF	2009	3A	IIB72AB	281	--

Tab. 5.7.3.1 (II) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	ANF	2009	3A	NONE	1000	--
IIB	8C-9A	ANF	2009	3B	IIB72AB	322	--
IIB	8C-9A	ANF	2009	3B	NONE	420	--
IIB	8C-9A	ANF	2009	3C	IIB72AB	1	--
IIB	8C-9A	ANF	2009	3C	NONE	1	--
IIB	8C-9A	ANF	2009	3T	NONE	234	--
IIB	8C-9A	ANF	2009	NONE	NONE	255	--
IIB	8C-9A	ANF	2010	3A	IIB72AB	9	--
IIB	8C-9A	ANF	2010	3A	NONE	87	--
IIB	8C-9A	ANF	2010	3B	IIB72AB	18	--
IIB	8C-9A	ANF	2010	3B	NONE	6	--
IIB	8C-9A	ANF	2010	3C	IIB72AB	0	--
IIB	8C-9A	ANF	2010	3C	NONE	0	--
IIB	8C-9A	ANF	2010	3T	NONE	84	--
IIB	8C-9A	ANF	2010	NONE	NONE	3	--
IIB	8C-9A	ANF	2011	3A	IIB72AB	17	--
IIB	8C-9A	ANF	2011	3A	NONE	174	--
IIB	8C-9A	ANF	2011	3B	IIB72AB	11	--
IIB	8C-9A	ANF	2011	3B	NONE	15	--
IIB	8C-9A	ANF	2011	3C	IIB72AB	1	--
IIB	8C-9A	ANF	2011	3C	NONE	0	--
IIB	8C-9A	ANF	2011	3T	NONE	111	--
IIB	8C-9A	ANF	2011	NONE	NONE	2	--
IIB	8C-9A	JAX	2003	3A	IIB72AB	3656	--
IIB	8C-9A	JAX	2003	3A	NONE	16038	--
IIB	8C-9A	JAX	2003	3B	IIB72AB	42	--
IIB	8C-9A	JAX	2003	3B	NONE	36	--
IIB	8C-9A	JAX	2003	3C	IIB72AB	8	--
IIB	8C-9A	JAX	2003	3C	NONE	2	--
IIB	8C-9A	JAX	2003	3T	NONE	7	--
IIB	8C-9A	JAX	2003	NONE	NONE	14437	--
IIB	8C-9A	JAX	2004	3A	IIB72AB	5541	--
IIB	8C-9A	JAX	2004	3A	NONE	20364	--
IIB	8C-9A	JAX	2004	3B	IIB72AB	87	--
IIB	8C-9A	JAX	2004	3B	NONE	50	--
IIB	8C-9A	JAX	2004	3C	IIB72AB	5	--
IIB	8C-9A	JAX	2004	3C	NONE	3	--
IIB	8C-9A	JAX	2004	3T	NONE	9	--
IIB	8C-9A	JAX	2004	NONE	NONE	15229	--
IIB	8C-9A	JAX	2005	3A	IIB72AB	4104	--
IIB	8C-9A	JAX	2005	3A	NONE	19560	--
IIB	8C-9A	JAX	2005	3B	IIB72AB	79	--
IIB	8C-9A	JAX	2005	3B	NONE	65	--
IIB	8C-9A	JAX	2005	3C	IIB72AB	8	--
IIB	8C-9A	JAX	2005	3C	NONE	3	--
IIB	8C-9A	JAX	2005	3T	NONE	30	--
IIB	8C-9A	JAX	2005	NONE	NONE	13480	--
IIB	8C-9A	JAX	2006	3A	IIB72AB	4601	--
IIB	8C-9A	JAX	2006	3A	NONE	21511	--

Tab. 5.7.3.1 (III) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: "3a" – bottom trawls of mesh size ≥ 32 mm, "3b" – gillnets of mesh size ≥ 60 mm, "3c" – bottom long-lines. Gear type "3t" denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type "none" contains other gears and the gears not allocated. "--" means "not available", "0" means "0 tonnes". No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	JAX	2006	3B	IIB72AB	109	--
IIB	8C-9A	JAX	2006	3B	NONE	63	--
IIB	8C-9A	JAX	2006	3C	IIB72AB	17	--
IIB	8C-9A	JAX	2006	3C	NONE	2	--
IIB	8C-9A	JAX	2006	3T	NONE	48	--
IIB	8C-9A	JAX	2006	NONE	NONE	12782	--
IIB	8C-9A	JAX	2007	3A	IIB72AB	4107	--
IIB	8C-9A	JAX	2007	3A	NONE	22545	--
IIB	8C-9A	JAX	2007	3B	IIB72AB	170	--
IIB	8C-9A	JAX	2007	3B	NONE	238	--
IIB	8C-9A	JAX	2007	3C	IIB72AB	15	--
IIB	8C-9A	JAX	2007	3C	NONE	11	--
IIB	8C-9A	JAX	2007	3T	NONE	208	--
IIB	8C-9A	JAX	2007	NONE	NONE	12574	--
IIB	8C-9A	JAX	2008	3A	IIB72AB	3299	--
IIB	8C-9A	JAX	2008	3A	NONE	20398	--
IIB	8C-9A	JAX	2008	3B	IIB72AB	238	--
IIB	8C-9A	JAX	2008	3B	NONE	504	--
IIB	8C-9A	JAX	2008	3C	IIB72AB	21	--
IIB	8C-9A	JAX	2008	3C	NONE	7	--
IIB	8C-9A	JAX	2008	3T	NONE	133	--
IIB	8C-9A	JAX	2008	NONE	NONE	19391	--
IIB	8C-9A	JAX	2009	3A	IIB72AB	446	--
IIB	8C-9A	JAX	2009	3A	NONE	8474	--
IIB	8C-9A	JAX	2009	3B	IIB72AB	227	--
IIB	8C-9A	JAX	2009	3B	NONE	448	--
IIB	8C-9A	JAX	2009	3C	IIB72AB	13	--
IIB	8C-9A	JAX	2009	3C	NONE	13	--
IIB	8C-9A	JAX	2009	3T	NONE	247	--
IIB	8C-9A	JAX	2009	NONE	NONE	17683	--
IIB	8C-9A	JAX	2010	3A	IIB72AB	301	--
IIB	8C-9A	JAX	2010	3A	NONE	6784	--
IIB	8C-9A	JAX	2010	3B	IIB72AB	32	--
IIB	8C-9A	JAX	2010	3B	NONE	158	--
IIB	8C-9A	JAX	2010	3C	IIB72AB	19	--
IIB	8C-9A	JAX	2010	3C	NONE	2	--
IIB	8C-9A	JAX	2010	3T	NONE	103	--
IIB	8C-9A	JAX	2010	NONE	NONE	30	--
IIB	8C-9A	JAX	2011	3A	IIB72AB	701	--
IIB	8C-9A	JAX	2011	3A	NONE	6612	--
IIB	8C-9A	JAX	2011	3B	IIB72AB	36	--
IIB	8C-9A	JAX	2011	3B	NONE	156	--
IIB	8C-9A	JAX	2011	3C	IIB72AB	7	--
IIB	8C-9A	JAX	2011	3C	NONE	4	--
IIB	8C-9A	JAX	2011	3T	NONE	179	--
IIB	8C-9A	JAX	2011	NONE	NONE	61	--
IIB	8C-9A	MAC	2003	3A	IIB72AB	2772	--
IIB	8C-9A	MAC	2003	3A	NONE	8341	--
IIB	8C-9A	MAC	2003	3B	IIB72AB	7	--

Tab. 5.7.3.1 (IV) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: "3a" – bottom trawls of mesh size ≥ 32 mm, "3b" – gillnets of mesh size ≥ 60 mm, "3c" – bottom long-lines. Gear type "3t" denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type "none" contains other gears and the gears not allocated. "--" means "not available", "0" means "0 tonnes". No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	MAC	2003	3B	NONE	48	--
IIB	8C-9A	MAC	2003	3C	IIB72AB	13	--
IIB	8C-9A	MAC	2003	3C	NONE	1	--
IIB	8C-9A	MAC	2003	3T	NONE	22	--
IIB	8C-9A	MAC	2003	NONE	NONE	6643	--
IIB	8C-9A	MAC	2004	3A	IIB72AB	4651	--
IIB	8C-9A	MAC	2004	3A	NONE	11796	--
IIB	8C-9A	MAC	2004	3B	IIB72AB	38	--
IIB	8C-9A	MAC	2004	3B	NONE	74	--
IIB	8C-9A	MAC	2004	3C	IIB72AB	71	--
IIB	8C-9A	MAC	2004	3C	NONE	6	--
IIB	8C-9A	MAC	2004	3T	NONE	30	--
IIB	8C-9A	MAC	2004	NONE	NONE	12986	--
IIB	8C-9A	MAC	2005	3A	IIB72AB	5401	--
IIB	8C-9A	MAC	2005	3A	NONE	17191	--
IIB	8C-9A	MAC	2005	3B	IIB72AB	155	--
IIB	8C-9A	MAC	2005	3B	NONE	59	--
IIB	8C-9A	MAC	2005	3C	IIB72AB	145	--
IIB	8C-9A	MAC	2005	3C	NONE	28	--
IIB	8C-9A	MAC	2005	3T	NONE	31	--
IIB	8C-9A	MAC	2005	NONE	NONE	20792	--
IIB	8C-9A	MAC	2006	3A	IIB72AB	5555	--
IIB	8C-9A	MAC	2006	3A	NONE	17214	--
IIB	8C-9A	MAC	2006	3B	IIB72AB	54	--
IIB	8C-9A	MAC	2006	3B	NONE	40	--
IIB	8C-9A	MAC	2006	3C	IIB72AB	77	--
IIB	8C-9A	MAC	2006	3C	NONE	3	--
IIB	8C-9A	MAC	2006	3T	NONE	21	--
IIB	8C-9A	MAC	2006	NONE	NONE	25832	--
IIB	8C-9A	MAC	2007	3A	IIB72AB	4348	--
IIB	8C-9A	MAC	2007	3A	NONE	12529	--
IIB	8C-9A	MAC	2007	3B	IIB72AB	42	--
IIB	8C-9A	MAC	2007	3B	NONE	39	--
IIB	8C-9A	MAC	2007	3C	IIB72AB	88	--
IIB	8C-9A	MAC	2007	3C	NONE	53	--
IIB	8C-9A	MAC	2007	3T	NONE	43	--
IIB	8C-9A	MAC	2007	NONE	NONE	40726	--
IIB	8C-9A	MAC	2008	3A	IIB72AB	3406	--
IIB	8C-9A	MAC	2008	3A	NONE	15505	--
IIB	8C-9A	MAC	2008	3B	IIB72AB	84	--
IIB	8C-9A	MAC	2008	3B	NONE	90	--
IIB	8C-9A	MAC	2008	3C	IIB72AB	66	--
IIB	8C-9A	MAC	2008	3C	NONE	38	--
IIB	8C-9A	MAC	2008	3T	NONE	61	--
IIB	8C-9A	MAC	2008	NONE	NONE	37101	--
IIB	8C-9A	MAC	2009	3A	IIB72AB	5782	--
IIB	8C-9A	MAC	2009	3A	NONE	19111	--
IIB	8C-9A	MAC	2009	3B	IIB72AB	63	--
IIB	8C-9A	MAC	2009	3B	NONE	56	--

Tab. 5.7.3.1 (V) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: "3a" – bottom trawls of mesh size ≥ 32 mm, "3b" – gillnets of mesh size ≥ 60 mm, "3c" – bottom long-lines. Gear type "3t" denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type "none" contains other gears and the gears not allocated. "--" means "not available", "0" means "0 tonnes". No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	MAC	2009	3C	IIB72AB	179	--
IIB	8C-9A	MAC	2009	3C	NONE	80	--
IIB	8C-9A	MAC	2009	3T	NONE	68	--
IIB	8C-9A	MAC	2009	NONE	NONE	64517	--
IIB	8C-9A	MAC	2010	3A	IIB72AB	12	--
IIB	8C-9A	MAC	2010	3A	NONE	1969	--
IIB	8C-9A	MAC	2010	3B	IIB72AB	5	--
IIB	8C-9A	MAC	2010	3B	NONE	4	--
IIB	8C-9A	MAC	2010	3C	IIB72AB	0	--
IIB	8C-9A	MAC	2010	3C	NONE	0	--
IIB	8C-9A	MAC	2010	3T	NONE	18	--
IIB	8C-9A	MAC	2010	NONE	NONE	281	--
IIB	8C-9A	MAC	2011	3A	IIB72AB	48	--
IIB	8C-9A	MAC	2011	3A	NONE	2721	--
IIB	8C-9A	MAC	2011	3B	IIB72AB	6	--
IIB	8C-9A	MAC	2011	3B	NONE	11	--
IIB	8C-9A	MAC	2011	3C	IIB72AB	0	--
IIB	8C-9A	MAC	2011	3C	NONE	1	--
IIB	8C-9A	MAC	2011	3T	NONE	14	--
IIB	8C-9A	MAC	2011	NONE	NONE	31	--
IIB	8C-9A	RAJ	2003	3A	IIB72AB	0	--
IIB	8C-9A	RAJ	2003	3A	NONE	17	--
IIB	8C-9A	RAJ	2003	3B	IIB72AB	16	--
IIB	8C-9A	RAJ	2003	3B	NONE	1	--
IIB	8C-9A	RAJ	2003	3C	IIB72AB	20	--
IIB	8C-9A	RAJ	2003	3C	NONE	1	--
IIB	8C-9A	RAJ	2003	3T	NONE	38	--
IIB	8C-9A	RAJ	2003	NONE	NONE	28	--
IIB	8C-9A	RAJ	2004	3A	IIB72AB	1	--
IIB	8C-9A	RAJ	2004	3A	NONE	31	--
IIB	8C-9A	RAJ	2004	3B	IIB72AB	9	--
IIB	8C-9A	RAJ	2004	3B	NONE	5	--
IIB	8C-9A	RAJ	2004	3C	IIB72AB	12	--
IIB	8C-9A	RAJ	2004	3C	NONE	3	--
IIB	8C-9A	RAJ	2004	3T	NONE	69	--
IIB	8C-9A	RAJ	2004	NONE	NONE	18	--
IIB	8C-9A	RAJ	2005	3A	IIB72AB	4	--
IIB	8C-9A	RAJ	2005	3A	NONE	35	--
IIB	8C-9A	RAJ	2005	3B	IIB72AB	11	--
IIB	8C-9A	RAJ	2005	3B	NONE	9	--
IIB	8C-9A	RAJ	2005	3C	IIB72AB	14	--
IIB	8C-9A	RAJ	2005	3C	NONE	2	--
IIB	8C-9A	RAJ	2005	3T	NONE	79	--
IIB	8C-9A	RAJ	2005	NONE	NONE	28	--
IIB	8C-9A	RAJ	2006	3A	IIB72AB	5	--
IIB	8C-9A	RAJ	2006	3A	NONE	74	--
IIB	8C-9A	RAJ	2006	3B	IIB72AB	15	--
IIB	8C-9A	RAJ	2006	3B	NONE	4	--
IIB	8C-9A	RAJ	2006	3C	IIB72AB	17	--

Tab. 5.7.3.1 (VI) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	RAJ	2006	3C	NONE	3	--
IIB	8C-9A	RAJ	2006	3T	NONE	102	--
IIB	8C-9A	RAJ	2006	NONE	NONE	16	--
IIB	8C-9A	RAJ	2007	3A	IIB72AB	27	--
IIB	8C-9A	RAJ	2007	3A	NONE	133	--
IIB	8C-9A	RAJ	2007	3B	IIB72AB	19	--
IIB	8C-9A	RAJ	2007	3B	NONE	13	--
IIB	8C-9A	RAJ	2007	3C	IIB72AB	33	--
IIB	8C-9A	RAJ	2007	3C	NONE	8	--
IIB	8C-9A	RAJ	2007	3T	NONE	194	--
IIB	8C-9A	RAJ	2007	NONE	NONE	18	--
IIB	8C-9A	RAJ	2008	3A	IIB72AB	29	--
IIB	8C-9A	RAJ	2008	3A	NONE	187	--
IIB	8C-9A	RAJ	2008	3B	IIB72AB	21	--
IIB	8C-9A	RAJ	2008	3B	NONE	6	--
IIB	8C-9A	RAJ	2008	3C	IIB72AB	189	--
IIB	8C-9A	RAJ	2008	3C	NONE	7	--
IIB	8C-9A	RAJ	2008	3T	NONE	165	--
IIB	8C-9A	RAJ	2008	NONE	NONE	26	--
IIB	8C-9A	RAJ	2009	3A	IIB72AB	33	--
IIB	8C-9A	RAJ	2009	3A	NONE	360	--
IIB	8C-9A	RAJ	2009	3B	IIB72AB	20	--
IIB	8C-9A	RAJ	2009	3B	NONE	10	--
IIB	8C-9A	RAJ	2009	3C	IIB72AB	53	--
IIB	8C-9A	RAJ	2009	3C	NONE	4	--
IIB	8C-9A	RAJ	2009	3T	NONE	241	--
IIB	8C-9A	RAJ	2009	NONE	NONE	41	--
IIB	8C-9A	RAJ	2010	3A	IIB72AB	21	--
IIB	8C-9A	RAJ	2010	3A	NONE	277	--
IIB	8C-9A	RAJ	2010	3B	IIB72AB	10	--
IIB	8C-9A	RAJ	2010	3B	NONE	9	--
IIB	8C-9A	RAJ	2010	3C	IIB72AB	20	--
IIB	8C-9A	RAJ	2010	3C	NONE	6	--
IIB	8C-9A	RAJ	2010	3T	NONE	217	--
IIB	8C-9A	RAJ	2010	NONE	NONE	8	--
IIB	8C-9A	RAJ	2011	3A	IIB72AB	59	--
IIB	8C-9A	RAJ	2011	3A	NONE	308	--
IIB	8C-9A	RAJ	2011	3B	IIB72AB	13	--
IIB	8C-9A	RAJ	2011	3B	NONE	4	--
IIB	8C-9A	RAJ	2011	3C	IIB72AB	34	--
IIB	8C-9A	RAJ	2011	3C	NONE	3	--
IIB	8C-9A	RAJ	2011	3T	NONE	206	--
IIB	8C-9A	RAJ	2011	NONE	NONE	8	--
IIB	8C-9A	WHB	2003	3A	IIB72AB	4106	--
IIB	8C-9A	WHB	2003	3A	NONE	17112	--
IIB	8C-9A	WHB	2003	3B	IIB72AB	0	--
IIB	8C-9A	WHB	2003	3B	NONE	2	--
IIB	8C-9A	WHB	2003	3C	IIB72AB	20	--
IIB	8C-9A	WHB	2003	3C	NONE	11	--

Tab. 5.7.3.1 (VII) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	WHB	2003	3T	NONE	0	--
IIB	8C-9A	WHB	2003	NONE	NONE	255	--
IIB	8C-9A	WHB	2004	3A	IIB72AB	5109	--
IIB	8C-9A	WHB	2004	3A	NONE	21146	--
IIB	8C-9A	WHB	2004	3B	IIB72AB	1	--
IIB	8C-9A	WHB	2004	3B	NONE	1	--
IIB	8C-9A	WHB	2004	3C	IIB72AB	17	--
IIB	8C-9A	WHB	2004	3C	NONE	18	--
IIB	8C-9A	WHB	2004	3T	NONE	0	--
IIB	8C-9A	WHB	2004	NONE	NONE	109	--
IIB	8C-9A	WHB	2005	3A	IIB72AB	5916	--
IIB	8C-9A	WHB	2005	3A	NONE	19770	--
IIB	8C-9A	WHB	2005	3B	IIB72AB	1	--
IIB	8C-9A	WHB	2005	3B	NONE	2	--
IIB	8C-9A	WHB	2005	3C	IIB72AB	18	--
IIB	8C-9A	WHB	2005	3C	NONE	1	--
IIB	8C-9A	WHB	2005	3T	NONE	0	--
IIB	8C-9A	WHB	2005	NONE	NONE	89	--
IIB	8C-9A	WHB	2006	3A	IIB72AB	4379	--
IIB	8C-9A	WHB	2006	3A	NONE	17065	--
IIB	8C-9A	WHB	2006	3B	IIB72AB	0	--
IIB	8C-9A	WHB	2006	3B	NONE	1	--
IIB	8C-9A	WHB	2006	3C	IIB72AB	14	--
IIB	8C-9A	WHB	2006	3C	NONE	3	--
IIB	8C-9A	WHB	2006	3T	NONE	0	--
IIB	8C-9A	WHB	2006	NONE	NONE	215	--
IIB	8C-9A	WHB	2007	3A	IIB72AB	4356	--
IIB	8C-9A	WHB	2007	3A	NONE	17360	--
IIB	8C-9A	WHB	2007	3B	IIB72AB	1	--
IIB	8C-9A	WHB	2007	3B	NONE	1	--
IIB	8C-9A	WHB	2007	3C	IIB72AB	10	--
IIB	8C-9A	WHB	2007	3C	NONE	9	--
IIB	8C-9A	WHB	2007	3T	NONE	1	--
IIB	8C-9A	WHB	2007	NONE	NONE	520	--
IIB	8C-9A	WHB	2008	3A	IIB72AB	4722	--
IIB	8C-9A	WHB	2008	3A	NONE	17708	--
IIB	8C-9A	WHB	2008	3B	IIB72AB	1	--
IIB	8C-9A	WHB	2008	3B	NONE	3	--
IIB	8C-9A	WHB	2008	3C	IIB72AB	10	--
IIB	8C-9A	WHB	2008	3C	NONE	4	--
IIB	8C-9A	WHB	2008	3T	NONE	0	--
IIB	8C-9A	WHB	2008	NONE	NONE	351	--
IIB	8C-9A	WHB	2009	3A	IIB72AB	5104	--
IIB	8C-9A	WHB	2009	3A	NONE	20739	--
IIB	8C-9A	WHB	2009	3B	IIB72AB	1	--
IIB	8C-9A	WHB	2009	3B	NONE	0	--
IIB	8C-9A	WHB	2009	3C	IIB72AB	15	--
IIB	8C-9A	WHB	2009	3C	NONE	11	--
IIB	8C-9A	WHB	2009	3T	NONE	1	--

Tab. 5.7.3.1 (VIII) Landings (t) and discards (t) by species and derogation, 2003-2009. Regulation gears codes according to the EC Council Regulation No 41/2007: “3a” – bottom trawls of mesh size ≥ 32 mm, “3b” – gillnets of mesh size ≥ 60 mm, “3c” – bottom long-lines. Gear type “3t” denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type “none” contains other gears and the gears not allocated. “--“ means “not available”, “0” means “0 tonnes”. No Spanish data for 2010 and 2011.

Annex	Area	Species	Year	Gear	Specon	Landings	Discards
IIB	8C-9A	WHB	2009	NONE	NONE	363	--
IIB	8C-9A	WHB	2010	3A	IIB72AB	2	--
IIB	8C-9A	WHB	2010	3A	NONE	1354	--
IIB	8C-9A	WHB	2010	3B	IIB72AB	0	--
IIB	8C-9A	WHB	2010	3B	NONE	0	--
IIB	8C-9A	WHB	2010	3C	IIB72AB	0	--
IIB	8C-9A	WHB	2010	3C	NONE	0	--
IIB	8C-9A	WHB	2010	3T	NONE	0	--
IIB	8C-9A	WHB	2010	NONE	NONE	0	--
IIB	8C-9A	WHB	2011	3A	IIB72AB	92	--
IIB	8C-9A	WHB	2011	3A	NONE	615	--
IIB	8C-9A	WHB	2011	3B	IIB72AB	0	--
IIB	8C-9A	WHB	2011	3B	NONE	0	--
IIB	8C-9A	WHB	2011	3C	IIB72AB	1	--
IIB	8C-9A	WHB	2011	3C	NONE	0	--
IIB	8C-9A	WHB	2011	3T	NONE	0	--
IIB	8C-9A	WHB	2011	NONE	NONE	0	--

The contributions of the individual derogations to the overall landings can be taken from Tables 5.7.3.1. For brevity, landings and discards in weight by derogation are restricted to anglerfish (ANF), horse mackerel (JAX), mackerel (MAC), rays (RAJ) and blue whiting (WHB).

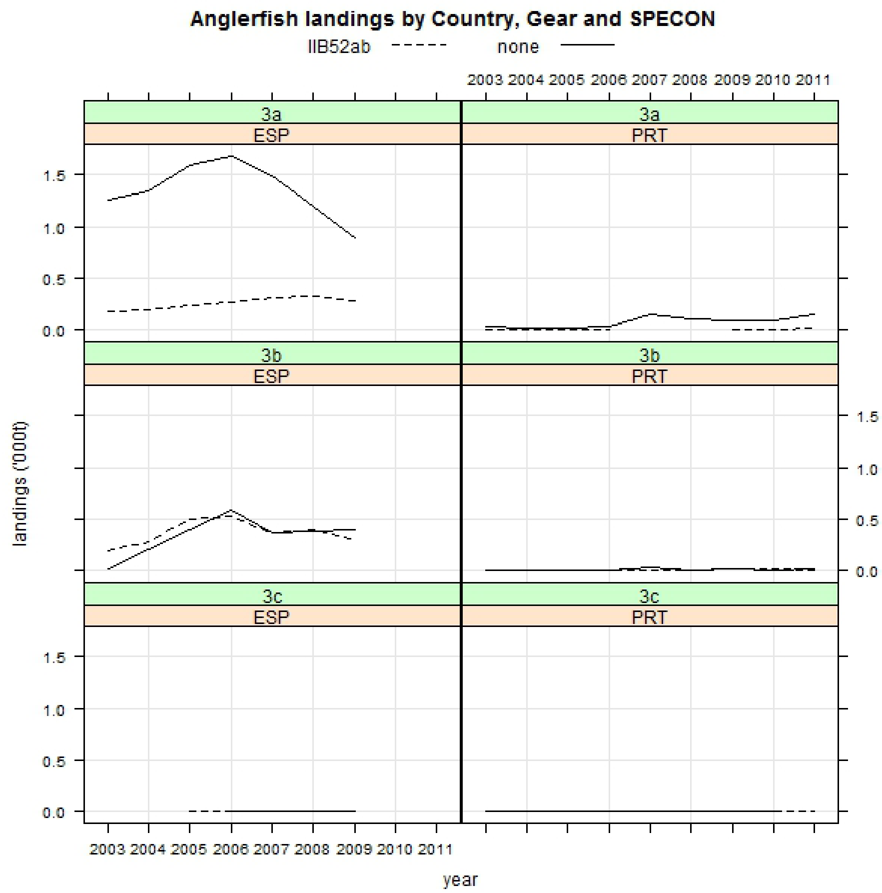


Fig. 5.7.3.1 Trends in landings of anglerfish by Member State, regulated gear and specon.

From these species, special attention is given to anglerfishes (Figure 5.7.3.1). However, the group anglerfish includes two species, *Lophius piscatorius* and *L. budegassa*, which are in different exploitation status and have different area distributions.

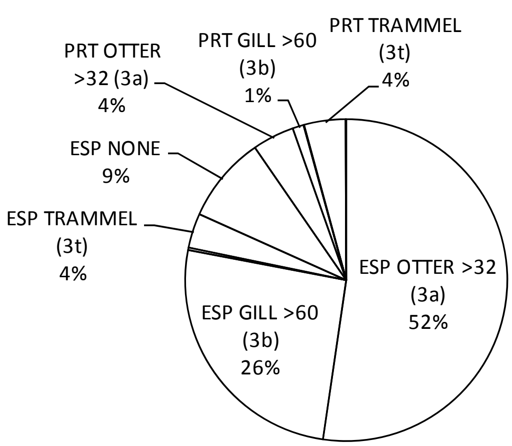


Figure 5.7.3.2. Average 2007-2009 anglerfish landings by fleet in 8c & 9a (excluding Cadiz) (ESP: Spain, PRT: Portugal).

Figure 5.7.3.2 shows the average 2007-2009 anglerfish landings by fleet. The Spanish regulated trawlers (3a) land 52% of anglerfish, followed by Spanish regulated gillnetters (3b, 26%) and Spanish non-regulated gears (none and trammel, 13%). Spanish regulated trawlers (3a) under effort restrictions (ESP-3a-specon none) land 79% of the total trawl anglerfish landings.

