



32nd PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-09-03)

PLENARY MEETING, 9-13 NOVEMBER 2009, Brussels

Edited by John Casey & Hendrik Dörner

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PLENARY MEETING

9-13 NOVEMBER 2009, BRUSSELS

1. INTRODUCTION

The STECF plenary took place at the Albert Borschette Building in Brussels from 9 to 1 November 2009. The Chairman of the STECF, Dr John Casey, opened the plenary session at 14:30h. The terms of reference for the meeting were reviewed and the meeting agenda agreed. The session was managed through alternation of Plenary and working group meetings. Rapporteurs for each item on the agenda were appointed and are identified in the list of participants. The meeting closed at 16:00h on 13 November.

2. LIST OF PARTICIPANTS

Contact details are attached in ANNEX I.

MEMBERS OF THE STECF:

Abella, J. Alvaro
Andersen, Jesper Levring (Vice-chair)
Bailey, Nick (Rapporteur)
Balguerias, Eduardo (Rapporteur)
Cardinale, Massimiliano (Rapporteur)
Casey, John (Chair, Rapporteur)
Curtis, Hazel (Rapporteur)
Daires, Fabienne
Dobby, Helen (Rapporteur)
Döring, Ralf (Rapporteur)
Figueiredo, Ivone
Graham, Norman (Rapporteur)
Gustavsson, Tore
Hatcher, Aaron (Rapporteur)
Kirkegaard, Eskild (Rapporteur)
Kraak, Sarah (Rapporteur)
Kuikka, Sakari (Rapporteur)
Martin, Paloma
Prellezo, Raul (Rapporteur)
Somarakis, Stylianos (Rapporteur)
Stransky, Christoph (Rapporteur)
Vanhee, Willy (Rapporteur)
VanHoof, Luc

VanOostenbrugge, Hans
Virtanen, Jarno (rapporteur)

INVITED EXPERT:

Bertignac Michel (Rapporteur)

Joint Research Centre (JRC) experts:

Rätz Hans-Joachim (Rapporteur)

EUROPEAN COMMISSION:

DG- Maritime Affairs and Fisheries (MARE)

Angot, Veronique

Biagi Franco

Bruno Ellen

Cervantes Antonio

Daniel, Patrick

Degnbol Poul

Goldmanis Edgars

Lindebo Erik

Lindemann, Jan-Henning

JRC- STECF secretariat:

Dörner, Hendrik

Folisi, Floriana

Members of the STECF not present:

The following members of the STECF informed the secretariat that they were not able to attend the meeting:

Di Natale, Antonio

Gascuel, Didier

Sabatella, Evelina

Parkes, Graeme

Polet, Hans

3. INFORMATION FROM THE COMMISSION – ORGANISATIONAL MATTERS

STECF agenda 2010

The Commission informed the STECF plenary on the list of meetings planned for 2010.

1 - Bureau meetings

2 meetings to be organized

1. BUR 10-01: updating of the 2010 Work Programme in regards to results of the October, November and December Councils
2. BUR 10-02: 2011 Work Programme

2 - Plenary meetings

3 meetings to be organized

3. PLEN 10-01: at the beginning of the Spring 2010
4. PLEN 10-02: at the beginning of the Summer 2010
5. PLEN 09-03: at the mid of the Fall 2010

3 – Sub-group meetings

3.1 – Sub-Group on research needs

6. SG-RN 10-01 – Evaluation of 2009 technical reports related to the Data Collection framework
7. SG-RN 10-02 – Evaluation of National Programmes for the 2011-2013 period in relation with the Data Collection framework
8. SG-RN 10-03 – Evaluation of needs related to surveys

3.2 – Sub-Group on Economic Affairs

9. SG-ECA 10-01 – collection of economic data and needs related to the Data Collection Framework & possible discussion on the format of the Annual Economic Report
10. SG-ECA 10-02 – Economic interpretation of the Annual Economic Report
11. SG-ECA 10-03 – Evaluation of data related to the fishing processing sector

3.3 – Sub-Group on the Mediterranean Sea and the Black Sea

12. SG-MED 09-01 – Compilation of data and discussions on assessment methods for the stocks Mediterranean Sea and in the Black Sea
13. SG MED 09-02 – Assessment of stocks distributed in the Mediterranean Sea – Part 1
14. SG MED 09-03 – Assessment of stocks distributed in the Mediterranean Sea – Part 2

3.4 – Sub-Group on balance between resources and the exploitation

15. SG-BRE 10-01 – Review of national reports on balance between fishing capacities and fishing opportunities

3.5 – Sub-Group on stock review

16. SG-RST 10-01 – Review of scientific advice on Baltic Sea stocks and fisheries

17. SG-RST 10-02 – Review of scientific advice on North Sea stocks and fisheries, Western waters stocks and fisheries, widely distributed stocks (part 1), Black Sea stocks and fisheries and Outermost Regions stocks and fisheries

18. SG-RST 10-03 – Review of scientific advice on widely distributed stocks, deep sea stocks and fisheries and external stocks and fisheries

3.6 – Sub-Group on management objectives and strategies

19. SG-MOS 10-01 – ToRs for assessment of multi-annual plans and assessment of HCRs

20. SG-MOS 10-02 – Mixed fisheries, ecosystemic approach in fisheries management and the scientific advisory process

21. SG-MOS 10-03 – Assessment of fishing effort regimes – part 1

22. SG-MOS 10-04 – Assessment of fishing effort regimes – part 2

23. SG-MOS 10-05 – Evaluation of management, recovery and long-term plans

24. SG-MOS 10-06 – Assessment of new multi-annual plans

25. non allocated

Data calls 2010

The Commission informed the STECF plenary on the list of meetings planned for 2010.

- ✓ Call for data prior to the Annual Economic Report
 - Referent Unit: DG Mare Unit A3
 - To be launched at the beginning of 2010
 - *Rem.: DG Mare Unit C2 highlighted that a particular attention should be paid to economic performance of deep sea fleets and selected fleets operating in the Western Waters.*

- ✓ Call for data (efforts and catches) prior to fishing effort STECF WG meetings
 - Referent Units: DG Mare Units A2, C2 & E2
 - To be launched at the beginning of 2010
 - To be extended to all fisheries where management plans are in place on demersal and benthic stocks (e.g. the Baltic Sea will have to be included in the call, the deep sea fisheries and the western channel fisheries as well) and to areas covered by the Western Waters regime.

- ✓ Call for data prior to the Black sea and Mediterranean sea stocks evaluation

- Referent Unit: DG Mare Unit D2
- To be launched during the 1st quarter of 2010 for STECF SGMED WG in 1st quarter.

- ✓ Call for data prior to the Black sea and Mediterranean sea stocks evaluation
 - Referent Unit: DG Mare Unit D2
 - To be launched during the 1st quarter of 2010 for STECF SGMED WG in 2nd quarter.

- ✓ Call for data on the processing sector
 - Referent Unit: DG Mare Unit A3
 - To be launched within the second half of 2010

Information from the secretariat

The STECF secretariat informed that F. Folisi will leave the JRC by end November 2009. All submission of documents and requests related to reimbursement of payments should be send to the STECF secretariat functional “STECF payment” email stecf-payment@jrc.ec.europa.eu with copy to Marousa Vasilaki (marousa.vasilaki@ec.europa.eu) the new administrative assistant for STECF at the JRC.

4. ASSESSMENT OF WORKING GROUP REPORTS

4.1. SGMED-09-02: Assessment of Mediterranean Sea stocks

STECF is requested to review the report of the **SGMED-09-02** Working Group of June 8 – 12, 2009 (Villasimius, Sardinia) meeting, evaluate the findings and make any appropriate comments and recommendations.

Terms of reference

The terms of reference for the SGMED-09-02 Working Group are to be found in Annex I.

STECF observations

STECF concludes that overall the SGMED framework has so far represented an excellent forum to support stock assessment and advice within the region and built the foundations upon which assessment work can be successfully undertaken. The meetings in 2008 and 2009 also allowed the standardization of procedures for data collection and analysis within the region. In order to ensure that this is continued, the Working Group suggests that inter-sessional workshops or training courses be pursued to expand the number of scientists fully able to undertake assessments within the Mediterranean region.

STECF notes that the working group SGMED 09-02 was able exhaustively address all TORs. The SGMED 09-02 report deals mainly with the assessment of historic and recent trends in stock

parameters (stock size, recruitment and exploitation) and relevant scientific advice. Where applicable, long-term forecasts are provided in order to allow assessments of the stock against proposed management reference points $F_{0.1}$, F_{max} and F_{MSY} . In this context $F_{0.1}$ was considered as the most reliable proxy of F_{MSY} . For most of the stocks assessed, current exploitation rates are estimated larger or much larger than any level of fishing mortality that is associated with high long-term sustainable targets. STECF endorses such conclusion. STECF notes that deterministic short and medium term forecast of landings and stock size and related management advice will be delivered through the forthcoming SGMED 09-03 meeting in December 2009.

STECF supports SGMED 09-02 reiteration that recovery plans should be developed and established with urgency in order to achieve advised effort reductions and those recovery plans should be enforced until the stocks are proved to be exploited consistently with the sustainable targets. The development of recovery plans needs to consider catches of other species in a mixed fishery context and should be socio-economically evaluated.

STECF endorses the SGMED recommendations regarding its future working procedures. The stocks to be assessed within each working group should be clearly identified by the TORs prior to the meeting, rather than being faced with an open list of potential assessments and with experts facing ad hoc decisions on which stock to assess. Also, the data call should cover the needs to fulfill the TORs rather than having to undertake additional analyses at the meeting. In this context, SGMED considers a reasonable approach would be to attempt no more than 25 stock assessments over the 2-weekly working group meetings scheduled for future years. SGMED considers that a system, whereby each stock is assessed every 2 or 3 years, could represent an achievable working arrangement. This will also allow SGMED to conduct a more careful examination of the quality of input data and dedicate more time to a discussion of the observed trends and provision of advice.

Furthermore, SGMED-09-02 recommends the stock assessments should be continued in 2010 within two meetings. SGMED considers that a maximum of 10-15 selected stocks should be assessed in each meeting, which should also include predictions of catch and biomass under different management scenarios in the short-term for the assessed stocks.

STECF comments and conclusions

ToR a-b: STECF notes that during the meeting, data compilations and assessments of 59 demersal and small pelagic species/GSA combinations were conducted (ToR a-b). The species were anchovy, sardine, European hake, red mullet, deepwater pink shrimp, blue and red shrimp, giant red shrimp, Norway lobster and sole. The assessed stocks covered geographical sub-areas (GSA) from western part of the Mediterranean to Cyprus in the east. Those assessments were supported by a DCR data call as defined during a previous meeting of SGMED (SGMED 09-01; Murcia, 2-6 March 2009) and followed procedures agreed at SGMED 09-01. The layout of the assessments was designed to allow scientists and managers to review in a consistent way the data underlying the assessments outputs and the specific issues encountered during the assessment, and review the assumptions made and the management advice. The report includes summary sheets for stocks of anchovy (3), sardine (3), European hake (4), red mullet (2), pink shrimp (2), blue and red shrimp (1), giant red shrimp (1), Norway lobster (1) and sole (1) for which SGMED-09-02 concluded on definitive assessments and provided advice. STECF endorses the assessments and results obtained by SGMED 09-02.

STECF notes that a total of 13 stocks (out of 18 for which an advice was given) were considered overfished in accordance to the proposed reference points. No particular regional patterns of stock developments and exploitation emerged, while the only stocks that are exploited sustainably are the stocks of sardine, anchovy and pink shrimp. The assessment confirmed the results of the analyses

conducted in the previous 2008 meetings of SGMED, showing a general state of overfishing for most of the stocks, especially for hake and red shrimps, with an exception for some of the pelagic stocks.

ToR c: After a general discussion on candidate reference points applied in fisheries management of Mediterranean fish and shellfish stocks, SGMED recommends that high priority should be given to exploitation indicators (fishing mortality) and the appropriate levels to achieve high sustainable long-term yield. Considering data availability and the recent political agreements (UN, 2002) and EU communications (Council Conclusions 2007), SGMED recommends the application of F_{MSY} (maximum sustainable yield), with $F_{0.1}$ derived from Yield per Recruit analysis as the appropriate proxy in cases where data are lacking or there is uncertainty (Kell and Fromentin, 2007). In contrast, state indicators of stock size in terms of biomass are rather difficult to interpret, as decreases in biomass below reference levels such as B_{lim} (biomass of all adult specimens at the level of impaired recruitment) and B_{pa} (precautionary reference of the biomass of all adult specimens including uncertainty) can be due to many ecological effects in addition to fishery impacts. In addition, the shortness of the assessment time series for most of the Mediterranean stocks and the lack of appropriate historical data, impede the establishment of biomass reference points. In the light of the fact that the actual stock size cannot be directly controlled through fisheries management, SGMED recommends stock biomass reference points be given lower priority in the management of Mediterranean fisheries (finfish and shellfish) than exploitation indicators. SGMED further recommends that levels of fishing mortality F_{MSY} or its proxy $F_{0.1}$ should rather be interpreted and applied as management targets than any category boundaries, accounting also for uncertainty. Therefore, SGMED considers that emphasis should be given to exploitation rates rather than level of biomass. STECF agrees with SGMED 09-02.

STECF endorses the SGMED recommendations regarding fisheries management reference points for European hake in GSA 6. STECF **recommends** that $F=0.16$ ($F_{0.1}$) be adopted as the reference point for fishery management. SGMED is not in the position to estimate or propose adequate limit (B_{lim}) or precautionary (B_{pa}) biomass reference points given the data available due to the shortage of the time series and the limited stock dynamics it covers. The time series indicates that the stock has always been below the proposed $B_{lim}=2,200t$ and $B_{pa}=4,000t$. SGMED notes that the recent stock size is estimated at a much lower level and thus recommends as an interim measure, the proposed biomass reference points of B_{lim} and B_{pa} be adopted as biomass reference points. Those values may be revised in future when more information becomes available.

STECF endorses the SGMED recommendations regarding fisheries management reference points for pink shrimp in GSA 6. SGMED is not in the position to estimate and propose appropriate management targets of fishing mortality or biomass reference points due to the shortage of the time series and the extreme stock dynamics it covers. SGMED notes that the proposed $F \leq 0.2$ is much lower than the current exploitation of $F = 0.5$ for ages 2-5. In the light of the management advice of SGMED to reduce F in order to allow the stock to rebuild, SGMED recommends that as an interim measure $F \leq 0.2$ be adopted as the reference point for fishery management. This value might be revised in the future when more information becomes available. After a continuous decline in spawning stock biomass, the 2008 SSB is estimated to amount to 111 t, the lowest level observed since 2002. STECF notes that this level is much lower than the proposed management references of $B_{lim}=300t$ and $B_{pa}=1,200t$, respectively. Given the management advice of SGMED to allow the stock to recover, STECF **recommends** the proposed state reference points of B_{lim} and B_{pa} be adopted as biomass reference points. Those values might be revised in the future when more information becomes available.

STECF endorses the SGMED recommendations regarding the appropriateness of the exploitation rate $E \leq 0.4$ for anchovy and sardine stocks in the Mediterranean Sea as a sustainable fisheries management reference point consistent with high long-term yield. SGMED concludes that the short-term responses of the assessed anchovy and sardine stocks to recent exploitation rates indicate that an exploitation rate in the order of $E \leq 0.4$ might be consistent with the management goal of high long-term yields, taking into account the dynamic of the stocks. SGMED underlines that limited area and temporal coverage of the available stock assessments impede any quantification of risk related to this statement. As such, the expressed indication regarding Mediterranean small pelagic stocks is in agreement with empirical findings of Patterson (1992), who has proposed this exploitation level. SGMED recommends the application of the proposed exploitation rate $E \leq 0.4$ as management threshold for stocks of anchovy and sardine in the Mediterranean Sea. This value might be revised in the future when more information becomes available.

STECF endorses the SGMED recommendations regarding the biomass reference points for anchovy in GSA 17. SGMED bases its recommendations regarding the proposed biomass reference points of $B_{lim}=50,000t$ and $B_{pa}=80,000 t$ on a revised stock assessment accounting for natural mortality rates as advised during the SGMED workshop in Murcia, 2-6 March 2009. The visual inspection of the scatter plot of recruitment versus spawning stock biomass clearly indicates that recruitment is impaired at stock sizes below 50,000t. Thus, SGMED recommends that $B_{lim}=50,000t$ be adopted for the stock of anchovy in GSA 17. According to FAO recommendations (Cadima, 2003), B_{pa} should be in the range of $1.39*B_{lim} - 1.64*B_{lim}$, accounting for uncertainty in the estimations of fishing mortality. Such factors would determine B_{pa} being in the range of 70,000t - 82,000t. Thus, SGMED recommends that $B_{pa}=80,000t$ be adopted for the stock of anchovy in GSA 17.

STECF endorses the SGMED recommendations regarding the biomass reference points for sardine in GSA 17. SGMED bases its recommendations regarding the proposed biomass reference points of $B_{lim}=50,000t$ and $B_{pa}=300,000 t$ on a revised stock assessment accounting for natural mortality rates as advised during the SGMED workshop in Murcia, 2-6 March 2009. The visual inspection of the scatter plot of recruitment versus spawning stock biomass clearly indicates that recruitment is impaired at stock sizes below 180,000t. Thus, SGMED recommends adopting $B_{lim}=180,000t$ for the stock of sardine in GSA 17. According to FAO recommendations (Cadima, 2003), B_{pa} should be in the range of $1.39*B_{lim} - 1.64*B_{lim}$, accounting for uncertainty in the estimations of fishing mortality. Such factors would determine B_{pa} being in the range of 250,000t-295,000t. Thus, SGMED recommends $B_{pa}=270,000t$ for the stock of sardine in GSA 17.

TOR d: STECF notes that SGMED 09-02 compiled a data set of fishing effort trends in accordance to the DCR data call issued in 2009. The fleet specific effort trends are also listed in the respective stock specific assessment sections of the SGMED report. No general conclusions were drawn from these data.

ToR e and f: STECF acknowledges that SGMED 09-02 compiled and listed relevant data and methods used for stock assessments and associated biological reference points for management. However, STECF requests that such documentation is continued and further improved in future meetings of SGMED.

ToR g and h: STECF notes that SGMED has provided specific advice on how to undertake standardization of MEDITS and GRUND surveys and that a more structured approach is needed. STECF supports the SGMED recommendation noting that this particular issue would best be solved by convening an ad-hoc working group to develop and test species-specific R script to be applied to standardize MEDITS and GRUND time series for use as quantitative fishery-independent information in stock assessments.

ToR i: STECF endorses the recommendation by SGMED 09-02 that the bio-economic models MEFISTO and/or BIRDMOD should be used in future studies to simulate the effects of the management measures of Mediterranean fisheries and evaluate the models' outcomes. Such work is planned for the forthcoming meeting SGMED 09-03.

ToR k: STECF acknowledges that SGMED 09-02 compiled an extensive amount of information and analyses regarding the definition of the areas of aggregation and persistence of juveniles and, partially, also of spawners in several GSAs and stocks. STECF endorses the use of the index of persistence as estimated for example in Colloca *et al.* (2009) as a robust method to define such areas and verify their persistency. If this task is to be continued, STECF advises to address it by mean of a specific data call and a dedicated working group under the STECF framework.

4.2. SGBRE-09-01: Review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities

STECF is requested to review the report of the **SGBRE-09-01** Working Group of September 7 – 11 2009 (Edinburgh) meeting, evaluate the findings and make any appropriate comments and recommendations.

Terms of Reference:

The terms of reference for the SGBRE-09-01 Working Group are to be found in Annex II.

When reviewing the draft report, a particular attention should be paid to the annex drafted by economists from the JRC on the document submitted by France. If the plenary agrees both the methodology applied to assess such a document and the content of the annex, the STECF will be requested to review the structure of the SG-BRE report to include in its main body the part linked to the assessment of the French document.

STECF endorses the methods and working group report of SGBRE 09-01. STECF very much appreciates the effort put into the methodology and the work of the group to devise a scoring system by which MS and the Commission can evaluate and compare their annual reports on the balance of their fishing fleets and fishing opportunities.

STECF notes that no MS achieved a maximum score for fulfilling their obligations under Article 14 of Council Regulation No 2371/2002 and Article 12 of Commission Regulation no 1438/2003 (see table 5.4 in working group report). STECF also notes that ten out of 22 MS did not estimate any of the balance indicators recommended in the Commission's guidelines to MS (see table 6.1 in the SGBRE-09-01 Report). Completion of balance indicators is not mandatory under current regulations however.

In particular, STECF notes that only 6 of the 22 MS gave an overall assessment of whether the capacity of their fishing fleet was in balance with their fishing opportunities.

STECF endorses the suggestions and recommendations of the working group report. **STECF recommends** that the Commission and MS take the appropriate actions, namely:

1. The date of submission should be included in the MS reports.

2. The requirement in the regulations to restrict MS reports to 10 pages should be reconsidered.
3. Commission summaries of MS reports should follow the template format as suggested so that they contain the same information in the same order. This would greatly assist STECF to evaluate the Commission summaries should STECF continue to be required to do so.
4. MS should complete the report summary template suggested for their own report and include it at the front of their reports.
5. In its summary report, the Commission should make only factual observations regarding MS conclusions on balance, rather than adding any further interpretation to MS reports.
6. MS should be encouraged to provide suitable alternative approaches to the technical indicator for their passive or static gear fleet segments, since days at sea is not appropriate in these cases. It would be appropriate to update the Guidelines accordingly.
7. MS may have to revise their timetable for data collection in order to ensure the previous year is reported on for the Technical indicator by the required date in the current year.
8. Specific suggestions to individual MS in the working group report regarding data availability should be communicated by the Commission to MS.
9. MS should reveal why indicators have not been reported, this may help to resolve any underlying problems and make it possible to report indicators in subsequent years.
10. The suggested improvements to the Guidelines on Balance Indicators contained in response to ToR 5 in the WG report should be implemented.

STECF also **recommends** that the description of fleets should follow the fleet segmentation proposed by the DCF in order to be useful.

STECF notes that the assessment of balance requires consideration of the overall picture suggested by the four types of indicators: biological, technical, economic and social. STECF considers that it is not appropriate to draw conclusions based on a single indicator.

STECF suggests the Commission should consider revisiting Council Regulation No 2371/2002 and Regulation no 1438/2003 to ensure that the balance indicators listed in the Guidelines, are made mandatory through a revised Council Regulation thereby providing the legal basis to require MS to produce the required information in a timely and comprehensive fashion.

With regard to the French MS annual report, STECF notes that this report was only available to the working group in French and the WG participants were unable to read French. Subsequent to the WG, the French report was reviewed by JRC economists using the methods devised by SGBRE 09-01.

STECF notes that JRC economists completed TORs 1 and 2 in respect of the French report and that their approach appears to be consistent with what was done during the working group. It is understood that JRC was not asked by the Commission (here DG MARE) to complete TORs 3, 4 and 5 in respect of the French report.

The annex on the French report was not prepared by the working group and therefore STECF decided that it is appropriate to leave that section as an annex to the working group report.

STECF requests that the Commission ensure that all documents supplied to STECF are made available in the working language of STECF, namely, English.

4.3. SGECA/RST 09-03: Review of stock assessments

STECF is requested to review the report of the **SGECA/RST-09-03 Working Group** of October 19 – 23, 2009 (Vigo) meeting, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGECA/RST-09-03 Working Group are to be found in Annex III.

STECF response

STECF reviewed and adopted the report of the SGECA-SGRST-08-03 held in Vigo, Spain from 19-23 October 2009. The report constitutes Part 2 of the STECF review of advice for stocks of interest to the European Community in areas under the jurisdiction of CCAMLR, CECAF, WECAF, ICCAT, IOTC, IAATC, GFCM, SEAFO, NAFO, and stocks in the North East Atlantic assessed by ICES. Parts 11 and 2 and the STECF review of advice on stocks in the Baltic Sea² will be combined and published in the STECF Consolidated review of advice for 2010, which will be available in November 2009.

In undertaking the review, STECF has consulted the most recent reports on stock assessments and advice from appropriate scientific advisory bodies or other readily available literature, and has attempted to summarise it in a common format. For some stocks the review remains unchanged from the Review of advice for 2009 (STECF, 2009, EUR 23630 EN), since no new information on the status of or advice for such stocks was available at the time the present review took place.

STECF notes that the term ‘stock’ in some cases, may not reflect a likely biological unit, but rather a convenient management unit. In specific cases STECF has drawn attention to this fact. STECF also is of the opinion that, as far as possible, management areas should coincide with stock assessment areas.

For the first time STECF was requested by the Commission to estimate the TACs corresponding to the decision rules contained in the Commission’s Communication on Fishing Opportunities for 2010 (COM (2009) 224).

For each stock, a summary of the following information is provided:

STOCK: [Species name, scientific name], [management area]

FISHERIES: fleets prosecuting the stock, management body in charge, economic importance in relation to other fisheries, historical development of the fishery, potential of the stock in relation to reference points or historical catches, current catch (EU fleets’ total), any other pertinent information.

SOURCE OF MANAGEMENT ADVICE: reference to the management advisory body.

MANAGEMENT AGREEMENT: where these exist.

PRECAUTIONARY REFERENCE POINTS: where these have been proposed.

1 STECF 2009. Review of scientific advice for 2010 Part I. Office for Official Publications of the European Communities, Luxembourg, EUR 23981 EN, JRC 53318.

2 STECF 2009. Opinion by written procedure – review of scientific advice for 2010 – advice on stocks in the Baltic Sea (SGRST- 09-01). Office for Official Publications of the European Communities, Luxembourg, EUR 23942 EN, JRC 52743.

STOCK STATUS: Reference points, current stock status in relation to these. STECF has included precautionary reference point wherever these are available.

RECENT MANAGEMENT ADVICE: summary of advice.

STECF COMMENTS: Any comments STECF thinks worthy of mention, including errors, omissions or disagreement with assessments or advice.

FISHING OPPORTUNITIES FOR 2010 according to COM (2009) 224: The TACs corresponding to the TAC decision rules contained in COM (2009) 224.

Application of the rules for calculating TACs according to the Commission's Communication on Fishing opportunities for 2010 (COM (2009) 224)

STECF has adopted the following procedure in providing options for fishing opportunities for 2010 according to COM (2009) 224.

Options when a management plan is in place or proposed.

1. If the management plan has been evaluated and has been deemed to be consistent with the precautionary approach, STECF has advised on the level of TAC corresponding to the relevant harvest control rule contained in the plan.
2. If the management plan has not yet been evaluated or the evaluation was inconclusive with respect to the precautionary approach, STECF has noted the level of TAC corresponding to the relevant harvest control rule contained in the plan.
3. If the management plan has been evaluated and has been deemed not to be consistent with the precautionary approach, STECF has noted the level of TAC corresponding to the relevant harvest control rule contained in the plan. In this case, STECF also provides options for TACs according to the Communication from the Commission (COM (2009) 224) on a consultation on fishing opportunities for 2010.

Options when there is no management plan in place or proposed.

4. In such circumstances STECF provides options for TACs according to the Communication from the Commission (COM (2009) 224) on a consultation on fishing opportunities for 2010

While recognising that some stocks are shared resources and the EU may only obtain a share of the overall TAC, the values for 2010 TACs provided in the report according to COM (2009) 224 apply to the overall TAC and not the any anticipated EU share. This is because STECF has no advance information on what share is likely to be negotiated. Note also that the TAC values provided by STECF in accordance with COM (2009) 224 should not be considered as STECF-advice, unless it is explicitly stated as such in the report sections.

The STECF review of scientific advice for 2009 Part 2 was drafted by the STECF Sub-groups on Resource Status (SG-RS 09-02) held in Vigo, Spain from 19 – 23 October 2009.

STECF acknowledges the extensive contribution made by the following participants

Participants SG-ECA/RST 09-03 meeting in Vigo, Spain, 19 – 23 October 2009

STECF members

Casey, John (Chair)

Di Natale, Antonio
Vanhee, Willy
Parkes, Graham – CCAMLR stocks by
correspondence

Invited experts:

Fabi, Gianna
Gil de Sola, Luis
Johnston, Graham
Katsanevakis, Stelios
Keatinge, Michael
Kupschus, Sven
Mahé, Jean-Claude
Main, Charlotte
Petraakis, Georges
Portella, Julio

Experts contributing by correspondence:

Abellán, Luis López – Southwest Atlantic
stocks
Arkhipkin, Alexander- Southwest Atlantic
stocks
Santamaría, Teresa García – CECAF stocks
García-Isarch, E. - CECAF stocks
Fernández, L - CECAF stocks

JRC expert

Druon, Jean-Noël

STECF Secretariat

Druon, Jean-Noël

Additional requests to STECF on specific stocks:

4.3.1. Request to STECF on bluefin tuna

Based on the most recent information on stocks' status and management advice, STECF is requested to advise whether the stocks of bluefin tuna in the Atlantic Ocean and Mediterranean Sea are threatened with extinction.

STECF response

Bluefin tuna, eastern Atlantic and Mediterranean

STECF notes that estimates of current stock status of the eastern Atlantic and Mediterranean bluefin tuna relative to MSY benchmarks are uncertain, but current F is most likely at least 3 times that which would result in MSY and SSB_{2007}/SSB_{MSY} is most likely to be about 0.36 or less. STECF also notes that based on the most recent ICCAT_SCRS assessment the stock biomass has the potential to increase given appropriate management. The ICCAT recommendations for future management is to follow a $F_{0.1}$ strategy which if adopted and fully implemented and enforced would imply much lower catches of the order of 15,000 t or less during the next few years, but the long-term gain could lead to catches of about 50,000 t with substantial increases in spawning biomass. STECF concludes that if a $F_{0.1}$ strategy is followed, and providing appropriate management measures are implemented and rigorously enforced, the stock of bluefin tuna in the eastern Atlantic and Mediterranean has the potential to rebuild and is therefore not threatened with extinction.

Bluefin tuna, western Atlantic

STECF notes that estimates of current stock status of the western Atlantic stock indicate that the stock is well below that which would support MSY and that current exploitation rates are well

above F_{MSY} . Based on the most recent ICCAT-SCRS report on bluefin tuna (Doc. No. PA2-604 / 2009), STECF notes that the western bluefin stock has the potential to rebuild given appropriate management. The report states *“If there is perfect implementation of [Rec. 08-04] through the year 2019, projections indicate that it is almost certain that the stock will be higher in 2019 than it is in 2009 for both recruitment scenarios considered”*. Given that the stock has the potential to rebuild if ICCAT Rec. 08-04 is implemented and rigorously enforced, STECF concludes that the western Atlantic bluefin stock is not threatened with extinction.

4.3.2. Request to STECF on blue whiting

ICES advice on blue whiting contains the following explanation:

1. "The updated assessment has a lower fishing mortality in 2007 and a higher SSB in 2008 than estimated in last year's assessment. The estimated SSB for 2008 has been revised upwards by 40% and the estimated fishing mortality in 2007 has been revised downwards by 13%. Around 40% of the change in SSB is due to the greater reliance this year on spawning ground survey results (relaxation of the constraint on survey CV), and the remainder due to the addition of recent data."
2. STECF is asked to advise on the range of uncertainty in the stock assessment, in particular whether the revisions undertaken this year can be considered within the expected annual range of precision or exceptional.
3. STECF is also requested to analyse and explain the reduction in estimated recruitment of age 1 in the year 2008.

STECF response

Range of uncertainty

A comparison of the results of different annual assessments for blue whiting presented in ICES Advice 2009, Book 9, Figure 9.4.4.3, indicates that the revisions to F and SSB for 2007 and 2008 respectively arising from the revised 2009 assessment for blue whiting are within the range of precision previously observed in successive annual assessments of this stock (<http://www.ices.dk/committe/acom/comwork/report/2009/2009/whb-comb.pdf>).

Recruitment at age 1 in 2008

STECF notes that recruitment estimates are derived from 2 survey indices using the routine RCT3. The survey indices used are as follows:

- The international ecosystem survey standard area index
- The Barents Sea bottom-trawl time series.

Both recruitment series indicate that the 2005-2008 year-classes are extremely weak compared to earlier year-classes. The index value of 29 for year class 2007 (age 1 in 2008) from the international ecosystem survey standard area index is extremely low compared to the average value of 48 000 in the early part of the time series (1999-2004). The index of the Barents Sea bottom trawl survey is

the third lowest in the time series (1981-2008). STECF also notes that both survey indices at age 1 have a zero value for the 2008 year class. The resulting RCT3 estimate of the 2007 year class (age 1 in 2008) is 3 869 billion fish, which is 72% lower than the GM of 13 890 billion fish for the whole time series.

4.3.3. Request to STECF on monkfish (*Lophius spp.*)

STECF opinion is requested on possible needs for a minimum landing size on Monkfish in relation to the status of the stock. If such needs are confirmed, STECF will be requested to advice on such a MLS for Monkfish.

STECF response

STECF opinion is requested on possible needs for a minimum landing size on Monkfish in relation to the status of the stock. If such needs are confirmed, STECF will be requested to advise on such a MLS for Monkfish.

STECF notes that the among the 3 stocks of Anglerfish in northern and western divisions (IIIa, IV, Vb(EU), VI, XII and VIV), western divisions (VII and VIII a, b, d, e), and south-western divisions (VIIIc, IX and X) only the status of the latter stocks of *Lophius piscatorius* and *L. budegassa* is assessed. Based on this knowledge, STECF notes that the stock of *L. piscatorius* in the south-western divisions requires stringent conservations measures as it is currently in a poor state.

STECF notes that minimum landings size regulations as stock conservation measure is normally used in conjunction with minimum mesh size regulations and is also intended to discourage the capture of small individuals. However, STECF also notes that fisheries that exploit monkfish are primarily mixed fisheries and that because of their morphology size-selectivity of monkfish by both static and towed gears is poor. In general, even small animals are caught in nets with large meshes. Hence small animals are invariable caught if they are present where fishing operations take place. The only practical measure to safeguard against the capture of small monkfish is to avoid areas where such individuals occur or in the case of towed gears, to use semi-rigid grids, which have been shown to improve size selection (Maartens, *et al*, 2002; Loaec, *et al*, 2006). In the absence of such devices, the most practical method to reduce the exploitation rate on small monkfish is to reduce fishing effort in areas where small individuals occur. STECF concludes therefore that the introduction of a minimum landing size for monkfish is unlikely to provide significant conservation benefit and that effort restrictions in areas where small monkfish occur, are a more appropriate method to control the exploitation rate on small individuals.

References

- Maartens, L., Gamst, K.A. and Schneider, P.M., 2002. Size selection and release of juvenile monkfish *Lophius vomerinus* using rigid sorting grids. *Fisheries Research*, 57, pp75-88
- Loaec, H, Morandeau, F., Meillat, M. and Davies, P, 2006. Engineering development of flexible selectivity grids for *Nephrops*. *Fisheries Research*, 79, pp 210-218

4.4. SGMOS 09-05: Assessment of fishing effort regimes

Background

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

Terms of reference:

The detailed terms of reference for the SGMOS-09-05 Working Group are to be found in Annex IV.

The working group was requested to provide:

1 – an 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 and in Annex II to Regulation (EC) No 43/2009;

2 – an 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

3 – an assessment of fishing effort and evaluation of management measures to be assessed in 2009 (Deep sea and Western Waters effort regime)

The STECF subgroup SGMOS Effort Management (previously SGRST) has, since 2003 performed the task of collating and evaluating effort and catch data for fisheries operating under specific effort regulations (Annex XVII of Council Regulation No 2341/2002, since 2006 the Annex II A-C regimes of Council Regulation No 51/2006). Annex IIA covers cod stocks in the Kattegat, North Sea, Irish Sea and West of Scotland, Annex IIB covers hake and *Nephrops* in the Iberian peninsular and Annex IIC covers Western Channel sole. Until 2008 the work involved analysis of effort categorised by gears regulated under a series of derogations within Annex II. Towards the end of 2008 a new cod recovery plan was agreed which simplified the gear categories in Annex IIA and introduced an effort regime based around Member State allocations of KWdays (rather than centrally controlled days at sea). During 2008, ongoing discussions about a cod plan for the Celtic Sea led to a request for STECF to evaluate effort and catch in this area, the outcome is contained in the last report of STECF SGRST (ref). The agreed work plan for STECF in 2009 continued to include a requirement to evaluate the above effort management regimes and to inform the Celtic Sea discussions with additional information. A significant management development in 2008 was the direct linking of effort management to achievement of fishing mortality targets. Crucial to this process was the establishment of effort baselines and an annual evaluation and adjustment of effort. The latter has brought the work of SGMOS into sharp focus and the effort material has become the subject of close scrutiny and debate.