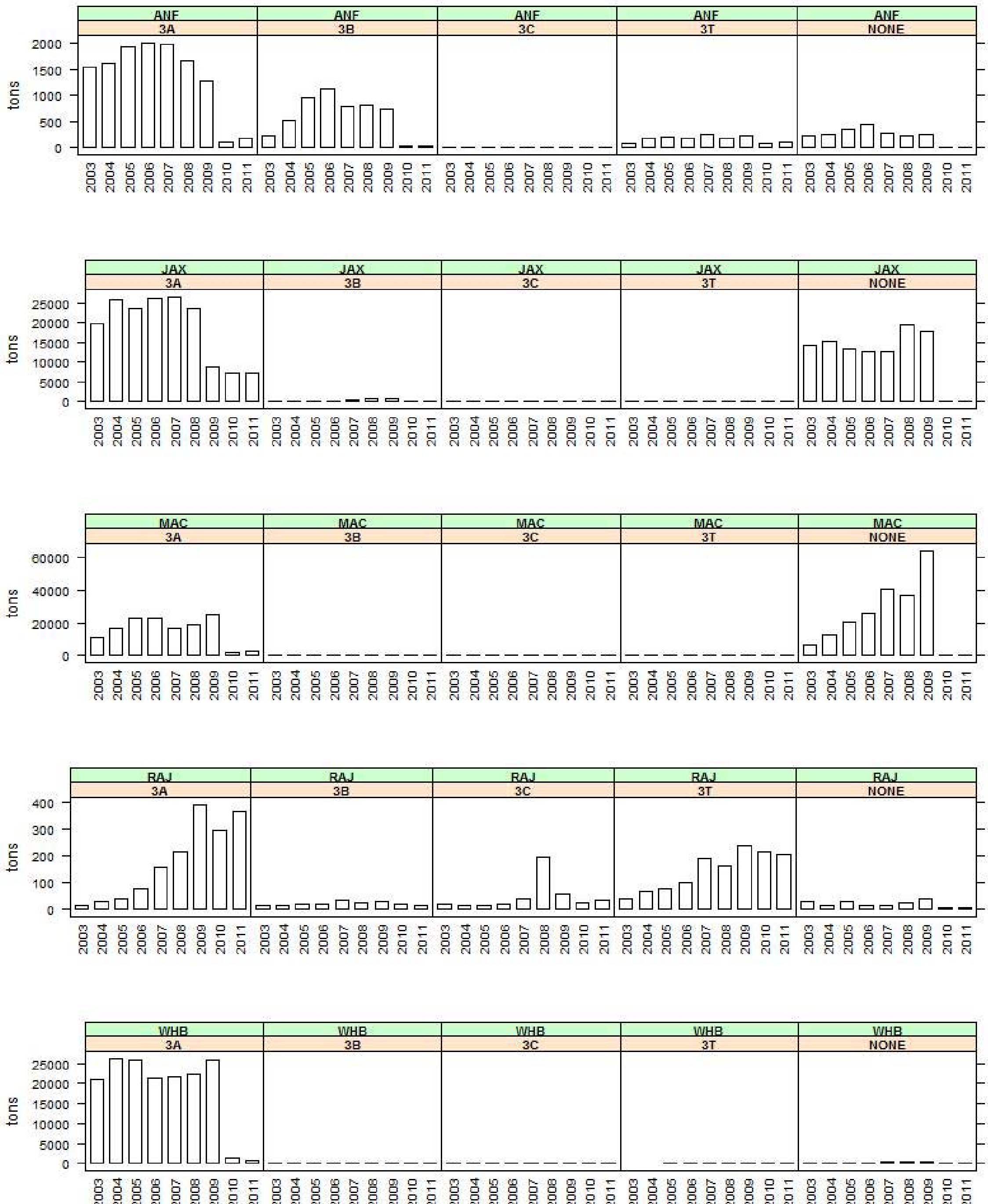


Figure 5.7.3.3 Landings by species and gear for the years 2003-2011. Spanish data for 2010-2011 not available. (ANF = Anglerfishes, JAX = *Trachurus spp.*, MAC = Mackerel, RAJ = Rays and WHB = Blue Whiting).

The data given in the Table 5.7.3.1 form the basis of the Figure 5.7.3.3 displaying the catches of anglerfish, horse mackerels, mackerel, rays and blue whiting by gear for the years 2003-2011. The lack of grey bars (representing discards) further indicates that data were not provided or there were no discards. The very low catches in 2010 and 2011 are related to the lack of information from Spanish fleets.

Regulated trawlers (3A) harvest high quantities of horse mackerels, mackerel and blue whiting (Figure 5.7.3.2). The main species in unregulated gears (NONE) are mackerel and horse mackerels.

5.7.4 ToR 1.d CPUE and LPUE of hake, Norway lobster and anglerfish by fisheries

Due to lack of 2010 and 2011 Spanish data (that represent 88% of the total catches of the stock of southern hake and 90% of anglerfish southern stocks), no CPUE trends are presented. The assessment performed by WGHMM in May 2011 (ICES, 2011) shows that hake biomass has increased since 2006. If effort data from all fleets were available, the CPUE trend would probably be consistent with this increase.

Nephrops data in 8c9a are mostly from Functional Units 28 and 29, in SW and S Portugal (9a). The remaining FUs, from Cantabrian Sea (8c) and 9a North are almost depleted. *Nephrops* is caught as by catch from other fisheries in very low quantities. Figure 5.7.4.1 compares the standardized *Nephrops* CPUE presented in WGHMM for FUs 28 and 29 (ICES, 2012) and the CPUE derived from the data presented to this EWG, considering only the Portuguese catches and effort. In the case of this species, discards are negligible and catches are considered equal to landings. The overall trend since 2005 is decreasing in both cases. The EWG CPUE was estimated only for Portuguese bottom trawl (3a), with demersal trawl and crustacean trawl together. The standardized CPUE presented to WGHMM was estimated only for Portuguese crustacean trawl fleet and using only trips targeting *Nephrops*.

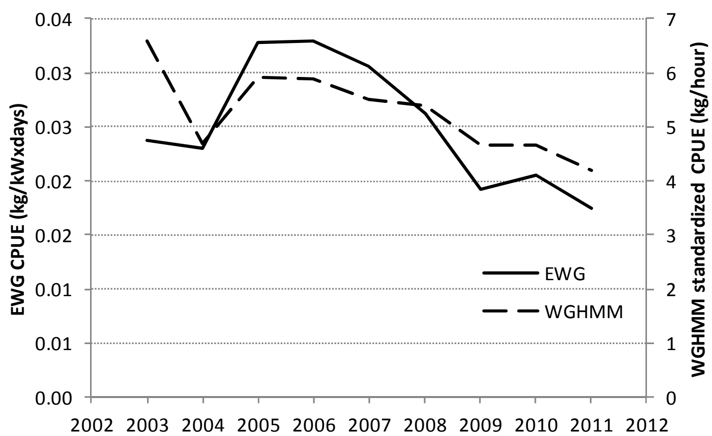


Figure 5.7.4.1 Comparison of *Nephrops* CPUE trends in Functional Units 28 and 29 (SW and S Portugal, within area 9a) using only Portuguese catch and effort data (EWG: CPUE estimated with this EWG data; WGHMM: CPUE estimates presented at WGHMM).

5.7.5 ToR 2 Remarks on quality of catches and discard estimates

Discards are only provided for hake and for trawl. Due to lack of consistency between the data call disaggregated metiers and the DCF sampling metiers, Spanish discards for otter trawl were assigned applying the discard rate used in WGHMM 2010 (ICES, 2010b) and Portuguese trawl hake discards were added to the final aggregated metiers based on DCF metiers estimates.

No discards on anglerfish were provided. Nephrops has no discards.

For more detailed information on quality of catches and discard estimates, see the section 4 "Data Quality" for each country.

5.7.6 Information on small boats (<10m by area)

Only Portugal has provided data for vessels below 10 m operating in areas 8c-9a, though specifying neither gear nor fishery. These vessels operate, in general, with several gears and do not fill logbooks. Data on catch and effort for these vessels are based on landings records. However, as no data from Spain were available and Annex IIB does not include limitations on this fleet effort, no analysis on this fleet segment was performed.

Since 2003, Portugal has carried out a specific sampling plan to collect data on the activity of the small scale fleet (<10m vessels) operating in continental waters. The data is collected with a stratified random strategy by skippers' interviews, and provides information about catches by species and effort. This sampling plan is under the scope of Reg. (EC) 1639/2001 and the results are presented on the DCF annual reports requested by the DGMARE.

5.7.7 ToR 3 Trend in calculated maximum effort of regulated gears and uptake by Member State

No adequate data are available to address this ToR. The allowed activity by vessel for the period 2003-2011 is presented in Table 5.7.3. Although the field "Number of Vessels" in Effort database has been filled, the data on the fishing activity is incomplete. Also, the vessels included can operate with different area/fishery/gear/mesh size combinations and therefore, the same vessels may be included in different records. Spain did not present any data on the fishing activity.

5.7.8 ToR 4 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

Due to incomplete data sets the STECF EWG 12-06 is unable to comment on recent evolutions.

5.7.9 ToR 5 Correlation between partial hake mortality and fisheries

Depending on data availability STECF EWG 12-06 will address this ToR during its follow-up meeting STECF EWG 12-12, 24-28 September 2012.

5.7.10 ToR 6 Considerations in order to accomplish spatio-temoral patterns in standardized catchability indices for hake, Nephrops and anglerfish

The STECF EWG 12-06 discussed this task and elaborated generic ideas given in section 4.9 of the present report.

5.8 Western Channel effort regime evaluation in the context of Annex IIC to Council Regulation (EC) No 57/2011) agreed

5.8.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member State and fisheries

STECF EWG-12-06 notes that assignment of derogations and special conditions is based on best expert knowledge. Data errors may exist regarding the huge data bases and the special knowledge required to deal with them (grouping and exact formulation of data queries).

STECF EWG noted five years ago a change in Annexes IIC to Council Reg. 41/2007 for 2007 as compared to the Annex IIC to 51/2006 which removed the special conditions IIC71a and IIC71b to static nets <220mm (3b). STECF EWG further notes that there were no special derogations added to Annex IIC of Council Reg. 40/2008, Annex IIC of Council Reg. 43/2009, Annex IIC of Council Reg. 53/2010 or Annex IIC of Council Reg. 57/2011, or Annex IIC of Council Reg. 43/2012. Table 5.8.1.1 lists the historic developments of days at sea by vessel and derogations.

Table 5.8.1.1 – Western Channel - Historic trends in days at sea by vessel specified in the Council Regulations since 2005.

Annex	AREA	REG GEAR	SPECON	2005	2006	2007	2008	2009	2010	2011	2012
IIc	7e	3a	none	240	216	192	192	192	164	164	164
IIc	7e	3b	none	240	216	192	192	192	164	164	164
IIc	7e	3b deleted	ICC71ab		365						

Detailed information is available from 2000 onwards, and can be found on the JRC website:

Http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

The previously identified French data problems affecting 2002 have so far not been corrected. STECF EWG decided therefore only to provide effort trends graphically starting from 2003. For brevity and clarity in this report only information since 2004 are tabulated. The dominating fleet from the two existing derogations in 7e (3a and 3b) is by far the English beam trawl fleet with percentages in the last 8 years in excess of 55% of the effort deployed (Table 5.8.1.2 and Figures 5.8.1.1 and 5.8.1.2). The other fleets involved are the French static gear fleet with a decreasing trend from 22% in 2006 to 8% in 2011 of the deployed effort and the Belgian beam trawl fleet with an increasing trend from less then 1% in 2000 up to about 16% in 2007 followed by a fluctuation around 12%. STECF-EWG however notes that about 83% of the overall effort deployed could not be allocated to regulated gear (e.g. gears outside the regulation such as otter- and pelagic trawls, dredges and pots). The "total" trend in Figure 5.8.1.2 is therefore highly influenced by the none regulated gear group. Regulated gears remain low or are further decreasing until 2011. The composition of the unregulated gears can be found in Table 5.8.1.6. Figure 5.8.1.3 shows the trends for all the unregulated gear in area VIIe.

There are no differences between the data provided in 2010 and 2011.

Information on GT*days at sea and the number of vessels active in 7e is presented in Tables 5.1.8.3 and 4, respectively.

The trends in the nominal effort of the two derogations (3a and 3b) are illustrated in Table 5.8.1.5. The beam trawl fleets decreased gradually from 2% below the 2004 level in 2005 to 39% below that level in 2009. In 2011, the relative effort deployed was 33% below the 2004 level. Also the static gear effort dropped substantially from 4% below the 2004 level in 2006 to a 72% below the 2004 level in 2011.

Category 'none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes The effort of the unregulated gear group 'None' has been around 85% of the overall nominal effort for the whole time series.

Table 5.8.1.6 shows the disaggregation of the 'none' category into the different gears categories. Effort by otter trawl is by far the dominant gear category with percentages in excess of 43% for all years. Dredges contribute around 25 %. Pelagic trawl and pots contribute each about 10% to the overall effort of the non regulated gear. The rest of the gears also account for about 10%.

Table 5.8.1.2 – Western Channel - Trend in nominal effort (kW*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012) and Member State, 2004-2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 4 of the report.

ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	3a	none	BEL	633428	689624	628907	837161	584560	358399	383303	450341
IIc	7e	3a	none	ENG	3206806	3227096	3283897	3021075	2870177	2197118	2227991	2318845
IIc	7e	3a	none	FRA	317275	261700	289867	320576	146443	138669	303078	200030
IIc	7e	3a	none	GBJ	209969	121139						
IIc	7e	3a	none	IRL	34577	16518	6474	16610	2143	442		
IIc	7e	3a	none	NLD								
IIc	7e	3a	none	SCO				3666		1396		
IIc	**7e**	**3a Total**	**none**		**4402055**	**4316077**	**4209145**	**4199088**	**3603323**	**2696024**	**2914372**	**2969216**
IIc	7e	3b	none	ENG	206294	178818	153434	103278	104187	104045	109257	118156
IIc	7e	3b	none	FRA	1236654	946127	1236595	920004	615534	611990	304540	280434
IIc	7e	3b	none	SCO			1215	3240	9315	2430		
IIc	**7e**	**3b Total**	**none**		**1442948**	**1124945**	**1391244**	**1026522**	**729036**	**718465**	**413797**	**398590**
IIc	7e	none	none	BEL	6625	11039	17515	17231	45760	106007	138125	74939
IIc	7e	none	none	DEU	106234	92768	29865		36994	21196	139157	51687
IIc	7e	none	none	DNK	1424	46389	102713	31213	88637	17994	90505	
IIc	7e	none	none	ENG	4177419	4262278	4138665	4149225	3717287	4080660	4204415	4396407
IIc	7e	none	none	FRA	17093208	17780680	19456045	19370589	12637420	12553428	12823801	13095161
IIc	7e	none	none	GBG	75868	57128	45780	57710	26194	36366	68030	58026
IIc	7e	none	none	GBJ	1476	6745	19360	30580	25740	31020	38060	42020
IIc	7e	none	none	IOM			19902	1116	778			
IIc	7e	none	none	IRL	347597	152539	3880	23340	1023	14228	52800	22942
IIc	7e	none	none	LTU						29520		150400
IIc	7e	none	none	NIR	1302						576	
IIc	7e	none	none	NLD	449855	632891	956066	894614	1073200	801327	1040600	558954
IIc	7e	none	none	SCO	607935	691419	585805	595030	606253	674277	598441	543344
IIc	**7e**	**none Total**	**none**		**22868943**	**23733876**	**25375596**	**25170648**	**18259286**	**18366023**	**19194510**	**18993880**
IIc	**7e**	**Grand Total**	**none**		**28713946**	**29174898**	**30975985**	**30396258**	**22591645**	**21780512**	**22522679**	**22361686**

Table 5.8.1.3 – Western Channel - Trend in GTdays (GT*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012) and Member State, 2004-2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 4 of the report.

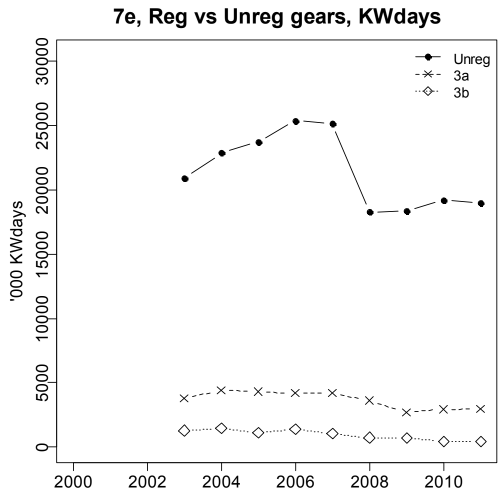
ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	3a	none	BEL	217960	230378	211798	264266	182061	108653	115214	138197
IIc	7e	3a	none	ENG	931813	932208	957038	922227	918800	715956	732929	810429
IIc	7e	3a	none	FRA	67633	58636	54792	58858	22666	21952	59701	45891
IIc	7e	3a	none	GBJ	63209	36001						
IIc	7e	3a	none	IRL	7838	4112	2022	3620	810	196		
IIc	7e	3a	none	NLD								
IIc	7e	3a	none	SCO				1296		592		
IIc	**7e**	**3a Total**	**none**		**1288453**	**1261335**	**1225650**	**1250267**	**1124337**	**847349**	**907844**	**994517**
IIc	7e	3b	none	ENG	48508	45697	42816	24434	24507	21667	25037	24994
IIc	7e	3b	none	FRA	158424	125936	172966	133602	77388	76950	43128	33332
IIc	7e	3b	none	SCO			384	1024	2944	768		
IIc	**7e**	**3b Total**	**none**		**206932**	**171633**	**216166**	**159060**	**104839**	**99385**	**68165**	**58326**
IIc	7e	none	none	BEL	3636	5200	6484	6161	15039	34208	43562	22816
IIc	7e	none	none	DEU	143250	106230	39730		50030	29112	154280	48999
IIc	7e	none	none	DNK	619	23792	52955	14659	39515	8022	40349	
IIc	7e	none	none	ENG	1004424	1014489	996220	942868	912669	951836	1016967	1027568
IIc	7e	none	none	FRA	3320926	3501265	3904177	3818126	2530061	2518492	2948271	2952478
IIc	7e	none	none	GBG	14231	10689	8385	12267	4809	6848	12573	10903
IIc	7e	none	none	GBJ	511	1708	5787	9141	7694	9271	11377	12561
IIc	7e	none	none	IOM			4547	255	61			
IIc	7e	none	none	IRL	107588	41848	1240	10073	415	6676	52272	10030
IIc	7e	none	none	LTU						28497		149507
IIc	7e	none	none	NIR	301						221	
IIc	7e	none	none	NLD	331902	391614	734553	602242	769364	432549	687063	355146
IIc	7e	none	none	SCO	198594	218717	194240	208252	229716	264304	225152	200533
IIc	**7e**	**none Total**	**none**		**5125982**	**5315552**	**5948318**	**5624044**	**4559373**	**4289815**	**5192087**	**4790541**
IIc	**7e**	**Grand Total**	**none**		**6621367**	**6748520**	**7390134**	**7033371**	**5788549**	**5236549**	**6168096**	**5843384**

Table 5.8.1.4 – Western Channel - Trend in number of vessels by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012) and Member State, 2004-2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in section 4 of the report.

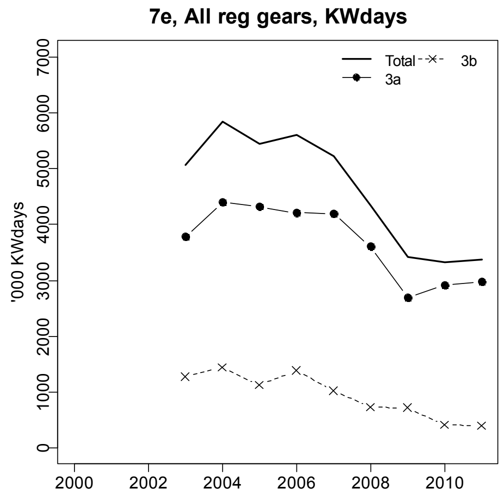
ANNEX	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	3a	none	BEL	57	67	58	55	49	44	31	33
IIc	7e	3a	none	ENG	62	53	51	53	47	43	38	44
IIc	7e	3a	none	FRA	12	13	20	15	11	10	13	8
IIc	7e	3a	none	GBJ	4	2						
IIc	7e	3a	none	IRL	2	2	5	1	2	1		
IIc	7e	3a	none	NLD								
IIc	7e	3a	none	SCO				1		1		
IIc	**7e**	**3a Total**	**none**		**137**	**137**	**134**	**125**	**109**	**99**	**82**	**85**
IIc	7e	3b	none	ENG	21	17	17	14	12	13	12	12
IIc	7e	3b	none	FRA	68	62	77	48	34	34	22	22
IIc	7e	3b	none	SCO			1	1	1	1		
IIc	**7e**	**3b Total**	**none**		**89**	**79**	**95**	**63**	**47**	**48**	**34**	**34**
IIc	7e	none	none	BEL	3	6	7	6	12	28	23	20
IIc	7e	none	none	DEU	4	3	3		2	1	3	1
IIc	7e	none	none	DNK	1	6	8	1	1	1	1	
IIc	7e	none	none	ENG	178	162	170	174	172	156	154	158
IIc	7e	none	none	FRA	837	943	1114	1259	868	1022	688	654
IIc	7e	none	none	GBG	1	2	4	5	4	3	3	2
IIc	7e	none	none	GBJ	1	1	1	1	1	1	2	3
IIc	7e	none	none	IOM			1	1	2			
IIc	7e	none	none	IRL	13	5	1	3	2	2	1	2
IIc	7e	none	none	LTU						1		1
IIc	7e	none	none	NIR	1						1	
IIc	7e	none	none	NLD	15	13	13	19	15	18	16	17
IIc	7e	none	none	SCO	23	14	21	16	15	18	18	19
IIc	**7e**	**none Total**	**none**		**1077**	**1155**	**1343**	**1485**	**1094**	**1251**	**910**	**877**
IIc	**7e**	**Grand Total**	**none**		**1303**	**1371**	**1572**	**1673**	**1250**	**1398**	**1026**	**996**

Table 5.8.1.5 Western Channel - Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012), 2004-2011. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in Section 4 of the report.

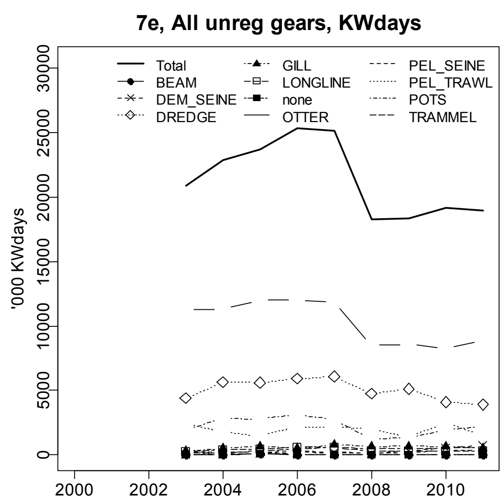
ANNEX	REG ARE/	REG GEAR (	SPECON	2004	2005	2006	2007	2008	2009	2010	2011	Rel. Change to 04	Rel. Change to 10
IIc	7e	3a	none	4402055	4316077	4209145	4199088	3603323	2696024	2914372	2969216	-0.33	0.02
IIc	7e	3b	none	1442948	1124945	1391244	1026522	729036	718465	413797	398590	-0.72	-0.04
IIc	7e	none	none	22868943	23733876	25375596	25170648	18259286	18366023	19194510	18993880	-0.17	-0.01
Sum	**7e**			**28713946**	**29174898**	**30975985**	**30396258**	**22591645**	**21780512**	**22522679**	**22361686**	-0.22	-0.01



Figures 5.8.1.1 – Western Channel -Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012), 2003-2011. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 4. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.



Figures 5.8.1.2 – Western Channel -Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012), 2003-2011. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 4. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.



Figures 5.8.1.3 – Western Channel -Trend in nominal effort (kW*days at sea) by unregulated gear according to Table 1 of Annex IIC (Coun. Reg. 43/2012), 2003-2011. Data qualities are summarised in section 4.

Table. 5.8.1.6. Western Channel Unregulated gear (category none-none) effort (kW*Days) by gear type, 2004-2011.

ANNEX	REG_AREA	REG_GEAR	REG GEAR COD	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	none	OTTER	11306475	11989022	12028972	11848608	8475537	8576314	8279978	8825774
IIc	7e	none	DREDGE	5637002	5602368	5903594	6083728	4752272	5121171	4096901	3894771
IIc	7e	none	POTS	2801196	2784755	3141625	2718668	1230013	1316333	1959298	2200079
IIc	7e	none	PEL_TRAWL	1830023	1474970	2163387	2131950	2020287	1410938	2458100	1537387
IIc	7e	none	DEM_SEINE	52316	94168	202941	166784	129716	307752	537514	729186
IIc	7e	none	TRAMMEL	131206	346504	436467	626072	486195	475625	522126	571254
IIc	7e	none	GILL	488105	674577	534836	781892	658756	665549	661402	520427
IIc	7e	none	PEL_SEINE	193853	183887	295531	207190	175282	174967	321953	344896
IIc	7e	none	LONGLINE	382787	441367	615657	587251	312345	277793	318936	301230
IIc	7e	none	none	33746	76435	42606	12474	18883	18883	0	48801
IIc	7e	none	BEAM	12234	65823	9980	6031	0	20698	38302	20075
Sum				**22868943**	**23733876**	**25375596**	**25170648**	**18259286**	**18366023**	**19194510**	**18993880**

5.8.2 ToR 1.b Catches (landings and discards) of sole in weight and numbers at age by fisheries

Although the data available for the review of Annex IIC of regulation 53/2010 comes from all countries involved in the fisheries, there is little information on discards for most of the species. Only very sparse discard information is available for anglerfish, cod, haddock, hake, plaice, sole and whiting. The lack of discard information on plaice in particular, increases the likelihood of incorrect assumptions on total removals for that species.

The following Table 5.8.2.1 lists the landings, discards and discard rates for the sole by derogations. For brevity, the following sections represent the landings and discards by derogation in weight for a subset of the species caught ie. anglerfish (ANF), cod (COD), haddock (HAD), hake, (HKE), Nephrops (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). However, additional data queries for other species can be made depending on data provisions of the national catches by the experts or national institutes. The data given in the table form the basis of Figure 5.8.2.1 displaying the catch compositions by derogations for the years 2004-2011. The absence of dark bars representing discards also indicates lack of observations rather than low discard numbers.

Figure 5.8.2.1 shows that in the beam trawl fleets (3a) landings of anglerfish have substantially increased in 2010 and 2011. Sole and plaice landings have been at a lower level since 2006/2007. Landings of the other main species have been rather stable at low levels. Landings by static nets (derogations 3b) are dominated by anglerfish which show a sharp decline since 2010. The category "none" which is responsible for most of the landings (except for sole, plaice and partly anglerfish) consist mainly of otter trawls. Information from otter trawls suggest that there is substantial discarding of cod, haddock and whiting. However, it should be noted that there is no discard information available for the period before 2010, and therefore no trends in discard practices can be concluded. Landings of anglerfish have dropped substantially in 2010, whereas landings of haddock and whiting have increased in the last 6 years (Haddock landings have more than double in 2011 and go inside with high discarding).Cod landings have fluctuated around the same levels since 2006 with a markedly increase in 2011. Information on landings and discards at age will be elaborated during the follow-up meeting STECF EWG 12-12.

Table 5.8.2.2 provides the sole catches of the unregulated gear types. The sole catches of the unregulated gear are in excess of 32% of the overall sole catches in area 7e for each year of the data series (2004-2011). The otter trawl fleet is the main fleet involved with percentages in excess of 26%. For 2011 the unregulated gears account for 32% of the overall sole catches where the otter trawl fleet is responsible for 27% of these catches.

Again STECF-EWG would like to mention that there is little information on discards for area 7e and therefore that the above percentages are more likely to be representative of landings than of total catches.

Tab. 5.8.2.1 Western Channel - Landings (t), discards (t) and relative discard rates for sole and derogation, 2004-2011 – Note: Discard information for area 7e are sparse and not available for all countries.

REG_GEAR	SPECIES	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
3a	SOL	184			486			530			497	1	0.00	430			347	7	0.02	376	4	0.01	430	27	0.06
3b	SOL	49			71			41			49			45			48			22			49		
none	SOL	192			300			268			273			232			222			197	4	0.02	225		

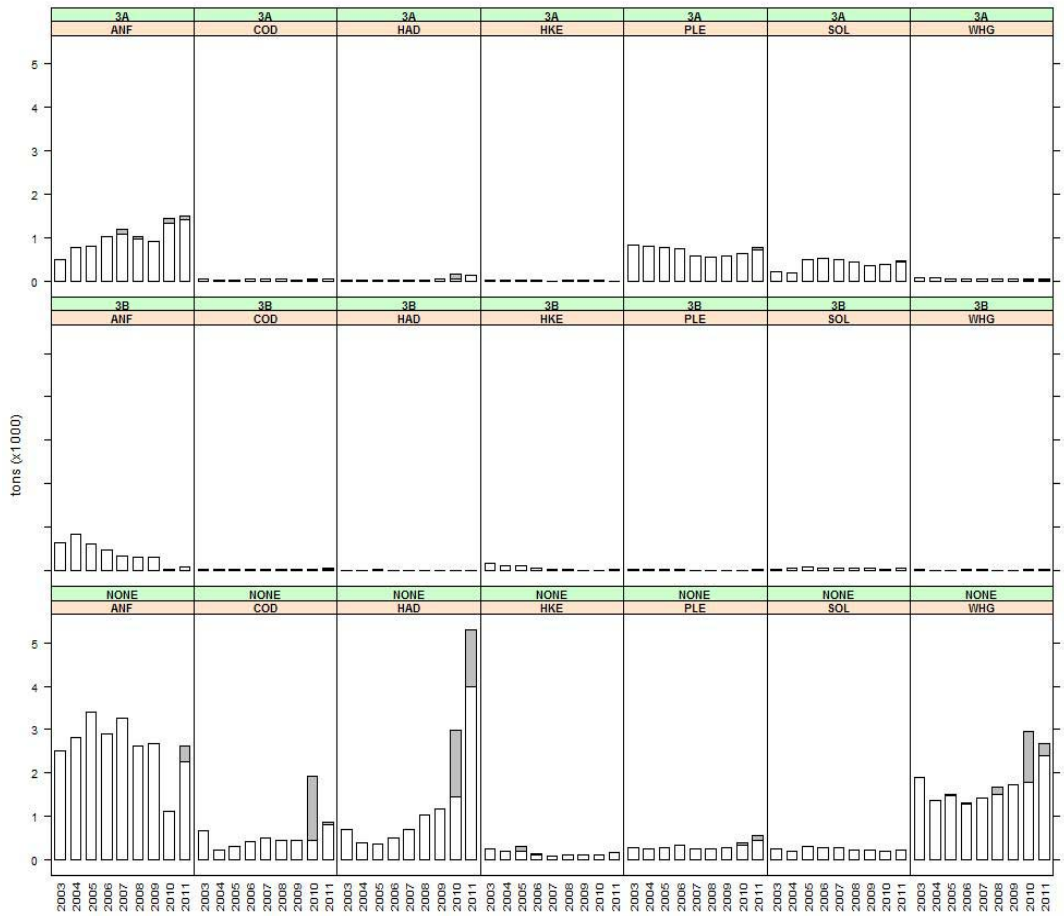


Fig. 5.8.2.1 – Western Channel - Landings (t) and discard (t) by derogation and species, 2004-2011, as well as for the “none” regulated gear. Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily mean zero discards.

Table. 5.8.2.2. Western Chanel. Unregulated gear (category none-none) sole (t) catch composition by gear type, 2004-2011. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	SOL	none	OTTER	165	235	236	239	192	187	157	188
IIc	7e	SOL	none	DREDGE	17	28	27	32	38	31	24	29
IIc	7e	SOL	none	POTS	0	3	0	1	0	0	10	4
IIc	7e	SOL	none	DEM_SEINE			0				0	1
IIc	7e	SOL	none	GILL	2	5	0	0	0	1	3	1
IIc	7e	SOL	none	PEL_TRAWL	0	0	0	0	0	0	1	1
IIc	7e	SOL	none	TRAMMEL	5	12	0	1	2	2	1	1
IIc	7e	SOL	none	BEAM	1	13	1	0		1	1	0
IIc	7e	SOL	none	LONGLINE	0	0	0	0	0	0	0	0
IIc	7e	SOL	none	PEL_SEINE							0	
IIc	7e	SOL	none	none	2	4	4	0	0	0		0
Sum					**192**	**300**	**268**	**273**	**232**	**222**	**197**	**225**

The relative contribution of sole weights in the catch (Table 5.8.2.3) shows an increase from 2003 to 2006 and stabilization afterwards for the dominating beam trawls (3a), which coincides with a decrease of the category “none”, mainly otter trawls which are not effort regulated in Annex IIc. STECF EWG notes however that this otter trawl fleet is generally responsible for about 30% of the estimated sole and plaice catches in weight and about 85% of the cod catches in weight. The static nets with mesh size <220 mm (3b) are taking around 4-11% of sole catches in weight. There is no difference in ranking of the derogations according to the year 2011 or the average of 2009-2011.

Table 5.8.2.3 Western Channel - Ranked derogations according to relative sole catches in weight (t) 2004-2011. Ranking is according to the year 2011 and the average 2009-2011.

ANNEX	REG_AREA	SPECIES	REG_GEAR	2003 Rel	2004 Rel	2005 Rel	2006 Rel	2007 Rel	2008 Rel	2009 Rel	2010 Rel	2011 Rel	Avg.2009-2011
IIc	7e	SOL	3a	0.42	0.44	0.57	0.63	0.61	0.61	0.57	0.63	0.62	0.61
IIc	7e	SOL	none	0.52	0.45	0.35	0.32	0.33	0.33	0.36	0.33	0.31	0.33
IIc	7e	SOL	3b	0.06	0.11	0.08	0.05	0.06	0.06	0.08	0.04	0.07	0.06

5.8.3 ToR 1.c Catches (landings and discards) of non-sole species in weight and numbers at age by fisheries

Table 5.8.3.1 lists the Landings (t), discards (t) and discard rates for the main species except sole by derogation, 2004-2011. Figure 5.8.2.1 incorporates next to sole, also the other main species in the fisheries and is commented on above (see section *Tor 1.b)*.

Table 5.8.3.2 provides the cod catches of the unregulated gear types. The cod catches of the unregulated gear are in excess of 84% of the overall cod catches in area 7e for each year of the data series (2004-2011). The otter trawl fleet is taking the bulk of these catches with percentages in excess of 81%. For 2011 the unregulated gears account for 92% of the overall cod catches where the otter trawl fleet is responsible for 86% of these catches.

Table 5.8.3.3 provides the plaice catches of the unregulated gear types. The plaice catches of the unregulated gear are in excess of 23% of the overall plaice catches in area 7e for each year of the data series (2004-2011). The otter trawl fleet is the main fleet involved with percentages in excess of 22%. For 2011 the unregulated gears account for 38% of the overall plaice catches where the otter trawl fleet is responsible for 36% of these catches.

Again STECF-EWG would like to mention that there is little information on discards for area 7e and therefore that the above percentages are more likely to be representative of landings than of total catches.

Tab. 5.8.3.1 Western Channel - Landings (t), discards (t) and relative discard rates by species and derogation, 2004-2011 – Note: Discard information for area 7e is sparse and not available for all countries.

REG_GEAR	SPECIES	2004 L	2004 D	2004 R	2005 L	2005 D	2005 R	2006 L	2006 D	2006 R	2007 L	2007 D	2007 R	2008 L	2008 D	2008 R	2009 L	2009 D	2009 R	2010 L	2010 D	2010 R	2011 L	2011 D	2011 R
3a	ANF	769			795			1013			1086	105	0.09	959	74	0.07	916	98	0.10	1344	92	0.06	1413	97	0.06
3b	ANF	824			618			459			318			302			303			12			67	2	0.03
none	ANF	2805			3412			2891			3256			2619			2688			1103			2258	350	0.13
3a	COD	29			32			36			49	2	0.04	37			28	1	0.03	31	16	0.34	44		
3b	COD	16			15			16			13			8			13			10			29	11	0.28
none	COD	231			302			416			511			451			433			430	1504	0.78	796	76	0.09
3a	HAD	14	2	0.13	10			17			22			30			38			55	95	0.63	128	15	0.10
3b	HAD	4			8			3			3			1			1			4			2		
none	HAD	384	9	0.02	362			492			703			1023			1166			1439	1533	0.52	3975	1313	0.25
3a	HKE	6			6	18	0.75	6	6	0.50	3			10			12			7			4		
3b	HKE	114			98			60			19			9			3			7			12	4	0.25
none	HKE	179	7	0.04	205	88	0.30	117	14	0.11	88			102			109			97			156		
3a	NEP																								
3b	NEP																								
none	NEP	8			13			6			10			9			9								
3a	PLE	801			767			743			571	2	0.00	547	9	0.02	581	2	0.00	627	4	0.01	726	34	0.04
3b	PLE	19			24			13			7			4			6			7			8	1	0.11
none	PLE	242			279			322			255			261			274			324	70	0.18	448	96	0.18
3a	POK	1																							
3b	POK	11			17			3			1			1			3			5					
none	POK	5			2			3			1			1			1			16					
3a	WHG	61			53	1	0.02	45			46	1	0.02	48			38			30	4	0.12	32	9	0.22
3b	WHG	7			6			11			8			6			5			10			16		
none	WHG	1352			1478	16	0.01	1293	4	0.00	1407			1501	163	0.10	1729			1779	1165	0.40	2398	276	0.10

Table. 5.8.3.2. Western Chanel. Unregulated gear (category none-none) cod (t) catch composition by gear type, 2004-2011. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	COD	none	OTTER	223	298	391	503	439	415	399	749
IIc	7e	COD	none	DEM_SEINE			1	1		5	10	26
IIc	7e	COD	none	TRAMMEL	1	1	2	2	3	3	6	9
IIc	7e	COD	none	LONGLINE	3	0	17	1	1	1	0	5
IIc	7e	COD	none	GILL	4	3	5	3	6	7	5	4
IIc	7e	COD	none	PEL_TRAWL	0	0	0	0	0	0	5	1
IIc	7e	COD	none	POTS	0	0	0	0	0	0	0	1
IIc	7e	COD	none	BEAM	0	0	0			0	0	0
IIc	7e	COD	none	DREDGE	0	0	0	1	2	2	5	0
IIc	7e	COD	none	PEL_SEINE							0	
IIc	7e	COD	none	none				0				1
Sum					**231**	**302**	**416**	**511**	**451**	**433**	**430**	**796**

Table 5.8.3.3 Western Chanel. Unregulated gear (category none-none) plaice (t) catch composition by gear type, 2004-2011. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_ARE.	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	PLE	none	OTTER	231	257	312	246	252	261	316	427
IIc	7e	PLE	none	DEM_SEINE		0	0	0	0	3	3	10
IIc	7e	PLE	none	DREDGE	9	14	9	7	8	8	4	9
IIc	7e	PLE	none	BEAM	1	4	1	2		0	0	1
IIc	7e	PLE	none	TRAMMEL	0	3	0	0	1	1	0	1
IIc	7e	PLE	none	GILL	0	1	0	0	0	1	1	0
IIc	7e	PLE	none	LONGLINE	0	0	0	0	0	0	0	0
IIc	7e	PLE	none	PEL_TRAWL	0	0	0	0	0	0	0	0
IIc	7e	PLE	none	POTS	0	0	0	0	0	0	0	0
IIc	7e	PLE	none	PEL_SEINE				0			0	
IIc	7e	PLE	none	none	1	0		0	0	0		0
Sum					**242**	**279**	**322**	**255**	**261**	**274**	**324**	**448**

Table. 5.8.3.4. Western Chanel. Unregulated gear (category none-none) cod (t) catch composition by gear type, 2004-2011. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_AREA	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	COD	none	OTTER	223	298	391	503	439	415	399	749
IIc	7e	COD	none	DEM_SEINE			1	1		5	10	26
IIc	7e	COD	none	TRAMMEL	1	1	2	2	3	3	6	9
IIc	7e	COD	none	LONGLINE	3	0	17	1	1	1	0	5
IIc	7e	COD	none	GILL	4	3	5	3	6	7	5	4
IIc	7e	COD	none	PEL_TRAWL	0	0	0	0	0	0	5	1
IIc	7e	COD	none	POTS	0	0	0	0	0	0	0	1
IIc	7e	COD	none	BEAM	0	0	0			0	0	0
IIc	7e	COD	none	DREDGE	0	0	0	1	2	2	5	0
IIc	7e	COD	none	PEL_SEINE							0	
IIc	7e	COD	none	none				0				1
Sum					**231**	**302**	**416**	**511**	**451**	**433**	**430**	**796**

Table 5.8.3.5 Western Chanel. Unregulated gear (category none-none) plaice (t) catch composition by gear type, 2004-2011. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG_ARE.	SPECIES	REG_GEAR	Gear code	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	PLE	none	OTTER	231	257	312	246	252	261	316	427
IIc	7e	PLE	none	DEM_SEINE		0	0	0	0	3	3	10
IIc	7e	PLE	none	DREDGE	9	14	9	7	8	8	4	9
IIc	7e	PLE	none	BEAM	1	4	1	2		0	0	1
IIc	7e	PLE	none	TRAMMEL	0	3	0	0	1	1	0	1
IIc	7e	PLE	none	GILL	0	1	0	0	0	1	1	0
IIc	7e	PLE	none	LONGLINE	0	0	0	0	0	0	0	0
IIc	7e	PLE	none	PEL_TRAWL	0	0	0	0	0	0	0	0
IIc	7e	PLE	none	POTS	0	0	0	0	0	0	0	0
IIc	7e	PLE	none	PEL_SEINE				0			0	
IIc	7e	PLE	none	none	1	0		0	0	0		0
Sum					**242**	**279**	**322**	**255**	**261**	**274**	**324**	**448**

5.8.4 ToR 1.d CPUE and LPUE of cod by fisheries

Very limited discards are available for sole, plaice and cod, therefore LPUE for sole, plaice and cod are represented in Tables 5.8.4.1-3. Figures 5.8.4.1-3 show CPUE and LPUE trends for sole, plaice and cod since 2003. Graphically, only the regulated gears and the most important unregulated gears (otter trawl and dredges) are presented.

Table 5.8.4.1 Western Channel - Sole CPUE (g/(kW*days)) by derogation and year, 2004-2011. Note: Discard information for area 7e area sparse and therefore LPUE is provided in the table. (CPUE is presented in the figures).

ANNEX	SPECIES	REG AREA COD	REG GEAR	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
IIc	SOL	7e	3a	none	42	113	126	118	119	128	129	145	134
IIc	SOL	7e	3b	none	33	63	29	48	62	65	53	123	77
IIc	SOL	7e	BEAM	none	82	197	100	0	0	48	26	0	25
IIc	SOL	7e	DEM_SEINE	none			0			0	0	1	1
IIc	SOL	7e	DREDGE	none	3	5	4	5	8	6	6	7	6
IIc	SOL	7e	GILL	none	4	7	0	0	0	2	5	2	3
IIc	SOL	7e	LONGLINE	none	0	0	0	0	0	0	0	0	0
IIc	SOL	7e	none	none	59	52	94	0	0	0	0	0	0
IIc	SOL	7e	OTTER	none	15	20	20	20	23	22	19	21	21
IIc	SOL	7e	PEL_SEINE	none						0	0	0	0
IIc	SOL	7e	PEL_TRAWl	none	0	0	0	0	0	0	0	1	0
IIc	SOL	7e	POTS	none	0	1	0	0	0	0	5	2	3
IIc	SOL	7e	TRAMMEL	none	38	35	0	2	4	4	2	2	3

Table 5.8.4.2 Western Channel - Plaice CPUE (g/(kW*days)) by derogation and year, 2004-2011. Note: Discard information for area 7e area sparse and therefore LPUE is provided in the table. (CPUE is presented in the figures).

ANNEX	SPECIES	REG AREA COD	REG GEAR	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
IIc	PLE	7e	3a	none	182	178	177	136	152	215	215	245	225
IIc	PLE	7e	3b	none	12	21	9	7	5	8	17	18	13
IIc	PLE	7e	BEAM	none	82	61	100	332	0	0	0	50	13
IIc	PLE	7e	DEM_SEINE	none		0	0	0	0	10	6	14	10
IIc	PLE	7e	DREDGE	none	2	2	2	1	2	2	1	2	2
IIc	PLE	7e	GILL	none	0	1	0	0	0	2	2	0	1
IIc	PLE	7e	LONGLINE	none	0	0	0	0	0	0	0	0	0
IIc	PLE	7e	none	none	30	0		0	0	0	0	0	0
IIc	PLE	7e	OTTER	none	21	21	26	21	30	30	38	48	39
IIc	PLE	7e	PEL_SEINE	none				0		0	0	0	0
IIc	PLE	7e	PEL_TRAWl	none	0	0	0	0	0	0	0	0	0
IIc	PLE	7e	POTS	none	0	0	0	0	0	0	0	0	0
IIc	PLE	7e	TRAMMEL	none	0	9	0	0	2	2	0	2	1

Table 5.8.4.3 Western Channel - Cod CPUE (g/(kW*days)) by derogation and year, 2004-2011. Note: Discard information for area 7e area sparse and therefore LPUE is provided in the table. (CPUE is presented in the figures).

ANNEX	SPECIES	REG ARE/	REG GEAI	SPECON	LPUE 2004	LPUE 2005	LPUE 2006	LPUE 2007	LPUE 2008	LPUE 2009	LPUE 2010	LPUE 2011	LPUE 2009-2011
IIc	COD	7e	3a	none	7	7	9	12	10	10	10	15	12
IIc	COD	7e	3b	none	11	12	12	14	10	18	24	73	34
IIc	COD	7e	BEAM	none	0	0	0		0	0	0	0	0
IIc	COD	7e	DEM_SEIN	none			5	6		16	19	36	26
IIc	COD	7e	DREDGE	none	0	0	0	0	0	0	1	0	1
IIc	COD	7e	GILL	none	6	4	7	4	8	9	8	8	8
IIc	COD	7e	LONGLINE	none	8	0	26	2	3	4	0	17	7
IIc	COD	7e	none	none				0		0	0	20	15
IIc	COD	7e	OTTER	none	20	25	33	42	52	48	48	85	61
IIc	COD	7e	PEL_SEIN	none						0	0	0	0
IIc	COD	7e	PEL_TRAV	none	0	0	0	0	0	0	2	1	1
IIc	COD	7e	POTS	none	0	0	0	0	0	0	0	0	0
IIc	COD	7e	TRAMMEL	none	8	3	5	3	6	6	11	16	11

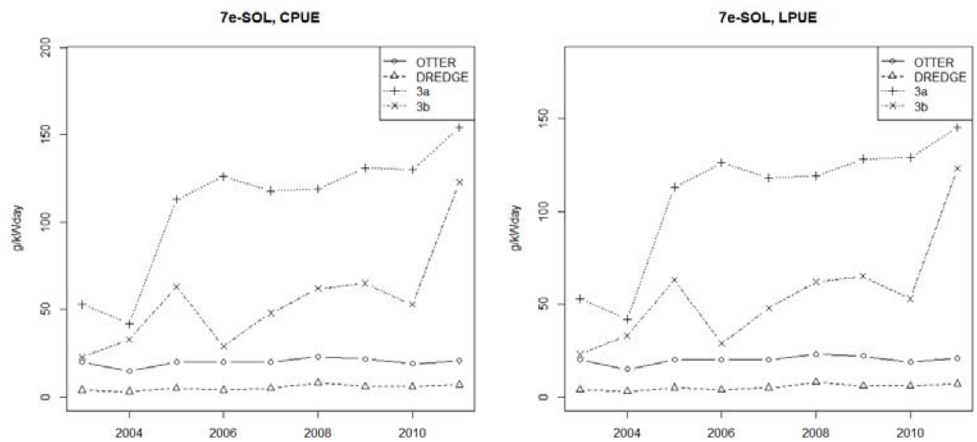


Figure 5.8.4.1 Western Channel - Sole – CPUE (left) and LPUE (right) (g/(KW*days)) by derogation and year, 2003-2011.

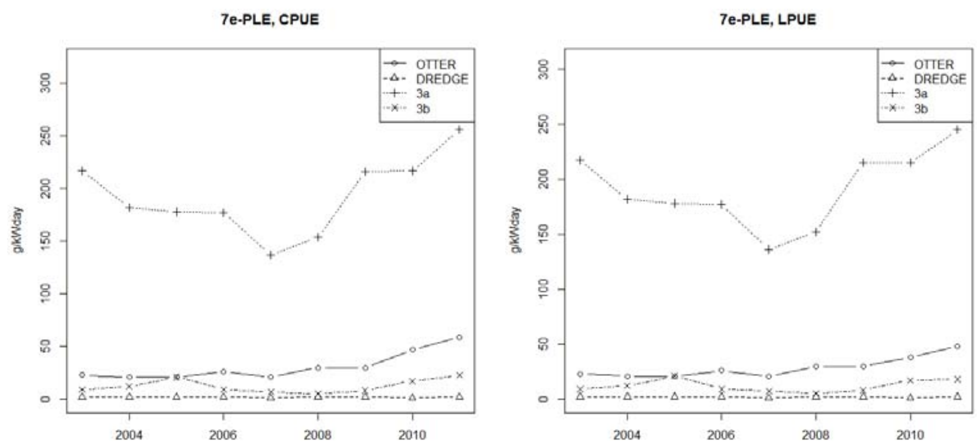


Figure 5.8.4.2 Western Channel - Plaice – CPUE (left) and LPUE (right) (g/(KW*days)) by derogation and year, 2003-2011.

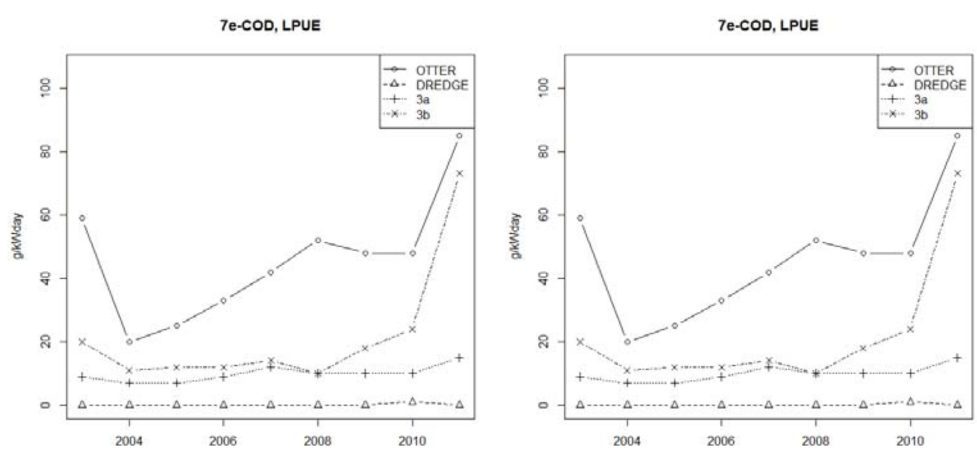


Figure 5.8.4.3 Western Channel - Cod – CPUE (left) and LPUE (right) (g/(KW*days)) by derogation and year, 2003-2011.

5.8.5 ToR 2 Remarks on quality of catches and discard estimates

Discard information is scarce.

5.8.6 ToR 3 Information on small boats (<10m)

5.8.6.1 Fishing effort of small boats by Member State

It should be noted that not all countries have submitted information and that the total figures are therefore likely to give an underestimation of effort and catches of this vessel category.

Table 5.8.6.1.1 provides an overview of the effort deployed by vessels >10m (regulated and non regulated gear) and vessels <10m in the Western Channel for the period 2004-2011. The effort from the vessels <10m fluctuates between 13% and 25% of the effort deployed by the vessels >10m.

Table 5.8.6.1.1 Western Channel - Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012), unregulated gear and vessels <10m, 2004-2011.

ANNEX	REG AREA (	REG GEAR	SPECON	2004	2005	2006	2007	2008	2009	2010	2011
IIc	7e	3a	none	4402055	4316077	4209145	4199088	3603323	2696024	2914372	2969216
IIc	7e	3b	none	1442948	1124945	1391244	1026522	729036	718465	413797	398590
IIc	7e	none	none	22868943	23733876	25375596	25170648	18259286	18366023	19194510	18993880
Sum_O10m	**7e**			**28713946**	**29174898**	**30975985**	**30396258**	**22591645**	**21780512**	**22522679**	**22361686**
Sum_U10m	**7e**			**4725226**	**3699800**	**5719680**	**5501293**	**4335239**	**3892587**	**4897943**	**5609749**
%-U10m	**7e**			**16**	**13**	**18**	**18**	**19**	**18**	**22**	**25**

5.8.6.2 Catches (landings and discards) of sole and associated species by small boats by Member State

Table 5.8.6.2.1 gives a preliminary overview of the catches of some main species (anglerfish, cod, haddock, hake, Nephrops, plaice, saithe, sole and whiting in area 7e for vessels <10m (2004-2011). STECF EWG would like to mention that although these figures are underestimates, they indicate that between 7% and 15% of the sole catches are taken by vessels < 10m.

More detailed information for vessels <10 meters were available only from France for the period 2003-2007. This information was presented in the 2008 report and is not repeated here. An update will be provided once new data become available.

Table 5.8.6.2.1 Western Channel – Overview of anglerfish, cod, haddock, hake, nephrops, plaice, saithe, sole and whiting catches by vessels <10m, 2004-2011.

REG_AREA	REG_GEAR	SPECIES	2004	2005	2006	2007	2008	2009	2010	2011
7e	3a	ANF	769	795	1013	1086	959	916	1344	1413
7e	3b	ANF	824	618	459	318	302	303	12	67
7e	none	ANF	2805	3412	2891	3256	2619	2688	1103	2258
Sum_O10m		ANF	4398	4825	4363	4660	3880	3907	2459	3738
Sum_U10m		ANF	262	217	199	286	237	225	179	196
%-U10m			**6**	**4**	**5**	**6**	**6**	**6**	**7**	**5**
7e	3a	COD	29	32	36	49	37	28	31	44
7e	3b	COD	16	15	16	13	8	13	10	29
7e	none	COD	231	302	416	511	451	433	430	796
Sum_O10m		COD	276	349	468	573	496	474	471	869
Sum_U10m		COD	26	17	40	57	35	46	82	140
%-U10m			**9**	**5**	**9**	**10**	**7**	**10**	**17**	**16**
7e	3a	HAD	14	10	17	22	30	38	55	128
7e	3b	HAD	4	8	3	3	1	1	4	2
7e	none	HAD	384	362	492	703	1023	1166	1439	3975
Sum_O10m		HAD	402	380	512	728	1054	1205	1498	4105
Sum_U10m		HAD	3	7	7	27	37	28	58	94
%-U10m			**1**	**2**	**1**	**4**	**4**	**2**	**4**	**2**
7e	3a	HKE	6	6	6	3	10	12	7	4
7e	3b	HKE	114	98	60	19	9	3	7	12
7e	none	HKE	179	205	117	88	102	109	97	156
Sum_O10m		HKE	299	309	183	110	121	124	111	172
Sum_U10m		HKE	1	2	1	1	2	3	4	3
%-U10m			**0**	**1**	**1**	**1**	**2**	**2**	**4**	**2**
7e	3a	NEP	0	0	0	0	0	0		0
7e	3b	NEP		0	0	0	0	0	0	0
7e	none	NEP	8	13	6	10	9	9	16	15
Sum_O10m		NEP	8	13	6	10	9	9	16	15
Sum_U10m		NEP	0	0	0	0	0	4	0	0
%-U10m			**0**	**0**	**0**	**0**	**0**	**44**	**0**	**0**
7e	3a	PLE	801	767	743	571	547	581	627	726
7e	3b	PLE	19	24	13	7	4	6	7	8
7e	none	PLE	242	279	322	255	261	274	324	448
Sum_O10m		PLE	1062	1070	1078	833	812	861	958	1182
Sum_U10m		PLE	82	67	130	104	75	68	104	111
%-U10m			**8**	**6**	**12**	**12**	**9**	**8**	**11**	**9**
7e	3a	POK	1	0	0	0	0	0	0	0
7e	3b	POK	11	17	3	1	1	3	5	3
7e	none	POK	5	2	3	1	1	1	16	1
Sum_O10m		POK	17	19	6	2	2	4	21	4
Sum_U10m		POK	1	1	0	0	0	2	1	2
%-U10m			**6**	**5**	**0**	**0**	**0**	**50**	**5**	**50**
7e	3a	SOL	184	486	530	497	430	347	376	430
7e	3b	SOL	49	71	41	49	45	48	22	49
7e	none	SOL	192	300	268	273	232	222	197	225
Sum_O10m		SOL	425	857	839	819	707	617	595	704
Sum_U10m		SOL	58	73	85	85	52	45	68	86
%-U10m			**14**	**9**	**10**	**10**	**7**	**7**	**11**	**12**
7e	3a	WHG	61	53	45	46	48	38	30	32
7e	3b	WHG	7	6	11	8	6	5	10	16
7e	none	WHG	1352	1478	1293	1407	1501	1729	1779	2398
Sum_O10m		WHG	1420	1537	1349	1461	1555	1772	1819	2446
Sum_U10m		WHG	79	53	71	123	127	141	154	124
%-U10m			**6**	**3**	**5**	**8**	**8**	**8**	**8**	**5**

5.8.7 Evaluation of fully documented fisheries FDF

5.8.7.1 Fishing effort of FDF by Member State and fisheries in comparison with fisheries not working under FDF provisions

There is no information available at the moment of vessels operational under the FDF provisions in area VIIe.