An additional task identified for STECF SGMOS in 2009 was the evaluation of effort and catches in the Baltic Sea. Given the established database and the relatively fewer gears and countries operating in the Baltic, this was seen as a straightforward extension of the work of SGMOS.

During 2009, a third area of evaluation emerged concerning two other existing management regimes, namely the Western Waters Regulation and Deep Sea Regulation. Plans to conduct a separate exercise were abandoned and the work was taken on by SGMOS. In view of the requirement once again for evaluation of effort data, the group was well placed to deal with this. However, a broader range of issues and questions implied the need for expertise in additional fields and there was some concern whether this additional workload could be adequately met by the SGMOS group alone.

Terms of reference addressed by STECF-SGMOS

The TORS given to SGMOS are listed in Annex IV to this report. These are organised into specific questions for each of the areas in Annex II, the Celtic Sea and the Baltic. STECF notes that alongside generic questions applied to all areas there are a number of requests tailored to specific areas. The Deep Water and Western Waters TORs are presented slightly differently and in addition to basic requests for data summaries covering effort, catch and catch composition, there are rather more strategic questions concerning the ongoing development of the Regulations concerned. Overall, the TOR list is extensive and demanding although STECF notes that the Commission acknowledgement that the Western waters and Deep Sea work represented a starting point for a longer term process and that it was unlikely that all questions would or could be answered immediately.

Approach adopted by Study Groups

The data call was issued on 16th March 2009 (corrigendum 19th March).

The Study Group was scheduled to meet on two occasions in 2009 but, in view of the workload, was allocated an additional meeting. The first meeting was held at IPIMAR in Lisbon Portugal and focussed mainly on data aggregation and checking. This was attended by 12 scientists and benefited from participation by 2 national database experts and a stakeholder. The second, additional meeting was held in parallel to the summer STECF plenary in Copenhagen and attended by a much smaller group. A specific invitation was extended to deep water experts who made good progress with the TORs on biology. Intersession work was carried out prior to the final meeting but STECF notes that data shortfalls impaired the group's progress until almost the end of the final meeting.

The group agreed that presentation of this extensive and diverse data would benefit from presentation in three reports covering respectively Annex II and the Celtic Sea, Baltic Sea and Western waters and Deep Sea. STECF notes that decisions were taken to streamline the material contained in the reports by adopting an area based presentation and removing some of the material to appear on the JRC website only.

Progress and Status of Reports

By the close of the third meeting, most of the effort data and catch data had been finalised and good progress had been made on the analysis of the Annex II areas and the Baltic. Only limited progress was made in the case of the Western Waters and Deep Sea analysis.

The present status is that the Baltic Report is at a fairly advanced draft stage, and the Annex II report has most of the substantive material on data and effort compiled and with accompanying text. These reports were available as draft documents at the November STECF Plenary. The Western Waters and Deep Sea report has considerably more work to be done although early examination of some of the material shows promise in terms of understanding deep sea fishing activities and the catch compositions supporting them.

Recognising that there would be a delay in the finalisation of reports, STECF was asked by Commission representatives attending the plenary to focus on providing summary material for the

Commission to work with and to focus its attention on discussing data availability, quality and consistency. In particular providing information on relative changes in data compared to the 2008 submissions and the possible reasons for these.

****STECF notes that during this Plenary Meeting a data revision was received from Denmark – this material is being processed and will alter the effort data and summaries in some of the Regulated Areas****

Interim provision of output material

Data summary tables can be found at [link to web]. ****[Data already supplied to DG MARE - Jan Lindeman, but will have to be reissued in view of the new submission from Denmark]****

The information is presented in a series of folders each covering one of the areas covered in the Annex II, Celtic Sea and Baltic analysis. (Western Waters and Deep Sea analysis is not presented). Each folder contains the material used in the Tables which will appear in the final reports. An overview summary folder contains versions of the tables derived from the database queries used to extract various metrics of catch and effort.

The following sections present data availability, quality and consistency information and give brief summaries of some of the main findings. A section at the end provides responses to some of the specific TORs and questions placed by the Commission during the course of the 2009 effort analysis.

Data availability and quality

Nominal fleet specific effort data 2000-2008

The fleet aggregation according to the derogations (gear group, mesh size and management area) defined in Annexes IIA-C or aggregation according to the revised cod plan is within the competence of the Member States' institutes. While every attempt is made to encourage a consistent approach, some differences between countries due to availability of essential information, different interpretations and/or different expertise to manage the extensive databases is known to occur. A number of Member States invested additional time in improving their data submissions and the overall quality is believed to have improved

STECF-SGMOS notes that assignment of derogations is based on best expert knowledge and data availability, which also reflects cooperation with the national control and enforcement institutions. The assignment of 'cod plan' gears is more straightforward and going forward the quality of data should improve further. The availability of the fleet specific effort data requested is summarised by Member State in Table 4.4.1.

Table 4.4.1. Overview on 2000-2008 effort data reports provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 40/2008 and 43/2009

Country	According to Annexes IIA-C of Coun. Reg. 40/2008 and 43/2009 effort data 2000-2008
Belgium	review o.k.
Denmark	no specon in the Baltic Sea
Estonia	only years 2006-2008, no specon, no mesh size
Finland	review o.k.
France	few inconsistencies in codifications
Germany	review o.k.
Ireland	review o.k., no <10m boats
Latvia	only Baltic Sea areas
Lithuania	only years 2005-2008, only Baltic Sea
Netherlands	review o.k.
Poland	no consistent data submission
Portugal	many inconsistencies in codifications including specon
Spain	many inconsistencies in codifications including specon
UK England without SCO	review o.k.
UK Scotland	review o.k.
Sweden	review o.k.

The following notes elaborate the effort data deficiencies and inconsistencies encountered and the corrections required while uploading Member State data to the nominal effort database

Belgium: Data o.k., no corrections required, no <10m vessel data

Denmark: No special condition information in the Baltic areas., no corrections required.

Estonia: Data limited to 2006-2008, no special condition information, no mesh size information, data only provided for >15m vessels. The following corrections were required:

area code IIa replaced with 2 RFMO, area code VIb replaced with 6b EU, area code XII replaced with 12 RFMO

Finland: Data o.k. Corrections involved making vessel size categories consistent and the replacement of one record peltrawl 16-31mm specon bacoma with none,

France: Corrections involved vessel length codifications made consistent, gear small_beam replaced with beam, gear n/a replaced with none, mesh size >16 was replaced with none, area codifications made consistent, all mesh size codes of gear none were replaced with none, all specon IIA83g of trammel with mesh size 110-149, 150-219 and >=220 were replaced with none, otter mesh size 60-69 were replaced with 55-69

Germany: Data o.k. Corrections involved DREDGE, 70-79, 4 specon IIA83d replace with none, POTS in area 8 replaced with 8a, Area 12 EU, 12 COAST replaced with 12 RFMO

Ireland: No special condition information provided, no <10m data provided. No corrections required

Latvia: Data ok , only available for Baltic areas. Corrections involved Longline mesh size 16-31 replaced with mesh size none

Lithuania: Data limited to 2005-2008 data. Corrections involved making vessel length categories consistent, making gear codification consistent, making mesh size codifications consistent, and code “22-24; 25-28” replaced with “22-24”

Netherlands: Data ok. Corrections involved making vessel length categories codifications consistent, deep sea fisheries identified were added with the specon DEEP

Poland: Data rejected as they are submitted in an inconsistent format, without any mesh size

Portugal: Data contained numerous errors and inconsistencies such that for the years 2003-2006 about 33% of effort could not be assigned to regulated or unregulated gears (8% in 2007-2008). Extensive correction of the data was also required as follows: Vessel length categories were made consistent, vessels <10m with specon IIB72ab were corrected to no specon, mesh size ≥ 100 was corrected to 100-109, mesh size ≥ 20 was corrected to 10-30, mesh size 30-50 was corrected to 31-49, mesh size ≥ 70 was corrected to 70-79, mesh size ≥ 80 was corrected to 80-89, mesh size > 80 was corrected to 50-59, mesh size 35-40 was corrected to 31-49, mesh size 60-79 was corrected to 60-69, mesh size 80-89 was corrected to 80-89, mesh size 8-29 was corrected to 10-39, Pots or pel_seine or trammel or dredge with specon IIB72ab was replaced with none, otter or gill without mesh size with specon IIB72ab was replaced with none, gill with mesh size 50-59 and specon IIB72ab was replaced to none, gill with mesh size 31-49, and specon IIB72ab was replaced to none, lots of additional areas reported which were not requested.

Spain: The data submission contained no area BSA information, no rectangle 28E2 data and no DEEP fleet information. Extensive correction of the data was also required as follows: Area codes are changed in accordance to the codifications. The zone “EU” was attached to all Divisions where necessary, i.e. 6B EU, 7C EU, 7J EU and 7K EU. Special conditions coded as “N/A”, “no specon” and blanks were replaced with none. Special conditions are only specified for Annex IIB (Div. 8c and 9a), not for Annex IIA. “specon” was replaced with IIB72ab. Mesh size “N/A” and blanks were replace with none. All otter none or 16-31 or < 32 specon IIB72ab was replaced with none. All gill none or 31-49 or 50-59 specon IIB72ab was replaced with none. All gears none, pel_seine, pots and trammel assigned IIB72ab were replaced with none. All gears none were assigned mesh size none.

UK Scotland: Data o.k. Corrections involved: Beam mesh size 80-89, 90-99 and IIA83i specon was replaced with none, gill with mesh size < 10 was replaced with none. Records BSA with special condition deep and other unknown areas, will all be ignored anyway.

UK England Wales N Ireland: Data ok. Corrections involved: trammel no mesh size in area 4 specon IIA83g was replaced to none. Some other area records will be ignored in the analyses.

Sweden: Data ok. Corrections involved: Mesh size > 220 was replaced with ≥ 220 , mesh size of gear none was replaced with none.

Relative changes in nominal effort data provided in 2009 compared with data provided in 2008

The effort data submitted in 2009 according to the derogations laid down in the Council Reg. 40/2008 Annexes A-C, covers the period 2000 to 2008, these data were compared with equivalent data submitted in 2008 (covering the period 2000 to 2007) in order to assess consistency. Relative changes are presented below by member state for each of the areas covered in Annex II. The overall differences are variable with some countries exhibiting very good consistency and others showing marked changes. Some of the differences can be explained by revisions of the data in the intervening period. Some very large percentage adjustments are apparent but these are frequently associated with very low absolute values of effort and can be ignored. Where available, explanations for changes are given below the tables. Additional information on effort data from Member states is given in section 4.4.1.

****Note that the data revision from Denmark received during the plenary will result in adjustments to the relative changes reported in the tables below for Denmark – particularly in the Baltic, Kattegat and North Sea****

Table 4.4.2. Annex Ila 3a Kattegat : Relative change in nominal effort 2008 data compared to 2007 data (Kw *days at sea) by gear, derogation and country 2000-2007

ANNEX	REG ARE/REG	GEAI	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
Ila	2a	4ai	none	DEN	14%	23%	-19%	13%	24%	48%	42%	54%
Ila	2a	4ai	none	GER	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4ai	none	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4aii	IIA83b	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4aii	none	DEN	-30%	-23%	-24%	-22%	-20%	-20%	-13%	12%
Ila	2a	4aii	none	GER	-21%	0%	-33%	-35%	-29%	0%	0%	-12%
Ila	2a	4aii	none	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4aiii	IIA83a	DEN	0%	0%	0%	0%	0%	0%	15%	48%
Ila	2a	4aiii	IIA83a	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4aiii	IIA83l	DEN	0%	0%	0%	0%	0%	0%	44%	0%
Ila	2a	4aiii	none	DEN	-30%	-22%	-24%	-22%	-24%	-23%	-42%	-44%
Ila	2a	4aiii	none	GER	809%	-30%	-31%	-30%	-18%	-5%	-46%	-25%
Ila	2a	4aiii	none	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4aiv	IIA83a	DEN	0%	0%	0%	0%	0%	0%	-90%	-90%
Ila	2a	4aiv	IIA83a	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4aiv	none	DEN	-20%	-14%	22%	18%	75%	103%	33%	34%
Ila	2a	4aiv	none	GER	19%	-2%	0%	0%	400%	101%	0%	154%
Ila	2a	4aiv	none	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4av	IIA83a	DEN	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4av	IIA83a	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4av	IIA83c	DEN	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4av	IIA83j	DEN	0%	0%	0%	0%	0%	0%	-80%	0%
Ila	2a	4av	none	DEN	-20%	-16%	-6%	-34%	-31%	-47%	-47%	-25%
Ila	2a	4av	none	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4ci	none	DEN	0%	-2%	-32%	4%	-23%	-7%	-20%	-17%
Ila	2a	4ci	none	GER	0%	0%	-3%	-2%	3%	-6%	-3%	-3%
Ila	2a	4ci	none	SWE	-88%	-48%	0%	-2%	-30%	-83%	-53%	-33%
Ila	2a	4cii	none	DEN	-23%	-22%	0%	-66%	-19%	-37%	-46%	-43%
Ila	2a	4cii	none	GER	0%	0%	0%	0%	0%	0%	-28%	0%
Ila	2a	4cii	none	SWE	-57%	-74%	-76%	-76%	-57%	-67%	-66%	-89%
Ila	2a	4ciii	none	DEN	13%	-6%	7%	-56%	-44%	-60%	-53%	-47%
Ila	2a	4ciii	none	GER	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	4ciii	none	SWE	-7%	-2%	0%	0%	-66%	-38%	-34%	-5%
Ila	2a	4civ	none	DEN	-50%	-18%	35%	-29%	-25%	-9%	-32%	-41%
Ila	2a	4civ	none	SWE	0%	0%	-6%	0%	0%	-1%	-15%	-5%
Ila	2a	4d	none	DEN	4858%	0%	0%	1035%	2734%	393%	924%	754%
Ila	2a	4e	none	DEN	0%	466%	0%	0%	0%	0%	0%	0%
Ila	2a	4e	none	SWE	0%	0%	0%	0%	0%	0%	0%	0%
Ila	2a	none	none	DEN	-21%	-22%	-22%	-38%	-45%	-48%	-45%	-34%
Ila	2a	none	none	GER	0%	0%	0%	0%	0%	0%	-29%	0%
Ila	2a	none	none	SWE	-36%	-40%	-42%	-44%	-42%	-43%	-38%	-38%

There are some major changes in effort for the Kattegat although it should be noted that some of the exceptional values arise from very small absolute amounts of effort. All countries have made some adjustments their numbers but the most widespread across different gears and specons were by Denmark. Denmark made a number of changes in the data extraction program leading to substantial revisions of the estimates, and is still in the process of validating these changes (see Section 4.4.1).

**** During the Plenary a new submission was received which is being processed****

Table 4.4.3. Annex Ila 3b North Sea : Difference between the data provided in 2008 and the data provided in 2009 for the period 2000-2007. Relative change – proportions.

REG ARE/REG	GEAISPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
2b	4ai	none	DEN	0.758	0.853	1.163	1.17	1.655	3.07	2.894
2b	4ai	none	ENG	2.943	2.968	173.557	0.295	11.652	0	56.746
2b	4ai	none	FRA	-0.585	-0.881	-0.89	-0.536	-0.757	-0.815	-0.966
2b	4ai	none	GER	-0.094	-0.077	-0.333	0.272	0	0	0
2b	4ai	none	NED	0	0	17.078	11.488	5.713	3.959	0.441
2b	4ai	none	NIR	0	0	0	0	0	0	0
2b	4ai	none	SCO	0.16	0	0	0	0	0	0
2b	4ai	none	SWE	0	0	0	0	0	0	0
2b	4aii	IIA83b	SWE	0	0	0	0	0	0	0
2b	4aii	IIA83d	ENG					-0.994	-0.995	
2b	4aii	IIA83d	FRA	-0.184	-0.141	-0.144	-0.142	-0.196	-0.268	-0.292
2b	4aii	IIA83d	SCO	0.002	0.002	-0.007	-0.004	0	0	0
2b	4aiiv	IIA83c	ENG	-0.794	-0.798	-0.863	-0.935	-0.782	-0.874	-0.965
2b	4aiiv	IIA83c	FRA	-0.583	0	-0.581	0	-0.202	0	-0.489
2b	4aiiv	IIA83c	GER	-0.02	-0.016	-0.013	-0.004	0	-0.011	0.002
2b	4aiiv	IIA83c	SCO	0	-0.046	-0.073	0	0	0	0
2b	4aiiv	IIA83d	ENG	-0.998	-0.995	-0.986	-0.995			-0.978
2b	4aiiv	IIA83d	FRA	-0.586	-0.299	-0.189	-0.22	-0.172	-0.19	-0.161
2b	4aiiv	IIA83d	GER	-0.063	-0.045	-0.064	-0.086	-0.067	-0.056	-0.151
2b	4aiiv	IIA83d	NIR	0	0	0	0	0	-0.923	-0.864
2b	4aiiv	IIA83d	SCO	0.006	0.003	0.001	0	-0.006	0	-0.001
2b	4aiiv	IIA83k	FRA	-0.155	-0.121	-0.173	-0.207	0	0	0
2b	4aiiv	none	DEN	-0.217	-0.23	0.146	0.373	0.993	0.452	-0.057
2b	4aiiv	none	ENG	0.456	0.5	0.899	2.174	2.082	1.907	5.486
2b	4aiiv	none	FRA	-0.191	-0.277	-0.337	-0.455	-0.786	-0.841	-0.568
2b	4aiiv	none	GER	0.013	-0.006	0.06	0.176	0.029	0.059	0.119
2b	4aiiv	none	IRL	0	0	0	0	0	0	0
2b	4aiiv	none	NED	0	0	0.12	0.031	0.247	-0.093	-0.156
2b	4aiiv	none	NIR	0	0	0	0	0	0.683	1.708
2b	4aiiv	none	SCO	0.003	0.004	0.005	-0.043	0	0	-0.013
2b	4av	none	SWE	0	0	0	0	0	0	0
2b	4av	IIA83c	DEN	0	0				1.579	0.037
2b	4av	IIA83c	ENG	0		-0.647	-0.809	-0.363	-0.979	0.47
2b	4av	IIA83c	FRA	0	0	0	0	0	0	-0.48
2b	4av	IIA83c	GER	0	0	0	0	0	0	0
2b	4av	IIA83c	NIR	0	0	0	0		-0.961	-0.98
2b	4av	IIA83c	SCO	0	0	0	0	0	0	0
2b	4av	IIA83d	ENG				-0.978	-0.97	-0.972	
2b	4av	IIA83d	FRA	-0.272	-0.718	-0.1	-0.051	-0.09	-0.231	-0.14
2b	4av	IIA83d	GER	0	-0.228	-0.015	-0.009	-0.042	-0.041	-0.055
2b	4av	IIA83d	SCO	0	0	-0.002	0	0.001	0	0
2b	4av	IIA83h	DEN	0	0	0	0	0	0	-0.495
2b	4av	none	DEN	-0.103	-0.1	-0.156	-0.22	-0.242	-0.248	-0.468
2b	4av	none	ENG	1.465	1.799	0.166	0.377	0.36	0.533	0.311
2b	4av	none	FRA	-0.702		-0.177	-0.183		-0.167	-0.006
2b	4av	none	GER	-0.999	-0.985	-0.457	-0.444	-0.481	-0.423	-0.312
2b	4av	none	NED	0	0	0.537	0.733	0.394	0.136	0.445
2b	4av	none	NIR	0	0	0	0	0	-0.639	-0.72
2b	4av	none	SCO	0	0.01	0.006	0.001	0.001	0	0.001
2b	4av	none	SWE	0	0	0	0	0	0	0
2b	4ci	none	DEN	-0.009	-0.039	-0.174	0.022	0.046	-0.01	0.013
2b	4ci	none	ENG	0.189	0.003	0.108	0.088	0.127	0.114	0.224
2b	4ci	none	FRA	0.04	1.539	-0.07	0.376	-0.004	-0.16	-0.515
2b	4ci	none	GER	-0.007	-0.026	-0.048	-0.037	-0.015	0.017	-0.009
2b	4ci	none	NED	0	0	1.346	2.602	5.701	3.712	1.32
2b	4ci	none	SCO	0	0	0	0	0	0	0
2b	4ci	none	SWE	0.591	0.884	0.356	0.398	0.377	0.188	0.137
2b	4cii	none	DEN	-0.039	-0.004	-0.146	-0.299	-0.063	-0.094	-0.136
2b	4cii	none	ENG	0.241	0.198	0.303	0.201	0.032	0.047	0.004
2b	4cii	none	FRA	-0.117	-0.204	-0.126	0.241	0.128	-0.187	-0.635
2b	4cii	none	GER	-0.039	0	0	-0.028	0	-0.121	-0.141
2b	4cii	none	NED	0	0	0	0	26.086	1.715	1.68
2b	4cii	none	SCO	0	0	0	0	0	0	0
2b	4cii	none	SWE	-0.31	-0.227	-0.286	-0.212	-0.215	-0.296	-0.405
2b	4ciii	none	DEN	0.086	0.03	0.019	-0.202	-0.023	0.013	-0.029
2b	4ciii	none	ENG	0.01	0.017	0.014	0.01	0.003	0.002	0.001
2b	4ciii	none	FRA	-0.154	-0.191	-0.259	-0.134	-0.254	-0.158	-0.326
2b	4ciii	none	GER	0	0	0.044	-0.038	-0.03	-0.048	-0.034
2b	4ciii	none	NED	0	0	0	0	0	14.986	0
2b	4ciii	none	SCO	0	0	0	0.092	0	0	0
2b	4ciii	none	SWE	-0.035	0	0	-0.145	-0.071	-0.633	-0.9
2b	4civ	none	DEN	-0.394	-0.224	1.307	1.353	0.858	0.761	1.196
2b	4civ	none	ENG	0.102	0.262	0.322	0.147	-0.008	-0.008	-0.006
2b	4civ	none	FRA	0	0		-0.562	-0.347	-0.306	-0.79

REG ARE/REG GEAI	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007	
2b	4d	none	DEN	0	0	354.073	120.129	25.974	13.938	34.79	20.627
2b	4d	none	ENG	-0.084	-0.123	-0.17	7.446	1.536	0.742	-0.286	1.115
2b	4d	none	FRA	0.042	-0.025	-0.158	-0.136	-0.1	-0.366	-0.656	-0.66
2b	4d	none	GER	0	0	0	0	0	0	0	0
2b	4e	none	DEN	1.692	2.771	0	23.266	16.771	3.762	0	0
2b	4e	none	ENG	0.135	0.095	0.259	0.527	0.285	0.394	0.569	1.326
2b	4e	none	FRA	-0.967	-0.873	-0.694	-0.658	-0.713	-0.663	-0.911	-0.876
2b	4e	none	NIR	0	0	0	0	0	0	0	0
2b	4e	none	SCO	0.016	0.007	0	0.002	0	0	-0.003	-0.003
2b	4e	none	SWE	0	0	0	0	0	0	0	0
2b	none	none	BEL	0.389	0.431	0.418	0.38	-0.383	-0.251	-0.282	-0.343
2b	none	none	DEN	-0.186	-0.122	-0.155	-0.091	-0.095	-0.131	-0.117	-0.001
2b	none	none	ENG	0.178	0.145	0.108	0.123	0.079	0.101	0.108	0.127
2b	none	none	FRA	-0.956	-0.963	-0.937	-0.896	-0.86	-0.889	-0.94	-0.947
2b	none	none	GBG	0.002	0.002	0.002	0.002	0.001	0	0	-0.001
2b	none	none	GBJ	0	0.002	0.03	0	0	0	0	0
2b	none	none	GER	-0.087	-0.094	-0.093	-0.089	-0.075	-0.067	-0.09	-0.124
2b	none	none	IOM	0	0	0	0	0	1.095	0.285	0
2b	none	none	IRL	0.033	-0.004	0.044	0.005	0.014	0.036	-0.043	-0.044
2b	none	none	NED	0	0	-0.763	-0.725	-0.772	-0.778	-0.737	-0.722
2b	none	none	NIR	0.012	0	0.212	0.121	0.102	0.053	0.107	0.18
2b	none	none	SCO	-0.006	0.023	0.038	0.01	0.006	-0.006	-0.004	-0.002
2b	none	none	SWE	-0.003	-0.003	-0.002	-0.003	-0.003	-0.003	-0.002	-0.005
2b1	4aii	none	DEN	-0.297	-0.307	-0.127	-0.139	-0.071	-0.332	-0.383	-0.347
2b1	4aii	none	GER	-0.218	0	0	0	0	0	0	0
2b1	4aii	none	SWE	0	0	0	0	0	0	0	0
2b1	4aiii	IIA83a	DEN	0	0	0	0	0	0	0.118	0.209
2b1	4aiii	IIA83a	SWE	0	0	0	0	0	0	0	0
2b1	4aiii	IIA83d	SWE	0	0	0	0	0	0	0	0
2b1	4aiii	IIA83l	DEN	0	0	0	0	0	0	0.551	0
2b1	4aiii	none	DEN	-0.279	-0.259	-0.238	-0.192	-0.224	-0.263	-0.47	-0.391
2b1	4aiii	none	GER	0	0	0	0	-0.276	0	0	0
2b1	4aiii	none	NED	0	0	0	0	0	0	0	0
2b1	4aiii	none	SWE	0	0	0	0	0	0	0	0
2b1	4aiv	IIA83a	DEN	0	0	0	0	0	0	-0.505	-0.592
2b1	4aiv	IIA83a	SWE	0	0	0	0	0	0	0	0
2b1	4av	IIA83a	DEN	0	0	0	0	0	0	1.069	4.686
2b1	4av	IIA83a	SWE	0	0	0	0	0	0	0	0
2b1	4av	IIA83j	DEN	0	0	0	0	0	0	1.026	0.894
2b12	4bi	none	BEL	0.371	0.296	0.382	0.299	0.383	0.281	0.415	0.404
2b12	4bi	none	DEN	0	0.909	-0.199	-0.183	0	-0.75	0.111	0
2b12	4bi	none	ENG	0.002	0.001	0	0	0	0	0	0
2b12	4bi	none	FRA	-0.175	-0.263	-0.139	-0.131	-0.425	-0.334	-0.491	-0.346
2b12	4bi	none	GER	-0.033	-0.018	-0.034	-0.042	-0.01	-0.016	-0.008	-0.006
2b12	4bi	none	NED	0	0	0.263	0.281	0.179	0.136	0.16	0.103
2b12	4bi	none	NIR	0	0	0	0	0	0	0	0
2b12	4bi	none	SCO	0	0	0	0	0	0	0	-0.003
2b12	4bii	none	DEN	-0.204	0	0.004	-0.903	-0.509	0	-0.265	0
2b12	4bii	none	ENG	0.023	0	0	0	0	0	0	0
2b12	4bii	none	FRA	-0.327	-0.326	-0.398	-0.564	-0.299	-0.455	-0.626	0
2b12	4bii	none	GER	0	0	-0.075	-0.038	0.018	-0.065	-0.054	-0.114
2b12	4bii	none	NED	0	0	-0.009	-0.315	-0.464	0.643	1.262	0.074
2b12	4bii	none	SCO	0	0	0	0	0	0	0	0
2b12	4biii	IIA83c	ENG	0.616	0.843	0.129	0.044	0.018	0.219	0.246	0.195
2b12	4biii	IIA83c	FRA	-0.255	-0.459	0	0	0	-0.089	0	0
2b12	4biii	IIA83c	GER	-0.015	-0.009	-0.005	-0.016	-0.015	0	0	0
2b12	4biii	IIA83c	NIR	0.343	0.439	0	0	0	0	0	0
2b12	4biii	IIA83c	SCO	0	0.015	0.004	0.018	0	0	0	0
2b12	4biii	IIA83i	ENG	-0.26	-0.632	-0.757	-0.43	-0.404	-0.925	-0.899	-0.891
2b12	4biii	IIA83i	NIR	0	-0.84	0	0	0	0	0	0
2b12	4biii	none	BEL	0.387	0.336	0.384	0.061	-0.536	-0.134		4.067
2b12	4biii	none	DEN	-0.092	-0.122	-0.062	-0.035	-0.154	-0.15	-0.189	-0.236
2b12	4biii	none	ENG	-0.889	-0.913	0.02	0	0	0	0	0
2b12	4biii	none	FRA	0	0	-0.468	0	0	0	0	0
2b12	4biii	none	GER	-0.036	-0.017	0	-0.066	-0.037	0	0	0
2b12	4biii	none	NED	0	0	-0.15	-0.096	-0.024	-0.203	0.17	0.553
2b12	4biii	none	NIR	-0.924	0	0	0	0	0	0	0
2b12	4biii	none	SCO	0	0	0	0.084	0	0	0	0

REG ARE/REG GEA/SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007		
2b12	4biv	IIA83c	DEN	0	0				-0.251		
2b12	4biv	IIA83c	ENG	-0.267	0.283	0.484	0.083	0.087	0.219	0.303	0.246
2b12	4biv	IIA83c	GER	0	0	-0.024	-0.044	0	-0.25	0	0
2b12	4biv	IIA83c	NIR	0	0	0.217	0.246	0.016	0	0	0
2b12	4biv	IIA83c	SCO	0	0	0	0	0	0	0	0
2b12	4biv	IIA83e	DEN	0	0	0	0	0	0	0.322	0
2b12	4biv	IIA83e	GER	0	0	-0.006	0	0	0	0	0
2b12	4biv	IIA83i	ENG	0	-0.782	-0.351	-0.397	-0.362	-0.618	-0.71	-0.779
2b12	4biv	IIA83i	NIR	0	0	-0.618	-0.939	-0.659	0	0	0
2b12	4biv	none	BEL	0.436	0.436	0.37	0.579	0.436	0.749	0.55	0.709
2b12	4biv	none	DEN	-0.116	-0.244	18.757	5.293	3.707	20.916	-0.515	-0.24
2b12	4biv	none	ENG			-0.986			0	0	0
2b12	4biv	none	FRA	0	0	-0.584	0	0	0	0	0
2b12	4biv	none	GER	0	-0.027	-0.022	-0.005	-0.03	0	-0.014	-0.042
2b12	4biv	none	NED	0	0	0.048	-0.234	-0.423	-0.391	-0.06	-0.2
2b12	4biv	none	SCO	0	0	0	0	0	0	0	0.002
2b12	4d	IIA83g	ENG	29.755	27.136	19.821	0	0	1.721	3.385	0.331
2b12	4d	IIA83g	FRA	-0.628	-0.529	-0.295	-0.126	0.021	-0.12	-0.613	-0.591
2b2	4aii	IIA83c	ENG						-0.998		
2b2	4aii	IIA83c	GER	-0.007	-0.007	-0.033	-0.007	-0.005	-0.002	0.104	-0.02
2b2	4aii	IIA83c	SCO	0	0.003	0	0	0	0	0	0
2b2	4aii	none	DEN	-0.352	-0.38	0.568	0.256	0.135	0.087	-0.329	-0.189
2b2	4aii	none	ENG	1.15	1.073	1.103	1.034	1.14	1.229	1.18	1.339
2b2	4aii	none	FRA	-0.153	-0.118	-0.121	-0.116	-0.127	-0.134	-0.153	-0.141
2b2	4aii	none	GER	-0.024	-0.025	-0.025	-0.024	-0.02	-0.025	-0.013	-0.006
2b2	4aii	none	IRL	0	0	0	0	0	0	0	-0.027
2b2	4aii	none	NED	0	0	1.018	0.565	0.221	0.076	-0.113	0.012
2b2	4aii	none	NIR	0	0	0.496	0	4.848	0.369	-0.015	0.428
2b2	4aii	none	SCO	0	0	0	0.003	-0.002	0	0	0
2b2	4aii	none	SWE	0	0	0	0	0	0	0	0
2b23	4aiii	IIA83a	DEN	0	0	0	0	0	0	0	0.061
2b23	4aiii	IIA83a	SWE	0	0	0	0	0	0	0	0
2b23	4aiii	IIA83d	ENG				-0.908		-0.996		
2b23	4aiii	IIA83d	FRA	-0.217	-0.126	-0.168	-0.134	-0.214	-0.334	-0.412	-0.356
2b23	4aiii	IIA83d	SCO	0	0	0	0	0	0	0	0
2b23	4aiii	IIA83l	DEN	0	0	0	0	0	0	0.214	0
2b23	4aiii	none	DEN	-0.353	-0.371	-0.352	-0.297	-0.317	-0.283	-0.504	-0.397
2b23	4aiii	none	ENG	5.093	4.44	21.271	1.385	3.241	4.066	2.241	2.971
2b23	4aiii	none	FRA	-0.171	-0.163	-0.099	-0.123	-0.152	-0.171	0.054	-0.433
2b23	4aiii	none	GER	0	0	0	-0.002	-0.006	0	0.023	-0.012
2b23	4aiii	none	IRL	0	0	0	0	0	0	0	0
2b23	4aiii	none	NED	0	0	0.458	0.043	0.027	0.675	-0.112	-0.075
2b23	4aiii	none	NIR	0	0	0	0	0	0.164	0.989	0.928
2b23	4aiii	none	SCO	0	0	0	0	0	0	-0.001	0
2b23	4aiii	none	SWE	0	0	0	0	0	0	0	0
2b23	4av	IIA83a	DEN	0	0	0	0	0	0	0.174	-0.025
2b23	4av	IIA83a	SWE	0	0	0	0	0	0	0	0
2b23	4av	IIA83j	DEN	0	0	0	0	0	0	0.418	0.47
2b3	4aii	none	ENG	4.702	9.297	12.479	5.291	25.977	4756.568	37.858	32.204
2b3	4aii	none	FRA	-0.087	-0.056	-0.012	0.016	-0.039	-0.125	-0.251	-0.256
2b3	4aii	none	GBG	0	0	0	0	0	0	0	0
2b3	4aii	none	NED	0	0	17.503	5.735	5.526	2.282	0.106	0.357
2b3	4aii	none	SCO	0	0	0	0	0	0	0	0.014
2b3	4bi	none	BEL	0.438	0.479	0.365	0.322	0.429	0.411	0.352	0.385
2b3	4bi	none	ENG	0.011	0.004	0	0	0	0	0	0
2b3	4bi	none	FRA	-0.002	0.01	0.035	0.106	-0.166	-0.182	-0.269	-0.271
2b3	4bi	none	GBJ	0	0	0	0	0	-0.177	0	0
2b3	4bi	none	NED	0	0	0	0	1.335	0	0	0
2b3	4bi	none	SCO	0	0	0	0	0	0	0	0
2b3	4bii	none	ENG	0	0	0	0	0	0	0	0
2b3	4bii	none	FRA	-0.064	-0.184	-0.17	-0.214	0.047	-0.099	-0.298	-0.49
2b3	4biii	IIA83c	ENG	-0.173	0.17	-0.027	2.223	0	0	0	0
2b3	4biii	IIA83c	FRA	-0.079	-0.166	0	0	0	0	0	0
2b3	4biii	IIA83i	ENG	0	-0.28	0.168		0	0	0	0
2b3	4biii	none	ENG	-0.754	0	0	0	0	0	0	0
2b3	4biii	none	FRA	-0.188	-0.094	0	0	0	0	0	0
2b3	4biv	IIA83c	ENG	0	0	0	0	0	0	0	0
2b3	4civ	IIA83f	FRA	0	0	0	0	-0.412	0	0	-0.53
2b3	4d	IIA83g	ENG	0	0.072	-0.285	-0.558	-0.203	-0.092	-0.045	-0.087
2b3	4d	IIA83g	FRA	-0.571	-0.074	-0.075	-0.068	-0.041	-0.153	-0.544	-0.526

Differences in the Annex IIA Skagerrak, North Sea and Eastern Channel effort compared to last year's submission were substantial and widespread across different gears and countries.

Most of the changes can be accounted for by structured revisions made by various member states and arise from adjustments in the methods used to estimate effort or corrections. England corrected some errors in the registration and allocation of the special conditions. For Belgium the effort calculated in last year's report as kW*fishing hours have been corrected to kW*days at sea taking into account the days spent in an area as a fraction of a day multiplied by the kW of the vessel. France corrected a number of inconsistencies in the estimation procedures. The Netherlands provided more accurate data based on logbooks than in all the previous years when information was based on VMS. Denmark made a number of changes in the data extraction program leading to substantial revisions of the estimates, and is still in the process of validating these changes. (see Section 4.4.1).