5.8.7.2 Catches (landings and discards) of cod and other species taken by FDF fisheries by Member State and fisheries in comparison with fisheries not working under FDF provisions

There is no information available at the moment of vessels operational under the FDF provisions in area VIIe.

5.8.8 ToR 4 Spatio-temporal patterns in effective effort by fisheries

STECF EWG 12-06 will accomplish the task during its follow-up meeting STECF EWG 12-12, 24-28 September 2012.

5.8.9 ToR 5 Trend in calculated maximum effort of regulated gears and uptake by Member State

Table 5.8.9.1 lists the effort in units of days at sea estimated for the effort regulated fisheries by Member State. However, the time series is only considered complete for the two most recent years 2010 and 2011 due to data gaps. Unlike the situation in the Baltic, the definitions of few fisheries and specific days at sea allocations to them allow the assessment of the effort uptake from the numbers of boats using effort regulated gears, assuming no major changes in gears used. Multiple counting of vessels (overestimation) is implied from vessels using more than one regulated gear. The maximum numbers of days available for such fisheries, i.e. the maximum days at sea per vessel multiplied with the number of vessels, are given in the right part of the Table 5.8.9.1. In 2011, the effort regime appears not constraining the fisheries, which have only used between 10 and 79% of the days at sea available.

Table 5.8.9.1 Western Channel - Trend in days at sea by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2012) and Member State, 2004-2011. Maximum days at sea are calculated from number of vessels multiplied with the maximum days allowed per vessel. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 4 of the report.

REG GEAR COD	SPECON	COUNTRY	2004	2005	2006	2007	2008	2009	2010	2011	Vessels-2011	Max days	%-used
3a	none	BEL			670	810	542	174	342	516	33	5412	10
3a	none	ENG								5687	44	7216	79
3a	none	FRA							1271	914	8	1312	70
3a	none	GBJ											
3a	none	IRL											
3a	none	NLD											
3a	none	SCO											
3a Total	**none**				**670**	**810**	**542**	**174**	**1613**	**7117**	**85**	**13940**	51
3b	none	ENG								752	12	1968	38
3b	none	FRA							1830	1780	22	3608	49
3b	none	SCO											
3b Total	**none**								**1830**	**2532**	**34**	**5576**	45
none	none	BEL						20	17		20		
none	none	DEU						4	34	12	1		
none	none	DNK											
none	none	ENG								18384	158		
none	none	FRA							52225	54427	654		
none	none	GBG								180	2		
none	none	GBJ								191	3		
none	none	IOM											
none	none	IRL									2		
none	none	LTU									1		
none	none	NIR											
none	none	NLD									17		
none	none	SCO									19		
none Total	**none**		**0**	**0**	**0**	**0**	**0**	**24**	**52276**	**73194**	**877**		
Grand Total	**none**				**670**	**810**	**542**	**198**	**55719**	**82843**	**996**		

5.8.10 ToR 6 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

STECF EWG 12-06 reiterates its observation that a relatively high percentage of sole are landed by non-effort regulated gears.

5.8.11 ToR 7 Correlation between partial cod mortality and fishing effort by Member State and fisheries

The STECF EWG presents partial fishing mortalities by major fisheries and Member States in relation to the estimated fishing mortality by ICES (2012) and the landings volumes in relation to the estimated total landings for the years available. The full list of all fisheries can be downloaded from the EWG's web page. The anticipated trend in fishing mortality as derived from the sole plan is also presented in the following Table 5.8.11.1. The sustainable exploitation target is defined as Fmsy=0.27. The trends in fishing effort in units of kWdays at sea of the relevant fisheries are also presented in Table 5.1.11.1. The presented parameters r (absolute value of Pearson's coefficient of correlation), numbers of points considered, two tailed students' t statistic as well as a p value to quantify the statistical significance (≤ 0.05) allow conclusions about the quality of the correlation between the partial F and fisheries specific fishing effort.

It can be concluded from the estimated F (Table 5.1.11.1) that the stock is sustainably exploited since 2009, assuming that discarding is negligible. The listed fisheries do contribute by more than 96% to the total fishing mortality estimated. Among the relevant beam trawl and static net fisheries by Belgium, England, and France, there are evident also significant partial Fs from non-regulated gears as well as under 8m boats.

STECF EWG 12-06 notes that the correlations between the summed partial Fs for landings of the major fisheries and their estimated fishing efforts are highly significant for the period 2005-2011. The correlation excludes the years 2003 and 2004 as the DCF data do represent only about 50% of the landings reported to ICES. The partial Fs of Belgian and English fisheries using the regulated gear 3a are also closely correlated with their specific effort estimates in kW days at sea, or miss just the level of $p \leq 0.05$. However for the French regulated fisheries (3a and 3b), which represent just about 10% of the sole landings, the correlation between F and effort (kWdays) is statistically not significant. This indicates that effective fisheries management for sole in ICES Division VIIe by fishing effort in units of kWdays at sea appears possible, also an auxiliary measure to catch constraints and technical measures.

STECF EWG 12-06 notes that if a fishing effort regime in the Western Channel is to be maintained, it shall consider an appropriate measure of effective unit of fishing effort to account for vessel size/power and gear effectiveness.

Table 5.1.11.1 The left part of the table lists estimated F trajectories from the management plan and the ICES 2012 assessment, as well as partial Fs of major fisheries for landings and discards. The right part of the table lists the respective trends in fishing effort (kW days at sea) as well as the correlation parameters between the partial Fs and the fisheries specific fishing effort. STECF 12-06 notes that the landings of sole in 2003 and 2004 are underestimated in the DCF data by about 50% and have thus been excluded from the correlation.

2007 F reductions by 20 percent unitl F<=Fmsy=0.27												Reference year				
							2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
F plan							0.256	0.306	0.337	0.357	0.27	0.27	0.27	0.27	0.27	0.27
reduction F plan												0.00	0.00	0.00	0.00	0.00
F estimated							0.256	0.306	0.337	0.357	0.363	0.33	0.224	0.222	0.235	
reduction F estimated												-0.09	-0.32	-0.01	0.06	
F par estimated as F*landings or discards(fishery)/Catch(total)							2003	2004	2005	2006	2007	2008	2009	2010	2011	
SOL	IIc	7e	BEL	3a	none	landings	0.000	0.005	0.009	0.012	0.014	0.011	0.005	0.005	0.006	
SOL	IIc	7e	ENG	3a	none	landings	0.084	0.080	0.149	0.180	0.172	0.164	0.101	0.098	0.100	
SOL	IIc	7e	ENG	none	none	landings	0.011	0.014	0.016	0.017	0.019	0.016	0.011	0.013	0.012	
SOL	IIc	7e	FRA	3a	none	landings	0.003	0.027	0.011	0.012	0.013	0.015	0.011	0.021	0.017	
SOL	IIc	7e	FRA	3b	none	landings	0.013	0.030	0.025	0.016	0.018	0.017	0.013	0.006	0.013	
SOL	IIc	7e	FRA	none	none	landings	0.105	0.107	0.092	0.085	0.089	0.083	0.063	0.051	0.053	
SOL	IIc	7e	ENG	u10m	none	landings	0.009	0.009	0.009	0.019	0.018	0.017	0.011	0.007	0.008	
SOL	IIc	7e	FRA	u10m	none	landings	0.024	0.028	0.018	0.015	0.017	0.005	0.004	0.016	0.017	
sum							0.249	0.300	0.329	0.356	0.360	0.328	0.219	0.217	0.226	
landings							0.249	0.300	0.329	0.356	0.360	0.328	0.219	0.217	0.226	
rel. contribution to F estimated							0.973	0.98	0.976	0.997	0.992	0.994	0.978	0.977	0.962	

Effort kW days running previous year baseline														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012				
Effort plan/ TAC regulations not applicable as days at sea per vessel														
reduction														
Effort estimated (re	5057647	5845003	5441022	5599174	5218704	4323044	3410663	3328167	3367806					
						-0.17	-0.21	-0.02	0.01					
											2005-2011			
EFFORT	2003	2004	2005	2006	2007	2008	2009	2010	2011		pearson r	n	t	p
kW days at sea	211491	633428	689624	628907	837161	584560	358399	383303	450341		0.918	7	5.176	0.004
kW days at sea	3374514	3206806	3227096	3283897	3021075	2870177	2197118	2227991	2318845		0.928	7	5.569	0.003
kW days at sea	45086	317275	261700	289867	320576	146443	138669	303078	200030		0.176	7	0.400	0.706
kW days at sea	956465	1236654	946127	1236595	920004	615534	611990	304540	280434		0.658	7	1.954	0.108
sum	4587556	5394163	5124547	5439266	5098816	4216714	3306176	3218912	3249650		0.954	7	7.115	0.001
	4587556	5394163	5124547	5439266	5098816	4216714	3306176	3218912	3249650		0.954	7	7.115	0.001
rel effort	0.907	0.923	0.942	0.971	0.977	0.975	0.969	0.967	0.965					

5.8.12 ToR 8 Considerations in order to accomplish spatio-temoral patterns in standardized catchability indices for sole

The STECF EWG 12-06 discussed this task and elaborated generic ideas given in section 4.9 of the present report.

5.8.13 ToR 9 Discard estimates of sole in 2011 for specific fisheries with additional quota allocations

STECF EWG 12-06 notes that discard information is scarce and inadequate to support provision of the requested 2011 discard estimates for specific fisheries with additional quota allocations. The landings and discards for sole by the regulated gear 3a (beam trawl) by UK are estimated as:

ANNEX	SPECIES	Year	REG_AREA	COUNTRY	REG_GEAR	LANDINGS	DISCARDS	DISC RATE
IIc	SOL	2011	7e	ENG	3a	349.807	21.961	0.059

5.9 Deep Sea and Western Waters effort regime evaluations

The STECF EWG 12-06 was unable to deal with the specific ToR due to time constraints. However, updated standard tables including 2011 of trends catches (landings and discards) as well as fishing effort by major gear groups and Member State are provided on the given link: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

The STECF EWG 12-06 intends to address the specific ToR regarding Deep Sea and Western Waters during its follow-up meeting STECF EWG 12-12, 24-28 September 2012.

5.10 Bay of Biscay effort regime evaluation in the context of Council Regulation (EC) No 388/2006)

5.10.1 ToR 1.a Fishing effort in kWdays, GTdays and number of vessels by Member State and fisheries

Catch and effort data have been provided by all Member States except Spain. Spanish data provided the previous years are now under revision, effort and catch time series need to be reconsidered before further complete analysis of the activity in this area.

All analyses were made this year without Spanish data.

As data problems were discovered with the French effort information for 2002, STECF-EWG-12-06 decided only to provide effort trends graphically starting from 2003 onwards.

Apart from the Belgium beam trawl fleet, only operational in quarter 3, almost all effort from all gears is French (Table 5.10.1.1).

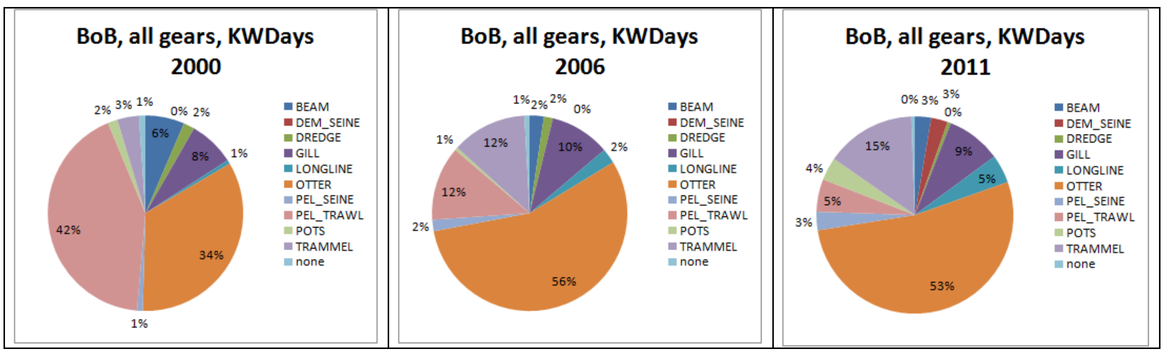


Figure 5.10.1.1: BoB, Trend in the distribution per gear of the nominal effort (KWDays).

The French otter trawl fleet being by far the dominating fleet with percentages around 50% of the effort deployed in the last 8 years (Table 5.10.1.1 and Figures 5.10.1.1 and 5.10.1.2). The other fleets involved are the French trammel nets with increasing trends from about 3% in 2000 up to 15% in the last three years. The predominantly French Pelagic trawl effort went down from about 40% in the beginning of the series to around 5% in the last few years. The Belgian beam trawl fleet accounts only for about 4% of the effort.

Information on the nominal effort of the specific condition SBCIIIART5 is given in Table 5.10.1.3. As mentioned above, data broken down following this specific condition were only provided for 2010 and 2011 for French vessels and since 2006 for Belgian vessels, introducing a shift for the main gear type from the "none" category to the SPECON "SBCIIIART5".

The otter trawl fleet increased since 2003 with a maximum effort level in 2007 that was nearly doubled compared to 2003. Since 2007 the effort deployed stayed at that level. The second important fleet in 2003 (pelagic trawl) decreased since 2006 from around 20% to about 5% following a large decommissioning due to the anchovy crisis.

Trammel nets effort in 2005 doubled compared to earlier years and has fluctuated around that level.

Gillnets increased from 2003 to 2006 and decreased since then.

Demersal seine is a new gear which appears the last two years.

As a quality check, STECF routinely compares the data currently submitted with the data submitted during the previous year, as is displayed in Table 5.10.1.2. Compared to the data submitted in 2010, no differences appear between the two data sets except some small differences which appear for Ireland pelagic trawl for four years.

Table 5.10.1.1 – Bay of Biscay - Trend in nominal effort (kW*days at sea) by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2000-2010. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	BEL	913 195	820 583	771 813	618 667	656 093	836 309						
BoB		none	ENG									880			
BoB		none	FRA				15 860	26 032	35 522	4 104	438				1 258
BoB		none	NLD		934 808										
BoB	**Total**	**none**		**913 195**	**1 755 391**	**771 813**	**634 527**	**682 125**	**871 831**	**4 104**	**438**	**880**	**-**	**-**	**1 258**
BoB	BEAM	SBcIIIart5	BEL							942 990	980 041	776 015	924 272	902 937	735 220
BoB		SBcIIIart5	FRA											588	
BoB	**Total**	**SBcIIIart5**								**942 990**	**980 041**	**776 015**	**924 272**	**903 525**	**735 220**
BoB	DEM_SEINE	none	FRA											383 146	749 480
BoB		none	NLD										12 776	8 936	
BoB	**Total**	**none**											**12 776**	**392 082**	**749 480**
BoB	DEM_SEINE	SBCIIIART5	FRA												215
BoB	**Total**	**SBcIIIart5**													**215**
BoB	DREDGE	none	ENG		4 183										
BoB		none	FRA	260 467	331 896	1 352 166	397 865	421 943	472 463	598 415	504 995	411 002	399 497	119 337	140 365
BoB		none	IRL				14 754								
BoB		none	SCO		25 124										
BoB	**Total**	**none**		**260 467**	**361 203**	**1 352 166**	**412 619**	**421 943**	**472 463**	**598 415**	**504 995**	**411 002**	**399 497**	**119 337**	**140 365**
BoB	DREDGE	SBcIIIart5	FRA											26 275	15 838
BoB	**Total**	**SBcIIIart5**												**26 275**	**15 838**
BoB	GILL	none	ENG			2 730		48 409	35 499	161 852	54 377	18 347	42 007	60 023	63 140
BoB		none	FRA	1 072 873	1 440 398	5 838 608	1 607 633	1 815 567	3 345 574	3 826 232	2 994 200	2 834 696	2 809 728	2 085 039	1 663 436
BoB		none	SCO				7 163	62 035	78 826	33 150	54 702	96 598	29 681	54 375	22 686
BoB	**Total**	**none**		**1 072 873**	**1 440 398**	**5 841 338**	**1 614 796**	**1 926 011**	**3 459 899**	**4 021 234**	**3 103 279**	**2 949 641**	**2 881 416**	**2 199 437**	**1 749 262**
BoB	GILL	SBcIIIart5	FRA											775 388	721 197
BoB	**Total**	**SBcIIIart5**												**775 388**	**721 197**
BoB	LONGLINE	none	ENG	6 716	17 364	57 670	84 319	110 156	71 646	66 968	54 601	20 237			
BoB		none	FRA	88 254	176 129	891 975	235 133	300 458	601 160	916 800	858 475	740 526	740 526	1 064 238	1 125 557
BoB		none	IRL						842	2 105	1 263				
BoB		none	SCO		3 001					6 797	1 378	22 160		9 337	58 942
BoB	**Total**	**none**		**94 970**	**196 494**	**949 645**	**319 452**	**410 614**	**673 648**	**992 670**	**915 717**	**782 923**	**740 526**	**1 073 575**	**1 184 499**
BoB	LONGLINE	SBcIIIart5	FRA											110 673	100 302
BoB	**Total**	**SBcIIIart5**												**110 673**	**100 302**
BoB	OTTER	none	DNK	21 694							11 850		58 516		
BoB		none	ENG	13 041	94	2 855	67 484	129 094	78 252	104 436			9 544	3 240	22 834
BoB		none	FRA	4 762 749	7 970 949	38 306 784	11 003 670	13 058 268	18 462 096	22 354 632	24 659 530	20 854 560	20 727 711	7 036 902	7 272 950
BoB		none	IRL		242	11 050		985		4 854					
BoB		none	SCO			4 634									
BoB	**Total**	**none**		**4 797 484**	**7 971 285**	**38 325 323**	**11 071 154**	**13 188 347**	**18 540 348**	**22 463 922**	**24 671 380**	**20 854 560**	**20 795 771**	**7 040 142**	**7 295 784**
BoB	OTTER	SBcIIIart5	FRA											7 321 109	7 302 739
BoB	**Total**	**SBcIIIart5**												**7 321 109**	**7 302 739**
BoB	PEL_SEINE	none	FRA	131 568	449 004	2 026 613	466 646	540 507	568 973	756 785	745 857	770 304	769 989	808 947	829 863
BoB	**Total**	**none**		**131 568**	**449 004**	**2 026 613**	**466 646**	**540 507**	**568 973**	**756 785**	**745 857**	**770 304**	**769 989**	**808 947**	**829 863**
BoB	PEL_SEINE	SBcIIIart5	FRA											828	
BoB	**Total**	**SBcIIIart5**												**828**	
BoB	PEL_TRAWL	none	DEU	246 685	323 841	191 411	30 222	122 593	263 370	181 553		85 325	20 800	41 237	11 025
BoB		none	DNK	86 110	26 710					38 027	174 671	141 787	179 083	29 240	7 123
BoB		none	ENG	89 855	68 867	275 666	166 043	207 062	127 741	92 445	36 288	155 677	217 846	44 490	24 501
BoB		none	FRA	3 057 444	2 472 517	14 403 101	3 035 742	1 135 975	3 148 397	4 076 421	3 124 058	888 396	828 481	1 565 259	1 228 870
BoB		none	IRL	320 050	100 508	142 989	93 214	158 436	125 890	99 746	67 199	20 000	4 028	15 000	
BoB		none	NLD	2 173 932	3 405 198	1 434 000	655 575	114 007	512 294	460 863	94 666	378 758	166 742	99 986	19 800
BoB		none	SCO	14 662			3 972						19 496		
BoB	**Total**	**none**		**5 988 738**	**6 397 641**	**16 447 167**	**3 984 768**	**1 738 073**	**4 177 692**	**4 949 055**	**3 496 882**	**1 669 943**	**1 436 476**	**1 795 212**	**1 291 319**
BoB	PEL_TRAWL	SBcIIIart5	FRA											147 222	184 067
BoB	**Total**	**SBcIIIart5**												**147 222**	**184 067**
BoB	POTS	none	DEU				14 112	21 168		13 631	11 500	7 056			
BoB		none	ENG					10 185							
BoB		none	FRA	229 712	161 728	618 764	229 673	347 756	176 851	187 550	164 883	24 911	24 911	647 487	579 451
BoB	**Total**	**none**		**229 712**	**161 728**	**618 764**	**243 785**	**379 109**	**176 851**	**201 181**	**176 383**	**31 967**	**24 911**	**941 931**	**947 585**
BoB	POTS	SBcIIIart5	FRA											45 936	96 457
BoB	**Total**	**SBcIIIart5**												**45 936**	**96 457**
BoB	TRAMMEL	none	ENG									547			
BoB		none	FRA	506 847	741 206	3 600 220	1 277 751	1 589 582	3 558 877	5 004 728	5 255 173	4 869 305	4 867 175	480 469	395 241
BoB	**Total**	**none**		**506 847**	**741 206**	**3 600 220**	**1 277 751**	**1 589 582**	**3 558 877**	**5 004 728**	**5 255 173**	**4 869 852**	**4 867 175**	**480 469**	**395 241**
BoB	TRAMMEL	SBcIIIart5	FRA											3 781 530	3 673 848
BoB	**Total**	**SBcIIIart5**												**3 781 530**	**3 673 848**
BoB	none	none	FRA	152 647	214 786	1 027 994	183 430	179 275	191 342	348 466	278 666	449 815	449 815		147 204
BoB		none	IRL						25 000						
BoB	**Total**	**none**		**152 647**	**214 786**	**1 027 994**	**183 430**	**179 275**	**216 342**	**348 466**	**278 666**	**449 815**	**449 815**		**147 204**
BoB	none	SBCIIIART5	FRA												12 939
BoB	**Total**	**SBcIIIart5**													**12 939**
BoB	**Grand Total**			**14 148 501**	**19 689 136**	**70 961 043**	**20 208 928**	**21 055 586**	**32 716 924**	**40 283 550**	**40 128 811**	**33 566 902**	**33 302 624**	**27 963 618**	**27 574 682**

Table 5.10.1.2 – Bay of Biscay – Percentage difference in effort (kW*days at sea) by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011 between the data provided in 2011 and 2012. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in section 9 of the report.

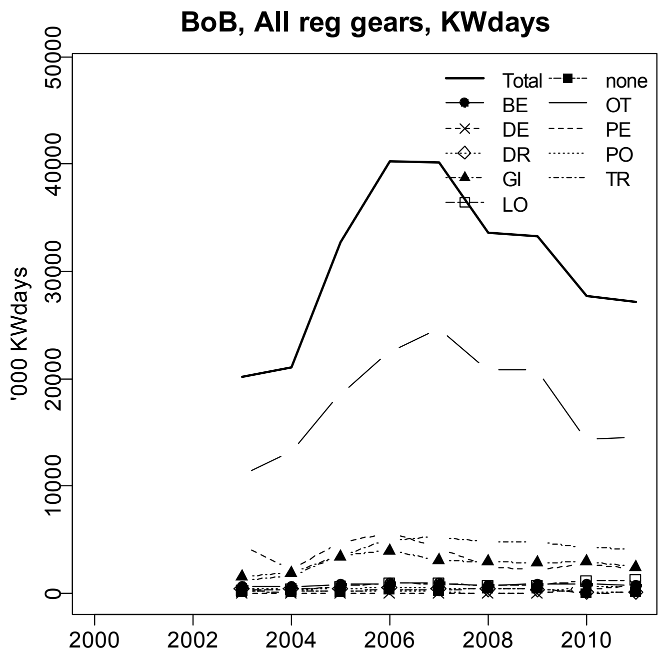
REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BoB	BEAM	none	BEL	0%	0%	0%	0%	0%	0%					
BoB	BEAM	none	FRA				0%	0%	0%	0%	0%			
BoB	BEAM	none	GBR									0%		
BoB	BEAM	none	NLD		0%									
BoB	BEAM	SBcIIIart5	BEL											0%
BoB	BEAM	SBcIIIart5	FRA											0%
BoB	DEM_SEINE	none	FRA											0%
BoB	DEM_SEINE	none	NLD										0%	0%
BoB	DREDGE	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	DREDGE	none	GBR		0%									
BoB	DREDGE	none	IRL				0%							
BoB	DREDGE	none	SCO		0%									
BoB	DREDGE	SBcIIIart5	FRA											0%
BoB	GILL	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	GILL	none	GBR			0%		0%	0%	0%	0%	0%	0%	0%
BoB	GILL	none	SCO				0%	0%	0%	0%	0%	0%	0%	0%
BoB	GILL	SBcIIIart5	FRA											0%
BoB	LONGLINE	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	LONGLINE	none	GBR	0%	0%	0%	0%	0%	0%	0%	0%	0%		
BoB	LONGLINE	none	IRL						0%	0%	0%			
BoB	LONGLINE	none	SCO		0%					0%	0%	0%		0%
BoB	LONGLINE	SBcIIIart5	FRA											0%
BoB	OTTER	none	DNK	0%							0%		0%	
BoB	OTTER	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	OTTER	none	GBR	0%	0%	0%	0%	0%	0%	0%			0%	0%
BoB	OTTER	none	IRL		0%	0%		0%		0%				
BoB	OTTER	none	SCO			0%								
BoB	OTTER	SBcIIIart5	FRA											0%
BoB	PEL_SEINE	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	PEL_SEINE	SBcIIIart5	FRA											0%
BoB	PEL_TRAWL	none	DEU	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%
BoB	PEL_TRAWL	none	DNK	0%	0%					0%	0%	0%	0%	0%
BoB	PEL_TRAWL	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	none	GBR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	none	IRL	0%	0%	0%	**-32%**	**-48%**	**-41%**	0%	0%	0%	0%	**-14%**
BoB	PEL_TRAWL	none	NLD	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	PEL_TRAWL	none	SCO	0%			0%						0%	
BoB	PEL_TRAWL	SBcIIIart5	FRA											0%
BoB	POTS	none	DEU				0%	0%		0%	0%	0%		
BoB	POTS	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	POTS	none	GBR					0%						
BoB	POTS	SBcIIIart5	FRA											0%
BoB	TRAMMEL	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BoB	TRAMMEL	none	GBR									0%		
BoB	TRAMMEL	SBcIIIart5	FRA											0%
BoB	none	none	FRA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
BoB	none	none	IRL						0%					

Table 5.10.1.3 – Bay of Biscay - Trend in nominal effort (kW*days at sea) by derogations stated in article 5 of Coun. Reg. 388/2006, 2000-11. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	913 195	1 755 391	771 813	634 527	682 125	871 831	4 104	438	880	-	-	1 258
BoB	BEAM	SBcIIIart5							942 990	980 041	776 015	924 272	903 525	735 220
BoB	DEM_SEINE	none										12 776	392 082	749 480
BoB	DEM_SEINE	SBcIIIart5												215
BoB	DREDGE	none	260 467	361 203	1 352 166	412 619	421 943	472 463	598 415	504 995	411 002	399 497	119 337	140 365
BoB	DREDGE	SBcIIIart5											26 275	15 838
BoB	GILL	none	1 072 873	1 440 398	5 841 338	1 614 796	1 926 011	3 459 899	4 021 234	3 103 279	2 949 641	2 881 416	2 199 437	1 749 262
BoB	GILL	SBcIIIart5											775 388	721 197
BoB	LONGLINE	none	94 970	196 494	949 645	319 452	410 614	673 648	992 670	915 717	782 923	740 526	1 073 575	1 184 499
BoB	LONGLINE	SBcIIIart5											110 673	100 302
BoB	OTTER	none	4 797 484	7 971 285	38 325 323	11 071 154	13 188 347	18 540 348	22 463 922	24 671 380	20 854 560	20 795 771	7 040 142	7 295 784
BoB	OTTER	SBcIIIart5											7 321 109	7 302 739
BoB	PEL_SEINE	none	131 568	449 004	2 026 613	466 646	540 507	568 973	756 785	745 857	770 304	769 989	808 947	829 863
BoB	PEL_SEINE	SBcIIIart5											828	
BoB	PEL_TRAWL	none	5 988 738	6 397 641	16 447 167	3 984 768	1 738 073	4 177 692	4 949 055	3 496 882	1 669 943	1 436 476	1 795 212	1 291 319
BoB	PEL_TRAWL	SBcIIIart5											147 222	184 067
BoB	POTS	none	229 712	161 728	618 764	243 785	379 109	176 851	201 181	176 383	31 967	24 911	941 931	947 585
BoB	POTS	SBcIIIart5											45 936	96 457
BoB	TRAMMEL	none	506 847	741 206	3 600 220	1 277 751	1 589 582	3 558 877	5 004 728	5 255 173	4 869 852	4 867 175	480 469	395 241
BoB	TRAMMEL	SBcIIIart5											3 781 530	3 673 848
BoB	none	none	152 647	214 786	1 027 994	183 430	179 275	216 342	348 466	278 666	449 815	449 815		147 204
BoB	none	SBcIIIart5												12 939
Sum			**14 148 501**	**19 689 136**	**70 961 043**	**20 208 928**	**21 055 586**	**32 716 924**	**40 283 550**	**40 128 811**	**33 566 902**	**33 302 624**	**27 963 618**	**27 574 682**

Table 5.10.1.4 – Bay of Biscay - Trend in nominal effort (kW*days at sea) by derogations stated in article 5 of Coun. Reg. 388/2006, 2003-11. Derogations are sorted by gear. Data qualities are summarised in section 9 of the report.

Length Class	REG AREA COD	REG GEAR COD	2003	2004	2005	2006	2007	2008	2009	2010	2011
o. 10m.	**BoB**	**BEAM**	634 527	682 125	871 831	947 094	980 479	776 895	924 272	903 525	736 478
	BoB	**DEM_SEINE**	-	-	-	-	-	-	12 776	392 082	749 695
	BoB	**DREDGE**	412 619	421 943	472 463	598 415	504 995	411 002	399 497	145 612	156 203
	BoB	**GILL**	1 614 796	1 926 011	3 459 899	4 021 234	3 103 279	2 949 641	2 881 416	2 974 825	2 470 459
	BoB	**LONGLINE**	319 452	410 614	673 648	992 670	915 717	782 923	740 526	1 184 248	1 284 801
	BoB	**OTTER**	11 071 154	13 188 347	18 540 348	22 463 922	24 671 380	20 854 560	20 795 771	14 361 251	14 598 523
	BoB	**PEL_SEINE**	466 646	540 507	568 973	756 785	745 857	770 304	769 989	809 775	829 863
	BoB	**PEL_TRAWL**	3 984 768	1 738 073	4 177 692	4 949 055	3 496 882	1 669 943	1 436 476	1 942 434	1 475 386
	BoB	**POTS**	243 785	379 109	176 851	201 181	176 383	31 967	24 911	987 867	1 044 042
	BoB	**TRAMMEL**	1 277 751	1 589 582	3 558 877	5 004 728	5 255 173	4 869 852	4 867 175	4 261 999	4 069 089
	BoB	**none**	183 430	179 275	216 342	348 466	278 666	449 815	449 815	-	160 143
	Sum o. 10m.		**20 208 928**	**21 055 586**	**32 716 924**	**40 283 550**	**40 128 811**	**33 566 902**	**33 302 624**	**27 963 618**	**27 574 682**



Figures 5.10.1.2 – Bay of Biscay -Trend in nominal effort (kW*days at sea) by derogations stated in article 5 of Coun. Reg. 388/2006, 2003-2011. Derogations are sorted by gear and summed by special condition (SPECON SBcIIIart5 and none). Data qualities are summarised in section 9 of the report.

Information on GT*days at sea and the number of vessels active in the Bay of Biscay are also presented below in this report.

Table 5.10.1.5 – Bay of Biscay - Trend in GT*days at sea by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2000-2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	BEL	369 502	336 856	316 675	252 346	260 227	326 238						
BoB		none	ENG									548			
BoB		none	FRA				1 740	4 067	4 350	1 044	24				171
BoB		none	NLD		248 953										
BoB	**Total**	**none**		**369 502**	**585 809**	**316 675**	**254 086**	**264 294**	**330 588**	**1 044**	**24**	**548**			**171**
BoB	BEAM	SBcIIIart5	BEL							346 648	345 158	260 196	303 554	295 502	246 961
BoB		SBcIIIart5	FRA											96	
BoB	**Total**	**SBcIIIart5**								**346 648**	**345 158**	**260 196**	**303 554**	**295 598**	**246 961**
BoB	DEM_SEINE	none	FRA											142 954	236 261
BoB		none	NLD										4 496	3 116	
BoB	**Total**	**none**											**4 496**	**146 070**	**236 261**
BoB	DEM_SEINE	SBCIIIART5	FRA												12
BoB	**Total**	**SBcIIIart5**													**12**
BoB	DREDGE	none	ENG		1 338										
BoB		none	FRA	32 808	45 907	219 148	56 918	48 856	68 560	71 463	56 560	43 663	42 476	12 421	14 527
BoB		none	IRL				4 156								
BoB		none	SCO												
BoB	**Total**	**none**		**32 808**	**47 245**	**219 148**	**61 074**	**48 856**	**68 560**	**71 463**	**56 560**	**43 663**	**42 476**	**12 421**	**14 527**
BoB	DREDGE	SBcIIIart5	FRA											2 457	1 761
BoB	**Total**	**SBcIIIart5**												**2 457**	**1 761**
BoB	GILL	none	ENG			1 098		22 584	16 562	80 491	27 430	7 817	22 181	37 567	39 130
BoB		none	FRA	244 432	296 268	1 396 820	348 718	373 764	658 577	740 970	552 908	584 996	580 821	749 706	557 887
BoB		none	SCO				3 302	32 419	43 990	22 249	36 714	55 743	19 920	28 297	12 236
BoB	**Total**	**none**		**244 432**	**296 268**	**1 397 918**	**352 020**	**428 767**	**719 129**	**843 710**	**617 052**	**648 556**	**622 922**	**815 570**	**609 253**
BoB	GILL	SBcIIIart5	FRA											180 065	154 755
BoB	**Total**	**SBcIIIart5**												**180 065**	**154 755**
BoB	LONGLINE	none	ENG	4 300	8 852	25 199	35 327	42 711	28 558	26 067	20 917	7 693			
BoB		none	FRA	22 548	36 361	233 868	57 242	55 559	84 331	124 674	122 865	106 382	106 382	174 731	213 036
BoB		none	IRL						356	890	534				
BoB		none	SCO							3 198	636	8 479		4 171	26 339
BoB	**Total**	**none**		**26 848**	**45 213**	**259 067**	**92 569**	**98 270**	**113 245**	**154 829**	**144 952**	**122 554**	**106 382**	**178 902**	**239 375**
BoB	LONGLINE	SBcIIIart5	FRA											12 993	12 514
BoB	**Total**	**SBcIIIart5**												**12 993**	**12 514**
BoB	OTTER	none	DNK	10 986							6 160		12 993	12 514	12 993
BoB		none	ENG	7 659	16	1 899	24 304	46 717	28 110	51 420			25 986	25 028	25 986
BoB		none	FRA	1 214 340	1 556 966	7 394 800	2 005 500	2 446 023	3 481 339	4 269 618	4 751 353	4 091 708	4 069 480	1 450 463	1 553 205
BoB		none	IRL		81	2 520		396		1 927					
BoB		none	SCO												
BoB	**Total**	**none**		**1 232 985**	**1 557 063**	**7 399 219**	**2 029 804**	**2 493 136**	**3 509 449**	**4 322 965**	**4 757 513**	**4 091 708**	**4 108 459**	**1 488 005**	**1 592 184**
BoB	OTTER	SBcIIIart5	FRA											1 427 339	1 367 470
BoB	**Total**	**SBcIIIart5**												**1 427 339**	**1 367 470**
BoB	PEL_SEINE	none	FRA	29 874	94 699	421 156	96 080	123 446	114 224	189 445	154 763	162 232	162 232	135 603	142 309
BoB	**Total**	**none**		**29 874**	**94 699**	**421 156**	**96 080**	**123 446**	**114 224**	**189 445**	**154 763**	**162 232**	**162 232**	**135 603**	**142 309**
BoB	PEL_SEINE	SBcIIIart5	FRA											96	
BoB	**Total**	**SBcIIIart5**												**96**	
BoB	PEL_TRAWL	none	DEU			267 960	39 360	166 460	327 390	215 600		102 668	25 448	46 031	12 112
BoB		none	DNK	46 096	14 931					17 148	83 555	63 210	79 838	13 036	3 175
BoB		none	ENG	64 166	39 091	153 142	86 974	117 074	77 997	61 750	17 867	85 125	132 938	23 130	14 193
BoB		none	FRA	743 688	658 886	4 195 824	693 938	255 981	741 811	1 006 582	692 958	273 256	262 051	338 295	262 826
BoB		none	IRL	280 146	67 391	25 199	43 642	95 310	73 660	41 317	28 609	8 752	4 372	6 564	-
BoB		none	NLD	2 022 856	2 948 484	1 186 141	546 023	89 502	423 345	404 107	74 323	311 385	138 260	75 620	16 370
BoB		none	SCO				999						5 660		
BoB	**Total**	**none**		**3 156 952**	**3 728 783**	**5 828 266**	**1 410 936**	**724 327**	**1 644 203**	**1 746 504**	**897 312**	**844 396**	**648 567**	**502 676**	**308 676**
BoB	PEL_TRAWL	SBcIIIart5	FRA											29 702	27 334
BoB	**Total**	**SBcIIIart5**												**29 702**	**27 334**
BoB	POTS	none	DEU				6 360	9 540		6 150	5 190	3 184			
BoB		none	ENG					7 423							
BoB		none	FRA	70 751	47 706	204 480	59 632	73 801	49 166	49 576	38 279	5 566	5 566	135 536	113 719
BoB	**Total**	**none**		**70 751**	**47 706**	**204 480**	**65 992**	**90 764**	**49 166**	**55 726**	**43 469**	**8 750**	**5 566**	**135 536**	**113 719**
BoB	POTS	SBcIIIart5	FRA											5 964	10 322
BoB	**Total**	**SBcIIIart5**												**5 964**	**10 322**
BoB	TRAMMEL	none	ENG									108			
BoB		none	FRA	123 442	175 857	916 076	278 019	332 093	653 595	839 422	907 133	809 048	808 584	63 509	55 018
BoB	**Total**	**none**		**123 442**	**175 857**	**916 076**	**278 019**	**332 093**	**653 595**	**839 422**	**907 133**	**809 156**	**808 584**	**63 509**	**55 018**
BoB	TRAMMEL	SBcIIIart5	FRA											756 069	741 980
BoB	**Total**	**SBcIIIart5**												**756 069**	**741 980**
BoB	none	none	FRA	71 399	84 549	329 060	73 993	70 753	86 080	47 505	37 463	52 059	52 059		17 118
BoB		none	IRL						15 840						
BoB	**Total**	**none**		**71 399**	**84 549**	**329 060**	**73 993**	**70 753**	**101 920**	**47 505**	**37 463**	**52 059**	**52 059**		**17 118**
BoB	none	SBCIIIART5	FRA												1 685
BoB	**Total**	**SBcIIIart5**													**1 685**
BoB	**Grand Total**			5 358 993	6 663 192	17 291 065	4 714 573	4 674 706	7 304 079	8 619 261	7 961 399	7 043 818	6 865 297	6 188 575	5 893 405

Table 5.10.1.6 – Bay of Biscay - Trend in Number of vessels concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2000-2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	BEL	14	19	20	17	19	23						
BoB		none	ENG									1			
BoB		none	FRA				1	4	1	1	1				2
BoB		none	NLD		8										
BoB	**Total**	**none**		**14**	**27**	**20**	**18**	**23**	**24**	**1**	**1**	**1**			**2**
BoB	BEAM	SBcIIIart5	BEL							18	20	14	18	13	15
BoB		SBcIIIart5	FRA											1	
BoB	**Total**	**SBcIIIart5**								**18**	**20**	**14**	**18**	**14**	**15**
BoB	DEM_SEINE	none	FRA											6	5
BoB		none	NLD										1	1	
BoB	**Total**	**none**											**1**	**7**	**5**
BoB	DEM_SEINE	SBCIIIART5	FRA												1
BoB	**Total**	**SBcIIIart5**													**1**
BoB	DREDGE	none	ENG		1										
BoB		none	FRA	166	143	169	193	117	136	80	84	102	92	61	61
BoB		none	IRL				4								
BoB		none	SCO		3										
BoB	**Total**	**none**		**166**	**147**	**169**	**197**	**117**	**136**	**80**	**84**	**102**	**92**	**61**	**61**
BoB	DREDGE	SBcIIIart5	FRA											9	10
BoB	**Total**	**SBcIIIart5**												**9**	**10**
BoB	GILL	none	ENG			1		1	1	3	3	3	3	3	1
BoB		none	FRA	67	53	79	50	63	70	101	82	85	79	36	36
BoB		none	SCO				1	2	1	1	1	1	1	1	1
BoB	**Total**	**none**		**67**	**53**	**80**	**51**	**66**	**72**	**105**	**86**	**89**	**83**	**40**	**38**
BoB	GILL	SBcIIIart5	FRA											22	19
BoB	**Total**	**SBcIIIart5**												**22**	**19**
BoB	LONGLINE	none	ENG	3	3	3	2	2	3	2	2	1			
BoB		none	FRA	16	17	23	20	28	34	55	50	49	33	41	38
BoB		none	IRL						1	1	1				
BoB		none	SCO		1					1	1	2		1	2
BoB	**Total**	**none**		**19**	**21**	**26**	**22**	**30**	**38**	**59**	**54**	**52**	**33**	**42**	**40**
BoB	LONGLINE	SBcIIIart5	FRA											9	9
BoB	**Total**	**SBcIIIart5**												**9**	**9**
BoB	OTTER	none	DNK	3							1		2		
BoB		none	ENG	2	1	1	2	2	2	2			2	1	2
BoB		none	FRA	202	238	210	230	276	326	470	457	334	279	128	117
BoB		none	IRL		1	2		1		1					
BoB		none	SCO			1									
BoB	**Total**	**none**		**207**	**240**	**214**	**232**	**279**	**328**	**473**	**458**	**334**	**283**	**129**	**119**
BoB	OTTER	SBcIIIart5	FRA											85	77
BoB	**Total**	**SBcIIIart5**												**85**	**77**
BoB	PEL_SEINE	none	FRA	10	14	20	17	26	18	18	18	14	14	13	21
BoB	**Total**	**none**		**10**	**14**	**20**	**17**	**26**	**18**	**18**	**18**	**14**	**14**	**13**	**21**
BoB	PEL_SEINE	SBcIIIart5	FRA											1	
BoB	**Total**	**SBcIIIart5**												**1**	
BoB	PEL_TRAWL	none	DEU	4	2	3	3	3	4	4		2	1	2	2
BoB		none	DNK	6	4					1	9	1	1	1	1
BoB		none	ENG	2	2	4	3	4	3	2	2	3	4	3	2
BoB		none	FRA	244	128	91	100	103	159	182	90	34	50	35	38
BoB		none	IRL	2	3	10	3	2	3	2	2	1	1	1	
BoB		none	NLD	12	13	11	10	4	6	8	2	3	2	2	1
BoB		none	SCO	2			1						1		
BoB	**Total**	**none**		**272**	**152**	**119**	**120**	**116**	**175**	**199**	**105**	**44**	**60**	**44**	**44**
BoB	PEL_TRAWL	SBcIIIart5	FRA											12	10
BoB	**Total**	**SBcIIIart5**												**12**	**10**
BoB	POTS	none	DEU				1	1		2	2	1			
BoB		none	ENG					1							
BoB		none	FRA	13	16	15	19	16	12	22	12	5	5	40	39
BoB	**Total**	**none**		**13**	**16**	**15**	**20**	**18**	**12**	**24**	**14**	**6**	**5**	**40**	**39**
BoB	POTS	SBcIIIart5	FRA											5	10
BoB	**Total**	**SBcIIIart5**												**5**	**10**
BoB	TRAMMEL	none	ENG									1			
BoB		none	FRA	39	42	47	50	68	68	92	117	124	134	23	21
BoB	**Total**	**none**		**39**	**42**	**47**	**50**	**68**	**68**	**92**	**117**	**125**	**134**	**23**	**21**
BoB	TRAMMEL	SBcIIIart5	FRA											72	72
BoB	**Total**	**SBcIIIart5**												**72**	**72**
BoB	none	none	FRA	93	81	98	79	76	95	81	49	62	62		38
BoB		none	IRL						1						
BoB	**Total**	**none**		**93**	**81**	**98**	**79**	**76**	**96**	**81**	**49**	**62**	**62**		**38**
BoB	none	SBCIIIART5	FRA												6
BoB	**Total**	**SBcIIIart5**													**6**

5.10.2 ToR 1.b Fishing capacity in GT of relevant vessels by Member State and fisheries

Fishing capacity in GT is only available for Belgian vessels since 2003 consequently trend in fishing capacity GT is only represented for beam trawl mainly composed of Belgian vessels.

Table 5.10.2.1 – Bay of Biscay - Trend in Fishing capacity (GT) concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2000-2011. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in Section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	BEL				6 295	6 945	8 226						
BoB		none	ENG												
BoB		none	FRA												
BoB		none	NLD												
BoB	**Total**	**none**					**6 295**	**6 945**	**8 226**						
BoB	BEAM	SBcIIIart5	BEL							6 611	7 237	5 118	6 957	4 946	5 661
BoB		SBcIIIart5	FRA												
BoB	**Total**	**SBcIIIart5**								**6 611**	**7 237**	**5 118**	**6 957**	**4 946**	**5 661**

5.10.3 ToR 1.c Catches (landings and discards) of sole in weight and numbers at age by fisheries

The following section provides quantities of sole landings by fisheries. Discard estimates are scarce.

Table 5.10.3.1 – Bay of Biscay - Trend in total landings (t) for common sole and associated species for vessels concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011. Derogations are sorted by gear. Data qualities are summarised in Section 9 of the report.

Length Class	REG AREA COD	REG GEAR COD	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
o. 10m.	BoB	BEAM	ANF	117	9	180	139	142	189	195	179	195
	BoB	DEM_SEINE	ANF								0	2
	BoB	DREDGE	ANF	1	1	1	0	0	1	1		0
	BoB	GILL	ANF	253	404	481	477	572	541	554	156	259
	BoB	LONGLINE	ANF	0	1	1	2	0	0	0	0	1
	BoB	none	ANF		0	0	3	0	0	0		
	BoB	OTTER	ANF	3268	3605	3593	3585	3877	3406	3393	616	1947
	BoB	PEL_TRAWL	ANF	42	38	0	1	3	5	5	7	10
	BoB	POTS	ANF	0		0	0	0			0	0
	BoB	TRAMMEL	ANF	226	352	355	437	380	476	476	22	120
	Sum_o10m			**3907**	**4410**	**4611**	**4644**	**4974**	**4618**	**4624**	**980**	**2534**
o. 10m.	BoB	BEAM	HKE	14	12	15	10	2	3	6	5	5
	BoB	DEM_SEINE	HKE							0	36	41
	BoB	DREDGE	HKE	3	0	2	3	1	1	1	1	0
	BoB	GILL	HKE	1632	1605	2891	1377	1026	2513	2485	6099	6657
	BoB	LONGLINE	HKE	34	22	34	57	78	54	54	448	820
	BoB	none	HKE		1	1	1	4	2	2		1
	BoB	OTTER	HKE	1408	1234	1716	1269	1906	2486	2472	1637	1466
	BoB	PEL_SEINE	HKE	0	0	0	0	0	0	0	1	2
	BoB	PEL_TRAWL	HKE	293	48	217	162	271	52	51	148	478
	BoB	POTS	HKE				0	0			6	9
	BoB	TRAMMEL	HKE	118	124	105	85	195	158	157	177	181
	Sum_o10m			**3502**	**3046**	**4981**	**2964**	**3483**	**5269**	**5228**	**8558**	**9660**
o. 10m.	BoB	BEAM	NEP	4	4	8	6	3	1	1	3	3
	BoB	DREDGE	NEP	0	0	2	0	0	1	1	2	
	BoB	GILL	NEP	1	2	0	2	1	3	3	0	1
	BoB	LONGLINE	NEP	0	0				0	0	1	16
	BoB	none	NEP				0	0	0	0		
	BoB	OTTER	NEP	2329	2506	3123	2908	2801	2659	2650	2564	2966
	BoB	PEL_TRAWL	NEP	5		0	2	4	34	34	2	19
	BoB	POTS	NEP	1	2	0		0			3	4
	BoB	TRAMMEL	NEP	0	1	1	5	0	0	0	4	1
	Sum_o10m			**2340**	**2515**	**3134**	**2923**	**2809**	**2698**	**2689**	**2579**	**3010**
o. 10m.	BoB	BEAM	SOL	296	320	350	381	398	287	362	451	384
	BoB	DEM_SEINE	SOL								0	1
	BoB	DREDGE	SOL	2	2	3	2	3	2	2	1	1
	BoB	GILL	SOL	245	293	387	270	156	159	158	118	99
	BoB	LONGLINE	SOL	0	10	10	9	0	0	0	3	1
	BoB	none	SOL	0	1	0	5	0	0	0		2
	BoB	OTTER	SOL	716	745	865	890	948	777	773	795	861
	BoB	PEL_SEINE	SOL		0		0				0	0
	BoB	PEL_TRAWL	SOL	2	0	2	1	2	5	5	3	5
	BoB	POTS	SOL	0			0	0			1	2
	BoB	TRAMMEL	SOL	991	1143	1650	1838	1744	2080	2077	1614	2244
	Sum_o10m			**2252**	**2514**	**3267**	**3396**	**3251**	**3310**	**3377**	**2986**	**3600**
o. 10m.	BoB	BEAM	WHG	1	0	3	2	4	1	2	3	1
	BoB	DEM_SEINE	WHG							0	86	144
	BoB	DREDGE	WHG	2	2	1	1	0	0	0	0	0
	BoB	GILL	WHG	62	39	53	64	52	55	55	46	33
	BoB	LONGLINE	WHG	9	64	110	152	302	170	170	156	195
	BoB	none	WHG	0	0		0	3	0	0		3
	BoB	OTTER	WHG	350	418	610	483	576	330	329	435	566
	BoB	PEL_SEINE	WHG				0					0
	BoB	PEL_TRAWL	WHG	238	80	130	87	133	45	44	156	77
	BoB	POTS	WHG					0			1	28
	BoB	TRAMMEL	WHG	34	31	42	74	72	87	87	46	80
	Sum_o10m			**696**	**634**	**949**	**863**	**1142**	**688**	**687**	**929**	**1127**

Table 5.10.3.2 – Bay of Biscay - Trend in total landings (t) and discards (t) for common sole (SOL) for vessels concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011. Derogations are sorted by gear, special conditions (SPECON) and country. Data qualities are summarised in Section 9 of the report.

SPECIES	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2003		2004		2005		2006		2007		2008		2009		2010		2011	
					L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D
SOL	BoB	BEAM	none	BEL	296	-	319	-	349	-												
	BoB		none	ENG											-	-						
	BoB		none	FRA	-	-	1	-	1	-	-	-									1	-
	BoB	**Total**	**none**		296	-	320	-	350	-	-	-	-	-	-	-	-	-	-	-	1	-
	BoB	BEAM	SBcIIIart5	BEL							380	-	398	-	287	-	362	9	451	29	384	9
	BoB		SBcIIIart5	FRA															-	-		
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	380	-	398	-	287	-	362	9	451	29	384	9
	BoB	DEM_SEINE	none	FRA															-	-	1	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	BoB	DREDGE	none	FRA	2	-	2	-	3	-	2	-	3	-	2	-	2	-	-	-	-	-
	BoB	**Total**	**none**		2	-	2	-	3	-	2	-	3	-	2	-	2	-	-	-	-	-
	BoB	DREDGE	SBcIIIart5	FRA															-	-	1	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	BoB	GILL	none	ENG									-	-	-	-	-	-				
	BoB		none	FRA	245	-	293	-	387	-	270	-	156	-	159	-	158	-	10	4	8	-
	BoB	**Total**	**none**		245	-	293	-	387	-	270	-	156	-	159	-	158	-	10	4	8	-
	BoB	GILL	SBcIIIart5	FRA															108	4	91	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	108	4	91	-
	BoB	LONGLINE	none	FRA	-	-	10	-	10	-	9	-	-	-	-	-	-	-	1	-	1	-
	BoB	**Total**	**none**		-	-	10	-	10	-	9	-	-	-	-	-	-	-	1	-	1	-
	BoB	LONGLINE	SBcIIIart5	FRA															2	-	1	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-
	BoB	OTTER	none	FRA	716	-	745	-	865	-	890	-	948	-	777	-	773	-	150	6 696	185	-
	BoB	**Total**	**none**		716	-	745	-	865	-	890	-	948	-	777	-	773	-	150	6 696	185	-
	BoB	OTTER	SBcIIIart5	FRA															646	437	676	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	646	437	676	-
	BoB	PEL_SEINE	none	FRA			-	-			-	-							-	-	-	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	PEL_TRAWL	none	FRA	2	-	-	-	2	-	1	-	2	-	5	-	5	-	-	-	2	-
	BoB	**Total**	**none**		2	-	-	-	2	-	1	-	2	-	5	-	5	-	-	-	2	-
	BoB	PEL_TRAWL	SBcIIIart5	FRA															3	-	3	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3	-
	BoB	POTS	none	FRA	-	-					-	-	-	-					-	-	2	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
	BoB	POTS	SBcIIIart5	FRA															-	-	-	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	TRAMMEL	none	FRA	991	-	1 143	-	1 650	-	1 838	-	1 744	-	2 080	-	2 077	-	35	-	24	-
	BoB	**Total**	**none**		991	-	1 143	-	1 650	-	1 838	-	1 744	-	2 080	-	2 077	-	35	-	24	-
	BoB	TRAMMEL	SBcIIIart5	FRA															1 579	1	2 219	38
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 579	1	2 219	38
	BoB	none	none	FRA	-	-	1	-	-	-	5	-	-	-	-	-	-	-			-	-
	BoB	**Total**	**none**		-	-	1	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
	BoB	none	SBcIIIart5	FRA																	2	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
	BoB	**Grand Total**			2 252	-	2 514	-	3 267	-	3 395	-	3 251	-	3 310	-	3 377	9	2 985	7 171	3 601	47

5.10.4 ToR 1.c Catches (landings and discards) of non-sole species in weight and numbers at age by fisheries

The following section provides quantities of sole and other major species' landings by fisheries. Discard estimates are scarce.

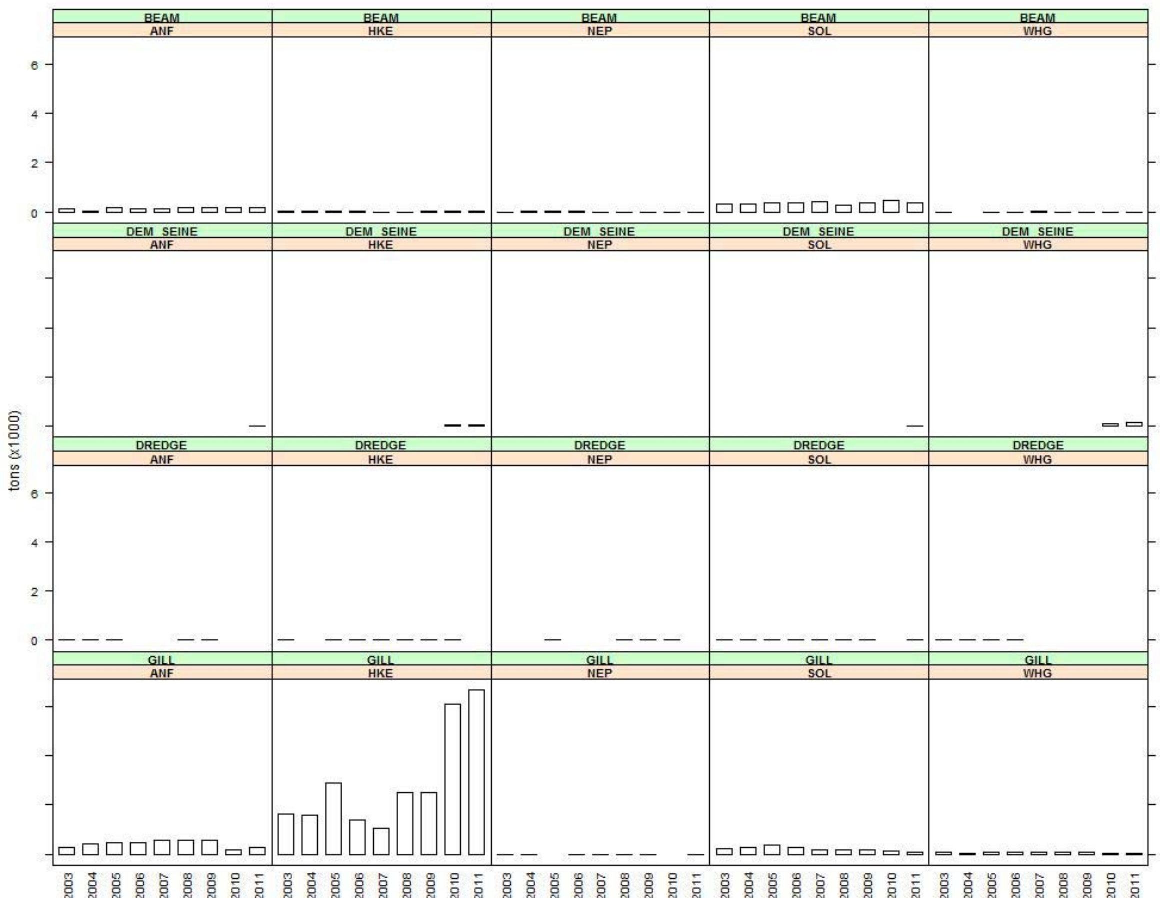


Fig. 5.10.4.1 – Bay of Biscay - Landings (t) by derogation and species, 2003-2011 (from left to right).