**** During the Plenary a new submission was received which is being processed**.**

SGMOS considered the reporting of the revised data this year as being equal to or more accurate than previous years for most countries. STECF notes that a number of countries are still in a process of in-depth checking procedures as well as validating the consistency between data estimated by scientific institutes and data provided by national authorities. Therefore, some data presented here are still provisional, and it is expected that further revisions will likely occur before next year's meeting.

The changes highlighted here are described in more detail in the national data section (Section 4.4.1) and only the main parts are summarised here.

Table 4.4.4. Annex IIa 3c Irish Sea: Relative differences in nominal effort (kW*days at sea) 2009 submissions by Member State for existing derogations given in Table 1 of Annex IIA Coun. Reg. 40/2008. Derogations are sorted by gear, special condition (SPECON), and country.

REG	GEAF	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
4ai	none	ENG		0%	0%	0%	0%	0%	0%	0%	0%
4ai	none	IRL		0%	0%	0%	-3%	47%	-12%	-13%	0%
4ai	none	NIR		0%	0%	0%	0%	0%	0%	0%	0%
4aii	IIA83c	ENG		-99%	-100%			-100%			
4aii	IIA83c	NIR		-99%							
4aii	IIA83d	ENG				-100%					
4aii	IIA83d	FRA		-30%	0%	0%	0%	0%	0%	0%	0%
4aii	IIA83d	NIR		-100%							
4aii	IIA83d	SCO		0%	0%	4%	1%	0%	0%	0%	0%
4aii	none	ENG		77%	111%	194%	138%	83%	88%	186%	175%
4aii	none	FRA		-14%	-44%	-56%	-33%	0%	0%	0%	0%
4aii	none	IOM		321050%	579%	0%	15979%	2081%	1068%	524%	0%
4aii	none	IRL		0%	0%	0%	-1%	-1%	0%	0%	2%
4aii	none	NIR		84%	110%	174%	198%	191%	176%	167%	167%
4aii	none	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4aiii	IIA83d	FRA		0%	0%	0%	0%	0%	0%	0%	0%
4aiii	none	ENG		70%	21%	1531%	2517%	23%	50%	44%	13%
4aiii	none	FRA		-83%	0%	0%	0%	0%	0%	0%	0%
4aiii	none	IOM		0%	696%	53462%	0%	0%	443%	262%	0%
4aiii	none	IRL		0%	0%	0%	3%	4%	0%	-15%	-22%
4aiii	none	NIR		0%	6%	0%	0%	52%	19%	120%	8%
4aiii	none	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4aiv	IIA83c	ENG		-89%	-97%	-94%	-93%	32%	-75%		-81%
4aiv	IIA83c	FRA		0%	0%	-28%	-19%	-17%	0%	0%	0%
4aiv	IIA83c	NIR		-43%	-77%	-92%	-97%	-97%	-84%	-68%	-59%
4aiv	IIA83d	ENG		-97%	-99%	-96%					
4aiv	IIA83d	FRA		-18%	-12%	-11%	-15%	-11%	-28%	-21%	-13%
4aiv	IIA83d	NIR		-90%	-93%	-96%	-84%	-94%	-95%	-96%	-97%
4aiv	IIA83d	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4aiv	IIA83k	FRA		-22%	-20%	-18%	-19%	-16%	0%	0%	0%
4aiv	none	ENG		52%	53%	57%	76%	81%	43%	10%	12%
4aiv	none	FRA		-11%	-8%	-7%	-9%	-3%	-6%	-6%	-5%
4aiv	none	IOM		32%	0%	0%	102%	0%	0%	0%	0%
4aiv	none	IRL		0%	0%	0%	1%	1%	3%	-1%	-1%
4aiv	none	NIR		42%	58%	70%	63%	110%	85%	98%	221%
4aiv	none	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4av	IIA83c	ENG		3690%	-23%	-39%	-95%				0%
4av	IIA83c	NIR		0%	0%	0%	0%	0%	0%	-92%	-75%
4av	IIA83d	ENG		-97%	-88%		-99%		0%	0%	0%
4av	IIA83d	NIR		0%	0%	0%		0%	0%	0%	0%
4av	IIA83d	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4av	none	ENG		2024%	795%	0%	21%	72%	26%	0%	0%
4av	none	FRA		0%	0%	-8%	0%	0%	0%	0%	0%
4av	none	IRL		0%	0%	0%	3%	2%	0%	-5%	13%
4av	none	NIR		0%	0%	0%	205%	0%	0%	127%	0%
4av	none	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4bi	none	BEL		30%	21%	18%	22%	25%	24%	26%	34%
4bi	none	ENG		0%	0%	0%	0%	0%	0%	0%	0%
4bi	none	GBJ		0%	0%	0%	0%	0%	0%	0%	0%
4bi	none	IRL		0%	0%	0%	-3%	11%	1%	-2%	4%
4bii	none	IRL		0%	0%	0%	-8%	-9%	4%	0%	-1%
4bii	none	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4biii	none	IRL		0%	0%	0%	-3%	-3%	0%	0%	0%
4ci	none	ENG		0%	0%	0%	0%	0%	0%	30%	40%
4ci	none	IRL		0%	0%	0%	9%	52%	-7%	119%	50%
4ci	none	SCO		0%	0%	0%	0%	0%	0%	0%	0%
4cii	none	ENG		2%	13%	20%	21%	11%	110%	56%	59%
4cii	none	IRL		0%	0%	0%	-46%	-43%	-45%	-22%	107%
4ciii	none	ENG		0%	0%	0%	0%	0%	0%	0%	0%
4ciii	none	IRL		0%	0%	0%	-9%	-2%	-26%	-15%	1%
4ciii	none	NIR		0%	0%	0%	0%	0%	0%	0%	0%
4civ	none	ENG		0%	0%			261%	118%	0%	0%
4civ	none	IRL		0%	0%	0%	0%	75%	-10%	0%	0%
4d	none	ENG		0%	0%	0%	0%	0%	0%	0%	0%
4e	none	ENG		2%	0%	1%	0%	11%	16%	168%	234%

In comparison with 2008 data submissions, overall nominal effort figures show inconsistency for some nations. Most of the changes can be accounted for by structured revisions made by various member states and arise from adjustments in the methods used to estimate effort or corrections. This relates, in several cases to changes in days-at-sea effort calculation methodology, including Irish and French data. For Belgium the effort calculated in last year's report as kW*fishing hours have been corrected to kW*days at sea taking into account the days spent in an area as a fraction of a day multiplied by the kW of the vessel.. The UK England and Wales figures have changed substantially. A large amount of effort had previously been excluded due to inappropriately

assigned special conditions. Further more, effort previously included within existing special condition categories has been moved into the equivalent categories without special condition. It should be noted that some of the exceptional values arise from very small absolute amounts of effort.

The changes highlighted here are described in more detail in the national data section (Appendix 2) and only the main parts are summarised here.

Table 4.4.5. Annex IIa 3d West of Scotland. Relative change in nominal effort (kW*days at sea) reported by Member State compared to the data submitted in 2008; by derogations under Annex IIA of Coun. Reg. 40/2008. Derogations are sorted by gear and special condition (SPECON).

REG	GEAISPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
4ai	none	IRL	0%	0%	0%	0%	0%	0%	-8%	-1%
4ai	none	NIR	151%	0%	33%	33%	0%	0%	0%	0%
4ai	none	SCO	4%	0%	0%	0%	1%	0%	0%	0%
4aii	IIA83c	SCO	0%	0%	0%	0%	0%	0%	0%	0%
4aii	IIA83d	FRA	-50%		-45%	-20%	-17%	0%	0%	-50%
4aii	IIA83d	SCO	3%	2%	2%	1%	0%	0%	0%	0%
4aii	none	ENG	109%	-3%	0%	80%	41%	41%	83%	122%
4aii	none	FRA		-19%	0%	-70%	0%	0%	0%	0%
4aii	none	IOM	0%	0%	0%	0%	23340%	0%	0%	0%
4aii	none	IRL	0%	0%	0%	-1%	-2%	-2%	-2%	1%
4aii	none	NIR	261%	903%	1429%	1873%	342%	281%	226%	127%
4aii	none	SCO	-2%	-2%	-1%	0%	0%	0%	0%	0%
4aiii	IIA83d	SCO	0%	0%	0%	0%	0%	0%	0%	0%
4aiii	none	ENG	0%	0%	0%	0%	206%	133%	65%	1227%
4aiii	none	IRL	0%	0%	0%	-6%	5%	11%	12%	15%
4aiii	none	NIR	0%	0%	0%	0%	69%	0%	10%	26%
4aiii	none	SCO	218%	0%	-57%	0%	0%	0%	0%	0%
4aiv	IIA83c	SCO	0%	0%	0%	0%	0%	0%	0%	0%
4aiv	IIA83d	FRA	-97%	-95%	-95%	-93%	-93%	-91%	-88%	-88%
4aiv	IIA83d	GER	0%	0%	3%	0%	0%	200%	1%	50%
4aiv	IIA83d	SCO	1%	1%	1%	1%	0%	0%	0%	0%
4aiv	none	ENG	51%	68%	40%	243%	62%	10%	0%	0%
4aiv	none	FRA	-78%	-79%	-81%	-84%	-92%	-85%	-81%	-74%
4aiv	none	GER	11%	0%	0%	0%	0%	43%	39%	28%
4aiv	none	IOM	13%	0%	0%	0%	0%	0%	0%	0%
4aiv	none	IRL	0%	0%	0%	1%	2%	-7%	0%	-5%
4aiv	none	NIR	106%	171%	135%	106%	77%	77%	122%	83%
4aiv	none	SCO	2%	3%	2%	1%	2%	0%	0%	0%
4av	IIA83c	SCO	0%	0%	0%	0%	0%	0%	0%	0%
4av	IIA83d	FRA		-97%	-95%			-99%	-61%	
4av	IIA83d	SCO	0%	0%	3%	5%	2%	1%	0%	0%
4av	none	ENG	268%	87%	115%	98%	302%	516%	91%	0%
4av	none	FRA	0%	284%	120%	54%	0%	0%	118%	0%
4av	none	GER	0%	0%	0%	0%	-72%	26%	53%	150%
4av	none	IRL	0%	0%	0%	13%	-52%	0%	-3%	-18%
4av	none	NIR	0%	0%	0%	0%	0%	0%	56%	0%
4av	none	SCO	0%	5%	1%	2%	5%	1%	1%	0%
4bi	none	BEL	23%	331%	0%	39%	44%	67%	40%	38%
4bi	none	ENG	0%	0%	0%	0%	0%	0%	0%	0%
4bi	none	GBJ	0%	0%	0%	0%	0%	0%	0%	0%
4bi	none	IRL	0%	0%	0%	0%	94%	0%	-5%	0%
4biii	none	ENG	0%	0%	0%	0%	0%	0%	0%	0%
4biii	none	FRA	0%	-17%	0%	0%	0%	0%	0%	0%
4biii	none	SCO	0%	2%	0%	0%	0%	0%	0%	0%
4biv	none	SCO	0%	0%	0%	1%	0%	0%	0%	0%
4ci	none	FRA	0%	0%	-76%	0%	0%	0%	0%	0%
4ci	none	IRL	0%	0%	0%	0%	0%	0%	0%	0%
4ci	none	SCO	0%	0%	0%	0%	-1%	0%	0%	0%
4cii	none	ENG	0%	0%	0%	0%	0%	0%	0%	0%
4cii	none	FRA	-90%	-48%	-73%	-52%	-15%	-13%	-23%	-18%
4cii	none	IRL	0%	0%	0%	-3%	-26%	0%	-12%	-16%
4cii	none	SCO	0%	0%	0%	0%	0%	0%	0%	0%
4ciii	none	ENG	0%	0%	-9%	0%	0%	3%	0%	0%
4ciii	none	IRL	0%	0%	0%	0%	0%	0%	-7%	0%
4ciii	none	SCO	0%	0%	0%	0%	0%	0%	0%	0%
4civ	none	ENG	64%	160%	41%	56%	52%	36%	51%	0%
4civ	none	FRA	-16%	-100%	0%	-62%		-66%		-78%
4civ	none	GER	32%	20%	-29%	11%	1%	-4%	0%	0%
4civ	none	IRL	0%	0%	0%	0%	1%	0%	0%	-8%
4civ	none	SCO	5%	0%	0%	0%	-1%	-9%	0%	0%
4d	none	FRA	-15%	0%	0%	0%	0%	0%	0%	0%
4d	none	SCO	51%	0%	0%	0%	36%	0%	0%	0%
4e	none	ENG	62%	56%	85%	65%	52%	29%	30%	13%
4e	none	FRA	-80%	0%	0%	0%	0%	0%	-58%	-65%
4e	none	IRL	0%	4%	5%	26%	-2%	-1%	0%	0%
4e	none	NIR	0%	0%	0%	0%	0%	0%	0%	0%
4e	none	SCO	0%	2%	5%	0%	0%	0%	0%	0%
none	none	ENG	7%	5%	9%	10%	3%	9%	3%	15%
none	none	FRA		-92%	-49%	-89%	-95%	-82%	-84%	-81%
none	none	GER	-9%	-3%	3%	18%	6%	15%	-6%	-1%
none	none	IOM	18302%	15781%	21858%	27047%	79%	142%	132%	0%
none	none	IRL	-4%	-1%	-2%	-5%	-4%	-2%	-4%	-4%

The Table 4.4.5 for West of Scotland above shows the percentage change in effort totals supplied by member states compared to data submitted in 2008. Most of the changes can be accounted for by structured revisions made by various member states and arise from adjustments in the methods used to estimate effort or corrections. Some values from the UK(E,W,NI,IOM) have increased significantly proportionally, but for categories where the absolute amount of effort is small. Significant changes in both percentage and absolute terms are reductions in recorded effort from France. Also the Netherlands has revised effort in the none-none category upwards from 2002 onwards. This revision is most significant for the year 2004. For Belgium the effort calculated in

last year's report as kW*fishing hours have been corrected to kW*days at sea taking into account the days spent in an area as a fraction of a day multiplied by the kW of the vessel..

Table 4.4.6. Annex II B Hake *Nephrops*

REG	GEAISPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
3a	IIB72ab	POR	0	0	0	0	0	-0.799	-0.879	-0.963
3a	IIB72ab	SPN	0	0	0	0	0	-0.782	-0.909	0.427
3a	none	ENG	0	0	0	0	0	0	0	0
3a	none	FRA	-0.718	-0.598	-0.822	-0.687	-0.669	-0.722	-0.711	-0.662
3a	none	IRL	0	0	0	-0.11	0	0	-0.024	0
3a	none	POR	0	0	-0.032	-0.23	0.282	0.511	9.136	40.249
3a	none	SPN	0	0	0.398	0.309	0.338	5.276	7.258	-0.061
3b	IIB72ab	POR	0	0	0	0	0	-0.708	-0.171	-0.666
3b	IIB72ab	SPN	0	0	0	0	0	-0.803	-0.804	-0.055
3b	none	ENG	0	0	0	0	0	0	0.892	0
3b	none	FRA	-0.866	-0.433	-0.57	-0.572	-0.613	-0.6	-0.57	-0.679
3b	none	POR	0	0	0	-0.587	0.108	-0.263	0.275	2.416
3b	none	SCO	0	0	0	0	0	0	0	0
3b	none	SPN	0	0	0.411	0.297	0.355	7.389	4.266	0.678
3c	IIB72ab	POR	0	0	0	0	0	0.093	1.703	2.823
3c	none	ENG	0	0	0	0.143	0	0	0	0
3c	none	FRA	-0.491	0	0	0	0	-0.477	0	0
3c	none	IRL	0	0	0	0	0	0	-0.219	0.051
3c	none	POR	3.241	18.673	0.533	0.927	4.125	1.939	2.035	0.019
3c	none	SPN	0	0	33.596	13.444	17.405	15.991	11.576	6.795
3t	none	FRA	-0.279	0	-0.083	-0.619	-0.583	0	-0.621	0
3t	none	POR	-0.145	-0.178	-0.087	-0.02	0.408	-0.417	0.129	0.128
3t	none	SPN	0	0	2.85	2.864	2.688	3.372	2.96	2.442
none	none	FRA	-0.995	0	0	0	0	0	-0.948	0
none	none	GER	0	0	0	0	0	0	0	-0.137
none	none	IRL	0	0	0.13	-0.387	0	0	0	0

The Table for effort in Annex IIB Hake *Nephrops* above shows the percentage change in effort totals supplied by member states compared to data submitted in 2008. Some of the changes can be accounted for by structured revisions made by various member states and arise from adjustments in the methods used to estimate effort or corrections. For example, France corrected a number of inconsistencies in the estimation procedures as for other areas. Information on the reasons for changes in the data from Portugal and Spain were not presented.

Table 4.4.7. Annex II C Western Channel – Percentage difference in effort (kW*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 43/2009) and Member State, 2003-2007 between the data provided in 2008 and 2009. Derogations are sorted by gear, special condition (SPECON), and country.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIc	7e	3a	none	BEL	62%	100%	49%	56%	102%	94%	73%	71%
IIc	7e	3a	none	ENG	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	FRA	0%	48%	0%	75%	22%	7%	-31%	-28%
IIc	7e	3a	none	GBJ	0%	0%	0%	0%	0%	-2%	0%	0%
IIc	7e	3a	none	IRL	0%	0%	0%	1%	-2%	406%	27%	22%
IIc	7e	3a	none	NED	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	3a	none	SCO	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	3b	none	ENG	4%	4%	6%	4%	2%	2%	2%	8%
IIc	7e	3b	none	FRA	-13%	-22%	-26%	-22%	-26%	-25%	-49%	-55%
IIc	7e	3b	none	SCO	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	BEL	0%	0%	0%	0%	0%	5880%	1298%	525%
IIc	7e	none	none	ENG	1%	1%	1%	1%	1%	0%	0%	-1%
IIc	7e	none	none	FRA	-18%	-20%	-17%	-19%	-22%	-20%	-29%	-32%
IIc	7e	none	none	GBG	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	GBJ	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	GER	-1%	5%	13%	0%	8%	0%	-29%	0%
IIc	7e	none	none	IOM	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	IRL	-1%	0%	-3%	13%	2%	1%	0%	7%
IIc	7e	none	none	NED	0%	0%	-54%	-43%	-64%	-58%	-48%	-36%
IIc	7e	none	none	NIR	0%	0%	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	SCO	-1%	-1%	0%	0%	0%	0%	0%	0%
IIc	7e	none	none	SPN	0%	0%	0%	0%	0%	107%	201%	184%

The Table 4.4.7 for Western Channel above shows the percentage change in effort totals supplied by member states compared to data submitted in 2008. Most of the changes can be accounted for by structured revisions made by various member states and arise from adjustments in the methods used to estimate effort or corrections. A positive value should be interpreted as a higher value in 2009 compared to 2008 where a negative value means that the 2009 data is lower than the 2008 value. The main differences are apparent for the Belgian, the French, the Netherlands and Spanish fleets. However, it should also be noted that the large discrepancies for some fleets (e.g. Irish beam and Belgian none regulated gear) are revisions of small effort contribution and do not change the overall picture of the effort deployed in area 7e. The reason for the important revisions are explained below.

For Belgium the effort calculated in last year's report as kW*fishing hours have been corrected to kW*days at sea taking into account the days spent in an area as a fraction of a day multiplied by the kW of the vessel.

The French national data base was updated and some changes were made, as removals of duplicate records (mainly for gillnets and trammel nets), updates of referential (vessels, mesh size). These corrections can explain the overestimation in previous submissions.

For the Netherlands, the data provided in 2009 has been based on logbook information instead of VMS data which formed the basis for the data provided in 2008.

As there was no Spanish expert present at the meeting, STECF-SGMOS was not able to clarify the differences for the Spanish fleets.

Fleet specific landing and discard data and effort data by Statistical Rectangle 2003-2008

STECF notes that SGMOS encountered data availability and quality issues in respect of the catch and rectangle effort data which also formed part of the call, these issues are not covered in detail here but summaries are provided

The availability of the requested fleet specific catch and discard data is summarised, by Member State in the Table below. According to the experts, none of the national data bases includes unallocated landings. Not all Member States provided landings, discards and biological data from all species requested, so only anglerfish, cod, haddock, whiting, saithe, hake, plaice, sole, mackerel, horse mackerel, blue whiting, rays, penaeid shrimps and *Nephrops* are considered in the analyses conducted. Overall, the landings figures compiled in the data base are consistent with the officially reported landings of the stocks considered in the analyses. Some Member States again did not provide essential quality parameters of the data. Consequently, STECF-SGMOS remains in a poor situation regarding the description of the quality of the fleet specific estimates of discards and age disaggregated catches, mainly due to lack of requested information (no. of discard samples, fish measured and aged).

Table 4.4.8. Overview on 2003-2008 catch data reports (landings and discards) provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Reg. 40/2008 and 43/2009

Country	According to Annexes IIA-C of Coun. Reg. 40/2008 and 43/2009 landings data 2003-2008
Belgium	review o.k.
Denmark	no specon in the Baltic Sea
Estonia	only years 2006-2008, no specon, no mesh size
Finland	review o.k., no biological data
France	few inconsistencies in codifications
Germany	review o.k.
Ireland	review o.k.
Latvia	review o.k.
Lithuania	only 2005-2008, only cod, no specon
Netherlands	only year 2008, only area 4, only cod, ple and sol, only beam, no mesh size
Poland	only cod
Portugal	many inconsistencies in codifications including specon
Spain	only areas 4-9, no deep or BSA
UK England incl. Northern Ireland	few inconsistencies in codifications, biological data imprecise
UK Scotland	few inconsistencies in codifications, biological data imprecise
Sweden	few inconsistencies in codifications, only cod in the Baltic Sea
Country	discards data 2003-2008
Belgium	review o.k.
Denmark	no specon in the Baltic
Estonia	none
Finland	review o.k., no biological data
France	none
Germany	review o.k.
Ireland	review o.k.
Latvia	review o.k.
Lithuania	2005-2008, only cod, no specon
Netherlands	only year 2008, only area 4, only cod, ple and sol, only beam, no mesh size
Poland	only cod
Portugal	incorrect
Spain	only areas 4-9, no deep or BSA
UK England incl. Northern Ireland	few inconsistencies in codifications, biological data imprecise
UK Scotland	few inconsistencies in codifications, biological data imprecise
Sweden	few inconsistencies in codifications, only cod in the Baltic Sea

In order to provide spatial distributions patterns of fishing effort, SGMOS continued to use the data base structure agreed previously to collate data on effective effort in units of trawled hours by statistical rectangle for mobile gears only. The data have been made available from the national logbooks and aggregated to the regulated gear groups (derogations) defined in Annexes IIA, IIB and IIC of Council Reg. 40/2008 and the cod plan 43/2009. The table below provides an overview of the quality of the submitted data

Table 4.4.9. Overview on 2003-2008 effective effort data reports (trawled hours by derogation and rectangle) provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 40/2008 and 43/2009

Country	According to Annexes IIA-C of Coun. Reg. 40/2008 and 43/2009 effort data 2003-2008
Belgium	review o.k.
Denmark	no specon in the Baltic Sea
Estonia	only year 2007, no specon, no mesh size, only >15m
Finland	review o.k.
France	few inconsistencies in codifications
Germany	review o.k.
Ireland	review o.k.
Latvia	only Baltic Sea areas
Lithuania	no consistent data submission
Netherlands	review o.k.
Poland	no consistent data submission
Portugal	many inconsistencies in codifications including specon
Spain	no consistent data submission
UK England without SCO	review o.k.
UK Scotland	review o.k.
Sweden	no Baltic Sea areas

Summary of SGMOS 09 findings

A preliminary summary of some of the key observations made by the STECF SGMOS Effort Management Group is given in Appendix 3

In view of the submission of revised Danish data during the Plenary some of the material in the final reports will change. This is not expected to significantly alter broad trends in aggregated data but may affect important outputs such as CPUE calculations by gear.

Summary responses on some specific TORs and ad hoc questions

In response to Commission requests received during the Plenary, STECF offers the following responses to some of the specific TORs of SGMOS.

TOR “Concerning effort in kW-days and gear grouping (also per Member State), catches and cpue/lpue in the **Eastern Channel** (division VIIId): Describe the development of these parameters in 2008 compared to previous years, overall and per Member State, and compare these developments to developments observed in the rest of the area (Skagerrak and North Sea), in particular: Can effort displacement from the North Sea towards the Eastern Channel be identified in certain gears?”

STECF was able to examine effort development in this area during the meeting. Spatial distribution of effort by area can be inspected in the spatial plots presented in the North Sea section of the SGMOS Effort report. There is no obvious sign that there has been an effort shift from the North Sea to the English Channel for any regulated gear. Examples of these plots are shown below for BT2 and TR2 gears.

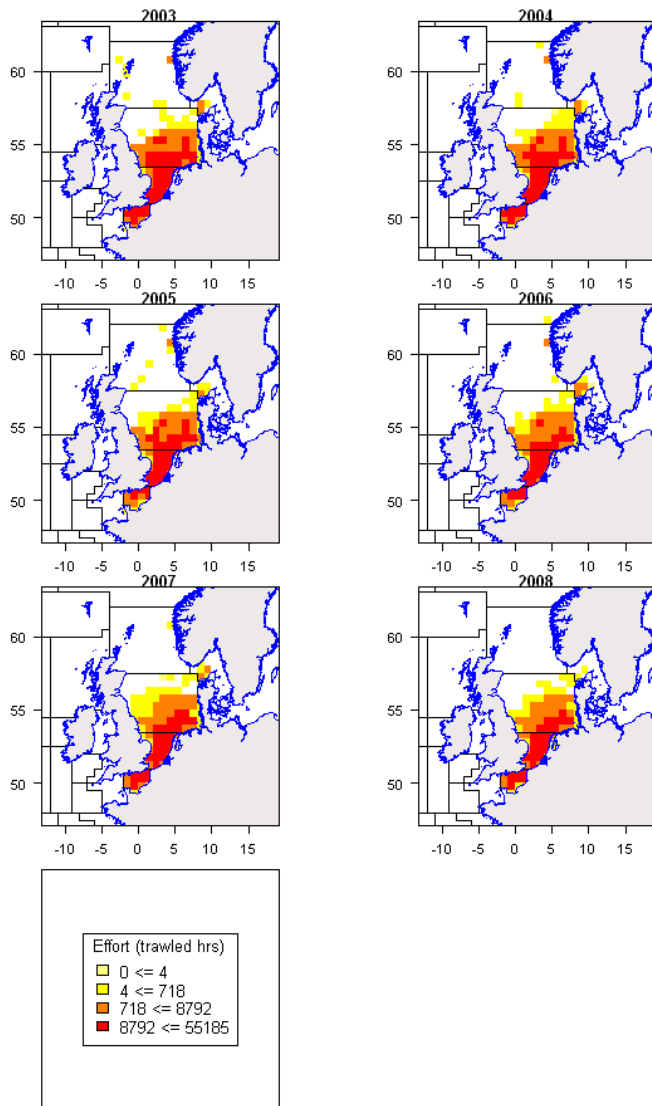


Fig. 4.4.1. North Sea, Skagerrak and English Channel. Spatial distribution of fishing effort for regulated gear BT2, 2003-2008

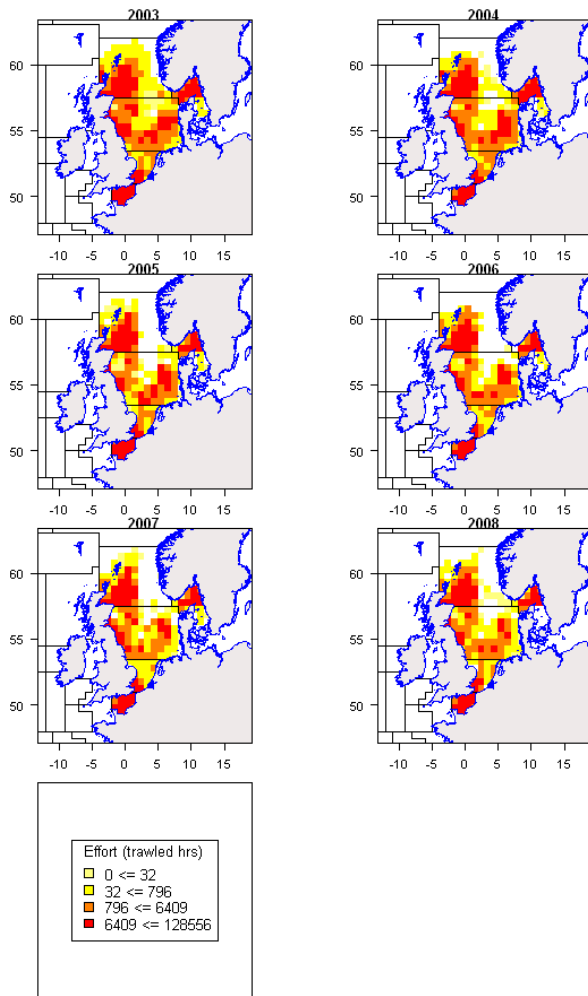


Fig. 4.4.2. North Sea, Skagerrak and English Channel. Spatial distribution of fishing effort for regulated gear TR2, 2003-2008

The Table 4.4.10 below provides the percentage of combined North Sea + Eastern English Channel effort spent specifically in the English Channel, for the relevant country and gear categories. There has been some increase in the relative effort share in the English Channel for some segments, such as Belgium Beam trawlers BT2 and the Scottish Dredgers, whereas some other segments have proportionally decreased their effort share. For the total effort, the relative share of English Channel effort has slowly and regularly increased from 7% in 2000 to 13% in 2008.

Table 4.4.10. Percentage of combined North Sea + Eastern English Channel effort spent specifically in the English Channel, for the relevant country and gear categories.

% effort			2000	2001	2002	2003	2004	2005	2006	2007	2008
7d	BEL	BT2	28%	33%	37%	38%	36%	35%	46%	56%	44%
		GN1	9%	13%	6%	13%	16%	16%	23%	1%	9%
		GT1								64%	46%
	BEL	total	18%	22%	26%	29%	27%	25%	34%	41%	33%
	ENG	BT2	8%	10%	20%	23%	16%	9%	11%	9%	15%
		DREDGE	76%	76%	72%	70%	65%	58%	76%	74%	62%
		GN1	4%	1%	0%	1%	1%	0%	1%	1%	7%
		GT1	6%	8%	16%	91%	85%	63%	35%	70%	43%
		LL1	10%	22%	14%	30%	28%	22%	42%	71%	86%
		OTTER	28%	39%	2%	28%	26%	20%	8%	23%	64%
		PEL_TRAW	47%	35%	20%	24%	31%	28%	22%	31%	22%
		POTS	25%	26%	29%	29%	29%	33%	30%	32%	31%
		TR2	29%	26%	22%	12%	14%	11%	10%	8%	8%
		TR3	0%	2%	0%	70%	0%	7%	6%	8%	0%
	ENG	total	12%	13%	14%	18%	17%	15%	14%	17%	17%
	FRA	BEAM	90%	8%	100%	60%	87%	77%	75%	67%	100%
		BT2	83%	92%	86%	93%	95%	95%	97%	92%	94%
		GN1	83%	95%	91%	93%	77%	90%	94%	90%	86%
		GT1	61%	75%	76%	81%	82%	82%	71%	73%	75%
		LL1	100%	100%	100%	100%	100%	100%	100%	100%	42%
		TR1	10%	7%	10%	4%	3%	6%	2%	12%	1%
		TR2	87%	79%	87%	87%	90%	89%	91%	88%	85%
		TR3	62%	52%	56%	100%	100%	87%	100%	100%	99%
	FRA	total	67%	66%	71%	73%	77%	77%	75%	74%	69%
	GER	PEL_TRAW	25%	14%	15%	11%	16%	15%	16%	35%	25%
	GER	total	2%	2%	2%	1%	2%	2%	2%	2%	2%
	NED	DREDGE	100%	100%	100%	41%	51%	47%	49%	40%	51%
		OTTER	62%	77%	77%	26%	0%	0%	0%	0%	
		PEL_TRAW	41%	40%	26%	34%	28%	30%	26%	33%	54%
		TR1	0%	1%	0%	2%	1%	0%	0%	0%	0%
		TR2	8%	14%	9%	7%	17%	21%	19%	24%	25%
	NED	total	3%	3%	3%	4%	4%	4%	3%	4%	6%
	SCO	DREDGE	1%	1%	0%	7%	6%	5%	16%	20%	21%
	SCO	total	0%	0%	0%	0%	0%	0%	1%	2%	2%

TOR. “Provide effort information (kwdays) by member state and regulated gear for ICES Area Vb”

Background

The revised cod recovery plan defines Regulated Area 3d as ICES VIa and ICES Area Vb (EU) and requires that effort for these areas is combined, (previously, Vb EU was not included). In the interests of transparency for Member States it would be helpful to see how much effort has been added to the Reg Area 3d by the addition of Vb EU.

Response

STECF notes that the effort evaluation by STECF SGMOS in 2009 now correctly combines effort for VIa and Vb EU in the Reg Area 3d summaries. The Table below summarises the effort for Vb EU component.

Table 4.4.11. Effort in Vb EU by country and gear

ANNEX	Area code	REG	ARE/REG	GEA	COUNTR	2000	2001	2002	2003	2004	2005	2006	2007	2008
Ila	5b EU	3d	GN1	ENG		140735	233104	86980	158890	106655	42147	7804		
Ila	5b EU	3d	LL1	ENG		1921					3219			
Ila	5b EU	3d	POTS	ENG						744				
Ila	5b EU	3d	TR1	ENG		5679	22440	3305	5712	8405	3135	1522		
Ila	5b EU	3d	GN1	FRA				992	4109				9568	
Ila	5b EU	3d	GT1	FRA			23552							
Ila	5b EU	3d	PEL_TRAI	FRA				94208	20608	17664		35328	38272	
Ila	5b EU	3d	TR1	FRA		1906	16083	10448	34893	20937	5619	14726	11956	1233
Ila	5b EU	3d	TR2	FRA						5838	295		1584	
Ila	5b EU	3d	GN1	GER					15876	5733				
Ila	5b EU	3d	PEL_TRAI	GER					102767	4942	60375	28639	2600	
Ila	5b EU	3d	TR1	GER		1020					10590	5100		
Ila	5b EU	3d	OTTER	IRL			1800							
Ila	5b EU	3d	PEL_TRAI	IRL					13057	29321	27100		5880	
Ila	5b EU	3d	PEL_TRAI	NED			451252	28028	200693	341000	142740	83036	44686	48530
Ila	5b EU	3d	POTS	NIR								1744		
Ila	5b EU	3d	BT2	SCO			1608							
Ila	5b EU	3d	DREDGE	SCO					260					
Ila	5b EU	3d	GN1	SCO		246								
Ila	5b EU	3d	LL1	SCO			1404	7892						
Ila	5b EU	3d	PEL_SEIN	SCO		3090	5112	4950						
Ila	5b EU	3d	PEL_TRAI	SCO				33750	52687	94966				
Ila	5b EU	3d	TR1	SCO		86876	111676	84950	57491	83343	14951	16313	2566	12661

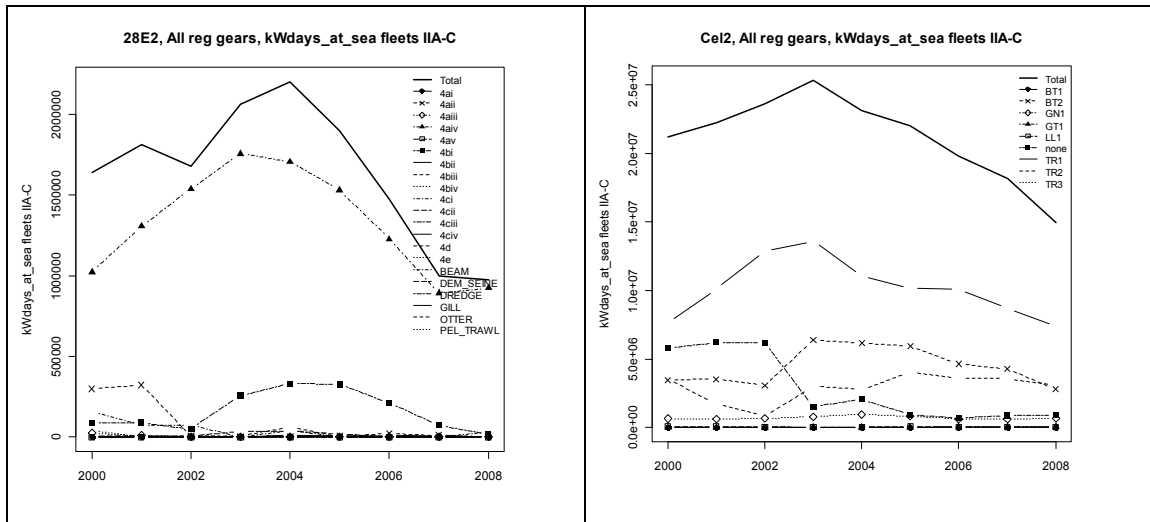
TOR “Concerning effort, CPUE/LPUE and catch data linked to the Celtic Sea:

- (i) Compare the fishing effort level evaluated per fishery and per gear groupings in VIIf+VIIg with the data submitted for ICES rectangle 28E2 and conclude on whether exploitation of cod shows similar characteristics;
- (ii) For VIIf+VIIg only, evaluate how much of the overall fishing effort per gear groupings would be framed by a management of fishing effort that relates to cod catches of 2 or 3 or 5 or 7,5 % in the catch composition per vessel and per year ?
- (iii) 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.”