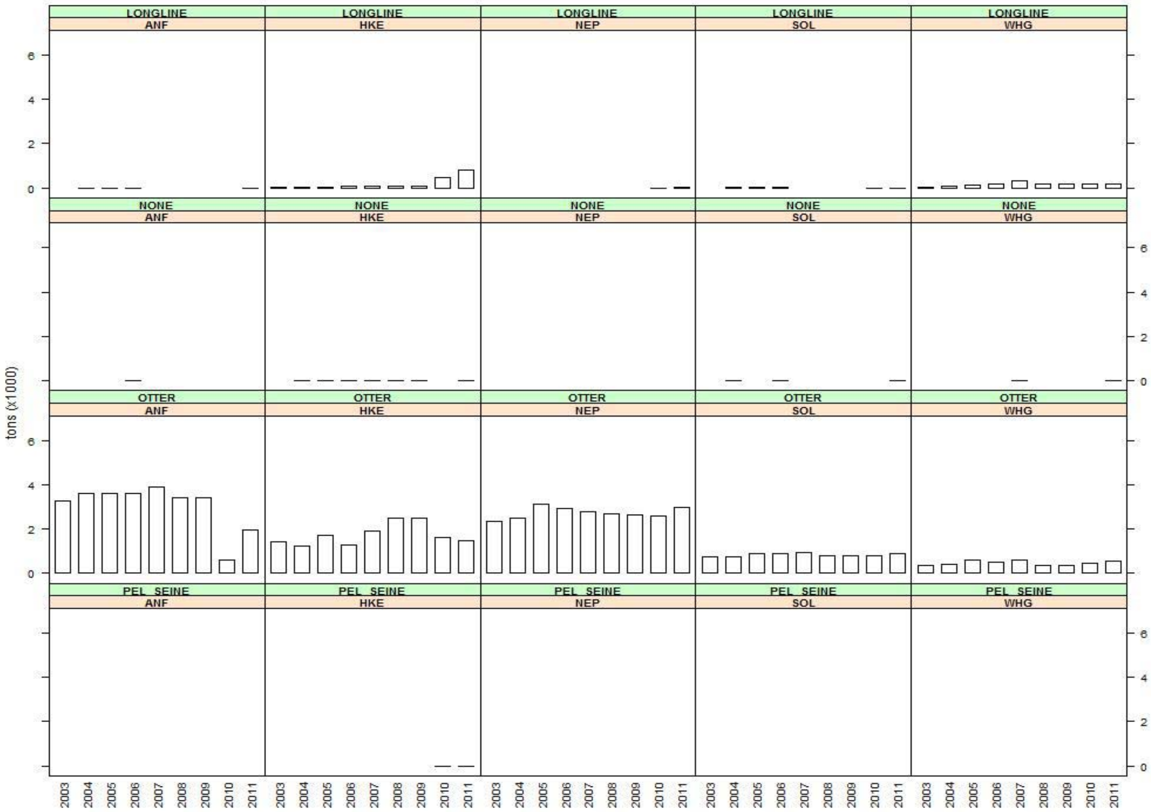


Fig. 5.10.4.1 – Continued - Bay of Biscay - Landings (t) by derogation and species, 2003-2011 (from left to right).

Fig. 5.10.4.1 – Continued - Bay of Biscay - Landings (t) by derogation and species, 2003-2011 (from left to right).

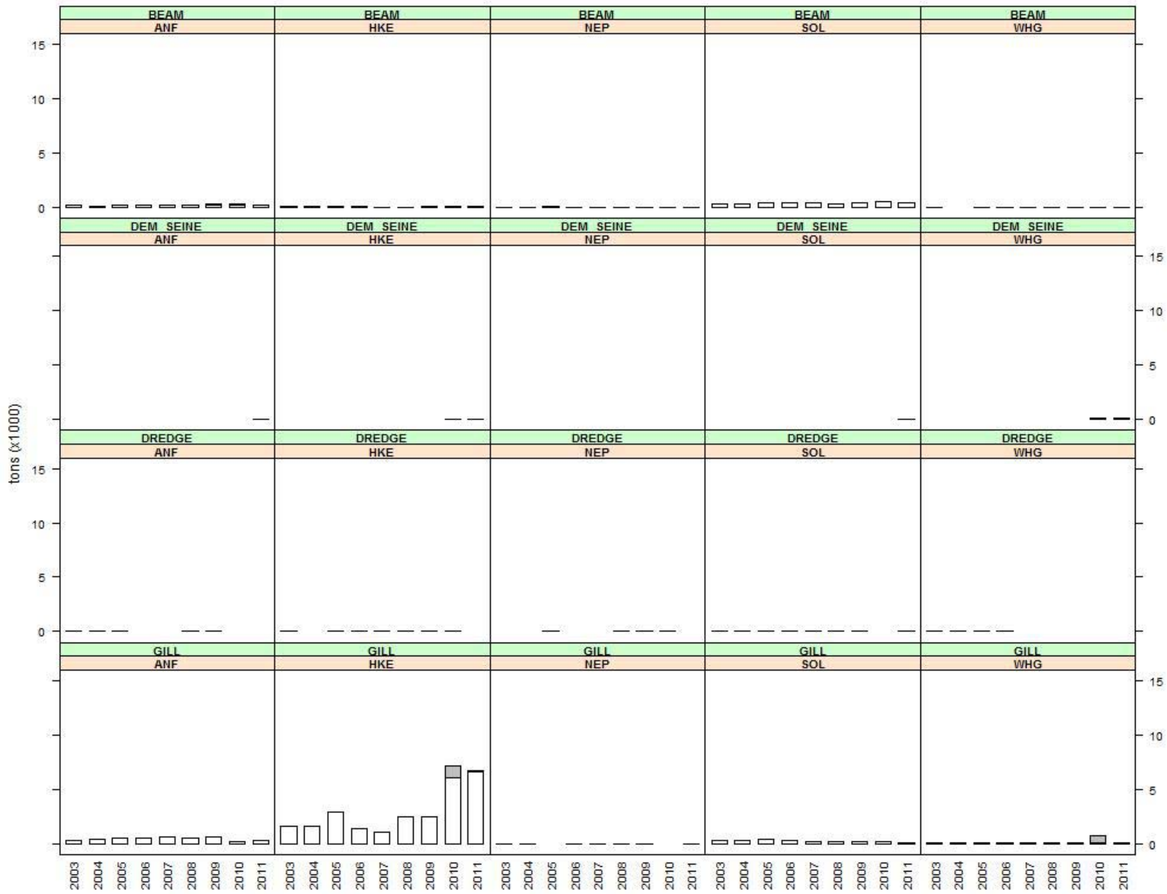


Fig. 5.10.4.1 – Continued - Bay of Biscay - Landings and discards (t) by derogation and species, 2003-2011 (from left to right).

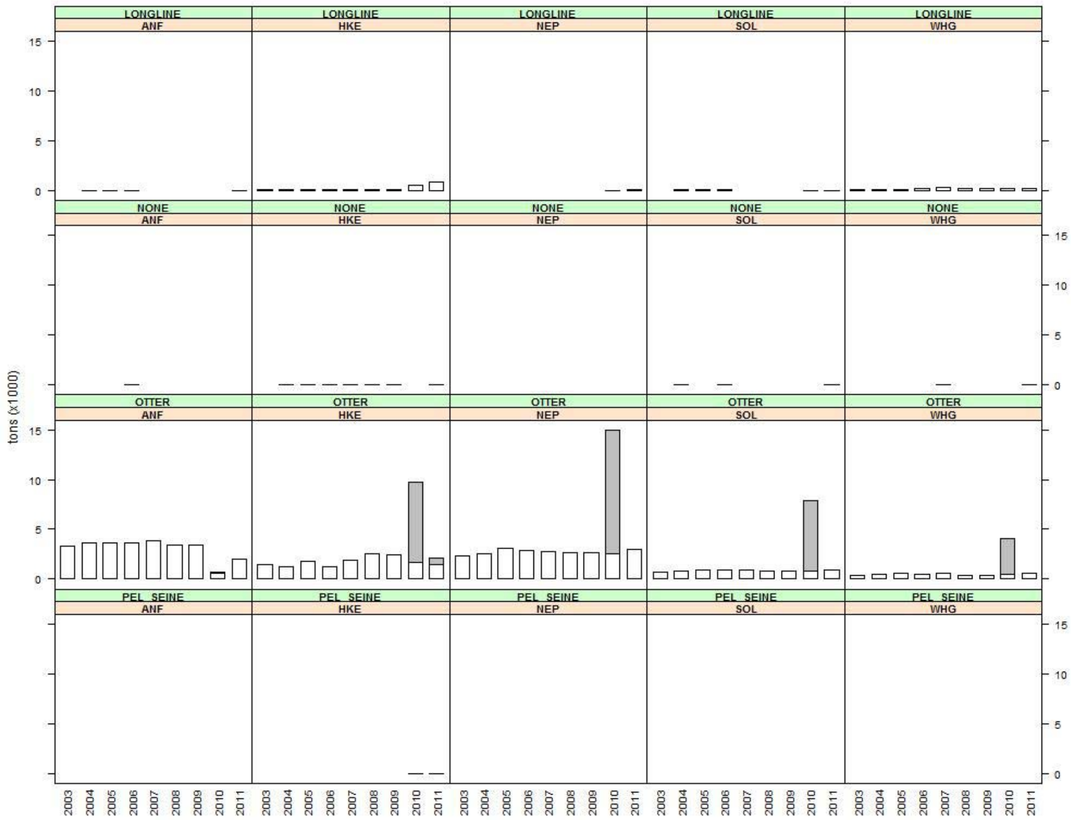


Fig. 5.10.4.2 – Continued - Bay of Biscay - Landings (t) and discard (t) by derogation and species, 2003-2011 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

Fig. 5.10.4.2 – Continued - Bay of Biscay - Landings (t) and discard (t) by derogation and species, 2003-2011 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

Table 5.10.4.1 – Bay of Biscay - Trend in total landings (t) and discards (t) for AnglerFish (ANF) for vessels concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011. Derogations are sorted by gear, special conditions (SPECON) and country. Data qualities are summarised in Section 9 of the report.

SPECIES	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2003		2004		2005		2006		2007		2008		2009		2010		2011	
					L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D
ANF	BoB	BEAM	none	BEL	116	-	6	-	179	-												
	BoB		none	ENG											1	-						
	BoB		none	FRA	1	-	2	-	2	-	-	-										
	BoB	Total	none		117	-	8	-	181	-	-	-	-	-	1	-	-	-	-	-	-	-
	BoB	BEAM	SBcIIIart5	BEL							139	-	142	-	187	-	195	70	179	48	195	29
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	139	-	142	-	187	-	195	70	179	48	195	29
	BoB	DEM_SEINE	none	FRA															-	-	2	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
	BoB	DREDGE	none	FRA	1	-	1	-	1	-	-	-	-	-	1	-	1	-			-	-
	BoB		none	IRL	-	-																
	BoB	Total	none		1	-	1	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-
	BoB	DREDGE	SBcIIIart5	FRA																	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	GILL	none	ENG							47	-	17	-	-	-	29	-	81	-	99	-
	BoB		none	FRA	253	-	404	-	481	-	402	-	487	-	459	-	459	-	72	-	154	-
	BoB		none	SCO							27	-	67	-	82	-	67	-	2	-		
	BoB	Total	none		253	-	404	-	481	-	476	-	571	-	541	-	555	-	155	-	253	-
	BoB	GILL	SBcIIIart5	FRA															1	-	6	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	6	-
	BoB	LONGLINE	none	ENG	-	-																
	BoB		none	FRA	-	-	1	-	1	-	2	-	-	-	-	-	-	-	-	-	1	-
	BoB	Total	none		-	-	1	-	1	-	2	-	-	-	-	-	-	-	-	-	1	-
	BoB	LONGLINE	SBcIIIart5	FRA															-	-	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	OTTER	none	FRA	3 268	-	3 605	-	3 593	-	3 585	-	3 877	-	3 406	-	3 393	-	453	5	1 475	45
	BoB		none	IRL																	-	-
	BoB	Total	none		3 268	-	3 605	-	3 593	-	3 585	-	3 877	-	3 406	-	3 393	-	453	5	1 475	45
	BoB	OTTER	SBcIIIart5	FRA															164	111	472	1
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	164	111	472	1
	BoB	PEL_TRAWL	none	FRA	42	-	38	-	-	-	1	-	3	-	5	-	5	-	7	-	10	-
	BoB	Total	none		42	-	38	-	-	-	1	-	3	-	5	-	5	-	7	-	10	-
	BoB	PEL_TRAWL	SBcIIIart5	FRA																	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	POTS	none	FRA	-	-			-	-	-	-	-	-					-	-	-	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	TRAMMEL	none	FRA	226	-	352	-	355	-	437	-	380	-	476	-	476	-	10	3	62	4
	BoB	Total	none		226	-	352	-	355	-	437	-	380	-	476	-	476	-	10	3	62	4
	BoB	TRAMMEL	SBcIIIart5	FRA															12	2	58	9
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	2	58	9
	BoB	none	none	FRA			-	-	-	-	3	-	-	-	-	-	-	-				
	BoB	Total	none		-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
	BoB	Grand Total			3 907	-	4 409	-	4 612	-	4 643	-	4 973	-	4 617	-	4 625	70	981	169	2 534	88

Table 5.10.4.2 – Bay of Biscay - Trend in total landings (t) and discards (t) for European Hake (HKE) for vessels concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011. Derogations are sorted by gear, special conditions (SPECON) and country. Data qualities are summarised in Section 9 of the report.

SPECIES	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2003		2004		2005		2006		2007		2008		2009		2010		2011	
					L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D
HKE	BoB	BEAM	none	BEL	12	-	10	-	10	-												
	BoB		none	ENG											-	-						
	BoB		none	FRA	2	-	1	-	6	-	-	-										
	BoB	Total	none		14	-	11	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	BEAM	SBcIIIart5	BEL							10	-	2	-	3	-	6	6	5	4	5	23
	BoB		SBcIIIart5	FRA															-	-		
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	10	-	2	-	3	-	6	6	5	4	5	23
	BoB	DEM_SEINE	none	FRA															36	-	41	-
	BoB		none	NLD													-	-				
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	41	-
	BoB	DEM_SEINE	SBcIIIart5	FRA																	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	DREDGE	none	FRA	3	-	-	-	2	-	3	-	1	-	1	-	1	-	1	-	-	-
	BoB	Total	none		3	-	-	-	2	-	3	-	1	-	1	-	1	-	1	-	-	-
	BoB	DREDGE	SBcIIIart5	FRA															-	-	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	GILL	none	ENG			29	-	37	-	11	-	-	-	-	-	-	-	-	-	-	-
	BoB		none	FRA	1 628	-	1 557	-	2 784	-	1 360	-	1 026	-	2 493	-	2 485	-	5 266	575	5 910	51
	BoB		none	SCO	4	-	19	-	69	-	6	-	-	-	20	-	-	-	52	3	73	-
	BoB	Total	none		1 632	-	1 605	-	2 890	-	1 377	-	1 026	-	2 513	-	2 485	-	5 318	578	5 983	51
	BoB	GILL	SBcIIIart5	FRA															780	435	673	16
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	435	673	16
	BoB	LONGLINE	none	ENG									-	-								
	BoB		none	FRA	34	-	22	-	34	-	56	-	78	-	54	-	54	-	417	-	774	-
	BoB		none	SCO							1	-	-	-	-	-			10	-	39	-
	BoB	Total	none		34	-	22	-	34	-	57	-	78	-	54	-	54	-	427	-	813	-
	BoB	LONGLINE	SBcIIIart5	FRA															22	-	7	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	7	-
	BoB	OTTER	none	ENG																	2	6
	BoB		none	FRA	1 408	-	1 234	-	1 716	-	1 269	-	1 906	-	2 486	-	2 472	-	642	73	759	494
	BoB	Total	none		1 408	-	1 234	-	1 716	-	1 269	-	1 906	-	2 486	-	2 472	-	642	73	761	500
	BoB	OTTER	SBcIIIart5	FRA															995	7 993	705	180
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	995	7 993	705	180
	BoB	PEL_SEINE	none	FRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-
	BoB	PEL_TRAWL	none	ENG													-	-	27	-	3	-
	BoB		none	FRA	293	-	48	-	217	-	162	-	271	-	52	-	51	-	110	10	398	-
	BoB		none	NLD															2	-	17	-
	BoB	Total	none		293	-	48	-	217	-	162	-	271	-	52	-	51	-	139	10	418	-
	BoB	PEL_TRAWL	SBcIIIart5	FRA															9	2	60	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	2	60	-
	BoB	POTS	none	FRA							-	-	-	-					5	-	7	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	7	-
	BoB	POTS	SBcIIIart5	FRA															1	-	3	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-
	BoB	TRAMMEL	none	ENG											-	-						
	BoB		none	FRA	118	-	124	-	105	-	85	-	195	-	158	-	157	-	9	39	16	4
	BoB	Total	none		118	-	124	-	105	-	85	-	195	-	158	-	157	-	9	39	16	4
	BoB	TRAMMEL	SBcIIIart5	FRA															168	22	166	54
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	168	22	166	54
	BoB	none	none	FRA			1	-	1	-	1	-	4	-	2	-	2	-			1	-
	BoB	Total	none		-	-	1	-	1	-	1	-	4	-	2	-	2	-	-	-	1	-
	BoB	none	SBcIIIart5	FRA																	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	Grand Total			3 502	-	3 045	-	4 981	-	2 964	-	3 483	-	5 269	-	5 228	6	8 558	9 156	9 661	828

Table 5.10.4.3 – Bay of Biscay - Trend in total landings (t) and discards (t) for Norway Lobster (NEP) concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011. Derogations are sorted by gear, special conditions (SPECON) and country. Data qualities are summarised in Section 9 of the report.

SPECIES	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2003		2004		2005		2006		2007		2008		2009		2010		2011	
					L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D
NEP	BoB	BEAM	none	BEL	1	-			1	-												
	BoB		none	FRA	2	-	4	-	7	-												
	BoB	Total	none		3	-	4	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	BEAM	SBcIIIart5	BEL							6	-	3	-	1	-	1	-	3	-	3	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	6	-	3	-	1	-	1	-	3	-	3	-
	BoB	DREDGE	none	FRA	-	-	-	-	2	-	-	-	-	-	1	-	1	-	2	-		
	BoB	Total	none		-	-	-	-	2	-	-	-	-	-	1	-	1	-	2	-	-	-
	BoB	DREDGE	SBcIIIart5	FRA															-	-		
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	GILL	none	FRA	1	-	2	-	-	-	2	-	1	-	3	-	3	-	-	-	-	-
	BoB	Total	none		1	-	2	-	-	-	2	-	1	-	3	-	3	-	-	-	-	-
	BoB	GILL	SBcIIIart5	FRA															-	-	1	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	BoB	LONGLINE	none	FRA	-	-	-	-							-	-	-	-	1	-	16	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	16	-
	BoB	LONGLINE	SBcIIIart5	FRA															-	-		
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	OTTER	none	FRA	2 329	-	2 506	-	3 123	-	2 908	-	2 801	-	2 659	-	2 650	-	1 223	12 384	1 435	-
	BoB		none	IRL																	4	-
	BoB	Total	none		2 329	-	2 506	-	3 123	-	2 908	-	2 801	-	2 659	-	2 650	-	1 223	12 384	1 439	-
	BoB	OTTER	SBcIIIart5	FRA															1 341	-	1 526	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 341	-	1 526	-
	BoB	PEL_TRAWL	none	FRA	5	-			-	-	2	-	4	-	34	-	34	-	1	-	17	-
	BoB	Total	none		5	-	-	-	-	-	2	-	4	-	34	-	34	-	1	-	17	-
	BoB	PEL_TRAWL	SBcIIIart5	FRA															1	-	2	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-
	BoB	POTS	none	FRA	1	-	2	-	-	-			-	-					3	-	4	-
	BoB	Total	none		1	-	2	-	-	-	-	-	-	-	-	-	-	-	3	-	4	-
	BoB	POTS	SBcIIIart5	FRA															-	-		
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	TRAMMEL	none	FRA	-	-	1	-	1	-	5	-	-	-	-	-	-	-	2	-	1	-
	BoB	Total	none		-	-	1	-	1	-	5	-	-	-	-	-	-	-	2	-	1	-
	BoB	TRAMMEL	SBcIIIart5	FRA															2	-	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
	BoB	none	none	FRA							-	-	-	-	-	-	-	-				
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	Grand Total			2 339	-	2 515	-	3 134	-	2 923	-	2 809	-	2 698	-	2 689	-	2 579	12 384	3 009	-

Table 5.10.4.4 – Bay of Biscay - Trend in total landings (t) and discards (t) for Whiting (WHG) concerned by existing derogations stated in article 5 of Coun. Reg. 388/2006 and Member State, 2003-2011. Derogations are sorted by gear, special conditions (SPECON) and country. Data qualities are summarised in Section 9 of the report.

SPECIES	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2003		2004		2005		2006		2007		2008		2009		2010		2011	
					L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D
WHG	BoB	BEAM	none	BEL	1	-	-	-	3	-												
	BoB		none	FRA	-	-	-	-	-	-												
	BoB	Total	none		1	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	BEAM	SBcIIIart5	BEL							2	-	4	-	1	-	2	2	3	1	1	3
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	2	-	4	-	1	-	2	2	3	1	1	3
	BoB	DEM_SEINE	none	FRA															81	-	143	-
	BoB		none	NLD													-	-	5	-		
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	86	-	143	-
	BoB	DEM_SEINE	SBcIIIart5	FRA																	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	DREDGE	none	FRA	2	-	2	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
	BoB	Total	none		2	-	2	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
	BoB	DREDGE	SBcIIIart5	FRA															-	-	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	GILL	none	FRA	62	-	39	-	53	-	64	-	52	-	55	-	55	-	25	688	15	-
	BoB	Total	none		62	-	39	-	53	-	64	-	52	-	55	-	55	-	25	688	15	-
	BoB	GILL	SBcIIIart5	FRA															22	4	18	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	4	18	-
	BoB	LONGLINE	none	FRA	9	-	64	-	110	-	152	-	302	-	170	-	170	-	152	-	195	-
	BoB	Total	none		9	-	64	-	110	-	152	-	302	-	170	-	170	-	152	-	195	-
	BoB	LONGLINE	SBcIIIart5	FRA															4	-	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
	BoB	OTTER	none	FRA	350	-	418	-	610	-	483	-	576	-	330	-	329	-	148	699	210	-
	BoB	Total	none		350	-	418	-	610	-	483	-	576	-	330	-	329	-	148	699	210	-
	BoB	OTTER	SBcIIIart5	FRA															287	2 942	356	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	287	2 942	356	-
	BoB	PEL_SEINE	none	FRA							-	-									-	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	PEL_TRAWL	none	FRA	238	-	80	-	130	-	87	-	133	-	45	-	44	-	153	-	71	-
	BoB	Total	none		238	-	80	-	130	-	87	-	133	-	45	-	44	-	153	-	71	-
	BoB	PEL_TRAWL	SBcIIIart5	FRA															3	-	6	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	6	-
	BoB	POTS	none	FRA									-	-					1	-	28	-
	BoB	Total	none		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	28	-
	BoB	POTS	SBcIIIart5	FRA															-	-	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	TRAMMEL	none	FRA	34	-	31	-	42	-	74	-	72	-	87	-	87	-	6	18	4	10
	BoB	Total	none		34	-	31	-	42	-	74	-	72	-	87	-	87	-	6	18	4	10
	BoB	TRAMMEL	SBcIIIart5	FRA															40	313	76	93
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	313	76	93
	BoB	none	none	FRA	-	-	-	-			-	-	3	-	-	-	-	-			3	-
	BoB	Total	none		-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3	-
	BoB	none	SBcIIIart5	FRA																	-	-
	BoB	Total	SBcIIIart5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	Grand Total			696	-	634	-	949	-	863	-	1 142	-	688	-	687	2	930	4 665	1 126	106

5.10.5 ToR 2 Remarks on quality of catches and discard estimates

Discards estimates available in 2010 and 2011 for fisheries of the Bay of Biscay have been dubious in certain cases. Landings figures have therefore been produced in addition of the landings and discards figures.

5.10.6 ToR 3 Information on small boats (<10m)

5.10.6.1 Fishing effort of small boats by Member State

Table 5.10.6.1.1 – Bay of Biscay – Overview of fishing effort in kW*days by fisheries for vessels <10m, comparison with the vessels >=10m, 2003- 2011.

Length Class	REG AREA COD	REG GEAR COD	2003	2004	2005	2006	2007	2008	2009	2010	2011
o. 10m.	Sum o. 10m.		20 208 928	21 055 586	32 716 924	40 283 550	40 128 811	33 566 902	33 302 624	27 963 618	27 574 682
u. 10m.	BoB	BEAM	-	-	-	-	2 552	-	-	2 376	352
	BoB	DREDGE	130 847	113 824	156 906	218 456	122 252	89 947	89 929	118 595	113 582
	BoB	GILL	829 544	746 587	874 201	974 350	973 764	722 318	722 318	1 362 593	1 158 775
	BoB	LONGLINE	236 715	293 392	375 098	834 555	953 642	534 995	534 891	1 291 386	1 282 910
	BoB	OTTER	267 514	300 223	318 094	499 881	534 888	290 303	290 303	544 874	538 344
	BoB	PEL_SEINE	572	-	-	990	4 070	-	-	1 764	6 737
	BoB	PEL_TRAWL	18 611	2 131	6 643	7 409	198	1 419	1 419	83 677	58 825
	BoB	POTS	136 492	114 423	131 759	306 264	360 067	250 780	250 780	847 154	907 244
	BoB	TRAMMEL	342 662	375 530	488 565	809 414	876 285	751 703	751 703	607 225	615 918
	BoB	none	840 236	798 017	762 313	773 527	896 805	831 417	831 411	-	417 635
	Sum u. 10m		2 803 193	2 744 127	3 113 579	4 424 846	4 724 523	3 472 882	3 472 754	4 859 644	5 100 322
	% u.10m		14%	13%	10%	11%	12%	10%	10%	17%	18%

Figure 5.10.6.1.1 – Bay of Biscay – Overview of fishing effort in kW*days by <10m and >=10m vessels, 2003- 2011.

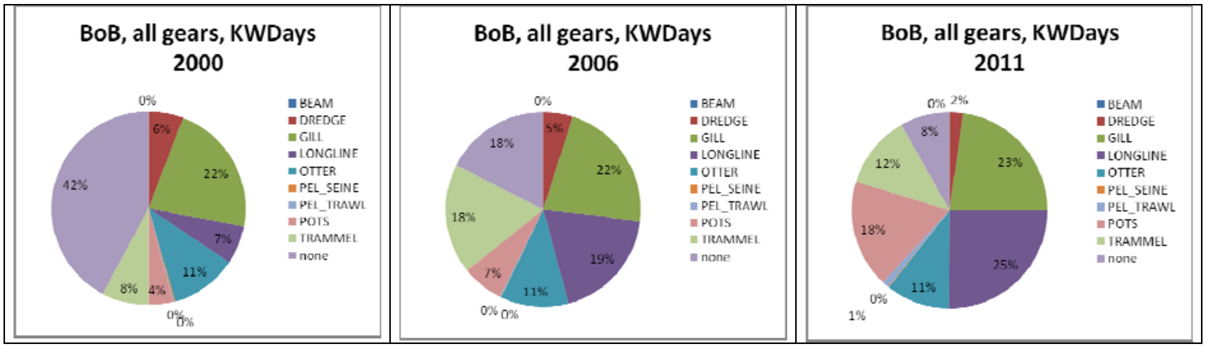


Figure 5.10.6.1.2 Bay of Biscay, Trend in the distribution per gear of the nominal effort (KWDays) for vessels <10m., 2000, 2006 and 2011.