Response

(i) Data for nominal fishing effort in the area 28E2 were provided by England, Ireland, Belgium and France. To compare whether exploitation of cod shows similar characteristics in that area, catch patterns per species and gear grouping were first assessed in area VIIF+VIIg to identify gear grouping targeting cod. The Table 4.4.12 below shows that the main gear grouping targeting cod in area VIIf+VIIg are TR1, TR2 and in a less measure BT2 and GN1.

Reg Area		7bcefghjk							Reg area		7fg						
REG	GEAR	SPECIES	2003	2004	2005	2006	2007	2008	REG	GEAR	SPECIES	2003	2004	2005	2006	2007	2008
BT1	COD			1				0	BT1	COD			0				
BT2	COD		299	314	426	328	315	216	BT2	COD		220	238	327	246	216	151
GN1	COD		155	174	210	230	261	217	GN1	COD		77	121	154	166	173	160
GT1	COD		14	11	12	11	11	14	GT1	COD		1	0	0	3	3	4
LL1	COD		19	6	4	20	3	3	LL1	COD		1		2	2	0	0
none	COD		27	68	3	1	3	2	none	COD		23	60	2	1	1	0
TR1	COD		3 715	1 845	1 128	1 370	1 845	1 840	TR1	COD		2 796	1 366	797	970	1 357	1 014
TR2	COD		925	475	675	783	795	808	TR2	COD		238	198	331	390	291	304
TR3	COD		0	0	0	0	0	0	TR3	COD			0	0	0		0

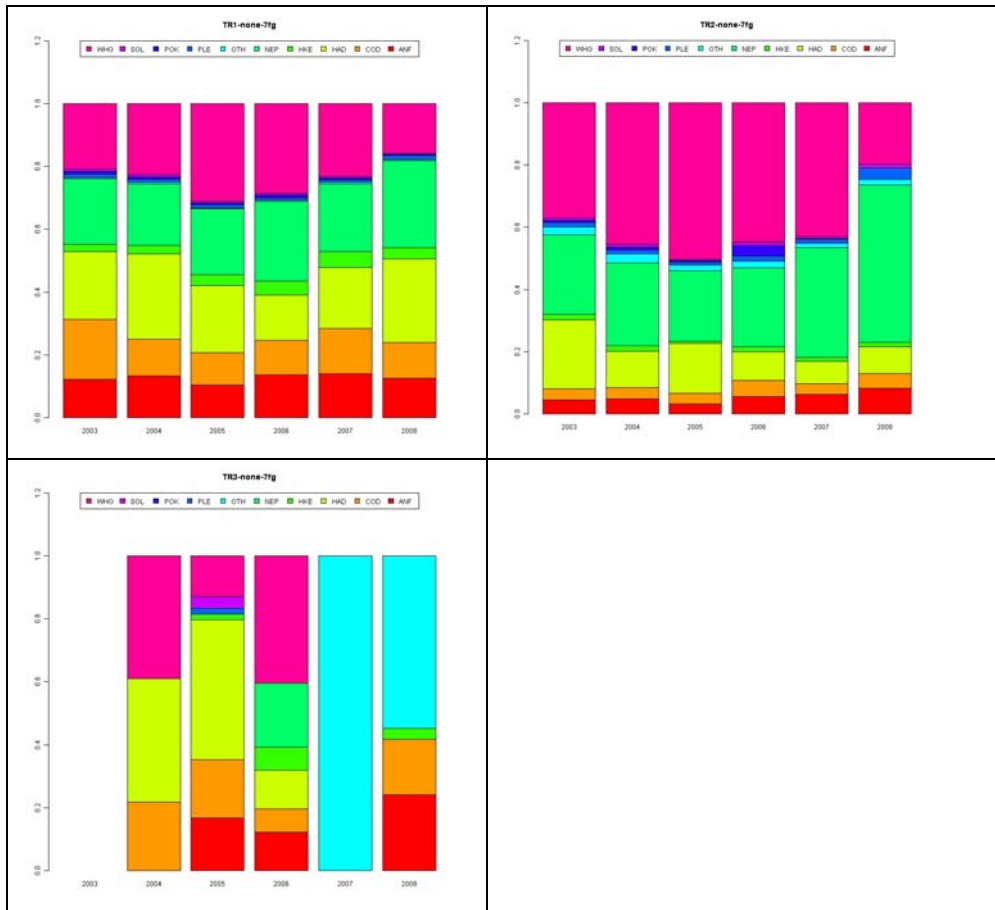


The figure 4.4.3 above shows a comparison of the effort trends in 28E2 (left panel) and VII f and g (right panel). Although the two plots show different details of gear categorisations (Annex II 40/2008 derogations on the left and new cod plan on the right), the trends are quite similar with a general decrease of the total effort in these areas. The decrease is mainly due to the decrease of the effort of the main gear category (TR1). The second most important gear category is BT2 that shows an artificial increase between 2000 and 2003 due to the desegregation of the Irish data in 2002. Following this, BT2 then decreases steadily. In terms of gear trends the two areas appear to have been exploited in similar ways.

(ii) No information at a vessel level was available to answer this question. A specific call involving individual vessel data would be required to answer this.

(iii) The main species (in volume) were identified in the working group report (Tables 9.3.1.1a-I). The next Figure 4.4.4 shows the relative percentage (in volume, not taking into account the discards) of each species in the total catches. A group (“OTH”) merging all the “other” species not described in the report has been added to take into account the whole landings. The trends for the main gear groupings (TR1 and BT2) are quite stable. The other gear groupings appear to be more erratic but the level of effort of these gear grouping detailed are not significant compared to the main gear groupings.





TOR “Is it possible to distinguish the effort belonging to pelagic and to bottom trawls in the TR3 category (mesh size 16-32 mm)? Did the pelagic effort contribute to the TR3 baseline? If possible assess the percentage of the cod catches from total catches of the TR3 group?”

Background

In accordance with annex I of the cod plan (R 1342/2008) the gear TR3 (trawls with mesh size 16-32) is included in the gear grouping of demersal trawls. In the fishing opportunities regulation for the year 2008, the trawls of mesh size 16-32 were classified as just trawls without dividing them in the bottom or pelagic trawls. The fishing effort belonging to this effort group contributed to the establishment of the effort baseline. Therefore, in case corrections to the baseline are required it would be helpful to distinguish the effort belonging to pelagic and to bottom trawls with mesh size 16-32 mm. Furthermore, would it be possible to assess the percentage of the cod catches from total catches of this group?

STECF response

The Table below shows TR3 (towed gears, 16-31 mm) effort divided into demersal (otter and dem_seines) and pelagic (pel trawls and pel seines) components. The table presents material according to the regulated areas of the cod plan. It appears the TR3 gear is not a major issue for the western slope divisions of the cod areas (3c and 3d) but is more important in 3a and 3b. After the drastic reductions in catch possibilities of sandeel, the demersal effort dropped and also the pelagic

effort (probably mainly targeting sprat) decreased significantly in the North Sea, Skagerrak and the eastern Channel (3b).

Table 4.4.13. TR3 (16-31mm) effort (kwdays) by Regulated Areas for demersal and pelagic components

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size code	2000	2001	2002	2003	2004	2005	2006	2007	2008
Ila	3a	TR3	dem	16-31	313933	471003	444153	575712	377496	420863	301694	228605	125029
Ila	3a	TR3	pel	16-31	9144	52844	40875	66107	86344	100222	136000	76773	59449
Ila	3b	TR3	dem	16-31	5108148	3804371	3616646	3184857	2960419	2292908	1708037	795699	723579
Ila	3b	TR3	pel	16-31	1474002	1239586	1639740	1765507	1957970	2165508	1635978	1441896	909834
Ila	3c	TR3	dem	16-31	0	0	0	1034	90	3305	960	0	436
Ila	3c	TR3	pel	16-31	0	0	0	1673	4768	12887	10350	0	10005
Ila	3d	TR3	dem	16-31	14189	3775	1747	32075	7197	41544	160	573	11321
Ila	3d	TR3	pel	16-31	197995	47043	57958	60871	71786	21840	29660	20469	19975

In the regulations of the previous Annex IIA, specifications to distinguish between pelagic and demersal towed gears did not exist (other than beam trawls). The SGRST group often discussed this issue and agreed to include the pelagic trawls and pelagic seines; this procedure continued into 2009. So, the pelagic trawls and pelagic seines have so far always been included in the delivered mesh size specific estimations and as such in the baselines. This is also true in the case of the TR2 and TR1 categories but there are hardly any pelagic target species caught with the mesh sizes ≥ 70 mm so the potential problem is small.

Quantities of cod taken by the TR3 gear are shown in the table below. Since cod discards of TR3 are zero, small or no information is given, only the landings are considered here. Results suggest that the cod landings of this gear TR3 appear highest in the demersal otter trawls as would be expected. The contribution of this gear to cod landings is extremely small ($<0.5\%$) in all areas except Reg Area 3a (Kattegat) where it sometimes accounts for 5% of landings by demersal TR3. In pelagic trawls landings are always below 2%.

Table 4.4.14. TR3 (16-31mm) cod landings by Regulated Areas for demersal and pelagic components compared with cod landings by all gears

ANNEX	SPECIES	REG AREA	REG GEAR	GEAR	MESH SIZE	2003	2004	2005	2006	2007	2008
Ila	COD	3a	TR3	dem	16-31	79	27	15	40	8	7
Ila	COD	3a	TR3	pel	16-31	0	2	3	13	4	0
Ila	COD	3b	TR3	dem	16-31	51	29	32	31	4	57
Ila	COD	3b	TR3	pel	16-31	1	1	7	2	1	0
Ila	COD	3c	TR3	dem	16-31						
Ila	COD	3c	TR3	pel	16-31	0	0	0	0	0	1
Ila	COD	3a	All gears			2027	1161	817	791	585	403
Ila	COD	3b	All gears			24725	22765	22908	21686	19610	20544
Ila	COD	3c	All gears			1322	1078	941	916	1197	1212
Ila	COD	3d	All gears			1119	516	430	397	389	323
cod landings in TR3 as a percentage of total cod landings											
ANNEX	SPECIES	REG AREA	REG GEAR	GEAR	MESH SIZE	2003	2004	2005	2006	2007	2008
Ila	COD	3a	TR3	dem	16-31	3.90%	2.30%	1.80%	5.10%	1.40%	1.70%
Ila	COD	3a	TR3	pel	16-31	0.00%	0.20%	0.40%	1.60%	0.70%	0.00%
Ila	COD	3b	TR3	dem	16-31	0.20%	0.10%	0.10%	0.10%	0.00%	0.30%
Ila	COD	3b	TR3	pel	16-31	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ila	COD	3c	TR3	dem	16-31	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ila	COD	3c	TR3	pel	16-31	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%
Ila	COD	3d	TR3	dem	16-31	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ila	COD	3d	TR3	pel	16-32	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

STECF Comments and Conclusions

- STECF notes that the reports of SGMOS have not yet been finalised and that some Member State data has been subject to a late revision. Nevertheless, substantive data (in electronic form) have been provided for the Commission to work with

- STECF considers that, subject to completion of the revision, the aggregate data represent a further improvement on previous years for most areas and **endorses** the summary output produced by SGMOS-09-05 for use in the effort management regimes.
- STECF notes that SGMOS has, during its three meetings, updated fleet specific effort and catch (including discard estimates where available) data up to 2008 and provides results based on an aggregation which is consistent with the fleet/gear defined in Annexes IIA, IIB and IIC to Council Reg. 40/2008 and Annex IIA 43/2009. This year a number of countries undertook revisions of data and overall the quality is considered to have improved..
- STECF considers that further progress was made by SGMOS this year in collating data and preparing advice on the Celtic Sea.
- STECF considers that good progress was made by SGMOS in providing, for the first time, advice for the Baltic Sea area. STECF notes that conclusions will be necessarily limited in the first report owing to the failure of some countries fishing in the area to supply adequate data.
- STECF notes that a considerable amount of information has, for the first time, been collated covering the Deep Sea Regulation and the Western Waters Regulation but that this remains to be fully analysed. STECF encourages this process to continue and recognises that expertise outside from outside SGMOS will be required to fully exploit the new data resource created.
- STECF notes that the assignment of effort and catches to categories of gear is based on best expert knowledge, data availability and methods used, which also reflects cooperation with the national control and enforcement institutions. STECF considers that the simplification of the gear categories in the revised cod plan of Annex IIA will greatly facilitate this process.
- STECF notes that discard data are still incomplete from some member states and areas. Furthermore, STECF is unable to comment on the quality of the fleet specific estimates of total catches mainly due to shortfalls in the discard data, lack of requested data quality parameters, i.e. number of discard samples, fish measured and aged. STECF therefore **recommends** that care is exercised in the use of metrics, such as CPUE that involve catch data.
- STECF considers that it would be advantageous if closer alignment could be achieved between future effort management regime gear categories and the requirements and rationale of the new Data Collection Regulation. Such rationalisation would improve evaluation of fleet effort regulations.
- STECF welcomes the facility with which the database (held at JRC) can be accessed to address ad hoc questions and terms of reference and encourages further development of this facility.
- STECF supports the view that more permanent future resourcing, support and maintenance of the STECF database is necessary. STECF also **recommends** that more transparent arrangements for access to the database are discussed and agreed.
- Given the repeated experience of late and inconsistent data reports received from some Member States, STECF considers that continuing efforts by the Commission will be required to inform and educate national administrations on the required procedures, timescales and quality of data submissions. To this end, STECF **recommends** that there is i)

a repeat of the 2009 effort workshop early in 2010 ii) early **notification** and subsequent release of the 2010 data call.

4.4.1. *Member state descriptions of data submitted including the basis of revisions which lead to differences in effort between the 2008 and 2009 data submissions.*

This section (4.4.2) may be subject to amendment or elaboration pending finalisation of the SGMOS 05-09 WG Report.

Belgium: Belgium provided effort data (kw*days at sea) for 2003-2008 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.

The effort calculated in last year's report as kW*fishing hours have been corrected to kW*days at sea taking into account the days spent in an area as a fraction of a day multiplied by the kW of the vessel.

Denmark: The National Institute for Aquatic Resources in Denmark (DTU Aqua) had provided all relevant effort data for 2000-2008 for the areas: Baltic, North Sea, Skagerrak, Kattegat and Coastal and International waters in Northern Shelf in the required data format using the STECF-SGMOS guidelines, for the STECF meetings 25-30 May and 13-17 July. These data were built on the basis of a major revision of the data extraction program compared to the data delivered up to 2008. These revisions related to both a continuous improvement of the data available in the DFAD database maintained by DTU Aqua (e.g. inclusion of departure time and arrival time), as well as corrections of a number of factors considered as not fully consistent. The main revisions included:

- in the case of trips crossing several areas, the allocation of the trip to one single area was revised from area of the first operation to the area with the highest value,
- the identification of a trip was revised from vessel_ID and landings date to logbook sheet number, as traditionally used by the Danish Directorate for Fisheries DDF (Ministry of Food, Agriculture and Fisheries)

- Some corrections were made to the allocation of some gears in regulated and non regulated gear categories, for example with regards to some pelagic trawls and pots categories.
- Revision of the effort calculation. The initial method used the number of days between first fishing day to landings day, but was revised to using numbers of hours from departure to arrival rounded up to number of days.
- The allocation of trips occurring in area 2A was corrected in order to distinguish between areas 2 EU, 2 COAST and 2 RFMO.
- Finally, the checking macros developed by the STECF Working Group were successfully applied and the observed remaining inconsistencies between respective gears and specific conditions were corrected.

All these corrections are considered as major improvements in the quality of Danish data compared to previous years. But as a consequence, the resulting Danish effort estimates were in average significantly lower than the figures provided up to 2008.

This has created a major issue, since the effort estimates previously provided to the STECF WG were used for the calculation of the baseline for the 2009 effort regulation. In consequence, the comparison of the Danish data provided to STECF in 2009 with the effort regulation baseline would lead to an incorrect perception of actual trends in the Danish effort and of the actual implementation of the effort management plan.

This issue was acknowledged by the Danish Directorate for Fisheries. Because of the significant changes in data the current revision has implied, the DFF could not yet certify the validity of the Danish data with regards to the effort regulation. Differences between the data provided to the STECF-SGMOS and the official effort statistic has been found. As such, the Danish data presented in this report represent the current best scientific estimates and are fully consistent with STECF-SGMOS data call. But in the absence of a final certification from DFF, these data cannot in any case be used for management purposes.

The DFF and DTU Aqua have started a process in order to in details to check all data extraction programs ensuring that the legal text on effort issues in the TAC/Quota regulations and the cod recovery plan are followed. Therefore, adjustments of the Danish data may be expected and new updated data will be provided when this ongoing work is finalized.

France: For France effort data from 2000 to 2008 in kW and gross tonnage days at sea were updated in the mixed fishery database after the meeting of June. These data give the number of vessels concerned in a defined area for each fishery for all gears with all mesh size ranges.

*The effort calculated in last year's report as kw*fishing hours have been corrected to kw*days at sea according to the specifications in Council Regulation (EC) N° 43/2009.*

But it appears to be significant differences between the two data sets which could be explain as follow : Between submissions, the French national data base was updated and some changes were made, as removals of duplicate records (mainly for gillnets and trammel nets), updates of referential (vessels, mesh size). These corrections can explain the overestimation of catches and effort data computed in the first data set.

Given the incapacity to define the route of a fishing boat from the entry in the regulated area to the fishing ground, the present effort calculation is using numbers of fishing hours divided by 24 in a

regulated area rounded up to number of days. This may lead to an underestimation of the fishing effort for some fleets. Only fishing trips targeting regulated species were taken into account.

Concerning data quality, data have been compiled from logbook recorded in the French national database. Data used are not completely exhaustive but the data quality has been improved since 2000. All data were provided for all area concerned by the cod recovery plan but they did not take into account limits defining waters under the sovereignty or jurisdiction of Member States as laid down in article 2a of the Amendments to Regulation (EC) No 423/2004 about geographical definition.

The special conditions have been calculated thanks to an algorithm taking into account the specific composition for each trip.

A reference table have been used to create the relationship between the mesh size recorded into the logbook and the mesh size range defined into the mixed fisheries database. When this information is missing, the missing value '-1' has been used.

Germany: Germany provided fleet specific effort data for 2000-2007 in the requested formats derived from official logbook data bases covering all vessels ≥ 10 m. In addition to the usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea and maximum number of vessels observed active in the defined derogations. The latest data submission covers the areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea including the southern part of Division II in the EU-Zone and ICES Divisions VI and Va and Vb. There were no demersal fisheries (mesh sizes ≥ 70 mm) conducted in the Eastern Channel, the Irish Sea or the southern Divisions. 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. During 2000-2007, the fleets did not apply or have been eligible for other special conditions as confirmed by personal communication with the control and enforcement institute (BLE).

Ireland: Ireland provided fleet specific effort data for 2000-2008 in the requested formats, derived from official logbook databases for vessels ≥ 10 meters in length. Vessels less than 10m are not required to complete logbooks, and therefore no effort is available for these vessels. Data has been provided in nominal effort as kW*days-at-sea, effective effort in kW*hours fishing, GT*days at sea and vessel numbers within each category. The data covers all areas requested in the STECF-SGMOS data call in which the Irish fleet is active. Effort data conforms to the requested aggregation, of quarter, area, gear, mesh size, and vessel length. 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.

Revisions have been made to the 2003-2007 data provided to STECF-SGRST in 2008. These revisions result from the implementation of methodology guidelines for construction of days at sea data, provided by the Joint Research Council at a meeting held by the Commission in February 2009. This methodology was applied to the Irish logbook data, using trip departure, operation, and landing dates to determine activities whilst away from port. Only one Gear and area combination is applied to any one vessel day. The gear and area during a trip were assumed to be known only on days where fishing operations occur. Gear and area are allocated according to daily dominant fishing activity and area. Non-fishing days at sea (inactive days away from port) during a trip have been inferred using the guidelines provided by the JRC. Gear and area of non-fishing days from departing port to the first fishing operation date are assumed to be that of the first operation. Gear and area of non-fishing days between days of fishing are assumed to be those of the later operation date. Non-

fishing days from the last operation day to returning to port are assumed to be the same as the last operation.

The data call requested detailed area information (e.g. coast, RFMO, EU). It was not possible to aggregate data at this level of spatial detail. Detailed areas were assumed. 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 were assumed as 1 coast, 2 coast, and 12 RFMO.

Effort data was also provided by BSA and ICES rectangle 28E2, labelled as such within the area field. It should be noted that effort from these areas are also contained within their relevant ICES area. Further more, deepwater effort has been provided, classified as “Deep” within the special conditions field. Deepwater effort was identified as those vessels carrying out individual trips retaining 100kg or more of aggregated deepwater species (Annex I of Council Regulation 2347/2002), regardless of permit status. In addition, the group agreed to include trips where the aggregated Annex I species represented greater than 35% of the total trip landings as deepwater. This effort is a duplication of effort within the relevant areas.

No special conditions were allocated to Irish fleet categories, as no Irish vessel applied for the special conditions relating to Annex IIa (Council Regulation 40/2008) since the special conditions were introduced. Those special conditions applied for by Irish vessels relate to the allocation of additional days at sea for enhanced observer coverage.

Netherlands: In previous years the Netherlands provided effort data based on VMS information for the years 2000-2007, as requested in Annex 1 part B of the official data call. Following screening it was established that data for 2000 and 2001 were derived from a rather sparse coverage of VMS information and were therefore not representative. For the 2009 meeting, the Netherlands submitted data based on logbooks. This is considered to be more accurate for the purpose required here.

Portugal: Effort data were provided for 2004-2008 (Kw*days and GT*days) by quarter and year in the required data format for the areas 8c and 9a where the Portuguese fleet operates. Numbers of vessels were not provided. The information refers to all fishing vessels with overall length ≥ 10 m, licensed for the period 2004-2008. The gear categories and mesh size provided were in agreement with the data call and Annex IIB, gillnet with mesh size >60 mm, otter trawl with mesh size >32 mm and bottom longlines. However, no mesh size information could be provided for significant parts of the fleets deploying the gears defined. In the case of trawl, the unknown mesh size means that although the mesh size is greater than 32 mm, it is not possible to specify according to the categories defined by this working group, but their effort can be taken into account. The same is not applicable to the gillnets with unknown mesh size. This resulted in a high proportion of gillnet effort which could not be assigned to the defined derogations and therefore were grouped as unknown (none). Special conditions have been provided for a mixed passive gear category (“PGP”), which includes vessels operating with more than one gear. Although this group includes unregulated gears (trammel nets, traps, dredges, etc.) and regulated gears (longlines and gillnets) affected by the special conditions, it was not possible to consider the gear specific effort in the evaluation and they were added to “none”. The trawl fleet was further allocated to two fisheries, targeting crustaceans operating in area 9a or targeting demersal fish operating in areas 8c and 9a. Effort was computed differently for those vessels covered by the Southern Hake and *Nephrops* recovery plan which have effort limitations and other vessels. The former were computed based on logbooks information and the last based on sales notes, assuming each sale represents one fishing day.

Spain: Spain provided nominal effort (kW*days) and GT*days at sea data for 2000-2008 by quarter, ICES divisions and mesh size range for ICES divisions VII e-k, VIIIc and IXa (without Gulf of

Cádiz). Data contain only information of the trips that landed hake. The eleven Spanish gear categories are: BEAM (Beam trawl), DEM_SEINE (Danish and Scottish seiners), DREDGE (Dredges), GILL (Drift and fixed Nets except Trammel Nets), LONGLINE (Longlines), OTTER (Bottom trawl), PEL_SEINE (Pelagic seine and purse seine), PEL_TRAWL (Pelagic Trawl), POTS (Pots and traps), TRAMMEL (Trammel Nets) and NONE-N/A (unidentified gears). Effort by rectangle and by special conditions were not available. Allocating the trips to the strata some vessels occurred several times in the same year, quarter, gear type and mesh size in the same area, providing incorrect numbers, therefore number of vessel was not available.

Sweden: Sweden provided fleet specific effort data for 2000-2008 in the requested formats derived from official logbook data bases covering all vessel ≥ 10 m. In addition to the usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea and number of vessels. The latest data submission covers the areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.3.a, 8.3.b.

For vessels < 10 m Sweden provided total nominal effort usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea in areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.3.a, 8.3.b.

The main problem in using Swedish data analysing the use of technical regulations according to Annex 11a has been the mismatch in the introduction of a new technical measure in annex IIA and the national coding of the gear in the logbook. This has meant that the use of the special condition IIA8.3a has been assessed by other data sources than the logbook. During 2007, gear code for the 8.3a was introduced which allowed the data sources for 2005, and 2006 to be compared. The result from this comparison showed that the other data source and the logbook matched satisfactory. For special condition IIA8.3b there has been no such mismatch the introduction of the gear and the gear cod was introduced simultaneously.

UK England (England, Wales & Northern Ireland): UK England Wales NI provided effort data for 2000-2008. Details of the approach used to provide data is given in the Section at the end of this note (Detailed description of Eng and Wales data). The submission in 2009 involved revision of data. Work has been carried out to improve the linkage of activity to special conditions in light of contact with the Commission and the JRC to deal with inconsistencies and differences in interpretation of the special conditions, for example, instances where the special condition had been interpreted differently by the UK as well as instances where errors in the allocation of effort to the special conditions had occurred. In addition, the various quality initiatives introduced by the JRC in the central processing of the data reported to improve the quality of the data have been worked back to be included in the initial processing stages in the UK – for example, instances of data oddities (e.g. mesh sizes being reported for gears where meshes are not applicable such as long lines) are now detected and treated as appropriate in the compilation of data prior to submission.

In addition to the above, within the UK there have been changes to the core data source used to switch from a dedicated reference databases compiled from an aggregation of data from separate databases on activity held by the different fisheries administrations in the UK to using the IFISH UK database introduced as part of continuing development of combined data systems within the UK. This move has led to some slight changes in the data, primarily as a result of a change in the linkage to the vessel details for engine power and gross tonnage. These changes have been separately assessed and are of a minor overall impact.

UK (Scotland): Scotland provided effort data for the years 2000-2008. Effort is provided in terms of kW*days at sea (kWdays), gross tonnage*days at sea (GTdays) and number of vessels per category. Number of vessels and kWdays data are provided for all years. Effort in terms of Gross Tonnage*days at sea is provided for the years 2003-2007 consistent with the completion of EU wide vessel gross tonnage recalibration. As for catch data, effort data conforms to the aggregation by quarter, area, gear and mesh size as set out in the data request. Fisheries are defined using the combination of gear, mesh size and fishing area as specified in the STECF data requirement. Fisheries were further split according to SGDFP format area definitions (4, 7d etc). Special conditions (as per Appendix 5 of the data requirements document) were applied where possible. The databases available to UK (Scotland) do not provide information on whether a vessel has adopted one of the technical measures relevant to some special conditions or on special conditions requiring in-season management. Therefore, special condition designations have only been entered for certain fisheries. These include fisheries that can be built up from vessels active in 2002 and whose track record complied with one of the species composition rules set out in Annex IIA of regulation 40/2008. That is, all records of vessels fishing within waters subject to the effort rules of Annex IIA were grouped according to unique combination of vessel, gear type and mesh size range as used by Scottish government marine directorate (this combines gear groups 4.a.ii and 4.a.iii; also 4.a.iv and 4.a.v). For data for 2002 the annual catch composition of these grouped records were tested for compliance with the special condition requirements and special condition codes assigned to vessels if appropriate. In terms of area, all activity of a given vessel in 2002 was aggregated. For other years vessel, gear and mesh size combinations received the same special condition status as applied in 2002 (assuming the same combination existed in 2002). Also special condition 8.1(i) was applied to vessels using beam trawls with mesh size ≥ 100 mm if they had used beam trawls with mesh < 100 mm in 2003, 2004, 2005 or 2006 and special condition 8.1(g) for vessels using trammel nets with mesh size < 110 mm and absent from port no more than 24 hours. After assignment of special condition status vessels were grouped into fisheries. If a vessel fished in more than one area or used more than one type of gear or mesh size it is possible for it to contribute to more than one fishery grouping and to have qualified for special condition status in one or more fisheries but not in others. The number of vessels associated with each gear, mesh size, SGDFP area and special condition status has also been provided. Any vessel assigned to more than one fishery grouping will be counted in the number of vessels contributing to each grouping, i.e. there is the possibility of multiple counting of vessels. Existing special conditions were assigned exclusively i.e. there is no repetition of records to accommodate assigning more than one special condition code. So for example if a fishery qualified for both special condition code IIA81c and IIA81d it would be assigned IIA81d on the grounds the latter allows a greater number of days at sea. Catch assigned to statistical squares west of the line defined in section 2.2 of Annex IIA have not been excluded from calculations determining 2002 track record. The special condition defined under Annex IIB was found not to be relevant to Scottish vessels. No recorded landings from the divisions regulated under Annex IIB are present in any of the years 2000-2007. Data is compiled on a basis comparable with the information from the rest of the UK. Effort on voyages using more than one mesh size is allocated according to log book data. This affects the information for effort in the years prior to 2003, when vessels were allowed to use different mesh sizes within the same voyage. Similarly, effort on voyages fishing in more than one rectangle is allocated according to logbook data. Starting with the 2007 STECF meetings Scottish fleet effort for the other gears (dredges, pelagic seines, pots) is provided directly by UK (Scotland) on a comparable basis with that provided previously by UK (England).

Detailed description of Eng and Wales data

Notes on compilation of data submission for ENG on landings and effort for SGMOS 09-04

General notes on coverage of activity:

The data supplied under databases titled “ENG” include data related to the fleets of England, Wales and Northern Ireland with a full coverage of activity in terms of covering all landings by such vessels into the mainland UK as well as landings abroad into other Member States and into Third Countries. Details are also included for the Isle of Man and Channel Islands (Guernsey, Jersey) where available, which tends to be instances where such vessels have made landings into mainland UK, and as such the information is an incomplete coverage of the situation.

In the compilation of data the data call has been followed, taking in decision made during the group on the treatment of issues as they arose.

Data related to over 10m vessels:

The key source of information that feed into the compilation of data are the information on activity and landings reported on the EU logbook, landing declarations and sales notes received by administrations covering all activity by such UK registered vessels. These provide the source of landings and activity data used in the compilation of the data.

In the compilation of data an individual record is created for each unique instance of fishing activity during the trips:

- Day of activity
- Gear used
- Mesh size used
- ICES rectangle of activity (bringing with it the associated ICES Region and Division information – for areas not covered by ICES rectangles the appropriate more aggregated unit of area is also used).

As such if a vessel fishes with either a different gear, mesh size or in a different ICES rectangle in a given day, then a separate record is created. This reflects the requirements for the completion of an EU logbook, where such changes in activity require the completion of a separate line on the logbook.

The overall length of time at sea is calculated from trip information in terms of whole calendar days at sea using the formula:

$$\text{Days absent at sea on trip} = [\text{date return}] - [\text{date departure}] + 1$$

This calculation is done at the level of each trip to produce an estimate for the time at sea in whole days. However, this calculation can allow double counting of individual days – for example if a vessel lands on one day then sets out on another trip that same day, it effectively would be counted as a day of activity in both trips. As such an adjustment is made for such potential double counting of activity to remove 0.5 of a day from each trip when such cases are seen, giving an adjusted total length of time for the trip.

This overall length of time at sea for the trip is then allocated pro-rata across each day of actual fishing activity reported by the vessel during the trip. If more than one instance of activity is reported for each day (for example, use of multiple gears or mesh sizes in one day, or fishing in a

different ICES rectangle) then that day's activity is split pro-rata across each instance of activity during the day.

Thus the overall length of a trip is split across each instance of activity – the effectively means that non-fishing (steaming) time is allocated across all the areas of activity seen during the trip.

With regards to the landings data, the overall accurate landed weight of fish is derived from landings declarations and sales notes reported for the trip. These accurate weights are then converted to live weight equivalents for each species and then allocated across the matrix of species and instances of activity as reported by the operator in the EU logbook. This allows each instance of activity in a day to be allocated its appropriate share of the total quantities of fish landed during the trip.

Data on activity and landings for each vessel are then linked to the vessel information from the UK register of fishing vessels to incorporate details of gross tonnage and engine power of the vessels at the time of the trips, allowing the production of effort data:

For Database B – effort data for 2000-2008:

- Nominal Effort in KW days = days at sea x engine power
- GT Days at sea = days at sea x gross tonnage

For Database C – Effort data for 2003-2008 at rectangle level:

- Effective effort = days at sea x 24 to give hours

Data related to vessels 10m and under:

For vessels 10m and less overall length, a similar process is followed but this is complicated in that there is no statutory reporting of fishing activity as the use of the EU logbook is not mandatory for these vessels. Information has historically been obtained from interviews, sales notes and landings declarations and from local knowledge by district fisheries offices around the UK. In the case of shellfish vessels, data is obtained from the mandatory licensing scheme for all vessels, which includes a requirement to complete and submit a summary record of daily activity each month. Together, these sources of information allowed the production of estimates of catch and effort data –sometimes at the level of individual vessels, but more often are as aggregate estimates for groups of vessels working in local areas.

From 1st September 2005 UK Fisheries administrations introduced the requirement for buyers and sellers of fish at first point of sale to be registered. This had a significant advantageous impact on the amount of data being received on the activity of individual vessels of all sizes but particularly those of 10m overall length and under. This information is now being captured at the level of individual vessels and individual trips for each vessel through the use of sales notes data on quantities and values of fish landed. When this information on landings is entered onto UK systems, estimates of the associated fishing effort are also entered based on the knowledge staff in local fisheries offices have of the individual vessels involved. During 2006 quality assurance measures took place before a fully switch over to using this more detailed source of data from July 2006 onwards.

The result of this is that for years earlier than 2006, whilst the information on landings provided includes the full level of landings reported, it does not include details of the vessels involved, and as such while estimates of the gears/mesh sizes involved in the activity are included, they are only estimates given that whilst it is possible to observe the quantity of landed fish, it is difficult to

properly estimate the number of vessels involved as well as the number of trips that such landings represent. As such it is only for more recent years where the new source of information on activity of individual vessels involved is available from the obligations for the reporting of sales notes that more accurate information on the level of effort by 10m and under vessels at the level of individual vessels has been available.

As such the reported effort data for these small vessels has been constrained to only include the activity reported against individually identified vessels. The data on landings includes all information, including the data reported under grouped data entries in years before and for part of 2006. As such care thus needs to be taken when comparing the level of effort and the level of landings for this group of vessels.

Compilation of information for special conditions

Following discussions with the Commission and the JRC as part of identifying the need for corrections in the baseline effort levels established for the UK for the cod recovery regime for 2009, the methodology for allocating activity to the various special conditions has been revised:

- It is constrained to only lodge special conditions for activity within the area defined by the cod recovery regime.
- A consistent approach has been taken across the UK in the calculation of activity that allocates it to the arioso special conditions.
- A cross-check has been introduced in the compilation stage that ensures that special conditions can only be listed against the activity with the specific gears involved.
- Amendments were made following decisions taken at the group on how these conditions should be interpreted – for example, the interpretation of Special Condition IIA83(i) (formerly IIA81(i)) related to beam trawl activity.
- For instances where a vessels activity would make it eligible for more than one of the special conditions, its effort has been allocated to the one that would have been most beneficial to it in terms of increased days at sea allowed under het cod recovery regime.
- As such the allocation of effort to the special conditions has been improved to follow the consensus of the group and so to improve the consistency of the data.

Effort in the Biologically Sensitive Area

Effort in the Biologically Sensitive Area defined by the Western waters effort regime was taken as any effort in the rectangles listed in the corrected data call – as such the full effort details for those rectangles that are only partly within the area are included under the heading, leading to a possible overstatement of the effort involved in the area itself.

Deep sea species effort

Deep Sea Species activity was defined using the decision tree agreed during the meeting, where activity is to counted as Deep Sea Species related activity using the following hierarchy:

1. A Deep Sea Species specific gear was used (Not applicable for the UK data due to the mixed nature of the UK fisheries)
2. More than 100kg of the deep sea species as listed in Annex 1 of Council Regulation (EC) 2347/2002 were landed during the trip –
3. For other trips – the deep sea species listed in Annex 1 of Regulation 2347/2002 made up more than 35% of the total quantity of all species landed from the trip.

In instances where rules 2 and 3 resulted in the trip being regarded as Deep Sea Species related, this led to all the individual instances of activity reported during the trip being classified as deep sea species related.

Differences from last year's submission

Work has been carried out to improve the linkage of activity to special conditions in light of contact with the Commission and the JRC to deal with inconsistencies and differences in interpretation of the special conditions, for example, instances where the special condition had been interpreted differently by the UK as well as instances where errors in the allocation of effort to the special conditions had occurred. In addition, the various quality initiatives introduced by the JRC in the central processing of the data reported to improve the quality of the data have been worked back to be included in the initial processing stages in the UK – for example, instances of data oddities (e.g. mesh sizes being reported for gears where meshes are not applicable such as long lines) are now detected and treated as appropriate in the compilation of data prior to submission.

Also as and when decisions were made during the meeting of the group on how to treat particular instances and issues in the compilation and reporting of data, changes were made to the compilation process.

In addition to the above, within the UK there have been changes to the core data source used to switch from a dedicated reference databases compiled from an aggregation of data from separate databases on activity held by the different fisheries administrations in the UK to using the IFISH UK database introduced as part of continuing development of combined data systems within the UK. This move has led to some slight changes in the data, primarily as a result of a change in the linkage to the vessel details for engine power and gross tonnage. These changes have been separately assessed and are of a minor overall impact.

4.4.2. Summary of findings for Annex II, Celtic Sea and Baltic

This section (4.4.2) may be subject to amendment or elaboration pending finalisation of the SGMOS 05-09 WG Report.

General remarks

- STECF- SGMOS was given an extensive list of TORs to tackle. Good progress was made with some of these although TORs concerning catch data quality was not addressed and the Group considers that outcomes from SGRN will inform this process. TORS concerning Deep Sea and Western waters were partly tackled
- STECF-SGMOS has during its three meetings updated fleet specific effort and catch (including discard estimates where available) data up to 2008 and provides results based on

an aggregations defined in Annexes IIA, IIB and IIC to Council Reg. 40/2008 and also 43/2009. Several countries revised and improved their submissions although there are still shortfalls from some member States. Data were provided on a wider range of metrics including catch by country and CPUE by country

- STECF-SGMOS was again asked to collate data and advise on the Celtic Sea and completed a detailed section in the Annex II report addressing several additional TORs.
- STECF-SGMOS was asked to collate data and advise on the Baltic Sea and completed a new report. This provides an incomplete picture owing to very poor data provision from some member states
- STECF-SGMOS notes that assignment of derogations is based on best expert knowledge, data availability, and methods used which also reflects cooperation with the national control and enforcement institutions. In a number of cases improved communication and submission has taken place but there is some way to go. The simplification of effort categories in the Annex IIA cod plan should enhance quality.
- STECF-SGMOS continues to be concerned over the fleet specific estimates of total catches in some areas and for some fleets. This is mainly due to the quality of discard estimates provided. It is unclear how representative these are and what their precision is. The group considers that estimates of catch and CPUE should be used with caution.
- STECF-SGMOS considers that it would be advantageous if there was closer alignment between the effort management regime and the requirements and rational of the new Data Collection Framework. Such rationalisations would improve evaluation of fleet effort regulations.
- STECF SGMOS reiterates earlier comments about support and maintenance of the STECF database.
- Given the repeated experience of late and inconsistent data reports received from some Member States, STECF considers that continuing efforts by the Commission will be required to inform and educate national administrations on the required procedures, timescales and quality of data submissions. To this end, STECF **recommends** that there is i) a repeat of the 2009 effort workshop early in 2010 ii) early **notification** and subsequent release of the 2010 data call.

Review of Annex IIA of Council Reg.s 40/2008 and 43/2009 in the context of the cod recovery plan (Regulation 423/2004):

- STECF-SGMOS notes consistency between the updated fleet specific effort and catch data provided in 2009 and the historic information provided in previous years for a number of member States but draws attention to differences in some member states where structured data revision took place.
- STECF-SGMOS notes that the shift away from the derogation based approach in 40/2008 to the reduced gear categories in 43/2009 has simplified the task and is likely to lead to more reliable categorisation and reporting.
- STECF-SGMOS estimated further effort reductions from 2007 to 2008 in most areas regarding most of the cod, plaice and sole sensitive derogations, particularly trawl gears and gill netters.
- STECF-SGMOS continues to observe a high constancy in the catch compositions of the fleets defined in Annex IIA.

- STECF-SGMOS notes increased discards of 3 year old cod in 2008 (year class 2005) in the Skagerrak, in the North Sea and to the West of Scotland by the majority of cod sensitive gears.

Review of Annex IIB of Council Reg. 40/2008 in the context of the recovery plan for Southern hake and *Nephrops* (Regulation 2166/2005)

- STECF-SGMOS notes that data were provided by Spain and Portugal but that there were many inconsistencies and errors such that not all effort could be assigned adequately to regulated gears.

Review of Annex IIC of Council Reg. 40/2008 in the context of the recovery of Western Channel sole (proposal COM (2003) 819 final)

- STECF-SGMOS notes that with the exception of discard data there have been significant improvements in the provision of data from member states and the requested fleet specific effort data is now regarded as complete. The lack of discard data continues to impair the estimation of catches and some inconsistent data aggregations prevents a precise review of the effects of the defined derogations.
- STECF-SGMOS notes that there are no indications of effort reductions in terms of kW*days, GT*days or number of vessels regarding the sole sensitive derogations. Overall effort is lowest in the time series.
- STECF-SGMOS notes that the non-regulated (effort in days at sea) otter trawl fleet accounts for about 85% of the effort and contributes significantly to the estimates of landings in weight of cod (84%), plaice (23%) and sole (about 33%). In the case of cod, unregulated otter trawl take about 81% of the total

Review of Celtic Sea effort and catches in the context of proposals to extend the cod recovery zone to include cod stocks in this area

- Data were provided by key players in the fisheries operating in the Celtic Sea region. The coverage was considered adequate to continue the process of describing and detailing activities and catches using the framework of the Annex IIA as applied in other areas.
- STECF SGMOS was able to provide summaries for two different spatial descriptions. One for the Celtic Sea as a whole and one for ICES areas VIIIfg only.
- Trawl effort predominated in both areas and has declined in both areas recently.
- Results suggested that the VIIIfg definition of the Celtic Sea accounted for a large part of the cod landings of the area as a whole and that the CPUE of cod in this area is higher than the area as a whole.
- STECF SGMOS discussed whether any future extension of the cod recovery plan to apply to the Celtic Sea cod stock should apply to the whole area or would be effective if restricted to the smaller subset area. It was considered that additional information (such information on spawning area or nursery ground) in areas outside VIIIfg would be needed to make such a judgement.

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

- STECF SGMOS made good progress with the available data but was hampered by the lack of adequate fishing effort from some nations, most notably Poland.

On the basis of the partial effort data supplied, the overall trend has been markedly downward.

4.5. SGECA-09-03: Evaluation of data related to the fish processing sector

STECF is requested to review the report of the SGECA-09-03 Working Group of October 19 - 23, 2009 (Ispira) meeting, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGRN/ECA-09-02 Working Group are to be found in Annex V.

STECF comments and recommendations

STECF recognises the fish processing industry as an important factor contributing to accomplishing one of the basic aims of the Common Fisheries Policy: the sustainable use of marine living resources. Therefore, STECF sees this first evaluation of data from the fish processing industry as an important step to show how the catching and processing sectors can interact and affect each other's success. It additionally may show the linkage between consumer preferences, fish processors and the catching sector (as in the case of certification).

STECF observes that the report is a good attempt at the first EU-wide analysis of the performance of the fish processing sector.

STECF notes that given the late availability of data to the working group, the working group members found it difficult to complete and check their work during the week available.

STECF recognises that SGECA 09-03 managed to address to some extent all Terms of Reference with the exemption of 3e. However, STECF notes that some of the responses to the TORs need further discussion or improvement. Some MS did not deliver data or delivered only part of the data requested. Some data sets are internally inconsistent and there are large differences in the amount of data delivered by various countries.

STECF notes that some of the indicators presented, such as turnover per employee, seem highly implausible, and that this could have been mentioned in the working group report. STECF further notes that for some of the MS whose figures seemed implausible, there was no expert who could be asked to check the validity of the figures.

STECF observes that there is room for error and misunderstandings in regulation 1639/2001 concerning the parameters collected under the DCR. There is also large variation in which parameters were reported and the level of detail in the data. The heterogeneity in parameters that were collected and reported undermines the possibility to conduct analyses on a larger scale and on an EU level.

STECF regrets that some MS have not submitted data that is required by regulation 1639/2001. STECF observes that MS must follow the specifications in regulation 199/2008 and the guidelines for data collection under the DCF provided by SGECA 08-01 and SG-RN/ECA 09-03 in order for JRC or working groups to be able to analyse the data.

STECF further notes that in particular the issues raised under TOR 3 on a discussion of future possible issues following from the data analysis need to be addressed in more depth. Point 3 e) on cost structures and vulnerabilities was not addressed at all, point 3 d) on regional dependency on the

fish processing industry was included in the national chapters and for 3 b) it is not clear that a regional or segment specific (e.g. whitefish segment) analysis makes sense at all.

Data on the fish processing industry are partly collected by national statistical offices. There are two regulations for the data collection: NACE and ProdCom (both under number 10.20, fish processing industry). NACE is a systematic approach to data collection from a company perspective following the main activity. A company may have many activities, one of which is fish processing. This source of information only includes data on cost structure. In cases where fish processing activity is of minor importance to the company it is not reported as fish processing. Especially in large companies this might lead to bias in the data and any analyses conducted.

The second main regulation for collection of data is the ProdCom. In this case companies have to deliver data on production of commodities. In this case all companies above 20 FTE have to deliver data on their fish products. However, under this regulation sales prices and sales volume are the only data requested. Nevertheless, the ProdCom gives a better overview of total production. It is a problem that there are differences in how MS interpret the different categories under 10.20, and in many cases this makes it impossible to compare the data between countries.

STECF observes that in the new DCF, especially in Commission Regulation 1581/2004 and 199/2008, collection of data on amounts of raw material is no longer requested. STECF suggests that a critical analysis of the technical reports, national programmes and this report is necessary to clarify the possibilities and practicalities of collecting data on the amounts of raw material used in the processing industry. These data is crucial to answer the question on the linkages between the processing sector and the EU fleet. STECF suggests that the Commission should clarify this via a study or a separate working group. If there is to be a separate committee on the quality of economic data then that committee could deal with this issue as well.

STECF observes that the SGECA 09-03 working group developed a format and structure for the national chapters and for some useful indicators. STECF notes that a publication equivalent to the Annual Economic Report of EU Fishing Fleets would be a useful presentation of the data and analysis conducted by the working group and may be done every year to be able to show trends in the industry. For next year **STECF recommends** additionally a follow up on some of the issues not adequately addressed in this first report. The TORs for next year's meeting should include at least: data coverage and quality, national chapter, EU level analysis, discussion of possibilities for deeper economic analysis, analysis of cost structures and vulnerabilities.

STECF observes that section 7.2. of the working group report presents possible deeper economic analysis based on data collected under the old and new data regulations. The possibilities presented here are ambitious, and are not feasible if economic data are provided on a national level only, as requested by the DCR/DCF. In order to be able to conduct the analyses proposed here, **STECF recommends** that at the national institutes, data should be disaggregated by either type of commodity or by company size.

STECF recommends that working groups and calls for data are better organised and co-ordinated so that data are received by JRC staff, analysed and checked with the appropriate MS where necessary, before the start of the STECF working group. The previously suggested STECF time frame (see STECF 20083 [winter plenary report]) the preparation of the fleet data could be taken as a basis.

4.6. SGRN/ECA-09-03: Review of NP & TR Guidelines

STECF is requested to review the report of the **SGRN/ECA-09-03** Working Group of October 19 - 21, 2009 (Ispra) meeting, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGRN/ECA-09-02 Working Group are to be found in Annex VI.

Background

SGRN/ECA-09-03 met in Ispra during 19-21 October 2009 to review and establish guidelines and standard tables for the submission of National Programme (NP) proposals and Technical Reports (TR) under the new DCF (Reg. 199/2008), based on the drafts elaborated at SGRN-08-01 and SGRN/ECA-09-02.

STECF comments and recommendations

STECF appreciates the Working Group's progress in reviewing and establishing improved guidelines for NP proposals and TR and corresponding standard tables. STECF endorses the approach and the majority of the findings of the Working Group.

STECF notes that not all of the recommendations in the Report of the SGECA-09-02 'Working Group on the quality aspects of the collection of economic data' (Barcelona, 11-14 May 2009) with regard to the inclusion of a 'methodological report' in the NP proposals and TR have been incorporated in the guidelines for NP proposals and TR. In order to take all recommendations of SGECA-09-02 into account, amended text for the economic part (III.B) of the guidelines for NP/TR and corresponding standard tables (III.B.2, III.B.3, IV.A.3, IV.B.2) are provided in Sections 4.6.1 to 4.6.3 for inclusion in the final versions of the guidelines and tables.

STECF further appreciates that recommendations by the Regional Co-ordination Meetings (RCMs, Sep-Oct 2009) for amendments of the guidelines and tables have been taken into account by SGRN/ECA-09-03.

With regard to the standard tables to be filled in by MS in their NP proposals and TR, STECF notes that there are several multiple entries to be made by MS for sampling activity information, e.g. the number of observer trips and fish to be measured. In particular, the entry of age samples into Table III.C.5 is confusing and redundant, as section III.C of the guidelines is dealing with metier-related variables only and age sampling is dealt with in section III.E and Table III.E.3. Consequently, only length sampling should be entered in Table III.C.5 and column H (requesting information on 'Variable expressed by length or by age?') in Table III.C.5 should be deleted.

SGRN/ECA requested clarification from STECF regarding the remit of the RCM on Long-Distant Fisheries (and corresponding participation of MS) and the species for which economic data from aquaculture should be collected. STECF **recommends** that at least Cyprus, France, Germany, Greece, Italy, Lithuania, Malta, The Netherlands, Portugal and Spain should participate in the RCM on Long-Distant Fisheries, considering their fisheries in the CECAF area, South Pacific, Indian Ocean and 'other regions where fisheries are operated by EU vessels and managed by RFMOs'.

Regarding the species list for economic data collection from the aquaculture sector (Table IV.A.1), STECF **recommends** to leave the list open (groups of species instead of exact species names) in order to include species that might become important for aquaculture in future.

4.6.1. *STECF proposal for amended text (marked in red) of the economic part of the DCF Guidelines for National Programme (NP) proposals*

III.B Economic variables

[Insert here supra-region header, according to Appendix II of Commission Decision 2008/949/EC. For each supra region, sections III.B.1-4 should be given.]

This section of the NP should provide a clear and detailed description of the data collection methodologies in the MS. MS is invited to refer to the report of the STECF/SGECA 09-02 meeting for additional clarifications.

III.B.1 Data acquisition

(a) Definition of variables

The variables are listed and defined in Appendix VI of Commission Decision 2008/949/EC. For those variables which are not defined in the Appendix VI MS should provide definition.

Templates for calculation of capital value and depreciation are available on the DCF website (<http://fishnet.jrc.it/web/datacollection>). MS shall consider them and give information on data estimation procedures. In the case they are not used MS should provide justifications.

The methodology for calculation of FTE should be in accordance with the Study FISH/2005/14 and amendments made by SGECA 07-01 report (15-19 January 2007, Salerno) and should be explained in the NP.

In addition to variables listed in Appendix VI of Commission Decision 2008/949/EC, environmental indicators to measure the effects of fisheries on the marine ecosystem should be considered. In particular, within this section of the NP, MS shall describe the methodology to calculate the “fuel efficiency of fish capture” (indicator 9 of Appendix XIII of Commission Decision 2008/949/EC). This indicator is calculated as the ratio between value of landings and cost of fuel, by quarter and by métier. MS shall describe the collection of value of landings by métier in the relevant section of the NP (section III.F.3). Regarding the quarterly cost of fuel by métier, it is recommended that, in the case it cannot be derived from direct survey, MS shall estimate it considering a proportionality with the quarterly effort by métier.

(b) Type of data collection

MS should firstly indicate which type of data collection is to be applied for each fleet segment and for each economic variable as listed in Appendix VI of Commission Decision 949/08. Three different types of data collection schemes could be used for data collection:

- A) Census, which attempts to collect data from all members of a population. This would include collection of data from administrative records, as well as other cases in which data are derived from sources originally compiled for non-statistical purposes
- B) Probability Sample Survey, in which data are collected from a sample of a population members randomly selected
- C) Non-Probability Sample Survey, in which data are collected from a sample of population members not randomly selected.

The Standard Table III.B.3 should be used in order to illustrate which different types of data collection schemes will be used for different segments and different variable.

(c) Target and frame population

The *target population* is the population for which inferences are made and is clearly defined in the DCF. MS should:

- explain if there are deviations from the definition given in the DCF;
- describe the fleet segmentation (Standard Table III.B.1 with numbers of vessels per segment should be supplied);

The *frame* is a device that permits access to population units. The frame population is the set of population units which can be accessed through the frame and the survey data then refer to this population. The frame contains sufficient information about the units for their stratification, sampling and contact. The information about frame population should be provided in Standard Table III.B.1.

For economic variables to be collected for active and non-active vessels, the population and the frame (normally based on the Community Fishing Fleet Register) are the same. For economic variables to be collected only for active vessels, the frame may be different from the population. In this case the source of information used to distinguish the frame from the population should be described.

The fleet segments in table III.B.1 should correspond to those listed in Appendix III of the DCF, and the 'Total population nos.' should be those of the official fleet register on the 1st of January. The column, headed 'Reference year' should give the year to which the data collected actually refer and thus may differ from the 'NP-years' in the top of the table. Example: if, as part of a MS's National Programme for 2011-2013, data have been collected on variable costs incurred in 2010, then the cell 'NP-year' in the top of the table should read '2011-2013' and the entry in the column 'Reference years' should read '2010'.

Clustering of fleet segments should be described and information should be given on the segments that are clustered, as required by the DCF and following SGECA recommendations.

MS should distinguish between segments considered for clustering as follows:

1. Important segments with distinct characteristics
2. Segments similar to other segments
3. Non-important segments with distinct characteristics

Importance of fleet segments should be assessed in terms of landings (value and volume) and/or effort. Similarity should be demonstrated using expert knowledge on fishing patterns or on available data on landings and/or effort.

MS is invited to refer to the report of the STECF/SGECA 09-02 meeting in order to cluster segments according to their different characteristics.

Standard Table III.B.2 should report the segments that have been clustered. Clusters should be named after the biggest segment in terms of number of vessels.

Following the proposal of the 2009 RCM Med and in order to ensure the comparability of data at regional level, clusters should be discussed and agreed by RCMs after the first year, i.e. in 2010.

Description of fields in the table III.B.1 : Population segments for collection of economic data

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code eg. “GER”
Supra-region	Refer to the naming convention used in the Comm. Dec 2008/949/EC Appendix II
Fleet segment	Refer to the naming convention used in Comm. Dec. 2008/949/EC Appendix III. put an asterisk in the case the segment has been clustered with other segment(s)
Reference year	Give the year to which the data collected actually refer and thus may differ from the 'NP-years' in the top of the table.
Target population no	Total number of vessels in each of the fleet segments.
Frame population no	Number of vessels accessible for sampling in each of the fleet segments.
Planned sample no	Number of vessels comprised in the sampling plan for each of the fleet segments. Where planned sample numbers differ for the estimation of different parameters within a segment, please give the appropriate range.
Planned sample rate	Planned sampling rate for each of the segments. Where planned sampling rates differ for the estimation of different parameters within a segment, please give the appropriate range.
Type of data collection scheme	Enter the code of the data collection scheme, as referred to in subsection III.B.1.(b).

Description of fields in the table III.B.2 : Economic Clustering of fleet segments

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code eg. “GER”
Supra region	Refer to the naming convention used in the Comm. Dec 2008/949/EC Appendix II
Reference year	Give the year to which the data collected actually refer and thus may differ from the 'NP-years' in the top of the table.
Name of the clustered fleet segments	Provide an entry for all the segments marked with an asterisk in table III.B.1
Total number of vessels in the cluster from the most recent information	Total number of vessels in each of the clusters.
Name of the clustered fleet segments	Provide an entry for all the segments marked with an asterix in Table III.B.1
Total number of vessels in the cluster from the most recent information	[Isn't it redundant with III.B.1?].
Fleet segments which have been clustered	Refer to the naming convention used in Comm. Dec. 2008/949/EC Appendix III
Classification of segments which have been clustered	I: Important segments with distinct characteristics S: Segments similar to other segments N: Non-important segments with distinct characteristics
Number of vessels in the	Total number of vessels in each of the fleet segments.

segment from the most recent information	
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Description of fields in the table III.B.3: Economic Data collection strategy

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code eg. "GER"
Supra region	Refer to the naming convention used in the Comm. Dec 2008/949/EC Appendix II
Variable group	Refer to the naming convention used in the Comm. Dec 2008/949/EC Appendix XII
Variables	Refer to the naming convention used in the Comm. Dec 2008/949/EC Appendix XII
Reference year	Give the year to which the data collected actually refer and thus may differ from the 'NP-years' in the top of the table.
Data sources	Enter the data sources, as referred to in subsection III.B.1.(d), for all the variables listed in Appendix .
Type of data collection scheme	Enter the code of the data collection scheme, as referred to in subsection III.B.1.(b).
Type of error	Bias and/or Variability
Accuracy indicator	According to STECF/SGECA 09-02 recommendations
Fleet segment	Fleet segments can be reported as "all segments" where the sampling strategy is the same for all segments, otherwise MS should specify the segments for which a specific sampling strategy has been used.

Regarding Chapter III A.2.(3) of the Commission Decision 2008/949/EC, MS have to describe the approach followed to allocate vessels in each supra region (e.g. fishing days, catches, ...).

(d) Data sources

The description should be provided per each type of data collection scheme.

MS should provide a list of data sources used (logbook, sales notes, accounts, etc.) and a description of each. The information on data sources used to collect each variable per segment should be provided in Standard Table III.B.3.

If a questionnaire is going to be used, a copy of this may be included in an annex to the NP. Otherwise MS shall provide it in the TR or updated NP.

MS should provide information how the consistency of data coming from different data sources will be ensured.

(e) Sampling frame and allocation scheme

The description should be provided if sampling is planned (Probability Sample Survey or/and Non-Probability Sample Survey).

Type of sampling strategy

MS should describe the selection of sampling units and therefore the type of sampling strategy used (e.g., simple random sampling, systematic sampling, sampling with PPS, multiple stage sampling, etc.)

Further stratification within fleet segment

MS should describe if fleet segments have been divided into subsets (strata) before the selection of a sample. MS should define what parameters have been used to stratify.

Determination of sample size for each fleet segment

MS should explain which targets have been used to determine the sample size and why these targets have been chosen. MS should present the sample size by fleet segment in Standard Table III.B.1, together with the coverage rate (number of vessels in the sample/number of vessels in the population).

Sample evolution over time, rotational groups

In the case where rotation is applied to substitute non-responsive units, this should be clearly described and the consequences for the estimates should be discussed.

MS should describe any projected changes in sample size over time and should report the number of sample units that will be substituted from one year to another.

III.B.2 Estimation

Information on methodologies to derive final estimates from data collected should be given for each variable.

Estimation methods from sample to population

MS should describe the type of estimators used according to the type of sampling strategy (for example, Horvitz-Thompson or Hansen-Hurwitz estimators)

MS should describe estimation procedures, including the nature of any additional information used. The text of the NP should contain a description of estimators and estimation procedures. Raising factors and other details may be included in an annex to the NP.

Imputation of non responses/ Non-response adjustments

MS should describe the statistical models used, e.g., regression analysis, adjustments of raising actors, etc.

Where substitution is applied in cases of unit non-responses, the following information should be provided:

- method of selection of substitutes;
- main characteristics of substituted units compared to original units.

III.B.3 Data quality evaluation

The description should be provided per each type of data collection scheme.

MS should describe the methods to assess the variability of the estimates and to assess the bias derived from non-responses and from the use of models in case of non-probability sampling. **MS is**

invited to refer to the report of the STECF/SGECA 09-02 meeting where these terms are defined and explained.

MS shall use standard table III.B.3 to give further details on the methods used to assure the quality of the collected data. Information on data quality evaluation depends on the type of data collection and on the type of error. Methods used have to be described in the text (MS should use The European Statistical System (ESS) standard quality reporting documents (EUROSTAT 2009a and 2009b) and SGECA recommendations may be used for more information).

MS should distinguish two types of error: bias and variability. Accuracy indicators should be provided in the Standard Table III.B.3. It is proposed that:

- in case of A – census. None variability indicators could be planned. MS should give information on targeted response rate.
- in case of B - Probability Sample Survey. Indicators of bias: coverage rates and/or response rates. Indicators of Variability: Coefficient of variation (CV)
- in case of C - Non-Probability Sample Survey. Indicators of bias: coverage rates and/or response rates. Indicators of Variability: variability of the estimates serves as accuracy indicator. MS should describe clearly the methods which will be used to assess such variability in this section of the NP.

III.B.4 Data presentation

MS should indicate when data will be available to end users and the time lag with respect to the reference year.

Confidentiality problems and the need for clustering of segments in the phase of presentation of the results should be discussed in this section.

III.B.5 Regional coordination

Use this section to describe the initiatives taken to coordinate the national programme with other Member States in the same marine region, with regard to the collection of economic variables. Formal multi-lateral agreements should be annexed to the NP Proposals of all referenced parties.

List the appropriate recommendations from all relevant RCMs and give a brief description of the responsive actions that will be taken. Print recommendations and planned responsive actions in a text table comprising on the left side the recommendations and on the right side the responsive actions. There is no need to also list recommendations that do not apply to MS (e.g. on the terms of reference of ICES expert groups, on actions to be taken by the EC, etc.).

III.B.6 Derogations and non-conformities

MS shall justify any derogation requested and any non-conformity with the requirements of the DCF. When relevant, this justification should be based on scientific evidence. Note that under the DCF there are no provisions for the exclusion of any part of the vessel population from data collection (by means of thresholds for, e.g., fishing effort, quantities landed, revenues, etc.).

IV.A Collection of data concerning the aquaculture

IV.A.1 General description of the aquaculture sector

Use this section, and standard table IV.A.1, to give a general and concise description of the MS's aquaculture sector. The prime aim of standard table IV.A.1 is to get an overview of the typologies of aquaculture present in each MS and also for which the NP Proposal should have either concrete plans for sampling activities or a justification of the requested derogations. Enter 'Yes' or 'No' in the appropriate cells of standard table IV.A.1, regardless of the quantities produced. If quantities produced by a certain segment are too small to justify any sampling activities, then this should be justified in the section « IV.A.6. Derogations and non-conformities » and should be identified with NS (no sampling) in table IV.A.1 in brackets behind “Yes” in the respective cell.

Provide information on the importance of the aquaculture sector compared with the fishery sector, in terms of values and volume (tons) of production.

IV.A.2 Data acquisition

(a) Definition of variables

The variables are listed and defined in Appendix X of Commission Decision 2008/949/EC. ~~For those variables which are not defined in the Appendix VI MS should provide definition.~~

~~Data sources (e.g. company accounts, survey, etc.) should be clearly stated for each variable. Methodologies to derive final estimates from these data sources should be described. Where survey work is being undertaken, concise details should be given about methodology (including sampling procedures). MS may provide detailed calculation procedures, including statistical ones, in an annex.~~

Specify which is the reference year of the data that will be collected and when final validated data will be available. In the different years of the NP data for different reference years will be collected. Hence a separate row for each variable or segment for each reference year has to be provided.

~~Follow Appendix XI of Commission Decision 2008/949/EC to stratify the population and enterprises should be segmented according to their main farming technique. In this view, describe the criteria used to identify the main farming technique (e.g. on the basis of turnover, production, ...).~~

~~Further segmentation on the basis of size or other criteria shall be explained.~~

The methodology for calculation of FTE should be in accordance with the Study FISH/2005/14 and should be explained in the NP.

(b) Type of data collection

Indicate which type of data collection is to be applied for each economic variable as listed in Appendix XII of Commission Decision 949/08. Three different types of data collection schemes could be used for data collection:

- A. Census, which attempts to collect data from all members of a population. This would include collection of data from administrative records, as well as other cases in which data are derived from sources originally compiled for non-statistical purposes
- B. Probability Sample Survey, in which data are collected from a sample of a population members randomly selected
- C. Non-Probability Sample Survey, in which data are collected from a sample of population members not randomly selected.

(c) Target and frame population

Use standard table IV.A.2. to give a general outline of (i) the population nos. by segment, (ii) the planned sampling levels and sample rates (columns 'Planned sample no.' and 'Planned sample rate'), and (iii) the sampling method(s) that will be used (column 'Sampling strategy'). The segments in table IV.A.2 should correspond to those listed in Appendix XI of the DCF.

Description of fields in table IV.A.2: Population segments for collection of aquaculture data

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code e.g. “GER”
Segment	Refer to the naming convention used in Comm. Dec. 2008/949/EC Appendix XI.
Reference year	Give the year to which the data collected will refer and thus may differ from the 'NP-years' in the top of the table.
Total population no	Number of enterprises comprised in each of the segments.
Frame population no	Number of enterprises accessible for sampling in each of the segments.
Planned sample no.	Number of enterprises comprised in the sampling plan for each of the segments. Where planned sample numbers differ for the estimation of different parameters within a segment, please give the appropriate range.
Planned sample rate	Planned sampling rate for each of the segments. Where planned sampling rates differ for the estimation of different parameters within a segment, please give the appropriate range.
Type of data collection scheme	Enter the code of the data collection scheme, as referred to in subsection (b).

Description of fields in table IV.A.3: Sampling strategy - Aquaculture sector

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code e.g. “GER”
Variables (as listed in Appendix X)	Enter the name of the variables as listed in Commission Decision 2008/949/EC Appendix X.
Reference year	Give the year to which the data collected will refer and thus may differ from the 'NP-years' in the top of the table.
Data sources	Indicate the name(s) of the sources used for collecting the data and detailed in section IV.A.2.(e) of the NP proposal.
Type of data collection scheme	Indicate the code of the data collection scheme as detailed in section IV.A.2 (b) of the NP proposal.
Variability indicator	Specify the variability indicators to be used in relation to the type of collection scheme
Type of error	Bias and/or Variability
Accuracy indicator	According to STECF/SGECA 09-02 recommendations
Segments	Enter the name of the segments, which may be a composition of the segments names listed in Commission Decision 2008/949/EC Appendix XI.

The population to be considered is composed of enterprises whose primary activity is defined according to the EUROSTAT definition under NACE Code 03.2: “Fish Farming”. In case additional sources (e.g. veterinary register, aquaculture licences register, ...) are to be used to adjust the population, MS shall explain the procedure used.

Follow Appendix XI of Commission Decision 2008/949/EC to stratify the population and enterprises should be segmented according to their main farming technique. In this view, describe the criteria used to identify the main farming technique (e.g. on the basis of turnover, production, .). Further segmentation on the basis of size or other criteria shall be explained.

The column, headed 'Reference year' should give the year to which the data collected actually refer and thus may differ from the 'NP-years' in the top of the table. Example: if, as part of a MS's National Programme for 2011-2013, data have been collected on the turnover made in 2009, then the cell 'NP-year' in the top of the table should read '2011-2013' and the entry in the column 'Reference year' should read '2009'.

Target population.

The target population is the population for which inferences are made and is defined in the DCF. MS should:

- explain if there are deviations from the definition given in the DCF;
- describe the segmentation if it is used.

Frame Population.

The frame is a device that permits access to population units. The frame population is the set of population units which can be accessed through the frame and the survey data then refer to this population. The frame contains sufficient information about the units for their stratification, sampling and contact. The information about frame population should be provided in Standard Table IV.A.2.

(d) Data sources

Provide a list of data sources planned to be used and a description of each. The information on data sources to be used to collect each variable per segment (if segmentation is used) should be provided in Standard table IV.A.3.

If a questionnaire is going to be used, a copy of this may be included in an annex to the NP.

Provide information how the consistency of data coming from different data sources will be ensured.

(e) Sampling stratification and allocation scheme

The description should be provided if sampling is planned (Probability Sample Survey or/and Non-Probability Sample Survey).

Type of sampling strategy

Describe the selection of sampling units and therefore the type of sampling strategy used (e.g., simple random sampling, systematic sampling, sampling with PPS, multiple stage sampling, etc.)

Further stratification within sector/segment

Describe if sector/segments will be divided into subsets (strata) before the selection of a sample. MS should define what parameters will be used to stratify.

Determination of sample size

Explain which targets have been used to determine the sample size and why these targets have been chosen. Present the planned sample size (if segmentation is used by segment) in Standard table IV.A.2.

Sample evolution over time, rotational groups

In the case where rotation is applied to substitute non-responsive units, this should be clearly described and the consequences for the estimates should be discussed.

Describe any projected changes in sample size over time and should report the number of sample units that will be substituted from one year to another.

IV.A.3 Estimation

Information on planned methodologies to derive final estimates from data collected should be given for each variable.

Estimation methods from sample to population

Describe the type of estimators to be used according to the type of sampling strategy (for example, Horvitz-Thompson or Hansen-Hurwitz estimators)

Describe estimation procedures, including the nature of any additional information planned to be used.

The text of the NP should contain a description of estimators and estimation procedures. Raising factors and other details may be included in an annex to the NP.

Imputation of non responses/ Non-response adjustments

Describe the methods planned (e.g., regression analysis, adjustments of raising actors, etc.) for dealing with non-responses and other data deficiencies.

IV.A.4 Data quality evaluation

A description should be provided per each type of data collection scheme.

Use standard table IV.A.2 to give further details on the sampling methods used (column 'Sampling strategy') and describe the methods planned to assure the quality of the collected data.

MS should describe the methods to assess the variability of the estimates and to assess the bias derived from non-responses and from the use of models in case of non-probability sampling. MS is invited to refer to the report of the STECF/SGECA 09-02 meeting where these terms are defined and explained

MS shall use standard table IV.A.3 to give further details on the methods used to assure the quality of the collected data. Information on data quality evaluation depends on the type of data collection and on the type of error. Methods used have to be described in the text (MS should use The European Statistical System (ESS) standard quality reporting documents (EUROSTAT 2009a and 2009b) and SGECA recommendations may be used for more information).