Table 5.10.6.1.2 – Bay of Biscay - Trend in nominal effort (kW*days at sea) for vessels <10m by Member state sorted by gear and special condition (SPECON). Data qualities are summarised in section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	FRA								2 552			2 376	352
BoB	**Total**	**none**									**2 552**			**2 376**	**352**
BoB	DREDGE	none	ENG									18			
		none	FRA	126 082	114 268	385 932	130 847	113 824	156 906	218 456	122 252	89 929	89 929	114 673	112 922
BoB	**Total**	**none**		**126 082**	**114 268**	**385 932**	**130 847**	**113 824**	**156 906**	**218 456**	**122 252**	**89 947**	**89 929**	**114 673**	**112 922**
BoB	DREDGE	SBcIIIart5	FRA											3 922	660
BoB	**Total**	**SBcIIIart5**												**3 922**	**660**
BoB	GILL	none	ENG							76	50				
		none	FRA	480 698	604 354	2 259 415	829 544	746 587	874 201	974 274	973 714	722 318	722 318	1 191 380	979 126
BoB	**Total**	**none**		**480 698**	**604 354**	**2 259 415**	**829 544**	**746 587**	**874 201**	**974 350**	**973 764**	**722 318**	**722 318**	**1 191 380**	**979 126**
BoB	GILL	SBcIIIart5	FRA											171 213	179 649
BoB	**Total**	**SBcIIIart5**												**171 213**	**179 649**
BoB	LONGLINE	none	ENG									104			
		none	FRA	137 849	151 200	531 733	236 715	293 392	375 098	834 555	953 642	534 891	534 891	1 268 026	1 225 133
BoB	**Total**	**none**		**137 849**	**151 200**	**531 733**	**236 715**	**293 392**	**375 098**	**834 555**	**953 642**	**534 995**	**534 891**	**1 268 026**	**1 225 133**
BoB	LONGLINE	SBcIIIart5	FRA											23 360	57 777
BoB	**Total**	**SBcIIIart5**												**23 360**	**57 777**
BoB	OTTER	none	FRA	241 243	292 644	1 168 369	267 514	300 223	318 094	499 881	534 888	290 303	290 303	403 682	392 370
BoB	**Total**	**none**		**241 243**	**292 644**	**1 168 369**	**267 514**	**300 223**	**318 094**	**499 881**	**534 888**	**290 303**	**290 303**	**403 682**	**392 370**
BoB	OTTER	SBcIIIart5	FRA											141 192	145 974
BoB	**Total**	**SBcIIIart5**												**141 192**	**145 974**
BoB	PEL_SEINE	none	FRA	5 028	10 816		572			990	4 070			1 764	6 737
BoB	**Total**	**none**		**5 028**	**10 816**		**572**			**990**	**4 070**			**1 764**	**6 737**
BoB	PEL_TRAWL	none	FRA	3 779	16 084	170 025	18 611	2 131	6 643	7 409	198	1 419	1 419	81 181	58 136
BoB	**Total**	**none**		**3 779**	**16 084**	**170 025**	**18 611**	**2 131**	**6 643**	**7 409**	**198**	**1 419**	**1 419**	**81 181**	**58 136**
BoB	PEL_TRAWL	SBcIIIart5	FRA											2 496	689
BoB	**Total**	**SBcIIIart5**												**2 496**	**689**
BoB	POTS	none	ENG							592				59	
		none	FRA	88 512	87 342	403 162	136 492	114 423	131 759	305 672	360 067	250 780	250 780	839 660	878 182
BoB	**Total**	**none**		**88 512**	**87 342**	**403 162**	**136 492**	**114 423**	**131 759**	**306 264**	**360 067**	**250 780**	**250 780**	**839 719**	**878 182**
BoB	POTS	SBcIIIart5	FRA											7 435	29 062
BoB	**Total**	**SBcIIIart5**												**7 435**	**29 062**
BoB	TRAMMEL	none	FRA	169 753	198 398	1 095 507	342 662	375 530	488 565	809 414	876 285	751 703	751 703	460 576	460 807
BoB	**Total**	**none**		**169 753**	**198 398**	**1 095 507**	**342 662**	**375 530**	**488 565**	**809 414**	**876 285**	**751 703**	**751 703**	**460 576**	**460 807**
BoB	TRAMMEL	SBcIIIart5	FRA											146 649	155 111
BoB	**Total**	**SBcIIIart5**												**146 649**	**155 111**
BoB	none	none	DNK	6	8	27	23	30	30	37	30	12	6		
		none	FRA	912 675	985 673	4 318 096	840 213	797 987	762 283	773 490	896 775	831 405	831 405		410 811
BoB	**Total**	**none**		**912 681**	**985 681**	**4 318 123**	**840 236**	**798 017**	**762 313**	**773 527**	**896 805**	**831 417**	**831 411**		**410 811**
BoB	none	SBcIIIart5	FRA												6 824
BoB	**Total**	**SBcIIIart5**													**6 824**

Table 5.10.6.1.3 – Bay of Biscay - Trend in number of vessels for vessels <10m and Member State sorted by gear and special condition (SPECON). Data qualities are summarised in section 9 of the report.

REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
BoB	BEAM	none	FRA								1			1	1
BoB	**Total**	**none**									**1**			**1**	**1**
BoB	DREDGE	none	ENG									1			
		none	FRA	43	36	44	52	27	32	38	25	15	15	23	14
BoB	**Total**	**none**		**43**	**36**	**44**	**52**	**27**	**32**	**38**	**25**	**16**	**15**	**23**	**14**
BoB	DREDGE	SBcIIIart5	FRA											2	1
BoB	**Total**	**SBcIIIart5**												**2**	**1**
BoB	GILL	none	ENG							2	1				
		none	FRA	49	37	33	32	34	29	49	48	35	35	58	57
BoB	**Total**	**none**		**49**	**37**	**33**	**32**	**34**	**29**	**51**	**49**	**35**	**35**	**58**	**57**
BoB	GILL	SBcIIIart5	FRA											5	7
BoB	**Total**	**SBcIIIart5**												**5**	**7**
BoB	LONGLINE	none	ENG									1			
		none	FRA	23	20	36	52	55	62	150	153	91	90	171	168
BoB	**Total**	**none**		**23**	**20**	**36**	**52**	**55**	**62**	**150**	**153**	**92**	**90**	**171**	**168**
BoB	LONGLINE	SBcIIIart5	FRA											3	7
BoB	**Total**	**SBcIIIart5**												**3**	**7**
BoB	OTTER	none	FRA	24	18	23	16	19	14	36	50	27	27	28	31
BoB	**Total**	**none**		**24**	**18**	**23**	**16**	**19**	**14**	**36**	**50**	**27**	**27**	**28**	**31**
BoB	OTTER	SBcIIIart5	FRA											9	10
BoB	**Total**	**SBcIIIart5**												**9**	**10**
BoB	PEL_SEINE	none	FRA	3	1		1			2	1			1	2
BoB	**Total**	**none**		**3**	**1**		**1**			**2**	**1**			**1**	**2**
BoB	PEL_TRAWL	none	FRA	4	2	2	2	1	1	7	1	1	1	123	50
BoB	**Total**	**none**		**4**	**2**	**2**	**2**	**1**	**1**	**7**	**1**	**1**	**1**	**123**	**50**
BoB	PEL_TRAWL	SBcIIIart5	FRA											5	2
BoB	**Total**	**SBcIIIart5**												**5**	**2**
BoB	POTS	none	ENG							1				1	
		none	FRA	14	15	20	22	25	26	58	66	49	49	130	135
BoB	**Total**	**none**		**14**	**15**	**20**	**22**	**25**	**26**	**59**	**66**	**49**	**49**	**131**	**135**
BoB	POTS	SBcIIIart5	FRA											3	5
BoB	**Total**	**SBcIIIart5**												**3**	**5**
BoB	TRAMMEL	none	FRA	19	18	20	23	31	29	56	78	68	65	32	32
BoB	**Total**	**none**		**19**	**18**	**20**	**23**	**31**	**29**	**56**	**78**	**68**	**65**	**32**	**32**
BoB	TRAMMEL	SBcIIIart5	FRA											4	4
BoB	**Total**	**SBcIIIart5**												**4**	**4**
BoB	none	none	DNK	1	1	1	1	1	1	1	1	1	1		
		none	FRA	408	383	415	383	345	367	320	364	311	311		149
BoB	**Total**	**none**		**409**	**384**	**416**	**384**	**346**	**368**	**321**	**365**	**312**	**312**		**149**
BoB	none	SBcIIIart5	FRA												7
BoB	**Total**	**SBcIIIart5**													**7**

5.10.6.2 Catches (landings and discards) of sole and associated species by small boats by Member State

Table 5.10.6.2.1 – Bay of Biscay – Overview of landings (t) by principal species, by fisheries by vessels <10m, compare with vessels >=10m, 2003- 2011.

Length Class	REG AREA COD	REG GEAR COD	SPECIES	2003	2004	2005	2006	2007	2008	2009	2010	2011
o. 10m.	**Sum_o10m**		**ANF**	**3907**	**4410**	**4611**	**4644**	**4974**	**4618**	**4624**	**980**	**2534**
u. 10m.	BoB	DREDGE	ANF				0	0	0	0		
	BoB	GILL	ANF	24	32	10	8	3	2	2	13	12
	BoB	LONGLINE	ANF	0			0	0	0	0	1	1
	BoB	OTTER	ANF	0	1	1	2	0	0	0	2	1
	BoB	PEL_SEINE	ANF				0					
	BoB	POTS	ANF		0	0	0	0	0	0	0	0
	BoB	TRAMMEL	ANF	10	12	53	45	29	17	17	4	8
	Sum_u10m			**34**	**45**	**64**	**55**	**32**	**19**	**19**	**20**	**22**
	% u.10m			**1%**	**1%**	**1%**	**1%**	**1%**	**0%**	**0%**	**2%**	**1%**
o. 10m.	**Sum_o10m**		**HKE**	**3502**	**3046**	**4981**	**2964**	**3483**	**5269**	**5228**	**8558**	**9660**
u. 10m.	BoB	DREDGE	HKE								0	0
	BoB	GILL	HKE	59	55	39	76	61	58	58	106	37
	BoB	LONGLINE	HKE	18	20	8	12	27	30	30	46	85
	BoB	none	HKE									0
	BoB	OTTER	HKE	9	5	8	12	58	30	30	27	17
	BoB	PEL_TRAWL	HKE	0			0				0	
	BoB	POTS	HKE			0		0			1	2
	BoB	TRAMMEL	HKE	12	9	7	8	10	19	19	15	7
	Sum_u10m			**98**	**89**	**62**	**108**	**156**	**137**	**137**	**195**	**148**
	% u.10m			**3%**	**3%**	**1%**	**4%**	**4%**	**3%**	**3%**	**2%**	**2%**
o. 10m.	**Sum_o10m**		**NEP**	**2340**	**2515**	**3134**	**2923**	**2809**	**2698**	**2689**	**2579**	**3010**
u. 10m.	BoB	DREDGE	NEP								0	
	BoB	GILL	NEP	0		0	0				0	1
	BoB	LONGLINE	NEP									0
	BoB	OTTER	NEP	4	7	21	14	9			17	19
	BoB	POTS	NEP				1				0	2
	BoB	TRAMMEL	NEP								3	0
	Sum_u10m			**4**	**7**	**21**	**15**	**9**	**0**	**0**	**20**	**22**
	% u.10m			**0%**	**0%**	**1%**	**1%**	**0%**	**0%**	**0%**	**1%**	**1%**
o. 10m.	**Sum_o10m**		**SOL**	**2252**	**2514**	**3267**	**3396**	**3251**	**3310**	**3377**	**2986**	**3600**
u. 10m.	BoB	DREDGE	SOL				0	0	0	0	0	0
	BoB	GILL	SOL	26	30	29	27	32	7	7	155	87
	BoB	LONGLINE	SOL	0	0	0	0	0	0	0	2	5
	BoB	none	SOL		1				0	0		0
	BoB	OTTER	SOL	33	38	26	58	72	23	23	73	70
	BoB	PEL_SEINE	SOL									0
	BoB	PEL_TRAWL	SOL				0				0	0
	BoB	POTS	SOL	0			0	0	0	0	5	2
	BoB	TRAMMEL	SOL	35	52	50	103	120	103	103	62	115
	Sum_u10m			**94**	**121**	**105**	**188**	**224**	**133**	**133**	**297**	**279**
	% u.10m			**4%**	**5%**	**3%**	**6%**	**7%**	**4%**	**4%**	**10%**	**8%**
o. 10m.	**Sum_o10m**		**WHG**	**696**	**634**	**949**	**863**	**1142**	**688**	**687**	**929**	**1127**
u. 10m.	BoB	DREDGE	WHG					0			0	0
	BoB	GILL	WHG	9	11	16	25	9	8	8	31	36
	BoB	LONGLINE	WHG	3	30	32	38	55	26	26	69	68
	BoB	none	WHG		0							
	BoB	OTTER	WHG	1	2	2	6	4	1	1	14	19
	BoB	PEL_SEINE	WHG								0	
	BoB	PEL_TRAWL	WHG	1			0				0	0
	BoB	POTS	WHG			0		0			1	3
	BoB	TRAMMEL	WHG	2	3	6	11	5	2	2	6	6
	Sum_u10m			**16**	**46**	**56**	**80**	**73**	**37**	**37**	**121**	**132**
	% u.10m			**2%**	**7%**	**6%**	**9%**	**6%**	**5%**	**5%**	**13%**	**12%**

Table 5.10.6.2 – Bay of Biscay - Trend in total landings (t) and discards (t) for SOL for vessels <10m. sorted by gear, special condition (SPECON) and country. Data qualities are summarised in Section 9 of the report.

SPECIES	REG AREA COD	REG GEAR COD	SPECON	COUNTRY	2003		2004		2005		2006		2007		2008		2009		2010		2011	
					L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D
SOL	BoB	DREDGE	none	FRA							-	-	-	-	-	-	-	-	-	-	-	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	DREDGE	SBcIIIart5	FRA															-	-		
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	GILL	none	FRA	26	-	30	-	29	-	27	-	32	-	7	-	7	-	35	96	33	-
	BoB	**Total**	**none**		26	-	30	-	29	-	27	-	32	-	7	-	7	-	35	96	33	-
	BoB	GILL	SBcIIIart5	FRA															120	-	54	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	-	54	-
	BoB	LONGLINE	none	FRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
	BoB	LONGLINE	SBcIIIart5	FRA															1	-	3	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-
	BoB	OTTER	none	FRA	33	-	38	-	26	-	58	-	72	-	23	-	23	-	19	-	23	-
	BoB	**Total**	**none**		33	-	38	-	26	-	58	-	72	-	23	-	23	-	19	-	23	-
	BoB	OTTER	SBcIIIart5	FRA															53	-	47	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	-	47	-
	BoB	PEL_SEINE	none	FRA																	-	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	PEL_TRAWL	none	FRA							-	-							-	-	-	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	POTS	none	FRA	-	-					-	-	-	-	-	-	-	-	3	-	2	-
	BoB	**Total**	**none**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	2	-
	BoB	POTS	SBcIIIart5	FRA															2	-	-	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
	BoB	TRAMMEL	none	FRA	35	-	52	-	50	-	103	-	120	-	103	-	103	-	35	25	35	-
	BoB	**Total**	**none**		35	-	52	-	50	-	103	-	120	-	103	-	103	-	35	25	35	-
	BoB	TRAMMEL	SBcIIIart5	FRA															27	2	80	-
	BoB	**Total**	**SBcIIIart5**		-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	2	80	-
	BoB	none	none	FRA			1	-							-	-	-	-			-	-
	BoB	**Total**	**SBcIIIart5**		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BoB	**Grand Total**			**94**	-	**121**	-	**105**	-	**188**	-	**224**	-	**133**	-	**133**	-	**296**	**123**	**278**	-

5.10.7 ToR 4 Spatio-temporal patterns in effective effort by fisheries

Figure 5.10.7.1 to 5.10.7.10 show the spatial distribution of the effective fishing effort for all the different fisheries operating in the Bay of Biscay during the period 2003 to 2011. The pattern seems similar for the whole period for most of the fleets.

The effort is mostly distributed all across the gulf with somewhat higher values close to the estuaries (Gironde, baie de vilaine).

For trammel and otter, that are the two fisheries for which the effort increased between 2003-2007, the spatial effort allocation seems to follow the same trends, starting mainly in south Brittany and increasing in all the area in the following years.

The demersal seine fishery started in 2009 and increased in 2010 and 2011.

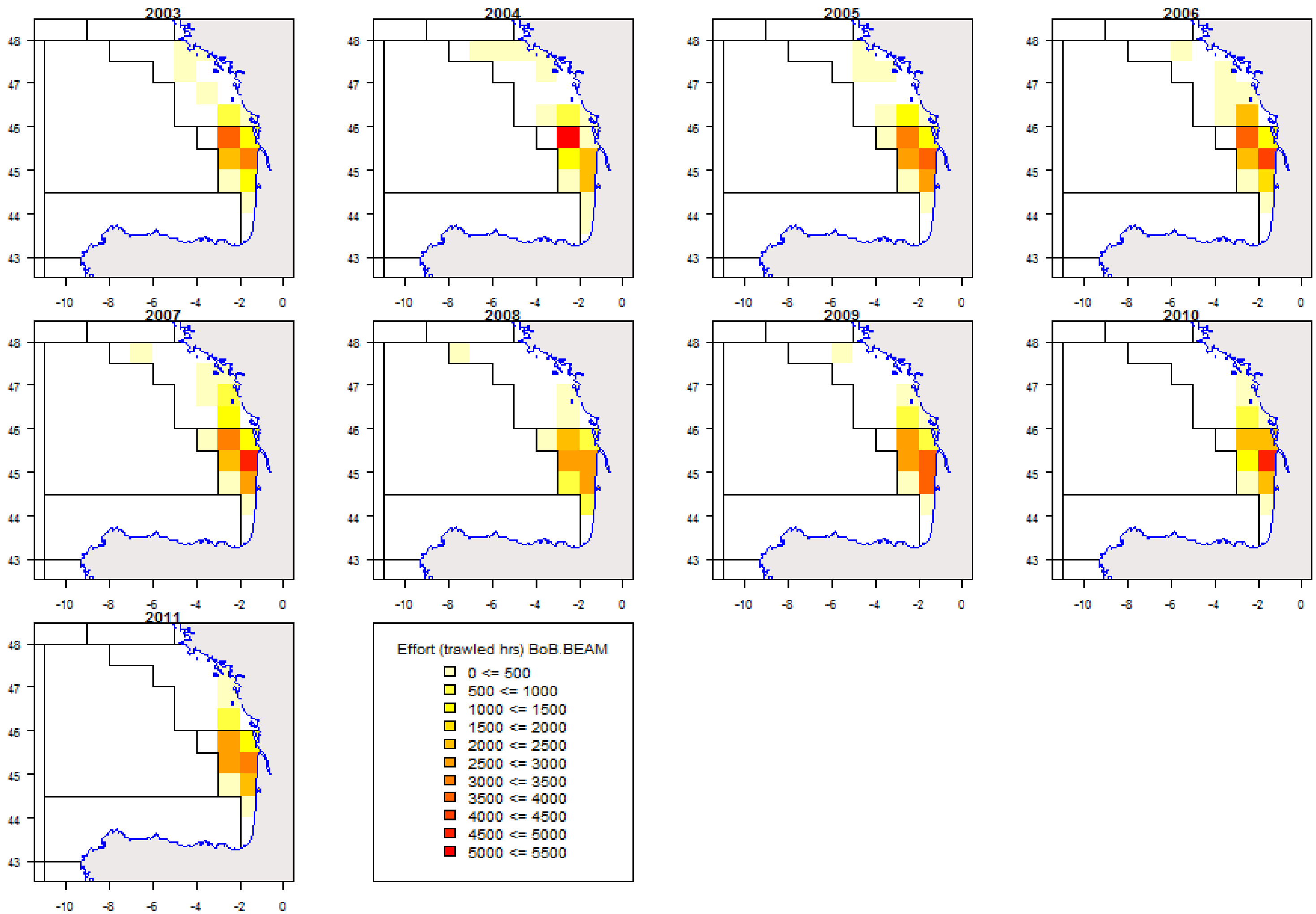


Figure 5.10.7.1. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for the Beam trawl gear, 2003-2011.

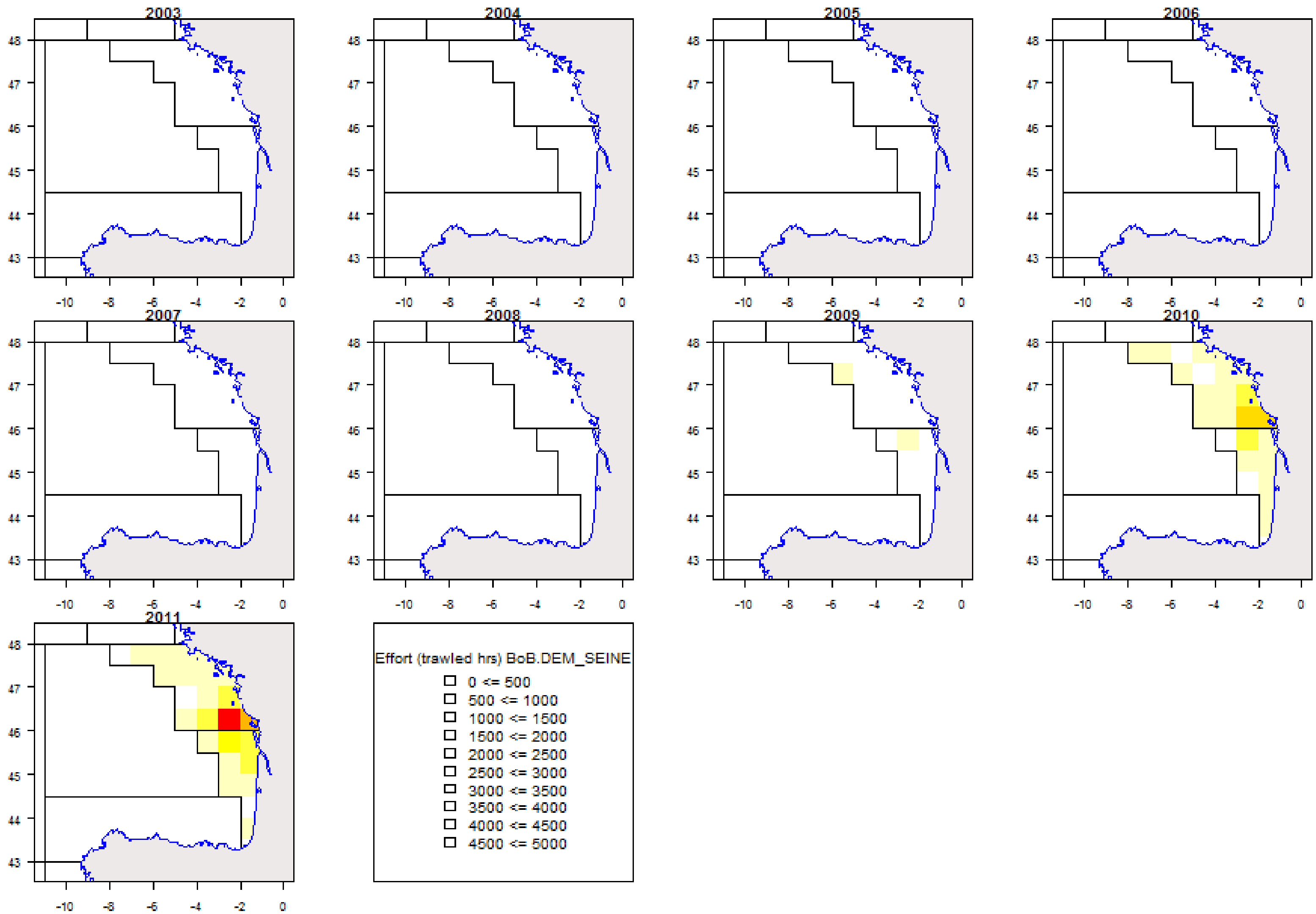


Figure 5.10.7.2. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Demersal Seine gear, 2003-2011.

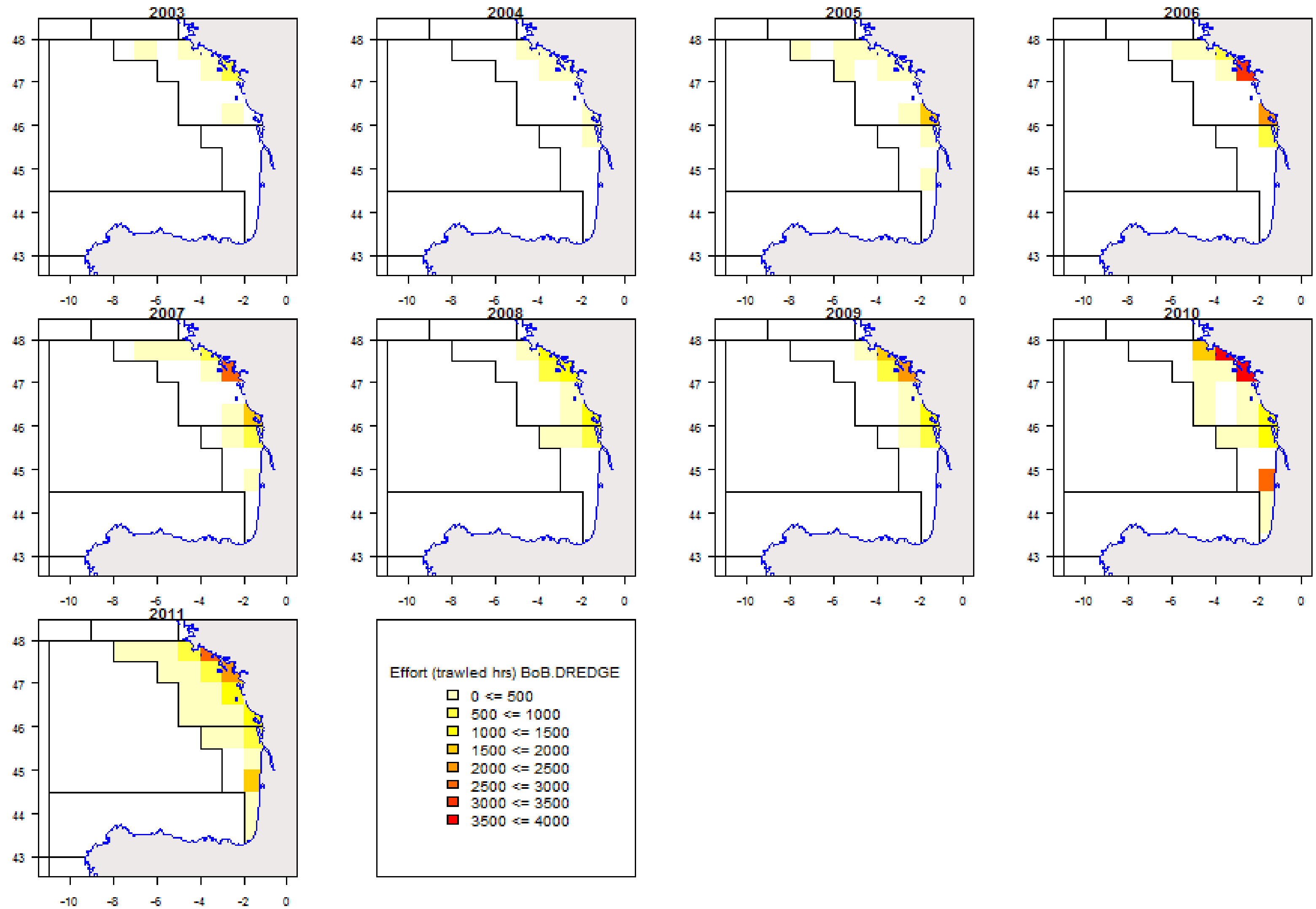


Figure 5.10.8.3. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Dredge gear, 2003-2011.