MS should distinguish two types of error: bias and variability. Accuracy indicators should be provided in the Standard Table IV.A.3. It is proposed that:

~~Information on data quality can be given in terms of target precision levels in the case of statistical sample and in terms of sample rate when precision levels cannot be calculated. Other methods can also be used and they have to be described in the text (MS should use The European Statistical System (ESS) standard quality reporting documents (EUROSTAT 2009a and 2009b) and SGECA recommendations may be used for more information).~~

~~Two types of error should be distinguished: bias and variability. Targets for variability indicators should be provided in the Standard table IV.A.3. It is proposed that:~~

- ~~• in case of A – census. None variability indicators could be planned. MS should give information on targeted response rate.~~
- ~~• in case of B - Probability Sample Survey. Indicators of bias: coverage rates and/or response rates. Indicators of Variability: Coefficient of variation (CV)~~

~~in case of C - Non-Probability Sample Survey. Indicators of bias: coverage rates and/or response rates. Indicators of Variability: variability of the estimates serves as accuracy indicator. MS should describe clearly the methods which will be used to assess such variability in this section of the NP For data collection type A (census), where the variability indicator is “none”, MS should give information on the targeted response rate;~~

~~For data collection type B (Probability Sample Survey), the coefficient of variation (CV) is preferred as an accuracy indicator and has to be used to define the planned target for data collection. However MS could use other accuracy indicators to define the planned targets (e.g. precision level, confidence intervals etc.);~~

~~For data collection type C (Non-Probability Sample Survey), the variability of the estimates serves as accuracy indicator. MS should describe clearly the methods which will be used to assess such variability in the NP.~~

IV.A.5 Presentation

Indicate when data will be available to end users, and the time lag with respect to the reference year. Confidentiality problems, and the need for clustering of segments when presenting the results, should be discussed in this section.

IV.A.6 Regional coordination

Use this section to describe the initiatives taken to coordinate the national programme with other Member States in the same marine region, with regard to the collection of economic data from the aquaculture sector. Formal multi-lateral agreements should be annexed to the NP Proposals of all referenced parties.

There may also be agreements reached during a RCM which are documented in the appropriate report, but for which there is no formal multi lateral signed document. In this case, the text of the appropriate RCM should be copied and pasted in italics in the NP proposal of all MS involved.

List the appropriate recommendations from all relevant RCMs and give a brief description of the responsive actions that will be taken. List any recommendations and planned responsive actions in a text table comprising on the left side the recommendations and on the right side the responsive actions. There is no need to also list recommendations that do not apply to MS (e.g. on the terms of reference of ICES expert groups, on actions to be taken by the EC, etc.).

IV.A.6 Derogations and non-conformities

MS shall justify any derogation requested and any non-conformity with the requirements of the DCF. When relevant, this justification should be based on scientific evidence.

IV.B. Collection of data concerning the processing industry

IV.B.1 Data acquisition –

(a) Definition of variables

The variables are listed and defined in Appendix XII of Commission Decision 2008/949/EC. For those variables which are not defined in the Appendix XII MS should provide definition and chosen methodology if necessary as stated in the Appendix XII of Commission Decision.

MS shall specify for which reference year the data will be collected and when finally validated data will be available. In the different years of the National Programme data for different reference year will be collected. Hence a separate row for each variable or segment for each reference year has to be provided.

The methodology for calculation of FTE should be in accordance with the Study FISH/2005/14 and should be explained in the NP.

(b) Type of data collection

Indicate which type of data collection is to be applied for each economic variable as listed in Appendix XII of Commission Decision 949/08. Three different types of data collection schemes could be used for data collection:

- A. Census, which attempts to collect data from all members of a population. This would include collection of data from administrative records, as well as other cases in which data are derived from sources originally compiled for non-statistical purposes
- B. Probability Sample Survey, in which data are collected from a sample of a population members randomly selected
- C. Non-Probability Sample Survey, in which data are collected from a sample of population members not randomly selected.

(c) Target and frame population

The population is defined in the DCF. The population shall refer to enterprises whose main activity is defined according to the Eurostat definition under NACE Code 10.20: ‘products’. ”Processing and preserving of fish, crustaceans and molluscs.”

For those enterprises that carry out fish processing but not as a main activity, it is also mandatory to provide information on population.

If segmentation is to be used the criteria for it should be number of persons employed and/or turnover. Standard table IV.B.1 should be used to present information on target and frame population. The column, headed 'Reference years' should give the year to which the data collected actually refer and thus may differ from the 'NP-years' in the top of the table. Example: if, as part of a MS's National Programme for 2011-2013, data have been collected on variable costs incurred in 2009, then the cell 'NP-year' in the top of the table should read '2011-2013' and the entry in the column 'Reference years' should read '2009'.

Target population.

The target population is the population for which inferences are made and is defined in the DCF. MS should:

- explain if there are deviations from the definition given in the DCF;
- describe the segmentation if it is used.

Frame Population.

The frame is a device that permits access to population units. The frame population is the set of population units which can be accessed through the frame and the survey data then refer to this population. The frame contains sufficient information about the units for their stratification, sampling and contact. The information about frame population should be provided in Standard table IV.B.1.

(d) Data sources

Provide a list of data sources to be used and a description of each. The information on data sources used to collect each variable per segment (if segmentation is used) should be provided in Standard table IV.B.2.

If a questionnaire is going to be used, a copy of this may be included in an annex to the NP.

Provide information how the consistency of data coming from different data sources will be ensured.

(e) Sampling stratification and allocation scheme

A description should be provided if sampling is planned (Probability Sample Survey or/and Non-Probability Sample Survey).

Type of sampling strategy

Describe the selection of sampling units and therefore the type of sampling strategy used (e.g., simple random sampling, systematic sampling, sampling with PPS, multiple stage sampling, etc.)

Further stratification within sector/segment

Describe if sector/segments have been divided into subsets (strata) before the selection of a sample. Define which parameters have been used to stratify.

Determination of sample size

Explain which targets have been used to determine the sample size and why these targets have been chosen. Present the sample size (if segmentation is used by segment) in Standard table IV.B.1.

Sample evolution over time, rotational groups

In the case where rotation is applied to substitute non-responsive units, this should be clearly described and the consequences for the estimates should be discussed.

Describe any projected changes in sample size over time and report the number of sample units that will be substituted from one year to another.

Description of fields in table IV.B.1: Processing industry: Population segments for collection of economic data.

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code e.g. "GER"
Segment	If applied, refer to the segmentation by number of employees used in Comm. Dec. 2008/949/EC Appendix XII or give the range of turnover for the different segments, when turnover is used for segmentation Otherwise indicate "entire segment".
Reference year	Give the year to which the data collected will refer and thus may differ from the 'NP-years' in the top of the table.

Total population no	Number of enterprises comprised (in each of the segments, if segmentation is used).
Frame population no	Number of enterprises accessible for sampling (in each of the segments, if segmentation is used).
Planned sample no.	Number of enterprises comprised in the sampling plan (for each of the segments, if segmentation is used). Where planned sample numbers differ for the estimation of different parameters (within a segment, if segmentation is used), please give the appropriate range.
Planned sample rate	Planned sampling rate for each of the segments. Where planned sampling rates differ for the estimation of different parameters within a segment, please give the appropriate range.
Type of data collection scheme	Indicate the code of the planned data collection scheme as detailed in section IV.B.1 (b) of the NP proposal.

Description of fields in table IV.B.2: Sampling strategy - Processing industry

Fields	Description/definition of the fields
MS	Member State shall be given as three letter code e.g. "GER"
Variables (as listed in Appendix XII)	Enter the name of the variables as listed in Commission Decision 2008/949/EC Appendix XII.
Reference year	Give the year to which the data collected will refer and thus may differ from the 'NP-years' in the top of the table.
Data sources	Indicate the name(s) of the sources used for collecting the data and detailed in section IV.B.1.(d) of the NP proposal.
Type of data collection scheme	Indicate the code of the data collection scheme as detailed in section IV.B.2.(b) of the NP proposal.
Type of error	Bias and/or Variability
Accuracy indicator	According to STECF/SGECA 09-02 recommendations
Variability indicator	Specify the variability indicators to be used in relation to the type of collection scheme
Segments	If applied, refer to the segmentation by number of employees used in Comm. Dec. 2008/949/EC Appendix XII or give the range of turnover for the different segments, when turnover is used for segmentation. Otherwise indicate "entire sector".

IV.B.2 Estimation

Give information on planned methodologies to derive final estimates from data collected for each variable.

Estimation methods from sample to population

Describe the type of estimators to be used according to the type of sampling strategy (for example, Horvitz-Thompson or Hansen-Hurwitz estimators)

Describe planned estimation procedures, including the nature of any additional information used.

The text of the NP should contain a description of estimators and estimation procedures. Raising factors and other details may be included in an annex to the NP.

Imputation of non responses/ Non-response adjustments

Describe the methods planned (e.g., regression analysis, adjustments of raising actors, etc.) for dealing with non-responses and other data deficiencies.

IV.B.3 Data quality evaluation

A description should be provided per each type of data collection scheme.

Use standard table IV.B.1 to give further details on the sampling methods that will be used (column 'Sampling strategy') and this section for the description of the methods planned to assure the quality of the collected data.

MS should describe the methods to assess the variability of the estimates and to assess the bias derived from non-responses and from the use of models in case of non-probability sampling. MS is invited to refer to the report of the STECF/SGECA 09-02 meeting where these terms are defined and explained

MS shall use standard table IV.B.2 to give further details on the methods used to assure the quality of the collected data. Information on data quality evaluation depends on the type of data collection and on the type of error. Methods used have to be described in the text (MS should use The European Statistical System (ESS) standard quality reporting documents (EUROSTAT 2009a and 2009b) and SGECA recommendations may be used for more information).

MS should distinguish two types of error: bias and variability. Accuracy indicators should be provided in the Standard Table IV.B.2. It is proposed that:

- in case of A – census. None variability indicators could be planned. MS should give information on targeted response rate.
- in case of B - Probability Sample Survey. Indicators of bias: coverage rates and/or response rates. Indicators of Variability: Coefficient of variation (CV)
- in case of C - Non-Probability Sample Survey. Indicators of bias: coverage rates and/or response rates. Indicators of Variability: variability of the estimates serves as accuracy indicator. MS should describe clearly the methods which will be used to assess such variability in this section of the NP

~~Information on data quality can be given in terms of target precision levels in the case of statistical sample and in terms of sample rate when precision levels cannot be calculated. Other methods can also be used and they have to be described in the text (MS should use The European Statistical System (ESS) standard quality reporting documents (EUROSTAT 2009a and 2009b) and SGECA recommendations may be used for more information).~~

~~Two types of error should be distinguished: bias and variability. Targets for variability indicators should be provided in the Standard table IV.B.2. It is proposed that:~~

~~For data collection type A (census), where the variability indicator is “none”, MS should give information on the targeted response rate;~~

~~For data collection type B (Probability Sample Survey), the coefficient of variation (CV) is preferred as an accuracy indicator and has to be used to define the planned target for data collection. However MS could use other accuracy indicators to define the planned targets (e.g. precision level, confidence intervals etc.);~~

~~D. For data collection type C (Non Probability Sample Survey), the variability of the estimates serves as accuracy indicator. MS should describe clearly the methods which will be used to assess such variability in the NP.~~

IV.B.4 Data presentation

Indicate when data will be available to end users and the time lag with respect to the reference year. Confidentiality problems and the need for clustering of segments in the phase of presentation of the results should be discussed in this section.

IV.B.5 Regional coordination

Use this section to describe the initiatives taken to coordinate the national programme with other Member States in the same marine region, with regard to the collection of economic variables for the processing sector. Formal multi-lateral agreements should be annexed to the NP Proposals of all referenced parties.

There may also be agreements reached during a RCM which are documented in the appropriate report, but for which there is no formal multi lateral signed document. In this case, the text of the appropriate RCM should be copied and pasted in italics in the NP proposal of all MS involved.

List the appropriate recommendations from all relevant RCMs and give a brief description of the responsive actions that will be taken. List any recommendations and planned responsive actions in a text table comprising on the left side the recommendations and on the right side the responsive actions. There is no need to also list recommendations that do not apply to MS (e.g. on the terms of reference of ICES expert groups, on actions to be taken by the EC, etc.).

IV.B.6 Derogations and non-conformities

MS shall justify any derogation requested and any non-conformity with the requirements of the DCF. When relevant, this justification should be based on scientific evidence.

4.6.2. STECF proposal for amended text (marked in red) of the economic part of the DCF Guidelines for Technical Reports (TR)

III.B Economic variables

[Insert here supra-region header, according to Appendix II of Commission Decision 2008/949/EC. For each supra region, sections III.B.1-4 should be given.]

III.B.1 Achievements: Results and deviation from NP proposal

Update standard tables III.B.1, III.B.2 and III.B.3 with the information collected during the sampling year.

Description of fields in the table III.B.1: Population segments for collection of economic data

Fields	Description/definition of the fields
Achieved Sample no.	Achieved number of vessels comprised in the sampling for each of the fleet segments. Where achieved sample numbers differ for the estimation of different parameters within a segment, please give the appropriate range.
Achieved Sample rate	Achieved sampling rate for each of the segments. Where achieved sampling rates differ for the estimation of different parameters within a segment, please give the appropriate range.

Description of fields in the table III.B.2: Economic Clustering of fleet segments

Fields	Description/definition of the fields
Total number of vessels in the cluster by the 1st of January of the sampling year	Updated number of vessels comprised in each of the clusters.
Number of vessels in the segment by the 1st of January of the sampling year	Updated number of vessels comprised in each of the fleet segments.

Description of fields in the table III.B.3: Economic Data collection strategy

Fields	Description/definition of the fields
Value of the accuracy indicators	Provide the value of the achieved accuracy as named in column I

In case of census with a very low achieved response rate (<70%), MS has to evaluate the representativeness of the data collected on the respondents.

List the shortfalls (if any) in the achieved data collection compared to what was planned in the relevant NP proposal, and explain the reasons for the shortfalls. Explain any deviation from the sampling intensity proposed, the methods used for collecting data and for estimating the parameters.

MS are reminded of the fact that the DCF has no provisions for the exclusion of any part of the vessel population from data collection (by means of thresholds for, e.g., fishing effort, quantities landed, revenues, etc.). If, nonetheless, part of the fleet was excluded from sampling, the reasons for this should be thoroughly explained and justified.

III.B.2 Data quality: Results and deviation from NP proposal

Update standard tables III.B.3 with the values of the accuracy indicators.

List the shortfalls (if any) in the achieved accuracy compared to what was planned in the relevant NP proposal, and explain the reasons for the shortfalls.

III.B.3 Follow-up of Regional and international recommendations

List the appropriate recommendations from all relevant RCMs related to the economic variables and give a brief description of the responsive actions taken. Use sub-headers to make the distinction between the different RCMs, and print recommendations and responses in a different font style (e.g. bold and/or italic for the recommendations and normal text for the descriptions of the action taken). There is no need to also list recommendations that do not apply to MS (e.g. on the terms of reference of ICES expert groups, on actions to be taken by the EC, etc.).

In doing so, you may have to go back several years in time and refer to RCM reports of more than one year ago. Most of the RCM recommendations and proposed actions will only take effect in the year following the actual meeting of the RCM and the actions taken by MS will only become visible in the Technical Reports that are submitted two or three years later.

III.B.4 Actions to avoid shortfalls

Briefly describe the actions that will be considered / have been taken to avoid the shortfalls in the future and when these actions are expected to produce effect. If there are no shortfalls, then this section can be skipped.

IV. MODULE OF THE EVALUATION OF THE ECONOMIC SITUATION OF THE AQUACULTURE AND PROCESSING INDUSTRY

IV.A Collection of data concerning the aquaculture

IV.A.1 Achievements: Results and deviation from NP proposal

Update standard tables IV.A.2 and IV.A.3 with the information collected during the sampling year.

Description of fields in the table IV.A.2: Population segments for collection of aquaculture data

Fields	Description/definition of the fields
Achieved no. sample	Achieved number of enterprises comprised in the sampling for each of the segments. Where achieved sample numbers differ for the estimation of different parameters within a segment, please give the appropriate range.
Achieved Sample rate	Achieved sampling rate for each of the segments. Where achieved sampling rates differ for the estimation of different parameters within a segment, please give the appropriate range.
Achieved sample rate / planned sample rate	Automatic filling with the figures achieved vs planned

Description of fields in the table IV.A.3: Sampling strategy – Aquaculture sector

Fields	Description/definition of the fields
Value of the accuracy indicators	Provide the value of the achieved accuracy as named in column I
Achieved variability	Provide the value of the achieved variability as named in column F
Bias indicator	Indicate which bias indicator is used.
Value of the bias indicator	Provide the value of the bias indicator as named in column H.

In case of census with a very low achieved response rate (<70%), MS has to evaluate the representativeness of the data collected on the respondents.

List the shortfalls (if any) in the achieved data collection compared to what was planned in the relevant NP proposal, and explain the reasons for the shortfalls. Explain any deviation from the sampling intensity proposed, the methods used for collecting data and for estimating the parameters. MS are reminded of the fact that the DCR has no provisions for the exclusion of any part of the population from data collection (by means of thresholds for, e.g., number of employees, quantities produced, revenues, etc.). If, none-theless, part of the aquaculture sector was excluded from sampling, the reasons for this should be thoroughly explained and justified.

IV.A.2 Data quality: Results and deviation from NP proposal

Update standard tables IV.A.3 with the values of the accuracy indicators.

List the shortfalls (if any) in the achieved accuracy compared to what was planned in the relevant NP proposal, and explain the reasons for the shortfalls.

IV.A.3 Follow-up of Regional and international recommendations

List the appropriate recommendations from all relevant RCMs related to the aquaculture variables and give a brief description of the responsive actions taken. Use sub-headers to make the distinction between the different RCMs, and print recommendations and responses in a different font style (e.g. bold and/or italic for the recommendations and normal text for the descriptions of the action taken). There is no need to also list recommendations that do not apply to MS (e.g. on the terms of reference of ICES expert groups, on actions to be taken by the EC, etc.).

In doing so, you may have to go back several years in time and refer to RCM reports of more than one year ago. Most of the RCM recommendations and proposed actions will only take effect in the year following the actual meeting of the RCM and the actions taken by MS will only become visible in the Technical Reports that are submitted two or three years later.

IV.A.4 Actions to avoid shortfalls

Briefly describe the actions that will be considered / have been taken to avoid the shortfalls in the future and when these actions are expected to produce effect. If there are no shortfalls, then this section can be skipped.

IV.B Collection of data concerning the processing industry

IV.B.1 Achievements: Results and deviation from NP proposal

Update standard tables IV.B.1 and IV.B.2 with the information collected during the sampling year.

Description of fields in the table IV.B.1: Processing industry - Population segments for collection of economic data

Fields	Description/definition of the fields
Achieved no. sample	Achieved number of enterprises comprised in the sampling for each of the segments. Where achieved sample numbers differ for the estimation of different parameters within a segment, please give the appropriate range.
Achieved Sample rate	Achieved number sampling rate for each of the segments. Where achieved sampling rates differ for the estimation of different parameters within a segment, please give the appropriate range.
Achieved sample rate / planned sample rate	Automatic filling with the figures achieved vs planned

Description of fields in the table IV.B.2: Sampling strategy – Processing industry

Fields	Description/definition of the fields
Value of the accuracy indicators	Provide the value of the achieved accuracy as named in column I

Achieved variability	Provide the value of the achieved variability as named in column F
Bias indicator	Indicate which bias indicator is used.
Value of the bias indicator	Provide the value of the bias indicator as named in column H.

In case of census with a very low achieved response rate (<70%), MS has to evaluate the representativeness of the data collected on the respondents.

List the shortfalls (if any) in the achieved data collection compared to what was planned in the relevant NP proposal, and explain the reasons for the shortfalls. Explain any deviation from the sampling intensity proposed, the methods used for collecting data and for estimating the parameters. MS are reminded of the fact that the DCR has no provisions for the exclusion of any part of the population from data collection (by means of thresholds for, e.g., number of employees, quantities produced, revenues, etc.). If, none-theless, part of the processing industry was excluded from sampling, the reasons for this should be thoroughly explained and justified.

IV.B.2 Data quality: Results and deviation from NP proposal

Update standard tables IV.A.3 with the values of the accuracy indicators.

List the shortfalls (if any) in the achieved accuracy compared to what was planned in the relevant NP proposal, and explain the reasons for the shortfalls.

IV.B.3 Follow-up of Regional and international recommendations

List the appropriate recommendations from all relevant RCMs related to the aquaculture variables and give a brief description of the responsive actions taken. Use sub-headers to make the distinction between the different RCMs, and print recommendations and responses in a different font style (e.g. bold and/or italic for the recommendations and normal text for the descriptions of the action taken). There is no need to also list recommendations that do not apply to MS (e.g. on the terms of reference of ICES expert groups, on actions to be taken by the EC, etc.).

In doing so, you may have to go back several years in time and refer to RCM reports of more than one year ago. Most of the RCM recommendations and proposed actions will only take effect in the year following the actual meeting of the RCM and the actions taken by MS will only become visible in the Technical Reports that are submitted two or three years later.

IV.B.4: Actions to avoid shortfalls

Briefly describe the actions that will be considered / have been taken to avoid the shortfalls in the future and when these actions are expected to produce effect. If there are no shortfalls, then this section can be skipped.

4.6.3. STECF proposal for amended DCF standard tables for NP proposals and TR

Table III.B.2 - Economic Clustering of fleet segments								NP years	
								TR Year	
MS	Supra region	Reference year	Name of the clustered fleet segments	Total number of vessels in the cluster from the most recent information	Total number of vessels in the cluster by the 1st of January of the sampling year	Fleet segments which have been clustered	Classification of segments which have been clustered (a)	Number of vessels in the segment from the most recent information	Number of vessels in the segment by the 1st of January of the sampling year
FRA	Baltic Sea, North Sea and Eastern Arctic, and North Atlantic	2008	Beam trawlers 18-24 m*	150	150	Beam trawlers 12-18 m	S	5	9
						Beam trawlers 18-24 m	I	145	141
a)	I: Important segments with distinct characteristics								
	S: Segments similar to other segments								
	N: Non-important segments with distinct characteristics								

Table III.B.3 - Economic Data collection strategy									NP years	
									TR year	
MS	Supra region	Variable group	Variables	Reference year	Data sources	Type of data collection scheme (a)	Type of error (b)	Accuracy indicator (c)	Value of the accuracy indicators	Fleet segments (d)
ESP	Baltic Sea, North Sea and Eastern Arctic, and North Atlantic	Income	Gross value of landings	2010	logbook	A	Bias	Response rate	90%	All segments

			Other income	2010	questionnaires	B	Bias and Variability	Coverage rate and CV	coverage rate: 25% CV: 3%	Beam trawlers <6 m, beam trawlers 6-12 m
			Other income	2010	questionnaires	C	Bias	Coverage rates	80%	Beam trawlers 18-24 m* passive gears <6 m
(a) A: census, B: Probability Sample survey, C: Non-Probability Sample survey										
(b) Variability or Bias										
(c) For bias: response rates and/or coverage rates and/or representativeness of the sample (always required in case of low response rate (<70%)). For variability: CV in case of B and variability of estimates in case of C										
(d) fleet segments can be reported as "all segments" in the case the sampling strategy is the same for all segments, otherwise MS should specify the segments for which a specific sampling strategy has been used										

Table IV.A.3 – Sampling strategy - Aquaculture sector

MS	Variables (as listed in Appendix X)	Reference year	Data sources	Type of data collection scheme (a)	Type of error (b)	Accuracy indicator (c)	NP years	
							TR year	Segments (d)
	Turnover	2010	Financial accounts	A	Bias	Response rate	90%	all segments
	Energy costs	2010	questionnaires	B	Bias and variability	Coverage rate and CV	Coverage rate: 25% CV: 3%	Land based farms - Hatcheries and Nurseries- other marine fish
	Energy costs	2010	questionnaires	C	Bias	Coverage rates	80%	Land based farms - On growing - sea bass & sea bream
	Energy costs	2010	questionnaires	C	Bias	Coverage rates	80%	Cages - salmon

(a) A: census, B: Probability Sample survey, C: Non-Probability Sample survey

(b) Variability or Bias

(c) For bias: response rates and/or coverage rates and/or representativeness of the sample (always required in case of low response rate (<70%)). For variability: CV in case of B and variability of estimates in case of C

(d) segments can be reported as "all segments" in the case the sampling strategy is the same for all segments, otherwise MS should specify the segments for which a specific sampling strategy has been used

Table IV.B.2 – Sampling strategy - Processing industry

NP years	
TR Year	

MS	Variables (as listed in Appendix XII)	Reference year	Data sources	Type of data collection scheme (a)	Type of error (b)	Accuracy indicator (c)	Value of the accuracy indicators	Segments (d)
SWE	Turnover	2010	financial accounts	A	Bias	Response rate	90%	all segments
SWE	Other operational costs	2010	questionnaires	B	Bias and variability	Coverage rate and CV	Coverage rate: 25% CV: 3%	companies <= 10
SWE	Other operational costs	2010	questionnaires	C	Bias	Coverage rates	80%	companies 11-49
SWE	Other income	2011	questionnaires	C	Bias	Coverage rates	80%	companies 50-249

(a) A: census, B: Probability Sample survey, C: Non-Probability Sample survey

(b) Variability or Bias

(c) For bias: response rates and/or coverage rates and/or representativeness of the sample (always required in case of low response rate (<70%)). For variability: CV in case of B and variability of estimates in case of C

(d) segments can be reported as "all segments" in the case the sampling strategy is the same for all segments, otherwise MS should specify the segments for which a specific sampling strategy has been used

5. ADDITIONAL REQUESTS SUBMITTED TO THE STECF PLENARY BY THE COMMISSION

5.1. General issues - Endorsement of the report written as preparatory work of SG-ECA/RST 08-01

Terms of Reference

The STECF plenary is requested to review and to possibly endorse the report drafted as preparatory work to the SG-ECA/RST 08-01 on possible indicators measuring the balance between fishing capacities and fishing possibilities.

STECF response

STECF welcomed the report Balance between Fishing Capacity and Resources. The report contains much useful material, in particular on the background to the development of EU policy on fishing capacity management, as well as on related modelling work, such as the application of the EIAA model.

STECF did, however, consider that the sections of the report dealing with the key concepts of capacity and overcapacity in fisheries could have been more clearly drafted. In particular, it would have been helpful if clear working definitions of capacity and overcapacity were provided at the outset, and it is suggested that the definitions adopted by the FAO could have been followed here. There also seemed to be confusion in parts of the report between capacity and capital, and this should be rectified. Finally, the report suggests that the balance between capacity and resources can only be assessed using a bio-economic model, but STECF observes that overcapacity is commonly defined and assessed in relation to catch targets (by the FAO, for example).

In the light of the above STECF could not endorse the report in its present form.

5.2. General issues - Experimental fisheries improving the knowledge on components of the herring stock in ICES sub-divisions VIa(S) & VIIb, c

Background

In its advice to the European Commission (see Annex II), the Pelagic RAC has raised three issues concerning the stock of herring in ICES Divisions VIa(S) and VIIbc:

- a. Doubts about the assessment of the state of the stock, in view of changes in commercial fishing operations.

- b. A draft rebuilding plan, based on stock assessments and biological reference points.
- c. A proposal for a sentinel fishery.

Terms of Reference

- Concerning point a., STECF is requested to reply to the technical comments about the assessment that are raised by the RAC.
- Concerning point b., the Commission notes that in the absence of population parameter estimates and reference points for the formulation of an assessment-based harvest rule, the proposed plan would not be implementable. The Commission requests STECF to advise on
 - (i) the applicability of a survey-based harvest rule for the management of this stock, such as the rule set out in Annex III of the Commission Communication "Consultation on Fishing Opportunities for 2010", or other rule deemed appropriate by STECF;
 - (ii) actions needed before an assessment-based plan could be developed.

Concerning point c., STECF is requested to advise on the design, operation and data-gathering requirements that such a sentinel fishery should apply in order to contribute substantially to improving the assessment of this stock. The survey design should, as appropriate, address questions raised under part a.

STECF Comments

Background

The stock identity of herring to the west of the British Isles is highly complex. The EU-funded WESTHER project (which reviewed herring stock identity in this area) identified distinct spawning grounds and spawning components and recommended that herring to the west of the British Isles should be managed as two stocks: the Malin Shelf stock (VIaS/VIIbc, VIaN and VIIaN) and the Celtic Sea stock, but with measures in place to prevent depletion of local components (WESTHER, Q5RS-2002-01056). As a result, the current assessment and advisory framework for the stocks in this area is in the process of being reviewed by ICES (SGHERWAY report - ICES, 2008).

The herring to the northwest of Ireland (VIaS/VIIbc stock) comprise both autumn and spring/winter spawning components. Individuals from the VIaS/VIIbc stock migrate to summer feeding grounds in VIaN where they mix with both the VIaN and VIIaN stocks, although the extent of this mixing is uncertain. Uncertainty over the stock distribution

has meant that a reliable survey index has never been available and ICES has been unable to present an analytic assessment for the VIaS/VIIbc herring stock. ICES advice is therefore based on a number of exploratory assessments which show consistent stock trends, with conclusions about the level of SSB with respect to B_{lim} , robust to a range of assumed terminal F values.

The advice for the fishery in 2010 is the same as the advice given in 2008 for the 2009 fishery: *“ICES recommends a rebuilding plan be put in place that will reduce catches. If no rebuilding plan is established, there should be no fishing. The rebuilding plan should be evaluated with respect to the precautionary approach”*.

STECF agreed with the ICES advice in July 2009 (STECF-SGRST-09-02) and noted that this implied a reduction of 25% in the TAC according to the Commission Communication "Consultation on Fishing Opportunities for 2010" (COM(2009) 244). The Commission has subsequently proposed a 25% TAC reduction for this stock for 2010.

Assessment of the State of the Stock

There is no agreed analytic assessment for the stock of herring in VIaS/VIIbc. In 2009, ICES presented a number of exploratory separable VPAs making use of age composition data from the Irish landings (which constitute almost 100% of landings from this area). ICES has noted that the age range observed in sampled data is truncated and also the absence of 1-ringers (ICES, 2009).

The document submitted by the pelagic RAC suggests that this truncated age range is due to a change in the fishing pattern (spatial and temporal) rather than due to a lower abundance of the older age classes. STECF agrees that without a time series of fishery independent estimates of the population age structure available for use in assessment, a change in fishery selection resulting in a truncated catch-at-age distribution could be wrongly interpreted as lower relative abundance at age and higher mortality.

STECF observes that this truncated age range in the catches has been in evidence for a number of years (Figure 5.2) and is not just a recent phenomenon, but that the 2008 acoustic survey contains a greater proportion of older individuals (6-9 years) in comparison to the commercial catch-at-age data.

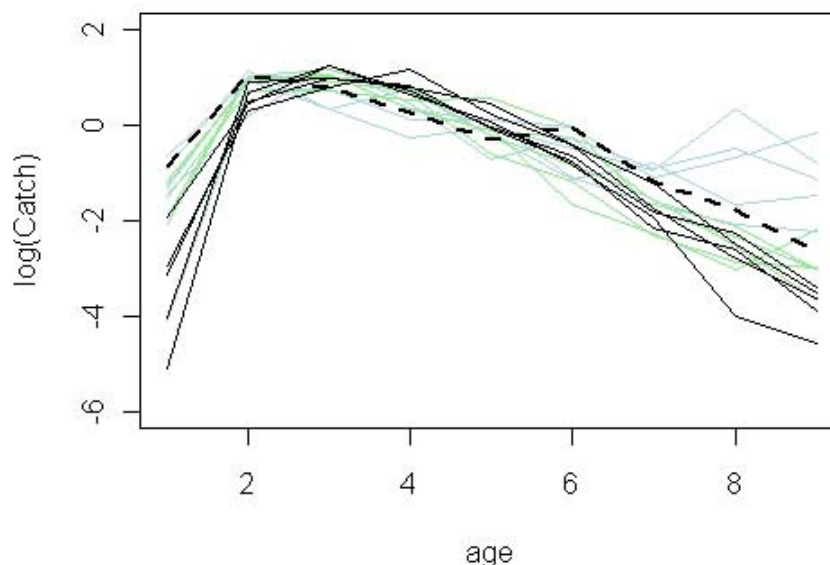


Figure 5.2.1. Log catch at age (mean standardised). Blue lines are 1994-1998, green: 1999-2003, and black: 2004-2008. Dashed line is 2008 acoustic survey of VIaS/VIIbc area.

The current assessment of the stock of VIaS/VIIbc herring is based on landings from these ICES areas, plus landings from Irish vessels fishing in VIaN which are also assumed to be taken from the VIaS/VIIbc stock. Although the landings from VIaN contribute approximately 25 % of the total, STECF notes that no age composition data from these landings appear to be used in the assessment.

Draft Rebuilding Plan

The document submitted by the pelagic RAC proposes a draft rebuilding plan for the stock of VIaS/VIIb,c herring. As noted by the Commission, the plan requires an assessment and appropriate reference points. STECF considers that a survey-based harvest rule is, in theory, a good idea. However, there are a number of issues which mean that the implementation of such an approach is not currently possible.

The current acoustic survey of the herring Malin Shelf Stock complex which is conducted in June/July each year is an internationally coordinated survey consisting of 3 components:

- VIaN (Scotland)
- VIaS/VIIbc (Republic of Ireland)
- North Channel/Western Approaches (Northern Ireland)

Coverage of area VIaS/VIIbc began only in 2008 and STECF considers that 2 years of survey data are insufficient for the implementation of a survey-based rule (Annex III of

the COM(2009) 244 requires 5 years). A previous survey of VIaS/VIIbc (winter 2003-2007) was discontinued as it was not considered to adequately cover the stock distribution (ICES, 2009).

In addition, ICES considers that the abundance estimates from the VIaN component of the survey are also likely to contain a proportion of the VIaS/VIIbc stock (due to stock mixing in the feeding grounds) - an issue that would need to be addressed in order to obtain a reliable survey index for the VIaS/VIIbc stock.

With respect to an assessment based plan, STECF advises that:

- A sufficiently long time series of acoustic survey data will be required to tune an analytic assessment (ICES does not usually consider a time-series of less than 5 years for tuning)
- The survey should cover all of the VIaS/VIIbc stock including that proportion occurring in VIaN at the time of the survey. Cooperative work (Scotland, Northern Ireland, Ireland) on splitting the survey abundance indices by spawning origin is ongoing

STECF notes that by the time a sufficiently long time series of survey data is available to apply a survey-based harvest rule for the management of this stock, such as that in Annex III, the survey series could potentially be used to tune an analytic assessment. Both approaches would be worth exploring.

Proposed Sentinel Fishery

The pelagic RAC has suggested introducing a sentinel fishery to “*locate the ‘missing fish’*” accompanied by a roll-over TAC for 2010.

STECF reiterates its agreement with the ICES advice for this stock, which for 2010 is: “*ICES recommends a rebuilding plan be put in place that will reduce catches. If no rebuilding plan is established, there should be no fishing. The rebuilding plan should be evaluated with respect to the precautionary approach*”.

STECF notes that the recently initiated internationally coordinated acoustic survey of the Malin Shelf stock complex of herring will provide estimates of population age composition for the VIaS/VIIbc stock and believes that this will enable an analytic assessment to be conducted for this stock in the near future. A sentinel fishery to “*locate the ‘missing fish’*” will not provide any extra information that will substantially improve the assessment of the stock (over and above that from the survey) and therefore STECF considers that in this case, such a fishery is unnecessary.

However, if the proposed sentinel fishery were to operate, then STECF offers the following advice on possible design, operation and data-gathering:

- According to the ICES HAWG (ICES, 2009), the fishery in VIaS/VIIb,c is conducted in quarters 1 and 4 on spawning aggregations with a closed season in quarters 2 and 3. Without detailed information on the temporal changes in the distribution of landings and fishing effort, STECF cannot specify a particular

design (in terms of spatial coverage) for a proposed sentinel fishery. However, in order to investigate the claims of the pelagic RAC concerning the truncated catch-at-age composition, STECF suggests that a sentinel fishery should target the known spawning grounds in VIaS/VIIbc across the fishing season (October to March).

- Many of the important spawning areas are within the 12 mile territorial limit, an area in which only smaller vessels are licensed to fish (ICES, 2009). STECF therefore proposes that vessels participating in the proposed sentinel fishery should be from this fleet segment ('polyvalent bulk storage'). The proposed fishery should be conducted in such a manner as to achieve greatest temporal and spatial coverage with the intended quota (10% of the Irish total).
- In terms of data collection, STECF **recommends** that vessels should be required to keep a daily log of their activity and catch, and record echo traces from their echo-sounders for potential further analyses. STECF further **recommends** that participating vessels should be required to accept scientific observers.
- Biological data are also required. STECF **recommends** that catches should be sampled for length, age, sex and maturity on a monthly basis. Additionally, otoliths should also be collected for the purpose of otolith microstructure/shape analysis to help determine the spawning origin of the catch. STECF notes that biological data from sentinel fisheries in operation in other parts are often collected by the participating fishers. However, the Marine Institute (Ireland) has volunteered to collect and process samples in this case.

To further improve the stock assessment input data, STECF suggests that biological sampling for age composition (if not already carried out) of the Irish fishery in VIaN (assumed to be exploiting the VIaS/VIIbc stock) should be carried out. Furthermore, otolith analysis to enable identification of spawning origin of the catches from this area should also be considered.

References:

ICES 2008. Report of the Study Group on the evaluation of assessment and management strategies of the western herring stocks (SGHERWAY), 8-12 December 2008, Aberdeen, UK. ICES CM 2008/RMC:08. 50 pp.

ICES 2009. Report of the Herring Assessment Working Group for the Area South of 62 N, 17-25 March 2009, ICES Headquarters, Copenhagen. 648 pp.

WESTHER, Q5RS-2002-01056: A multidisciplinary approach to the identification of herring (*Clupea harengus* L.) stock components west of the British Isles using biological tags and genetic markers.

5.3. General issues - Possible exemptions in application of Art. 11(2) to R(EC) No 1342/2008

Evaluation of possible exemptions of groups of vessels from the effort management system under the provisions of Article 11.2 of the ‘Long-term plan for cod stocks’ Regulation (EC) No 1342/2008: Additional question concerning the submissions to the European Commission by some Member States, as analysed by STECF April⁴ and July Plenary⁵.

Background

Article 11(2) of Council Regulation 1342/2008 of 18 December 2008 (long-term management plan for cod), makes provision for the Council, acting on a Commission proposal and on the basis of the information provided by Member States and the advice of STECF, to exclude certain groups of vessels from the effort regime provided certain conditions are met. Following various requests by Member States to the European Commission, STECF has in April and July 2009 assessed German, French, UK, Polish and Spanish vessel groups against the criterion mentioned in Article 11(2) of the cod plan, based on the concept of permanent technical or biological decoupling.

The Commission's approach to vessel exclusions under the cod plan (Article 11(2) cod plan) has taken into account the STECF's concept of technical or biological decoupling, but would in addition favour vessel exclusions based on vessel group characteristics that result in current catch rates of cod below 1,5% in the vessel group (on average), provided that

- a) the effort reduction coming along with such an exclusion would be permanent,
- b) the vessel activity would be automatically counted against the reduced effort ceilings when either a vessel no longer meets the group characteristics or the group catches exceed more than 1,5% cod (averaged over the year), and
- c) the Member State has put in place a monitoring system that will provide representative catch data enabling the Commission to assess whether the fulfilment of the exclusion criterion at the group level continues to be met.

4 **STECF 2009. 30th PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-09-01)** Office for Official Publications of the European Communities, Luxembourg, EUR 23829 EN, JRC 52051.

5 **STECF 2009. 31st PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-09-02)** Office for Official Publications of the European Communities, Luxembourg, EUR 23985 EN, JRC 53317.

Terms of Reference

In order to follow this approach, STECF is asked to give its advice on the cases in the table below, based on the data already received and on additional information as indicated in the table, concerning the following:

- 1) To what extent does the data on catches and landings submitted support the conclusion that during the reference period for which the data has been collected, the vessel group has (annually on average) caught less than or equal to 1.5% of cod from the total catch of those vessels?

STECF Response

The annual averages for the groups of vessels seeking exemption are provided in Table 1. STECF notes that while in some cases catches are below the 1.5% threshold, STECF reiterates its earlier comments relating to decoupling contained in the Reports of the April and July 2009 Plenary sessions. Those are given below.

Cod catches below 1.5% can be achieved by three principal mechanisms; **spatial decoupling** where the fishing activity occurs outside the normal distribution of cod; **technical decoupling**, where attributes of the fishing gear inhibits the capture of cod or; **depletion decoupling**, where fishing activity occurs in an area where cod were previously present but catches are low because the stock is depleted. Thus, STECF do not consider the third criteria as a condition for effort exemptions. Providing effort exceptions to groups of vessels that meet the third criterion has the potential to negate any attempts to reduce cod mortality and could inhibit stock rebuilding. STECF has provided average values of cod catches based on the available data, and in addition also provided further comment based on the criteria identified above.

STECF notes that some Member States' applications have not followed the guidelines provided by STECF (STECF, 2009). This has resulted in incomplete information being provided on catches and landings. In two of the submissions, no raw catch data were provided, only percentages of cod caught by haul and/or trip. In such cases, it is only possible to provide mean values of percentages. This can potentially bias the estimate for the group as a whole, and STECF is concerned about the accuracy of such estimates. STECF reiterates that member states should follow the guidelines laid out in STECF (2009) in order to facilitate a full analysis of future submissions from member states. Table 1 makes reference to individual submissions where incomplete data was presented against the criteria developed.

Terms of reference

- 2) In case of low scientific assurance with regard to question 1), please specify the need for improving the information base, in particular the sampling strategy in order to arrive at a satisfactory coverage of cod catches (including discards) or the description of gear properties and their effect.

STECF considered that sampling levels should to be at least in accordance with DCF precision targets that require a CV of 20% (level 1) (COM Decision 2008/949/EC). STECF notes that as the level of ‘true’ cod catches approaches 1.5%, the level of sampling required to demonstrate that catches are below 1.5%, increases exponentially (Figure 1). STECF **recommends** that statistical analysis of observer data be undertaken to determine the level of sampling required in order to demonstrate that cod catches are under 1.5% with a CV of 20%. STECF notes that the level of sampling required is likely to be well in excess of current sampling levels under the DCF, particularly with fisheries where the cod catches exceed 0.5%.

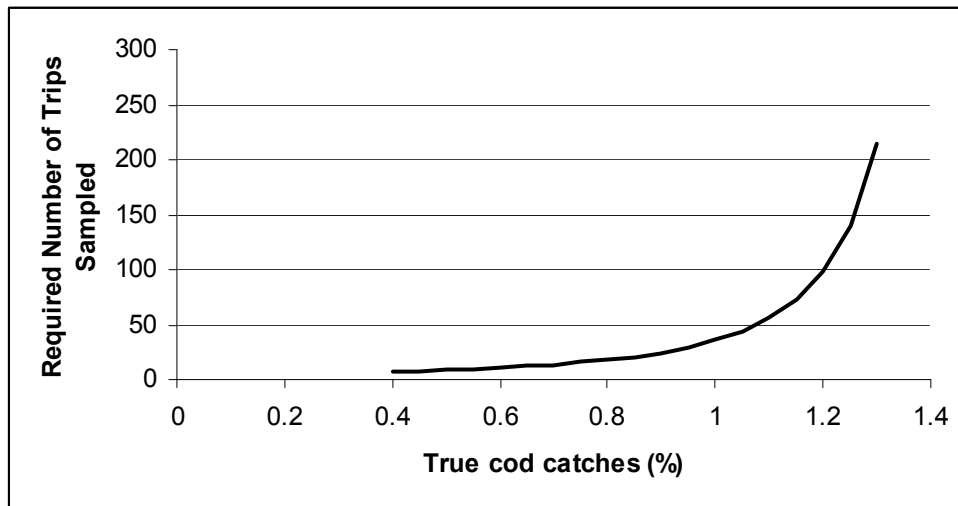


Figure 5.3.1. Simulated number of trips per year required to show that the mean cod catch is less than 1.5% with 95% power based on analysis. (Note: This is based on an analysis provided by the UK authorities specific to exemptions sought in VIa (North Minch). It is important to note that the required number of trips sampled will be fishery-dependent and an analysis of this type is required for each specific case)

Terms of reference

- 3) In case of low scientific assurance with regard to question 1), please specify if the information presented provides indication that the non-fulfilment of the criterion is due to a specific part of the vessel group's activity, e.g. when the group fishes in a particular area.

France has requested exemptions for the three trawler métiers (1-3) given the new data available and that the different fisheries are exploited by the same vessels (with the exception of one vessel). France notes that this is to avoid unnecessary bureaucracy. STECF notes that from the additional data presented it is not possible to derive an annual mean percentage of cod catches with any certainty. The data presented do not include information on catch weights from individual hauls or trips as required by STECF (see

STECF 02-09), only the percentage of cod in individual hauls is given. It is not appropriate to derive a value based on the mean of the percentages presented. This could result in a biased estimate, and to assess the cod catch percentages with any degree of accuracy, it is necessary to have the raw catch data from which the percentages were obtained. In addition, no data was provided on the bathymetric distribution of the observed catches. While the average percentage cod catches for all three metiers are less than 1.5%, STECF notes its previous advice that the activity of metiers 1 and 2 occurs in depths less than 300m and are therefore considered to occur within the bathymetric range of cod.

STECF reiterates the data requirements for evaluation of applications of exceptions:

- a. A list of the vessels belonging to the group, together with their Community Fishing Register (CFR) number and information on the following technical characteristics: gears deployed, mesh sizes, vessel size, engine power.
- b. Landings by weight of cod and all other fish, crustaceans and molluscs by all vessels identified as belonging to the group of vessels together with the fishing effort (kW days) deployed to obtain those landings.
- c. Landings and effort data should be provided by vessel, month and statistical rectangle for the most recent year.
- d. Representative samples of the catches (landings and discards) of cod from vessels identified as belonging to the group of vessels together with the fishing effort (kW days) deployed to obtain those catches. Sampling precision should at least correspond to the levels in the DCF.
- e. Spatial and temporal coverage: sampling levels (such as sampled effort versus total effort) should be given for onboard observer schemes for the exempted group(s) of vessels.
- f. Those groups of vessels exempted under spatial decoupling criteria due to fishing activity taking place in depths greater than those inhabited by cod should provide data to show that all fishing activity has taken place at depths below 300 m

STECF concludes that it is not advisable to grant generic exemptions for the three metiers because of an absence of raw catch data and the previous advice (STECF 20096) which

6 STECF 2008. 31st PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-09-02). Office for Official Publications of the European Communities, Luxembourg, EUR 23985 EN, JRC53317.

notes that the activity of the first two metiers overlaps with the bathymetric distribution of cod in both area IVa and VIa.

Table 5.3.1. on Member State submissions to which the Terms of reference refer:

Country	Group	Description	Previous advice from STECF	% Cod in catches from observer data supplied	Additional comments/information
UK	trawlers West of Scotland	68 <i>Nephrops</i> trawlers TR2 Minch strait	April: provide more detail on the link between scarce observer data and group July: historically low cod abundance, but no decoupling, catches partly above 1.5%	Cod catch 0.35% (0.0 – 0.91%) Based on 11 trips	UK has analysed scientifically the observer requirements that would be needed to underpin monitoring of the 68 Scottish vessels if they were exempted and would deploy the observer resources if necessary.
UK	trawlers West of Scotland	8 <i>Nephrops</i> trawlers TR2 Firth of Clyde	April: provide more detail on the link between scarce observer data and group July: historically low cod abundance, but no decoupling, catches partly above 1.5%	Cod catch 0.92% (0.02 – 1.82%) Based on 7 trips	Area subject to earlier cod recovery measures (closed area and technical modifications) so there is potential spatial overlap and historic distribution of the cod stock in the area indicating <u>depletion decoupling</u>
UK	trawlers Irish Sea	15 Queen Scallop trawlers TR2 Isle of Man	April: No discard data July: Provide more detail on the affirmation that the gear is working selectively	No catch data provided	Sampling programme initiated in 2009
UK	Trawlers Irish Sea	16 <i>Nephrops</i> trawlers TR2 Eastern Irish Sea	April: provide more detail on the link between observer data and group July: no decoupling, catches partly above 1.5%	Cod catch 1.76% (0.0 – 14.54%) from all observer data 2.01% (0.28-4.41%) for vessels sampled in exemption group 6 trawlers sampled	Vessel group exceeds the 1.5% provisions
UK	Beam trawlers Eastern Channel	18 BT2 trawlers in an Eastern Channel flatfish fishery	April: provide more detail on the link between observer data and group July: no decoupling, catches partly above 1.5%	Cod catch 1.15% (0.0 – 3.5%)	Only 1 vessel in the proposed group has been sampled. <u>Insufficient data</u> presented to determine if vessels sampled belong to the same metier as the group seeking exemptions. No landings data

					provided to demonstrate similarity in catch composition.
UK	Trawlers Irish Sea	26 <i>Nephrops</i> trawlers TR2 Western Irish Sea	July: no decoupling, catches partly above 1.5%	Group to which vessels belong has an average cod catch of 2.75%, exceeding limits of the regulation. 26 trawlers for which exemptions are sought have mean catch of 1.28% but STECF have no basis to consider these as a separate group due to spatial overlap, technical and catch similarities.	Spatial overlap with closed/restricted cod recovery area. <u>Depletion decoupling</u> It is not possible to identify the group of vessels as a specific metier as activity overlaps with vessels with similar catch and gear characteristics who <u>exceed 1.5%</u> cod catches based on observer data
FR	high-sea trawlers North Sea (metier 1)	9 saithe targeting vessels operating in Svalbard and the North Sea, 110 to 120mm in 200 m of depth	April: no sufficient discard data, incomplete description of the vessel group. July: in certain statistical rectangles, higher cod catches, substantial effort deployed shallower than 200m	(Metier 1, 2) Data presented is insufficient to estimate proportion of cod in catches with any statistical certainty. Only percentages from hauls presented. Estimating a reliable global percentage not possible.	(Metiers 1 and 2) No data on landings and discards weights (criteria 2) presented from which a weighted estimate could be derived. No data on observed hauls (position, depth) provided (criteria 5,6) Observer data does not cover full calendar year
FR	deep-sea trawlers western Scotland (Metier 2)	the same vessel group as before	July: in certain statistical rectangles, higher cod catches, substantial effort deployed shallower than 200m		Range of cod catches (metier 1) indicates some degree of spatial overlap with cod indicating <u>depletion decoupling</u>
FR	deep-sea trawlers western Scotland (metier 3)	8 vessels (partially identical to the saithe group) targeting deep-sea species with 120mm between 600 and 1500 m of depth	July: decoupling possible if the operations are limited to depths higher than 300m	(Metier 3) Exemption currently being process based on earlier STECF advice	(Metier 2) Previous STECF advice notes that some activity conducted in depths shallower than 200m, which is within the know distribution of cod, lack of catch could be associated with <u>depletion decoupling</u>
FR	long line vessels	3 hake targeting	July: no data on discards	No catch data provided	

	western Scotland	vessels			
FR	gillnet vessels western Scotland	8 hake targeting vessels operating from the Bay of Biscay to the western Scotland, GN 100mm	July: no data on discards	Data presented insufficient to estimate proportion of cod in catches with any statistical certainty. Only percentages from hauls presented, estimating a reliable global percentage not possible.	Observer data resented from 12 observer trips. Only one short trip conducted in VIa. All other trips outside cod management area.
FR	gillnet vessels western Scotland	2 vessels (including one also hake métier) targeting anglerfish, GN 280mm	July: decoupling possible if the operations are limited to depths higher than 300m	Exemption currently being process based on earlier STECF advice	
PL	High seas trawlers targeting saithe	1 vessel	July: Late submission of report. Can not consider spatial decoupling	0.005% based on new data presented	Activity conducted in depths shallower than 200m, which is within the know distribution of cod, lack of catch could be associated with <u>depletion</u> <u>decoupling</u> Data presented is obtained from only one trip. It is therefore not possible to ascertain how representative this is.

5.4. Mediterranean Sea and Black Sea - Mediterranean National management plans under Council Regulation (EC) No 1967/2006 - Slovenia

Background

Member States were expected to adopt management plans for fisheries conducted by trawl nets (demersal and pelagic), boats seines, shore seines, surrounding nets and dredges (for molluscs) within their territorial waters.

The plans shall include conservation reference points such as targets against which the recovery to or the maintenance of stocks within safe biological limits for fisheries exploiting stocks at/or within safe biological limits (e.g. population size and/or long-term yields and/or fishing mortality rate and/or stability of catches). The management plans shall be drawn up on the basis of the precautionary approach to fisheries management and take account of limit reference points recommended by relevant scientific bodies.

The plans shall ensure the sustainable exploitation of stocks and that impact of fishing activities on marine eco-systems is kept at sustainable levels.

The Management plans may incorporate any measure included in the following list to limit fishing mortality and the environmental impact of fishing activities: limiting catches, fixing the number and type of fishing vessels authorized to fish, limiting fishing effort, adopting technical measures (structure of fishing gears, fishing practices, areas/period of fishing restriction, minimum size, reduction of impact of fishing activities on marine ecosystems and non-target species), establishing incentives to promote more selective fishing, conduct pilot projects on alternative types of fishing management techniques.

Terms of Reference

STECF is requested to review the plans submitted by the Slovenian authorities, to evaluate their findings, to make appropriate comments, also with respect to the elements/measures included in the management plans and to advise whether each plan contains elements that account for the state of the exploited resources, if concerned fisheries are expected to exploit main target stocks in line with their production potentials and if the plan is expected to maintain or to revert fisheries productivity to higher levels.

Slovenian Management Plan

The Management Plan (MP) proposed by Slovenia includes all the fishing activities listed in Article 19 of Council Regulation (EC) No 1967/2006 and was initially evaluated in the 2007 STECF winter Plenum in Ispra, Italy, and the 2008 STECF summer Plenum in Helsinki, Finland. In both cases, the MP was not endorsed. Following STECF recommendations, the revised proposal includes additional scientific information and is submitted for further evaluation.

The list of basic information that STECF considered essential to evaluate the Slovenian proposal was the following (see STECF-PLN-08-02 28th plenary report):

1. Catch data for recent years for all fisheries concerned, including the fisheries that commenced in the most recent years;
2. Data on trends in CPUE;
3. Discard rates;
4. Stock assessment for the target species or other useful stock indicators, including shared stocks;
5. Specification of annual targets for the reduction of the bottom trawl fleet over the period 2008-2012;

6. Specification of annual targets for the reduction of pelagic trawl effort over the period 2008-2012.

In its 28th Plenary report, STECF also suggested that that Slovenian fishery scientists collaborate with the other scientists from Countries fishing within the same GSA, with the purpose to provide agreed assessments for shared stocks and to provide the data mentioned above.

Within the Slovenian Management Plan there are the following requests for derogations:

- I. Purse seine fishery: a derogation is required about the size of surrounding nets under Article 13(5) of Council Regulation (EC) No 1967/2006. Slovenia proposes that, from 1 January 2008, Slovenian fishermen should continue to use surrounding nets whose overall drop (70 m) is greater than specified in the second subparagraph of Article 13(3) of Council Regulation (EC) No 1967/2006, mainly because (a) this provision should lead to an 80% reduction of the area covered by each fishing haul, (b) the fishery is carried out in non protected areas where *Posidonia* meadows are not existing, and (c) the fishing method which requires a longer net to catch a sufficient number of fish.
- II. Bottom trawl fishery: by way of derogation from Council Regulation (EC) No 1967/2006, the plan requests permission to continue to use the existing mesh size because of (a) the shallow bottoms in the fishing grounds, (b) the fact that Musky octopus (*Eledone moschata*) is one of the target species and the adoption of a larger mesh will cause a strong reduction in catches and economic losses, and (c) the Marine Fishery Act (Official Gazette of the Socialist Republic of Slovenia No 25/76, entered into force on 1 January 1994), does not set a minimum mesh size for bottom trawl.

STECF comments:

Management plan (MP)

STECF reviewed the new version of the Slovenian MP and concluded that although some information is now included regarding points 1, 2, 3 and 5 above, there are no elements in the submission to evaluate whether the exploited resources targeted by the MP have been, or are currently being fished sustainably. Also, due to the lack of appropriate information, STECF is unable to evaluate the potential effects of the plan's proposals on stocks and fisheries. The MP has no clear biological and socioeconomic objectives and does not specify harvest control rules.

In the MP, a maximum sustainable yield approach (Schaefer model) is used to set target reference points and define 'optimum number of fishing vessels' for separate gear segments (namely, purse seiners, otter bottom trawlers and paired pelagic trawlers) using data on catch (species aggregated) per unit effort (number of fishing trips or fishing time in the case of pelagic trawlers) for a period of four years (2005-2008). Despite the numerous shortcomings of this analysis, many of which have been identified in the introductory sections of the MP (e.g., short time series, problems in defining fishing effort, minute fishing area and fleet in relation to the distribution, movements, overall fishing effort and catches taken by the Adriatic fish stocks that are shared between

different countries), results are ultimately used to define “optimal number of fishing vessels” in each gear segment. STECF notes that this approach is not suitable and the results of such analysis cannot be used as a basis to justify decisions such as to increase the number of vessels using surrounding nets and to encourage fishermen using bottom trawls to switch to surrounding nets, as implied in the MP.

In the MP, it is mentioned that the “the availability of fishing organisms in Slovenian territorial waters does not depend so much on local fishing pressure as on migrations and the status of stocks in the Adriatic, which is particularly affected by other Adriatic fisheries”. STECF concludes that because the majority of slovenian catches are from shared stocks, it is imperative that the Slovenian MP be consistent with MPs of other Countries fishing within the same GSA.

Data analysis

STECF **recommends** that data collected by Slovenia in the framework of the EU Data Collection Programs should be used to produce assessments of stock status for the shared Adriatic stocks in collaboration with other Countries fishing within the same GSA (in SCSSA/SAC/GFCM and/or SGMED/STECF). The Slovenian MP should be based on these assessments. Furthermore, the MP should include a socioeconomic impact assessment.

Derogations

STECF has the opinion that the derogation requested in point (I) seems reasonable, under the condition that no fishing will be carried out over *Posidonia oceanica* meadows. In order for STECF to evaluate the likely effects of the derogation, maps of *P. oceanica* beds should be submitted.

With regard to the derogation request in point (II) above, STECF considers that the requested derogation to use a smaller mesh size until 31 May 2010 is consistent with Council Regulation (EC) No 1967/2006.

STECF conclusions:

STECF reviewed the new version of the Slovenian MP and concluded that it still lacks appropriate data and information to permit an evaluation of its likely impact. Moreover, the MP has no clear biological and socioeconomic objectives, no proper explanation/justification of actions to achieve the objectives and no harvest control rules are specified. It also lacks any assessment of the status of the resources that the MP addresses. Therefore, it does not fully meet the requirements of Article 6 of the Council Regulation (EC) No 2371/2002.

5.5. Atlantic Waters and bordering Seas - Closed area for any fixed gears in the area of Cap Breton

Terms of Reference

STECF is requested to advise on the Cap Breton closure proposed by the SWW RAC.

This request is based on a French Regulation in force (Arrêté n° 156/99 of June 23rd. 1999; and modified by n° 215/999) prohibiting the deployment of any fixed gears in the southernmost area of French territorial waters and a fraction of EU EEZ.

Documentation consulted

The documentation provided to STECF on this item was poor and STECF had to search for appropriate material in an attempt to determine what was being proposed. As a result, STECF may have misinterpreted the proposal, if any critical piece of information was overlooked.

The following documentation was consulted:

- i) A letter outlining the request to DG MARE by the SWW RAC (date marked 22 April 2009) obtained from the SWWRAC website.
- ii) A response from DG MARE of 6 May 2009 to the SWWRAC request asking for supplementary information. This was also obtained from the SWW RAC website.
- iii) Supplementary information provided by the SWW RAC to the DG MARE containing:
 - The text of decree (Arrêté) number 156/99 of 23 June 1999 (documents SL004, SL005 and SL006 provided by DG MARE)
 - The text of decree (Arrêté) number 215/99 of 20 September 1999 (documents SL007 and Gouf Cap breton - Coordonnées.pdf provided by DG MARE)
 - IFREMER letter of 29 September 2009 providing scientific and technical information on the Cap Breton Canyon (documents SL002 and SL003 provided by DG MARE)

The following section outlines STECF's understanding of the background to the proposal based on the documentation consulted.

Background

In 1999 French authorities implemented measures (Arrêté 156/99 of 23 June 1999) to regulate the use of certain fishing gears in the Cap Breton canyon. The aim of the regulation was to avoid spatial conflict among fleets (métiers) fishing in the area. It established a specific area where fixed nets are prohibited but purse seining is permitted. STECF notes that the regulation does not mention the use of towed gears. A second regulation (Arrêté 215/99 of 20 September 1999) modified the limits of the area previously specified. The regulated area is shown in Figure 5.5.1.

Fig. 5.5.1.

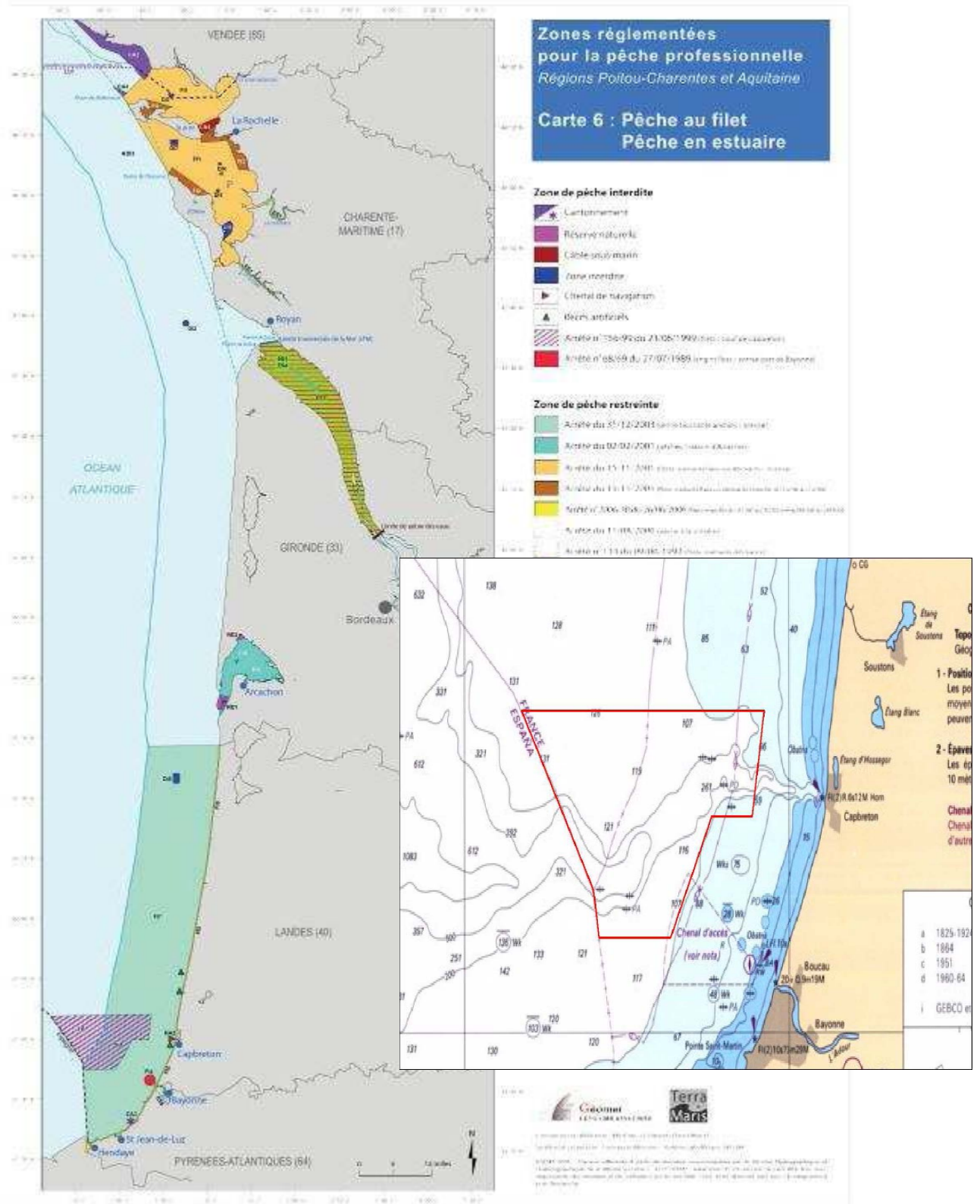


Figure 5.5.1.- Location and limits of the Cap Breton canyon area regulated under French legislation.

Because the measures are implemented through a national regulation the provisions contained in it apply exclusively to French fishing vessels operating in the area. Vessels from other nations are not subject to the provisions of the regulation. In order to avoid potential conflicts between fleets and “to guarantee a right balance in the space management for a good cohabitation”, the South Western Waters Regional Advisory Council (SWW RAC) addressed a request to the CE (DG MARE) in April 2009 to include the decree 156/99 as part of the EU technical measures regulatory framework. Supplementary technical and scientific information supporting the request was subsequently sent to the EC by the SWWRAC including a letter from IFREMER highlighting the most relevant ecological features of the area under consideration.

The IFREMER letter states that the Cap Breton canyon constitutes a unique ecosystem but recognises that the “knowledge about its biodiversity is still scarce”. Available data indicate the apparent existence of habitats and species of interest under the OSPAR Convention and EUNIS classification. It consists in a submerged valley the head of which (origin) arises very close to the coast favouring the presence of deep water species at a short distance from the coast. The letter also alleges that the area is important for groups of marine mammals and seabirds as well as containing an important diversity of infrequent or non-abundant fish species, such as some sharks. The sea bottom in the area is populated by benthic invertebrate communities including corals, pennatulids, cerianthids, ophiuroids and comatulids.

According to the IFREMER letter the regulated area is exploited by a limited number of French vessels using longlines, traps and nets (precise types not specified) and by several Spanish gillnetters competing with longliners for the same target species (i.e. hake, forkbeard, seabreams, sharks). IFREMER is in favour of affording a greater protection to the area without affecting longliner and trap/pot vessels, while recognising that there is a “*need to gather further demonstrating proofs*”.

IFREMER also notes that a multidisciplinary research program is being organised to study the ecological value and characteristics of the whole Cap Breton canyon. Furthermore, it states that results from these studies could provide scientific information needed to better support the SWW RAC proposal.

STECF response

STECF notes that the French regulations regulating fishing activities in the Cap Breton area were established with the aim of avoiding any competing conflict among fleets. The regulations explicitly prohibit fishing for fixed nets but permit purse seining, but there is no mention of any provisions for towed gears such as bottom trawls. Furthermore, the regulations in force only apply to French vessels and do not prevent other fleets (e.g.

Spanish) from using any type of nets. STECF has insufficient information to quantify the impact of including the proposed closed area to fixed nets in European legislation. Nevertheless closure of the area to all fixed nets is likely to result in reduced exploitation rates on some species and reduce impacts on the habitat provided that exploitation using other gears does not increase.

STECF also notes that the IFREMER letter indicates that the Cap Breton canyon may merit greater protection than that currently afforded by the French legislation. Therefore, **STECF encourages** IFREMER to undertake the multidisciplinary research program announced in its letter, in order to collect the scientific information needed to evaluate the ecological importance of the area.

5.6. Atlantic Waters and bordering Seas - Possible extension of the Anchovy multi-annual plan to the ICES area VII

Terms of Reference

In view of the catches of anchovy in zone VII, adjacent to Bay of Biscay (zone VIII), STECF is requested to analyse whether these catches belong to the stock in Bay of Biscay and the possibility of including the fishery of anchovy in zone VII to the multi-annual management plan in Bay of Biscay, the proposal of which currently covers zone VIII only.

Background.

Biology

Anchovy (*Engraulis encrasicolus*) in the Bay of Biscay is a short lived species, generally living no longer than 3 years. In recent years, the main part of the population comprised one year old fish (generally 70% or 80% of the total number). The stock is mainly located in the eastern part of the Bay of Biscay from the Basque country to the Southern part of Brittany. Its main spawning period ranges between mid April and mid June. Spawning mainly takes place in two locations. The main spawning area, is situated around the mouth of the Gironde estuary (between latitude 45°N and 46°30'N) from the coast to the continental shelf. The second is located between 44°30'N south to the Spanish coast, and from the French coast to longitude 3°E. Anchovy is fully mature at age 1 and the spawning stock is heavily dependent on the strength of the annual recruitment at age 1 (Uriarte, Prouzet and Vilamor, 1996)

Some observations made in 2000 during the PELASSES survey in winter also suggest the presence of anchovy in the Celtic Sea (Carrera, 2000). According to ICES, so far, these observations do not affect our perception of one stock in the Bay of Biscay area. Anchovy found in the Celtic sea area is probably linked to the population of anchovy found in the English Channel in spring and exploited for many years by several fisheries.

At that time of the year, the fishery operating in the Bay of Biscay was located in the south and was moving to the north only in autumn.

In recent years, changes in the anchovy distribution have occurred with an expansion in northern waters since the 90s and no particular change in the southern limit. The means by which anchovy is expanding in the North Sea was questioned with two hypotheses: good recruitment in micro local northern populations or vagrancy of adults from southern populations attempting to establish new life cycles in the North. (Report of SGRESP, ICES CM 2005/G: 06).

Fishery closure in VIII.

In July 2005 the fishery operating in the Bay of Biscay was closed due to the low levels of biomass of the anchovy population and the failure of the fishery. This closure has been prolonged stepwise, and is at present valid until July 2010.

In June 2009 ICES advice stated that “*Based on the most recent estimates of SSB, ICES classifies the stock as being at risk of reduced reproductive capacity. Although median SSB in 2009 is estimated to be above Blim, this estimate has a 47% probability of being below Blim. Low recruitment at age 1 since 2002 and almost complete recruitment failure of the 2004 year class are the primary causes of the low stock size. The recruitment at age 1 in 2009 is at the same level as last year but lower than in 2006 and 2007.*”. According to that state of the stock, ICES advice to the EC was: “*ICES advises on the basis of exploitation boundaries in relation to precautionary limits that the fishery should remain closed until the stock condition has improved. The stock condition can be re-evaluated when estimates of the 2010 SSB and 2009 year class are available based on the spring 2010 acoustic and DEPM surveys. This implies a closure of the fishery until at least July 2010.*”.

STECF has agreed with the ICES advice.

Finally, the Commission has launched a process for the development of a multiannual management plan for anchovy which should be implemented once the stock has recovered. It is based on the following objectives:

- ensure the exploitation of the stock at high yields consistent with maximum sustainable yield;
- guarantee the stability of the fishery, as far as possible, and with a low risk of stock collapse.

Catches of Anchovy in area VII

While catches of anchovy are reported each year for area VII (see Table 5.6 for 2008), neither assessment nor advice are provided for this area.

Div	Country	Catch (tonnes)
VIID	UK	0
VIII E	FRA	0.7
VIII E	NED	6
VIII E	UK	175.1
VIII F	UK	0.5

Table 5.6.1. Catches of anchovy in VII for 2008 as reported to ICES.

STECF Comments

STECF notes that no detailed study has been carried out to discriminate sub-populations within the whole European Atlantic distribution of the anchovy (ICES WGMHSA Report, 2007). Morphological studies have shown large variability among samples of anchovies coming from different areas, from the central part of the Bay of Biscay to the West of Galicia (Prouzet et al. 1995; Junquera *et al.*, 1993) however these authors explained that the variability is a reflection of the different environments in the recruitment zones where the development of larvae and juveniles took place.

In the light of current information, such as the well defined spawning areas of the anchovy at the South-east corner of the Bay of Biscay (Motos et al., 1996) and the complementary seasonality of the fisheries along the coasts of the Bay of Biscay (showing a general migration pattern; Prouzet et al., 1995), STECF agrees with ICES when it considers that the anchovy in this area has still to be dealt with as a single management unit for assessment purposes and as a consequence, STECF is of the opinion that it is premature to include the fishery for anchovy in zone VII in the management of the Bay of Biscay anchovy.

Furthermore, as, up to now, no assessment and management exists for anchovy in the Celtic Sea, the English Channel, the North Sea and the Baltic Sea, all areas where anchovy has been reported, **STECF recommends** that The Commission takes steps to initiate studies to better understand the structure of the population in those areas as a prelude to the development of a more general management plan for anchovy in the NE Atlantic. STECF finally notes that if, in the light of new studies on the links between the stock from the Bay of Biscay and more northern stocks, the assessment and management units were revised to combine, for example, area VII and VIII, a new combined assessment and multiannual management plan would have to be developed.

STECF also notes that, among the fleets that traditionally operated in area VIII while this area was still open to fishing for anchovy, some catches were taken during autumn in the most northern part of the Bay of Biscay and in waters located in area VII, adjacent to area VIII. It is probable that those catches occurred on the northern limit of the “so-called” Bay of Biscay stock. STECF notes that, since the closure of the fishery, some catches have still been taken from the latter area but are still sporadic and minor. STECF has no information on the location of those catches and on the northern limit of the Bay of Biscay stock inside area VII during autumn. STECF is of the opinion that if those catches

were to increase to a level that makes necessary their inclusion into the multiannual management plan for the Bay of Biscay, it might then be necessary to carry out studies to redefine the northern limit of the Bay of Biscay stock.