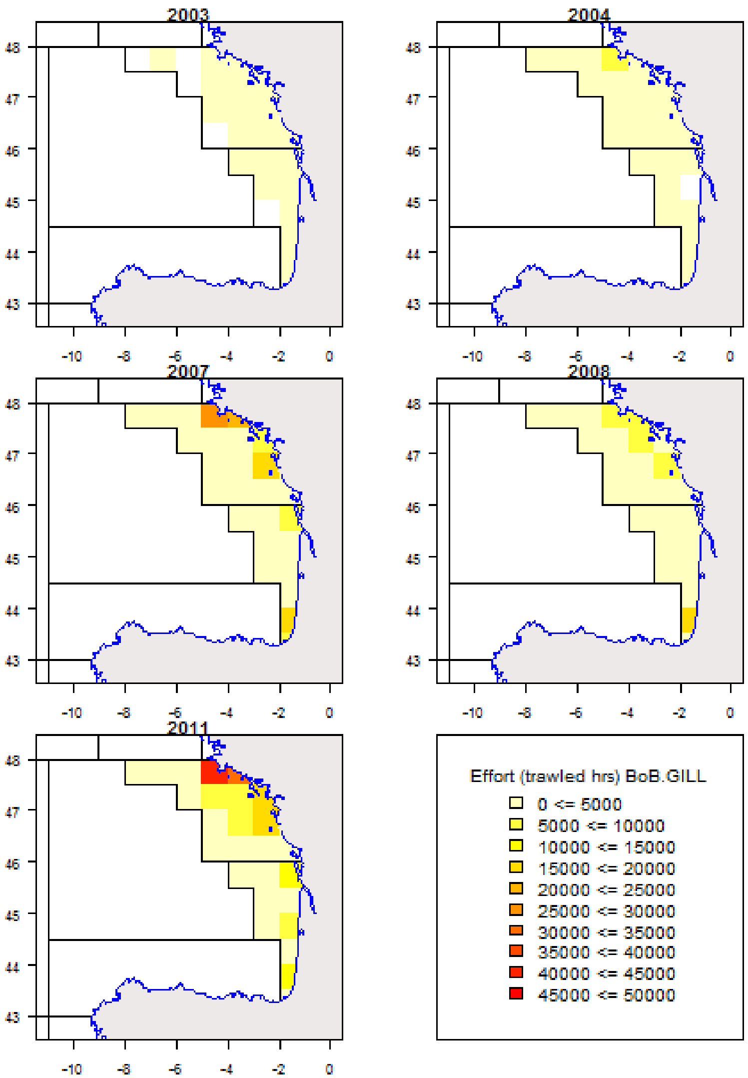


Figure 5.10.7.4. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Gill net gear, 2003-2011.

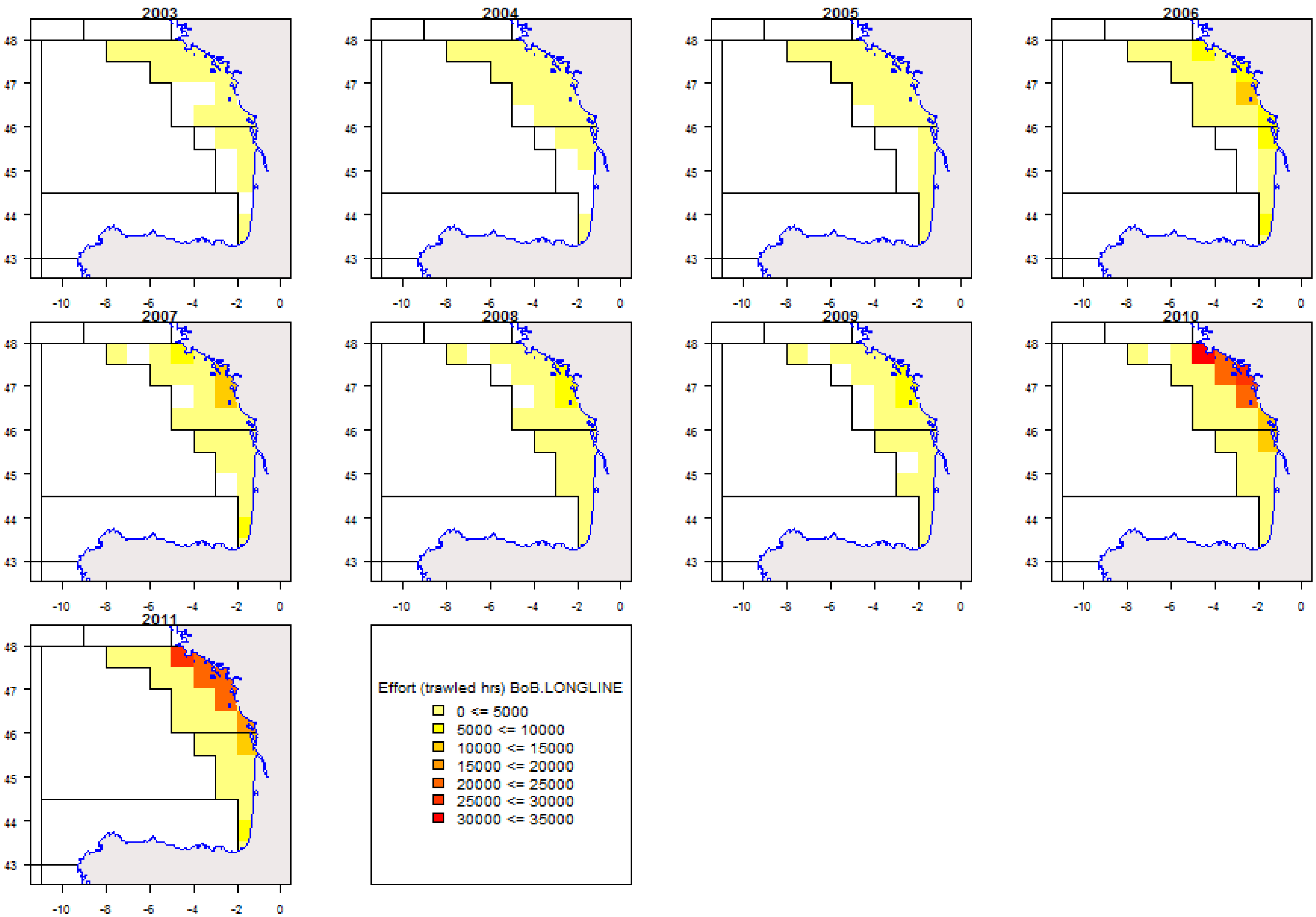


Figure 5.10.8.5. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Longline gear, 2003-2011.

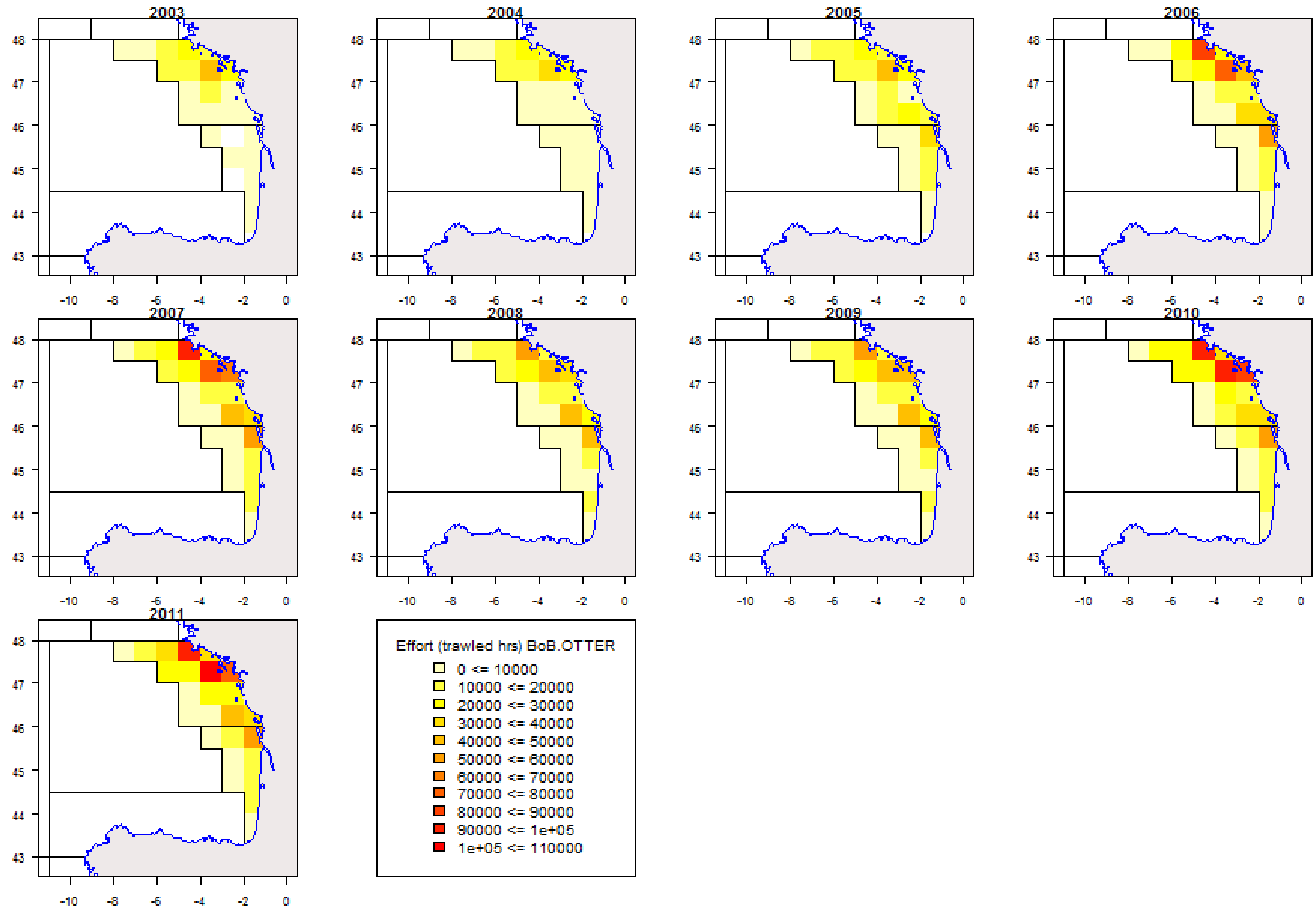


Figure 5.10.8.6. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Otter Trawl gear, 2003-2011.

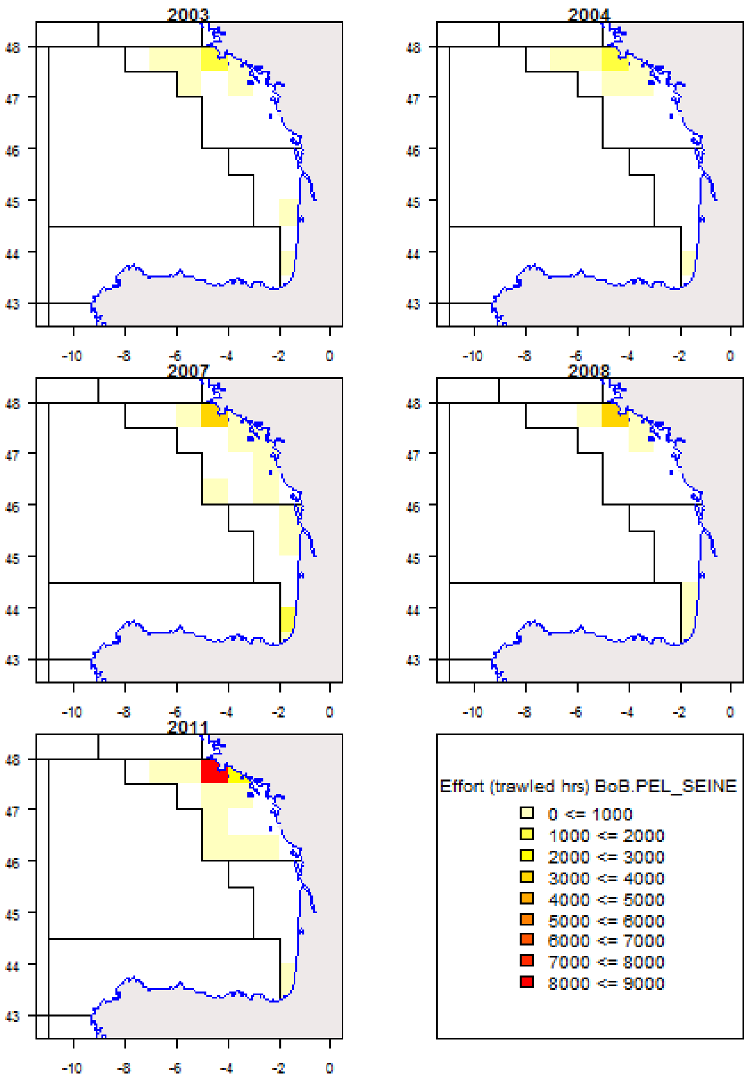


Figure 5.10.7.7. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Pelagic Seine gear, 2003-2011.

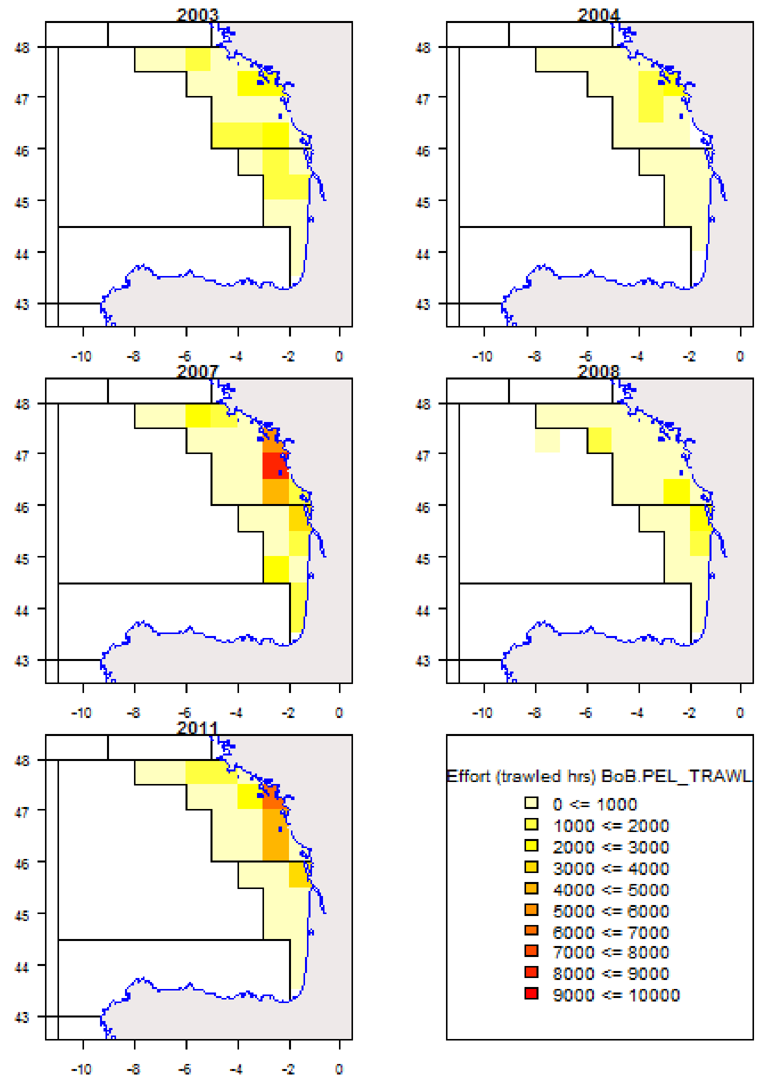


Figure 5.10.7.8. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Pelagic Trawl gear, 2003-2011.

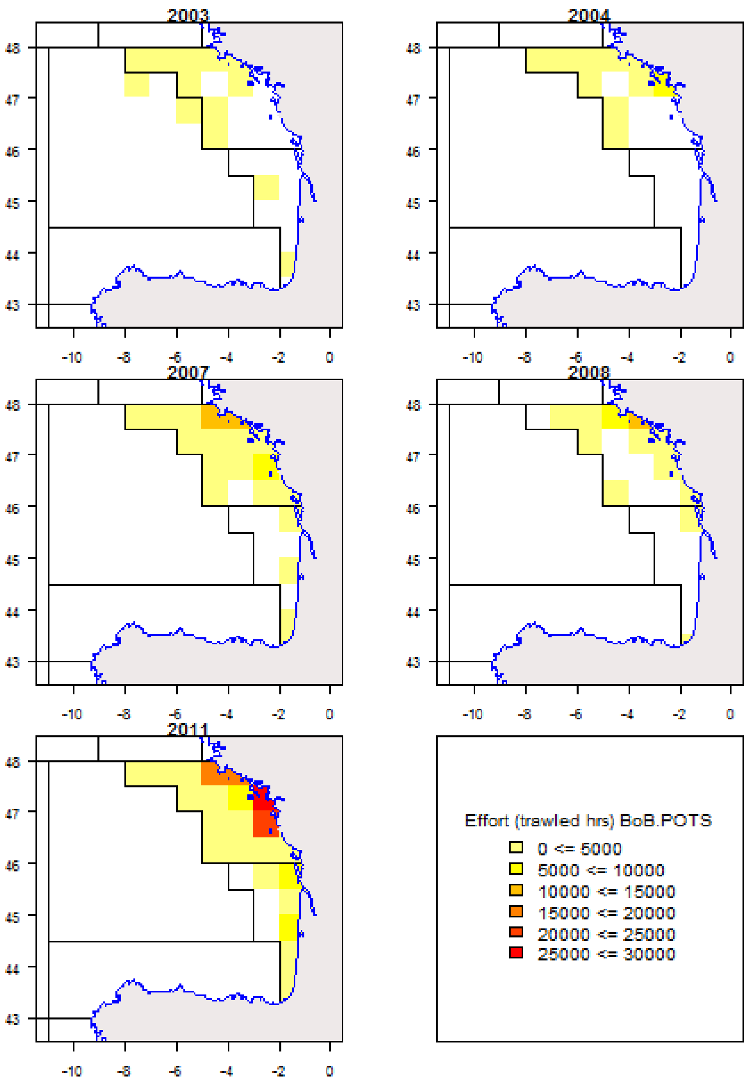


Figure 5.10.7.9. Bay of Biscay. Spatial distribution of effective fishing effort (fished hours) by ICES statistical rectangle for Pot gear, 2003-2011.

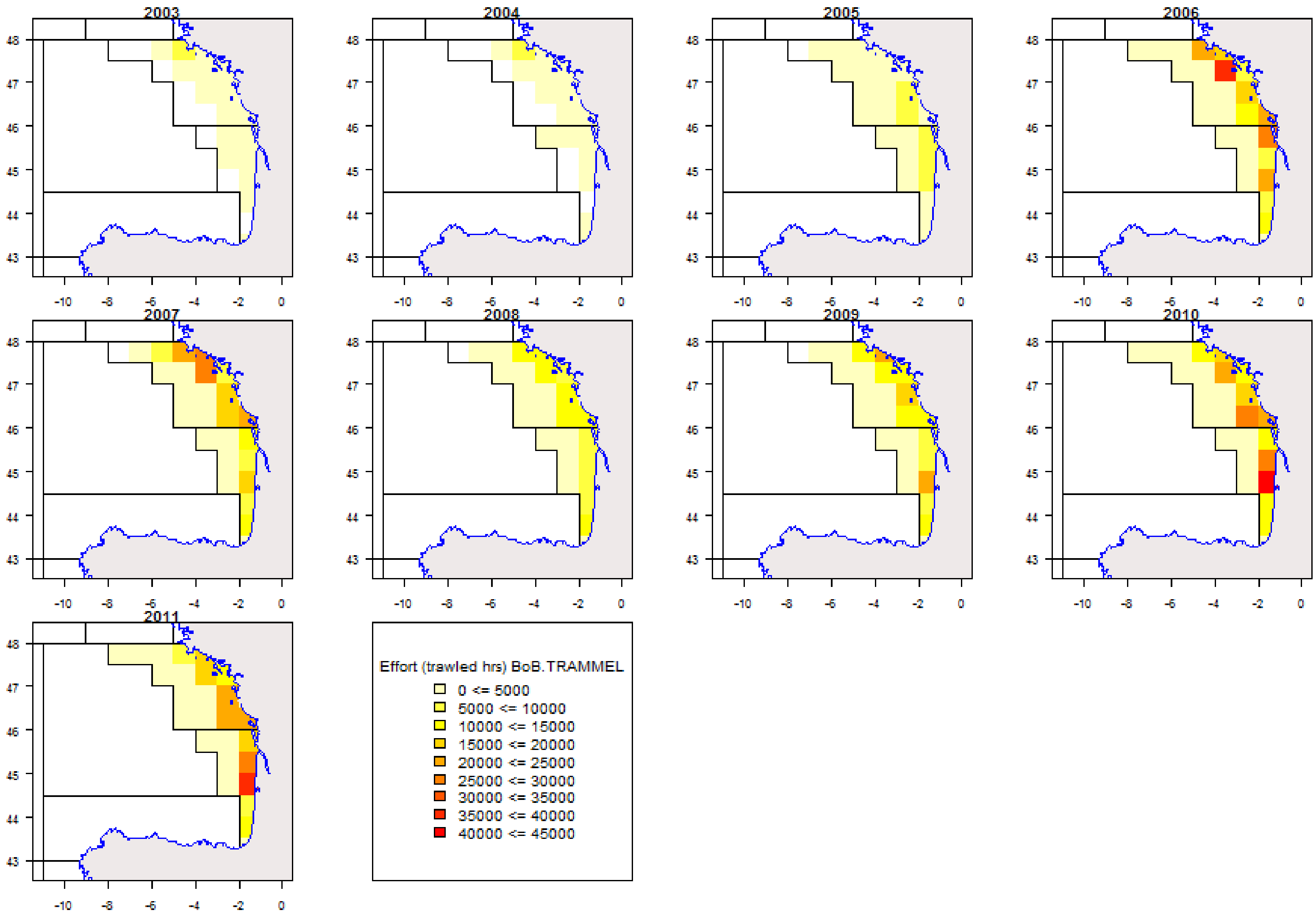


Figure 5.10.7.10. Bay of Biscay. Spatial distribution of effective fishing effort (trawled hours) by ICES statistical rectangle for Trammel net gear, 2003-2011.

5.10.8 ToR 5 Any unexpected evolutions of the trends in catches and effort by Member State and fisheries

STECF EWG 12-06 has no comments.

5.10.9 ToR 6 Correlation between partial sole mortality and fishing effort by Member State and fisheries

STECF EWG will address this task at its follow-up meeting STECF EWG 12-12, 24-28 September 2012.

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7 EWG-12-06 List of Participants

Name	Address	Telephone no.	Email
STECF Members			
Ulrich Rescan, Clara	DTU-Aqua Charlottenlund Castle, 2920 Charlottenlund, Denmark	0045 33963395	clu@difres.dk
Vanhee, Willy	ILVO Hospitaalstraat, 8400 Oostende, Belgium	+32(059)433083	wvanhee@pandora.be

Name	Address	Telephone no.	Email
Invited Experts			
Barrett, Katherine	Scottish Executive Environment and Rural Affairs D, Robb's Loan EH14 1TY, Edinburgh, United Kingdom	#131-244-6437	katy.barratt@scotland.gsi.gov.uk
Kovars, Maksims	Fish Resources Research department (BIOR) Lejupes Street 3, LV-1076, Riga, Latvia		Maksims.Kovsars@bior.gov.lv
Van der Kamp, Peter HJ	IMARES Haringkade 1, 1976 CP, IJmuiden, Netherlands	31317487176	peter.vanderkamp@wur.nl
Carlshamre, Sofia	SLU- Inst. of Marine Research, Turistgatan 5, 453 30 Lysekil, Sweden	+46-(0)10-4784015	sofia.carlshamre@fiskeriverket.se
Radtke, Krzysztof	Sea Fisheries Institute Kollataja 1, 81-332 Gdynia, Poland	48697109184	krzysztof.radtke@mir.gdynia.pl
Davie, Sarah	Marine InstituteRinville, Oranmore, Ireland	00 353 (0)91 387200	sarah.davie@marine.ie
Raid, Tiit	Estonian Marine Institute, University of Tartu, Estonia		tiit.raid@gmail.com
Vermard, Youen	IFREMER 150, Quai Gambetta, 62200 Boulogne sur mer, France		youen.vermard@ifremer.fr
Dolder, Paul	Cefas Pakefield Road NR33 0HT Lowestoft, United Kingdom	+441502 524259	paul.dolder@cefas.co.uk
Silva, Cristina	INRB-L/IPIMAR Av. de Brasília, 1449-006 Lisboa, Portugal	351-213015948	csilva@ipimar.pt
Holmes, Steven	Fisheries Research Services, Victoria Road, Aberdeen, United Kingdom	+44(0)1224 295507	s.holmes@marlab.ac.uk
Zolubas, Tomas	Fisheries Service under Ministry of Agriculture, Naujoji uosto 8ª, LT-92119 Klaipeda,Lithuania	37046310660	TomasZ@zum.lt

Name	Address	Telephone no.	Email
Invited Experts			
Kempf, Alexander	Institute of Sea Fisheries, Palmaille 9, 22767 Hamburg, Germany		alexander.kempf@vti.bund.de
Demaneche, Sebastiene	IFREMER B.P. 70, 29280, Plouzané, France	+33 298224040	sdemanec@ifremer.fr
Gonzales Herraiz, Isabel	Instituto Español de Oceanografía, Paseo Marítimo, Alcalde Francisco Vázquez, 10, 15001 A Coruña, Spain	0034981205362, ext132	isabel.herraiz@co.ieo.es
Kuzebski, Emil	Morski Instytut Rybacki Kollataja 1, 81-332 Gdynia, Poland	+48 7356118	emil@mir.gdynia.pl
JRC Experts			
Rätz Hans-Joachim (chairman)	Joint Research Centre (IPSC) Maritime Affairs Unit Via E. Fermi, 2749 21027 Ispra (Varese) Italy	Tel.+390332786073 Fax +390332789658	hans-joachim.raetz@jrc.ec.europa.eu
Mitrakis, Nicolaos	Joint Research Centre (IPSC) Maritime Affairs Unit Via E. Fermi, 2749 21027 Ispra (Varese) Italy	Tel.+ Fax+390332789658	nikolaos.mitrakis@jrc.ec.europa.eu

Name	Address	Telephone no.	Email
European Commission			
Traa, Marco	European Commission Rue Jozef II-99, 1000 Brussels, Belgium	32-2-2968070	marco.traa@ec.europa.eu
Rätz Hans-Joachim (chairman)	Joint Research Centre (IPSC), STECF secretariat	Tel.+390332786073 Fax+390332789658	hans-joachim.raetz@jrc.ec.europa.eu
Mitrakis, Nikolaos	Joint Research Centre (IPSC), STECF secretariat	Tel. Fax+390332789658	nikolaos.mitrakis@jrc.ec.europa.eu

Name	Address	Telephone no.	Email
Observers			

8 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on: http://stecf.jrc.ec.europa.eu/web/stecf/ewg06

List of background documents:

1. EWG-12-06 – Doc 1 - Declarations of invited and JRC experts.
2. EWG-12-06 – Doc 2 – Digital appendixes (EXCEL spreadsheets) to the present report: Fisheries specific parameters (fishing effort, landings, discards, landings and discards at age, catch per unit of effort, spatial effective effort, ranking by catch and landings, partial fishing mortality by fisheries and correlations with fishing effort).

European Commission

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

Title: Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Fishing Effort Regimes in European Waters Part 1 (STECF-12-09).

STECF members: Casey, J., Abella, J. A., Andersen, J., Bailey, N., Bertignac, M., Cardinale, M., Curtis, H., Daskalov, G., Delaney, A., Döring, R., Garcia Rodriguez, M., Gascuel, D., Graham, N., Gustavsson, T., Jennings, S., Kenny, A., Kirkegaard, E., Kraak, S., Kuikka, S., Malvarosa, L., Martin, P., Motova, A., Murua, H., Nord, J., Nowakowski, P., Prellezo, R., Sala, A., Scarcella, G., Simmonds, J., Somarakis, S., Stransky, C., Theret, F., Ulrich, C., Vanhee, W. & Van Oostenbrugge, H.

EWG-12-06 members: Ulrich Rescan, C., Vanhee, W., Barrett, K., Kovars, M., Van der Kamp, P. H. J., Carlshamre, S., Radtke, K., Davie, S., Raid, T., Vermard, Y., Dolder, P., Silva, C., Holmes, S., Zolubas, T., Kempf, A., Demaneche, S., Gonzales Herraiz, I., Kuzebski, E., Rätz, H.-J., Mitrakis, N.

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Abstract

STECF presents its review of the EWG 12-06 which has extensively addressed the ToR regarding the fishing effort regime evaluations in the

- Eastern and Western Baltic,
- the Kattegat,
- the Skagerrak, North Sea, European waters in ICES Div.2 and the Eastern Channel,
- to the West of Scotland,
- Irish Sea,
- Celtic Sea,
- Atlantic waters off the Iberian Peninsula,
- Western Channel,
- and the Bay of Biscay.

The specific Western Waters and Deep Sea effort regime evaluations have been deferred to the follow-up meeting STECF EWG 12-12, 24-28 September 2012, Barza d'Ispra, Italy. The major outstanding task is the estimation and delivery of CPUE and LPUE by Member State. This omission will also be accomplished during the follow-up meeting of the working group, EWG 12-12 24-28 September 2012, Barza d'Ispra, Italy. It is noted that compilations of fisheries specific data are provided as electronic appendixes and can be downloaded at http://stecf.jrc.ec.europa.eu/web/stecf/ewg06 in order to facilitate transparent dissemination of the information and further use. Due to the complexity of the fisheries information provided, interested users are advised to consult the data quality notes and data notations provided in the present report.

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The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

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