References:

Carrera, P., Villamor, B., Abaunza, P. 2000. Report of the acoustic survey PELACUS 0399: results on sardine, mackerel, horse mackerel and anchovy. Working Document presented to the ICES Working Group on the Assessment of Mackerel, Horse Mackerel, Sardine and Anchovy. ICES, C.M. 2000/ACFM:05

ICES. 2007. Report of the Working Group on the Assessment of Mackerel, Horse Mackerel, Sardine and Anchovy (WGMHSA), 4 - 13 September 2007, ICES Headquarters. ICES CM 2007/ACFM:31. 712 pp

Junquera, S; Perez de Gandaras, G, 1993. Analysis of stock identify in Bay of Biscay anchovy using biological parameters. ICES-CM-1992/H:10.

MOTOS L., A. URIARTE, V. VALENCIA 1996: The spawning environment of the Bay of Biscay anchovy (*Engraulis encrasicolus* L.). *Sci. Mar.*,60 (Supl.2): 117-140

Prouzet, P; Metuzals, K; Caboche, C. 1995. The anchovy in the Bay of Biscay: Generalites from a fishing cruise in 1993 . IFREMER Rapp. Interne DRV 95-04 RH/St Pee

Uriarte, A., P. Prouzet and B. Villamor B., 1996. Bay of Biscay and Ibero Atlantic anchovy populations and their fisheries. *Sci. Mar.*, 60 (Sup. 2) : 237-255.

5.7. North Sea & Baltic Sea - Fishing effort ceilings and Quotas allocated in Sole and Plaice fisheries of the North Sea

Terms of reference

STECF is requested to advice on the maximum level of fishing effort necessary to take catches of the plaice and sole equal to the EU share of the TACs adopted according to the multiannual plan for plaice and sole in the North Sea [R (EC) No 676/2007].

STECF response

STECF observes that similar advice was requested in 2007 for 2008 (see Reports of the STECF plenary June 2007; report 2007 STECF stock review). STECF follows the same approach for the current request. STECF notes that the TAC advice (following the regulation [R (EC) No 676/2007]) given for North Sea sole and plaice respectively implies a reduction of F in 2010 relative to F in 2009 of 10% for sole but of only 2.2% for plaice. Assuming a proportional relationship between fishing mortality and effort in kW*days, and a constant EU share of the TAC for plaice, STECF considers that the best estimate of the maximum level of fishing effort necessary to take catches equal to the EU shares of the TACs, would be equivalent to a reduction in effort in 2010 relative to 2009 of 10% when considering sole in isolation and 2.2% when considering plaice in isolation.

Plaice is mainly caught together with sole in a mixed beam trawl fishery. Therefore, the **maximum** level of fishing effort necessary to take catches of **both species** equal to the respective EU shares of their TACs, would be equivalent to a reduction in effort in 2010 relative to 2009 of 2.2%. STECF notes that this amount of effort would likely lead to a mismatch between effort and the sole TAC adopted according to the flatfish plan [R (EC) No 676/2007], potentially leading to over quota sole catches (under the assumptions of the calculations above the sole TAC would be overshoot by 1 370 tonnes, or 10%). Nevertheless, catching the plaice TAC while avoiding over quota sole catch can possibly be achieved by targeting plaice in the central North Sea where sole is absent or by using 120mm codend mesh size.

STECF also reiterates their note from earlier this year (STECF Review of advice for 2010 Part 1, July 2009), namely that a major part of the fleet fishing for sole and plaice in the North Sea is reported to have spent less effort in that area in 2009 compared to 2007 and 2008, including the decommissioning of 25 vessels in 2008. The magnitude of the effort reduction in 2009 is not quantifiable at present, but if it results in a reduction in fishing mortality on sole and plaice in 2009, STECF advises that forecasted catches and stock biomass for 2010 are likely to be underestimated. This would imply that lower effort levels would be sufficient to catch the respective TACs of both species in 2010.

5.8. North Sea & Baltic Sea - Assessment of cod catches in Baltic Sea subdivisions 27 & 28

Background

Article 29 of Council Regulation (EC) No 1098/2007 of 18 September 2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks, requires the Commission to decide on an annual basis about the application of the fishing effort management limits defined in Article 8 of the same regulation in Subdivisions 27, 28.1 and 28.2.

Terms of Reference

The Commission requests STECF to advise if catches of cod in the period 1 October 2008 to 30 September 2009 in Subdivisions 27 and 28.2 were lower than 3% of the total catches of cod in Subdivisions 25 to 28 and if the catches of cod in

Subdivision 28.1 were higher than 1.5 % of the total catches of cod in Subdivisions 25 to 28.

STECF response

STECF received catch data from the Commission for all member States fishing in the Baltic. It was not clear to STECF if the reported data relate to landings only or to total catch of cod (including estimates of discards). The reported proportions of the total catches of cod taken by the subdivisions concerned are summarised in Table 1.

Noting the lack of clarity on whether the data reported to the Commission represent landings or total catch of cod, the data in Table 1 indicate that between 1 October 2007 and 30 September 2008, less than 3 % of the reported catches of cod from Subdivisions 25 to 28 were taken in Subdivisions 27 and 28.2 and less than 1.5 % were taken in Subdivision 28.1.

Table 5.8.1. Baltic Sea cod: Reported catches by country for SD27+28.1 and SD 28.1 in % of the total catches in SD25-28 for the period 1 October 2007 to 30 September 2008.

Country	27+28.2 (%)	28.1 (%)
SWE	0.81	0
ES	0.05	0.06
LIT	0	0
GER	0	0
POL	0	0
DAN	0	0
LAT	2.6*	2.6*

*Catches from SD28 are not split into SD 28.1 and 28.2.

STECF conclusions

For all MS, catches of cod in the period 1 October 2008 to 30 September 2009 in Subdivisions 27 and 28.2 were lower than 3% of the total catches in Subdivisions 25 to 28. Also, for most countries, catches of cod in Subdivision 28.1 were lower than 1.5 % of the total catches in Subdivisions 25 to 28. In the case of Latvia the proportion of cod taken in 28.1 is unknown, because the catches were not split into SD 28.1. and 28.2. However, all available information indicates that there are very few cod in subdivision 28.1 (Gulf of Riga) and hence the catches are likely to have been very low.

5.9. North Sea & Baltic Sea - Review of advice concerning a management plan for pelagic stocks in the Baltic Sea

Background

The Commission has taken the commitment to develop a management plan for the pelagic stocks in the Baltic Sea. The objective will be to ensure that the exploitation of the stocks is in conformity with the objective of providing a high yield and sustainable economic, environmental and social conditions.

ICES has provided scientific advice regarding long-term management targets, harvest rules and associated measures for the individual stocks in this regard (see annex).

MRAG has provided subsequent advice on the economic and social impacts of three scenarios:

Status quo option based on the assumption that fishing mortality remains at current levels

Management Option recommended by ICES

Economic rationalised management option including sub-options such as further reducing the size of the fleet in line with current trends, and changing the uptake of herring and sprat quota

Terms of Reference

STECF is requested:

1. to review, comment, modify and complete as far as needed the advice received by ICES and MRAG with regards to the objective to develop a management plan for the long-term sustainable fishery of the Baltic pelagic stocks and the respective impact assessment
2. to provide an alternative status quo option and its environmental, social and ecological impacts, i.e. the TAC remains the same or is changed by up to 15% max. irrespective of fishing mortality /stock development variations
3. to reassess the ICES recommendation for a potential management scenario for Western Baltic/ IIIa herring under the assumption that the trend in recruitment observed since 2003 continues.

STECF responses

TOR 1 a) ICES advice on identify options for multi-annual management of the Baltic pelagic stocks.

Simulations were conducted by ICES in order to identify options for multi-annual management of the Baltic pelagic stocks. The results were presented in ICES (2009a, b). **STECF agrees** with the HCR proposed by ICES for all stock presented in ICES (2009a, b).

TOR 1 b) Impact assessment of long-term management plan

Background

The impact assessment of ICES proposed long-term management plan was made by MRAG. The objective of the report was ambitious: to explore environmental, economic and social impact implications of management plan proposed by ICES. Terms of reference included analysis of management plan on fishing fleet, onshore industries and communities dependent upon Baltic pelagic fisheries. In that respect the scope of the report is comprehensive.

Terms of reference required to investigate three management options:

- Option 1 – no change, implemented through the assumption that fishing mortality remains at current levels;
- Option 2 – implementation of ICES harvest control rules for the multi-annual management plan, implemented from 2009;
- Option 3 – economic rationalisation, including several options such as further reducing the size of the fleet in line with current trends, and changing the uptake of herring and sprat quota.

STECF response

STECF recognises that the results from impact assessment of the options to the fleet using EIAA model were largely in line with what would be expected from the biological simulations. However, there are several ambiguities that could not be clarified by STECF.

STECF has concerns that the use of AER data without detailed knowledge of the individual fisheries may lead to false conclusions. There are several errors in the descriptive part of the report (e.g. the landings and processing of the Lithuanian catches landings: 12,100 tons, processing: more than 63,000tons). It is not clear that sufficient local expertise was obtained early in the project to ensure accurate descriptions of fisheries and related activities or to ensure that the results of the modelling were reliable. STECF advises that for future impact assessments, it is essential that local experts are integrated into the assessment process from the outset.

STECF notes that the report is presented as a commercial consulting report to a client, rather than as a scientific paper or working group report. The report is not self-explanatory and fully transparent in terms of data collected and used, model applied and modifications to data used. It is not clear which version of the EIAA was used. If it was the publicly available version, then this is several years old. The AER data used are described as being incomplete but the data set is not presented. It is not clear how the AER data were applied to the model. The questionnaires used to collect further information are not reproduced in the report. There is no report of the response rate and no analysis of the responses is presented. There is concern that answers to the questionnaire may have been over-interpreted.

The market situation for the pelagic species in the Baltic, both herring and sprat, has changed significantly since 1990s. There are some general considerations of market development in the report, but STECF considers that the impact assessment should have contained substantially more analysis of future market development and should have run the EIAA model with different market scenarios. As the market is highly unstable and the future has not been properly considered, the results of the impact assessment are not as credible as they could be.

STECF notes that the MRAG impact assessment report is insufficiently transparent to allow an assessment of the robustness of data collected, data used, models applied, and conclusions drawn. Therefore, **STECF can not endorse** the conclusions drawn in the report. Also, the report does not contain explicit advice to the Commission, therefore STECF cannot, as requested, review, comment, modify and complete the advice received.

However, STECF finds that for the three options assessed, estimated impacts on the fleet, processing sector and communities are ranked in the order that could be expected.

TOR 2: Provide an alternative status quo option and its environmental, social and ecological impacts, i.e. the TAC remains the same or is changed by up to 15% max. irrespective of fishing mortality /stock development variations

The European Commission (EC) in its request to ICES to identify options for multi-annual management of the Baltic pelagic stocks asked ICES to advise on constant F based harvest control rules that would provide low risk of stock depletion, stable catches and sustained high yield. As basis for its response to the request ICES conducted a large number of simulations exploring constant F strategies. The request to ICES did not include harvest controls based on alternative strategies and ICES did not investigate TAC based strategies.

STECF did not conduct a new set of simulations exploring harvest control rules based on alternative harvest strategy during the November 2009 plenum. Firstly, because the time available did not allow detailed simulations to be conducted. Secondly, it was not clear to STECF what type of alternative harvest strategy the request for “an alternative status quo option” refers to. **STECF therefore invites** the European Commission to provide clear guidelines on the harvest strategy to be explored before new simulations are initiated.

TOR 3: Reassess the ICES recommendation for a potential management scenario for Western Baltic/ IIIa herring under the assumption that the trend in recruitment observed since 2003 continues

STECF notes that simulation conducted by ICES assumed the recruitment of WBH will remain within the range observed in recent years (i.e. low recruitment regime). Therefore, STECF considers that the simulation presented and the proposed HCR should be robust to a scenario of low recruitment for this stock. The proposed HCR is responsive to the stock size and stipulates no fishing if the SSB falls below 110,000 t. STECF therefore considers that an appropriate response to a situation of a continued decline in recruitment is already incorporated into the proposed HCR.

References

ICES 2009a. Report of the Workshop on Multi-annual management of Pelagic Fish Stocks in the Baltic, 23 - 27 February 2009, ICES Headquarters, Copenhagen. Diane Lindeman n. 126 pp.

ICES 2009b. ICES answer to an EU specific request on Multi-annual management of pelagic fish stocks in the Baltic.

5.10. North Sea & Baltic Sea - Development of a multiannual salmon management plan in the Baltic Sea

Background

The Commission is developing a management plan for salmon in the Baltic Sea. Even though ICES⁷ and STECF has already provided the Commission with an extensive set of advice on this subject, there are still some specific questions that need to be addressed.

Terms of reference

Advice on harvest control rules

A vital part of any management plan is harvest control rules to set TAC. STECF has recently been asked to propose such rules but replied that for it to be able to give advice it needs to have clear guidance on the objectives of the future management plan and the relative weight that should be given to different fisheries. Further clarification is given below.

The management plan is still under preparation but the specific objectives of the plan are likely to be:

1. Wild salmon in the Baltic Sea and its rivers is managed according to their maximum sustainable yield while ensuring its favourable conservation status
2. The genetic diversity of the different wild salmon populations is safeguarded.
3. Both commercial and recreational fishermen in the Baltic Sea and its rivers are able to use the resource in a sustainable way.

⁷ ICES special advice 2008, 8.3.3.3: Request to ICES for advice on management of Baltic Sea salmon <http://www.ices.dk/committe/acom/comwork/report/2008/Special%20Requests/EC%20Revision%20of%20salmon%20action%20plan.pdf>

The Commission will propose to set a conservation reference point for the stock at 80% smolt production of the possible production in all rivers by 2015. For the rivers that did not reach the old 50% target by 2010, the deadline to reach this level will be postponed to 2015 but with an ultimate target of 80% by 2020. At the same time, the objectives as expressed in the Habitat Directive (HD) for salmon to be in favourable conservation statuses in rivers must be respected.

The Commission is proposing to set a TAC on all marine commercial catches and to limit the mixed stock fishing (MSF) by proposing an X% maximum uptake of the national quota outside 4 nm from the baseline. Member States (MS) will be responsible for managing recreational fisheries and commercial river fisheries in accordance with the objectives in the plan and the HD. To make sure that weak rivers are protected, the plan will request MS to implement national measures i.e. seasonal and areas closures outside these rivers and by looking at each river system and its management with a holistic view.

Given the above stated objectives and taking into account

- occasional strong outbreaks of M74
- the post smolt survival of the Baltic stock
- the share of reared salmon in the catches
- no seasonal closure on the offshore fishery

and assuming that weak wild salmon river stocks will be protected by MS national measures and not be caught to any substantial degree in the coastal or river fishery.

The Commission would like to requests STECF to:

1. Advise on a fishing mortality rate that is consistent with F_{MSY} and has a maximum 5% risk of collapse of any wild salmon river stock
2. Advice on the proportion (%) of the combined TAC that may maximum be taken in the offshore mixed stock fishery outside 4 nm from the baseline in order to safeguard weak stocks exploited in this fishery.
3. Evaluate this harvest control rule:
 - Constant F at F_{MSY} in relation to all adult fish entering the fisheries each year, including reared fish
 - A maximum % of the TAC to be taken outside 4 nm from the baseline as proposed above
 - 15% TAC constraints

- Each year deduct in the TAC advice the mortality in the recreational and river fisheries as an average level of the last three years.

4. Suggest better rules.

STECF response

Request 1. Advise on a fishing mortality rate that is consistent with F_{MSY} and has a maximum 5% risk of collapse of any wild salmon river stock

Fishing mortality consistent with F_{MSY}

A universal F_{MSY} for the fisheries on the Baltic salmon stocks cannot be defined. The level of exploitation consistent with maximum sustainable yield varies between stocks pending on the productivity in the stocks (described by S/R relationship, and post smolt survival which is likely different in different parts of Baltic Sea). S/R relationship is very much linked to the environmental conditions in the rivers. F_{MSY} as a management tool is therefore only relevant if defined on a stock level and if the mortality generated by the fishery can both be estimated and managed on the same level.

Fishing opportunities consistent with less than a 5% risk of stock collapse

There is no general agreed definition of stock collapse. For the purposes of this response STECF has defined stock collapse as the situation where the smolt production is less than 10% of the potential production, even though this is not a commonly used figure. Genetic risks increase on low population levels, as well as the potential of e.g. M74 and poor post smolt survival to produce such combinations of environmental settings, where stock can be totally lost.

Available simulations suggest that the risk for weakest stocks is higher than 5 % in the near future, if current fishing practices continue. STECF agrees with ICES (2008) advice, that the exploitation of the stocks within a mixed stock fishery should be based on the weakest stock with the lowest resilience to exploitation.

STECF advises that in the current situation with a number of wild salmon stocks being at low levels, any fishery on mixed stocks offshore or coastal will most likely constitute a risk of collapse of more than 5% to the weakest stocks. STECF therefore advise that under the 5% risk criteria no commercial or recreational fishing of mixed salmon stocks should be allowed until the management target (recover all stocks to 80% of maximum smolt production) has been reached for all stocks.

Request 2. Advice on the proportion (%) of the combined TAC that may maximum be taken in the offshore mixed stock fishery outside 4 nm from the baseline in order to safeguard weak stocks exploited in this fishery.

The fisheries outside 4 nm (offshore) and the fishery within 4 nm are both exploiting a mixture of stocks and can be classified as mixed stock fisheries. The effectiveness of a split of a TAC in an offshore and a coastal quota as a tool to protect weak stocks is

unknown and STECF can not advise on a maximum share of the TAC to be taken outside 4 nm that will help safeguarding weak stocks.

Request 3. Evaluate the following harvest control rule:

The elements of the proposed harvest control rule are as follows:

- Constant F at F_{MSY} in relation to all adult fish entering the fisheries each year, including reared fish
- A maximum % of the TAC to be taken outside 4 nm from the baseline as proposed above
- 15% TAC constraints
- Each year deduct in the TAC advice the mortality in the recreational and river fisheries as an average level of the last three years.

STECF notes that the basis for establishing a universal target harvest rate for the mixed fisheries exploiting salmon in the Baltic Sea is limited. Nevertheless, since a universal F_{MSY} cannot be defined the proposed rule is unworkable. If the objective of management is to ensure recovery of all stocks, STECF advises that no commercial or recreational fishing of mixed salmon stocks should be allowed until the management target (recover all stocks to 80% of maximum smolt production) has been reached for all stocks.

Following recovery of all stocks, an appropriate harvest control rule would need to be developed in accordance with the intended management objectives at that time. STECF is not able to advise on the elements of such a rule at the present time. Simulations would need to be undertaken in order to establish an appropriate target F to be applied in the mixed fisheries.

No quantitative information was available to STECF on the possible implications of a $\pm 15\%$ constraint on the annual variation in the TAC and the following is based on qualitative evaluation of the possible risk of overexploitation the constraint on the TAC variation may introduce. The fisheries are mainly based on two year classes and relative large variation in fishing possibilities may occur from year to year pending on the environmental conditions in the rivers, possible outbreaks of M74 and variable post smolt mortality. STECF therefore considers that situations may occur where a $\pm 15\%$ constraint may result in a harvest rate allowing too high risks for weakest stocks. Until detailed analyses have been conducted indicating that the introduction of a constraint on the TAC variation is unlikely to constitute a risk to the salmon stocks STECF can not recommend the inclusion of constraints on TAC variation in the management plan.

STECF supports the idea that a TAC should cover all catches from the Baltic Sea (maritime waters) commercial as well as recreational. However if a separate TAC has to be set for the commercial fishery, STECF **recommends** that the anticipated recreational catch should not be based on the average catches over the latest three years but should be based on scientific advice on the likely recreational catches.

STECF considers that the fishing possibilities in the rivers should be set on the basis of stock specific conditions reflecting the state of the stock and should not be part of the overall TAC.

Request 4. Suggest better rules

The STECF proposals are documented in its response to the above requests.

Advice on stocking practices

Terms of reference: Most management plans for salmon contain guidelines on good practice for stocking and the introduction of such guidelines in the plan has strong support from almost all stakeholders. Based on "The Williamsburg Resolution"⁸, the guidelines in the SAP and results in the open consultation process, such guidelines has been drafted (Annex I)

Request to STECF

The Commission would like to request STECF to evaluate these draft guidelines and suggest improvements with the final aim to safeguard the genetic diversity of the Baltic salmon stock.

STECF response.

STECF has evaluated the draft guidelines. Revised guidelines with STECF’s proposals for amendments is given below.

Revised guidelines for stocking Baltic salmon with STECF’s proposals for amendments

Guidelines for Stocking Baltic Salmon

1. Glossary

Stocking	The deliberate release of salmon into the wild at any stage of their life-cycle for enhancement, restocking, enhancement or ranching purposes.
Non-indigenous	Not originating or occurring naturally in a particular environment; introduced outside its native or natural range.
Enhancement	The augmentation of wild stocks in individual river systems by the release of the indigenous salmon population at different stages in their lifecycles.
Population	A group of organisms of a species occupying a specific geographical area.
Rehabilitation	The rebuilding of a diminished salmon population, using a remnant-reproducing nucleus, toward the level that its environment is now

⁸ NASCO, CNL(06)48 "The Williamsburg Resolution", Annex 4- Guidelines for Stocking Atlantic Salmon III B 4 (a) <http://www.nasco.int/pdf/agreements/williamsburg.pdf>

	capable of supporting
Restocking	The re-establishment of salmon in rivers occupied by salmon in historical times.
Risk assessment	The process of identifying and describing the risks of activities having an impact on fisheries resources, habitat or aquaculture before such activities take place; the process of identifying a hazard and estimating the risk presented by the hazard, in either qualitative or quantitative terms
Ranching	The release of reared salmon smolts with the intention of harvesting all that return.
Stock	A management unit comprising one or more salmon populations.
Wild salmon	Fish that have spent their entire life-cycle in the wild and originate from parents which were also spawned and continuously lived in the wild.

2. Definition of river classes

For the purposes of these guidelines, three types of rivers are defined on the basis of the extent to which salmon and their habitats have been affected by human activities:

Class I - Pristine rivers with no significant human-induced habitat alterations and no history of introductions of fish into the watersheds or fish-rearing operations in the watersheds.

Class II Rivers where releases have been carried out in the history by indigenous stocks but which currently have wild stocks.

Class III - Rivers where either the habitat has been altered or non-indigenous wild or hatchery-reared salmon populations have been released.

Class IV - Rivers where habitats have been so altered or fish communities has been so destabilised, that there are no wild populations or only non-indigenous species are present.

3. General guidelines applicable to all rivers

Stocking should only be applied to enhance or restock salmon stocks which are in a critical stage and risk for collapse is high. Thus, stocking should be used as a conservation tool and not to enhance fisheries opportunities. If salmon stocking activities should be initiated, expert advice should be sought to identify the best option, based on the genetic and ecological characteristics of the donor population or the habitat characteristics of the donor stream. In accordance with the Precautionary Approach appropriate risk assessment for the stocking should also be conducted.

Any form of stocking should be conducted according to the following guidelines:

- (a) Stocking should only be conducted in freshwater and only in river systems able to support wild salmon stocks.
- (b) Stocking should be conducted as far upstream as possible taking into account the stock structure in the river system concerned.

- (c) Where there are suitable areas of unoccupied habitat, stocking with eggs or fry is recommended as stocked populations will benefit from natural selection during the juvenile phase.
- (d) Never release more salmon in a river system, than is expected to result in a total smolt production equal to what would be produced (or historically have been known to produce) under undisturbed conditions.
- (e) Wherever possible, use eggs or progeny of wild fish; if the residual populations are too small, thorough genetic and ecological assessments should be carried out to identify the best donor population(s).
- (f) Ensure that wild fish removal will not significantly adversely impact the donor population(s);
- (g) Where a river, or tributary, has completely lost its salmon population(s), several populations might be used for stocking to provide wide genetic variability for natural selection.
- (h) Derive brood stock from all phenotype age groups and components of a donor population.
- (i) If possible mate each male separately with a female so that the contribution of all males is equal.
- (j) Rearing of Baltic salmon should copy natural development cycle and the quality of reared salmon should be monitored by the appropriate authority.
- (a) When stocking, consideration should always be given to the impacts on the existing fish community and fisheries.

4. Guidelines applicable to Class I rivers

Generally, there should be no stocking in Class I rivers.

5. Guidelines applicable to Class II rivers

Generally, there should be no stocking in Class II rivers.

6. Guidelines applicable to Class III rivers

Before considering enhancement or rehabilitation stocking in Class III rivers, the preferred methods are to improve degraded habitat and to ensure escapement of sufficient spawners through fisheries management.

7. Guidelines applicable to Class IV rivers

For restocking in a river or part of a river where there is no indigenous salmon

- a) Use a population(s) from a tributary within the same river or from a nearby river(s) that has similar genetic and ecological characteristics to the original population(s);
- b) Use a population(s) from a tributary within the same river or from a nearby river(s) that has similar habitat characteristics;

In addition, STECF suggests a major change to current release practices. Taking into account the suggested aims of the management plan (exploitation of wild salmon at F_{MSY} , maintaining genetic diversity and integrity of wild salmon stocks, sustainable use or resources), **STECF recommends** that in the long-term, the practice of compensatory

releases should cease. In order to preserve the genetic make-up of stocks used in compensatory releases, there is a need to establish a natural life cycle for such stocks in the wild.

References

Report of the Workshop on Baltic Salmon Management Plan Request (WKBALSAL).
ICES CM 2008/ACOM:55

6. REQUESTS TO STECF SUBMITTED BY MEMBER STATES AUTHORITIES AND RELAYED BY THE COMMISSION

6.1. Nephrops Advice in ICES Sub-area VII

The Commission asked STECF to address the following request from the Irish Authorities.

STECF is requested to consider whether the Commission's proposal to reduce the TAC for *Nephrops* in ICES sub area VII in 2010 by 30% is consistent with the Commission's policy statement and whether the proposal takes into account sufficiently the differences in relative quota uptake and relative catch by FU between different member states.

STECF is also requested to give opinion on appropriate spatial and temporal parameters that would be consistent with the ICES and STECF advice that "catches in 2010 should be reduced to the lowest possible level" whilst minimising disruption to other non-*Nephrops* directed fishing operations.

Supporting documentation is given in Annex VIII.

The Commission forwarded two additional documents on Subarea VII *Nephrops* to STECF on the afternoon of Wednesday 11 November. The first was from the NWWRAC detailing a proposal for the management of *Nephrops* fisheries in Subarea VII and a second from the UK authorities requesting management advice for *Nephrops* in the Irish Sea (Division VIa N).

STECF recognised that both submissions may contain information and ideas that could assist STECF to respond to this request. However, due to the late arrival of both submissions coupled with a full work programme for the Committee, STECF regrettably was unable to respond directly to each submission.

Background

Nephrops in ICES sub area VII are the subject of a common TAC despite repeated ICES and STECF calls for functional unit-specific (FU-specific) management for the different functional units (FUs) in the area.

Following the classifications given in the Commission communication on fishing opportunities for 2010 (COM(2009) 224), STECF has classified the *Nephrops* FU's in ICES Subarea VII as follows (Table 6.1.1),

Table 6.1.1. FU categorisation and corresponding rule for setting a TAC for 2010 according to COM(2009) 224.

FU	Category	Policy statement (COM (2009) 224). TAC changes
14	6	Do not change the TAC by more than 15%.
15	2,6	Do not change the TAC by more than 15%.
16	10	The TAC should be reduced by at least 25%.
17	2,6	Do not change the TAC by more than 15%.
19	6	Do not change the TAC by more than 15%.
20-22	6	Do not change the TAC by more than 15%.

The overall TAC in 2009 for *Nephrops* in ICES sub area VII was 24,650 t and the TAC for 2010 corresponding to the policy statement rules is 17,180 t.

STECF response

STECF notes that management of all *Nephrops* FUs in Subarea VII under a single TAC is a major obstacle for a management complying with the Commission Communication on Fishing opportunities for 2010 (COM (2009) 224).

In subarea VII, the different functional units are located in widely differing sea areas, at varying depths and where growth and productivity may be vastly different. Hence, there is no scientific justification for the provision of advice on an area-wide TAC for *Nephrops*. On this basis, the relevant rule for setting a TAC for the whole of Subarea VII corresponds to category 11 of (COM (2009) 224) since there is no STECF advice for an overall TAC for subarea VII. Hence, according to COM(2009) 224, the TAC should not be changed by more than 15%. STECF concludes that the proposal to reduce the TAC for *Nephrops* in subarea VII in 2010 by 30% is not in line with the proposed TAC-setting rules in COM(2009) 224. Furthermore, there is no objective scientific justification for an area wide TAC for *Nephrops* in Subarea VII.

STECF is unable to determine whether the proposal for a 30% reduction in TAC for 2010 takes into account sufficiently the differences in relative quota uptake and relative catch by FU between different member states, since STECF is not aware of the basis of the proposal.

Noting the revised advice for *Nephrops* FUs 15 and 17 resulting from the addition of 2009 summer TV survey results, STECF advises that the catches by FUs in area VII corresponding to the advice for these stocks for 2010 is as follows:

Irish Sea E. (FU14) = 1000 t
Irish Sea W. (FU15) = 5892 t
Porcupine Bank (FU16) = 0 t
Aran Grounds (FU 17) = 704 t
SE & SW coasts of Ireland (FU 19) = 800 t
Celtic Sea (FUs 20-22) = 5300 t.

STECF agrees with ICES, that establishing an appropriate temporal closure on Porcupine bank (FU16) could help the rebuilding of the stock through a reduction in exploitation rate and is not inconsistent with the advice from ICES and STECF to reduce catches to the lowest possible level. The proposed closure is appended at ANNEX IX. Such a measure also supports the idea of separate management by FU. In addition, STECF notes that the geographical and temporal resolution proposed in the proposal is appropriate and would result in a closure to towed gears over the area where *Nephrops* are found at a time when catch rates and catches have been highest. In 2007 and 2008, the proposed period of closure (May to July) accounted for about 65% of the annual landings for those years.

STECF notes that seasonal reallocation of effort is unlikely to occur, given that catch rates outside the proposed closed period have been considerably lower historically, than in the proposed closed period. In contrast STECF notes that spatial reallocation of effort is likely to occur during the closed period and there is a risk that effort may be displaced into other *Nephrops* fisheries in area VII, increasing the exploitation rate these stocks (categorized as 2 or 6). Any increase in fishing pressure on individual FUs cannot be controlled by an area-wide TAC. In addition, the potential impact on fleets that do not target *Nephrops* but which fish in the proposed closed area for other species is unknown and should be assessed.

6.2. Irish Sea (VIIa N) Herring - Catch Opportunities for 2010 and Latest Scientific Information on Stock Status

The European Commission asked STECF to address the following request from the UK Authorities:

“The UK requests STECF to consider whether, in the light of information from the extended survey series, the acoustic survey estimates on Irish Sea herring are representative of stock trends and could be used to set management measures in line with the Commission’s Policy Statement for setting TACs for 2010 for Category 6 stocks where the state of the stock is not known precisely”.

Supporting documentation is given in Annex IX.

STECF response

On the basis of the information presented, STECF concludes that the results of the acoustic surveys are likely to be representative of the trends in the stock and in principle, could be used to by the Commission as a basis for setting fishing opportunities in line with COM(2009) 244 should the Commission choose to do so. However, STECF wishes to stress, that the suitability of the TAC setting rules in COM (2009) 244 for the management of fisheries has not been assessed and a decision to apply such rules should not be considered as STECF advice.

Other considerations

Furthermore, the acoustic survey results indicate that the 1+ biomass and SSB estimates from the survey in 2007 and 2008 are approximately 2-3 times higher than any equivalent estimate throughout the time series of the survey (1994 – 2008). In addition, STECF notes that in most years, 1- and 2-ring herring comprise between 80% and 90% of the estimated stock in number. The proportions of 1 and 2-ring fish in 2007 and 2008 were also about 90% in number.

STECF also notes that since 1994, the acoustic survey estimates of 1+ biomass and SSB show a gradual increase lending support to the view that the level of catches taken since that time has not caused any further decline in the stock although it remains at a low level compared to the estimated SSB in the mid-1970s (70,000 t – 120,000 t). Since 1994 the proportion of 1-and 2-ring fish in the commercial landings has averaged 53%, but in 2007 and 2008, these age groups accounted for 82% and 66% of the landings in number at age, reflecting the presence of the strong 2005 year-class. The acoustic survey results indicate that 1-group recruitment in 2009 is the strongest in the time series. A high proportion of the catches in 2009 and 2010 are therefore likely to consist of these recruiting fish. If the management objective for this stock is to increase SSB, it would seem prudent to regulate the catches of recruits to allow them to contribute to the future SSB.

6.3. Megrim in ICES areas IV & VI

Answer to the submission made by the UK Authorities to the European Commission requesting that the Scientific Technical and Economic Committee for Fisheries considers additional scientific evidence on megrim in ICES areas IV & VI

Request to STECF

The UK requests that STECF to consider the material provided by Marine Scotland Science and to advise whether, in light of the Commission's policy statement, an increase in the TAC for megrim (*Lepidorhombus* spp.) in both ICES zones IV and VI could be justified.

STECF comments

In ICES zones IV and VI, Megrim (*Lepidorhombus* spp.) is not subject to analytical assessment but ICES has approved the use of CPUE derived from the monkfish survey (Reid 2007; Fernandez 2009) as an indicator of the relative change in the megrim stock abundance and biomass. The survey area encompassed the Northern Shelf of the British Isles, north of latitude 56° to a northerly limit of 62° 30' north. This area was further limited to areas where the depth was less than 1000 m. Four regions were proposed as distinct areas and are surveyed by three commercial vessels and Scotia RV: Rockall; west of Scotland; north of Scotland; and east of Scotland. Details of the survey methods are given in Fernandes *et al.* (2007).

In 2009, the biomass of megrim on the Northern Shelf was estimated at approximately 8,673 tonnes: 4,312 tonnes in ICES Sub-area VI (west of Scotland) and 4,361 tonnes for the northern part of ICES Sub-area IV (North Sea). According to survey results, both abundance and biomass have increased in recent years. The increase between 2008 and 2009 is between 23 and 29% when compared to the three previous years (Table 1).

Table 6.3.1. Biomass of megrim by area as estimated by the monkfish survey from 2005 to 2009. Changes in biomass (in %) in 2008-2009 compared to the 2005-2007 period.

Area	Area IV (partial)	Area VI	Northern Shelf (partial)
2005	4652	2353	7005
2006	3629	3127	6757
2007	5509	4258	9766
2008	6953	4063	11016
2009	4361	4312	8673
% last 2 years	23.1	29.0	25.5

STECF conclusion and recommendations

STECF consider the CPUE derived from the monkfish survey as a reliable source of information to describe the relative changes in biomass of megrim in ICES zones IV and VI, although the precision of the annual estimates of biomass is low. According to the survey results, the stock of megrim has increased between 2008 and 2009 is between 23 and 29% when compared to the three previous years (Table 1). If the TACs for megrim in ICES divisions VI and VI are set according to the rules proposed in COM(2009) 244, this implies a 15% increase in TACs in 2010 for both ICES Sub-areas IV and VI, relative to those agreed for 2009. STECF wishes to stress that to follow the TAC-setting rules in COM(2009) 244 should not be construed as STECF advice.

Furthermore, STECF noticed that the survey timing was changed during the time series as the survey period was moved from November to April since 2008. Although the report stated that changes in survey period would not affect the CPUE estimation of the survey (i.e. no seasonal effect was foreseen as the survey always covered the entire depth range of the species), STECF considers that a possible seasonal effect on CPUE could also arise from changes in catchability. Therefore, STECF **recommends** that the survey data should be formally analyzed to determine whether there is any seasonal effect on catch rates.

6.4. German fleet targeting flatfish

Terms of reference

The STECF plenary is requested to advise whether the fishing activity of the German fleet targeting flatfish during the reference period, when the fishing effort baseline in accordance with Art 12 of Regulation (EC) No 1342/2008 was established, could be considered as atypical of this fleet's activity. Within limits of data availability, the fishing activity of the fleet before, during and after the reference period should be compared.

STECF response

STECF notes that the reference period for the German fleet, when the fishing effort baseline in accordance with Art 12 of Regulation (EC) No 1342/2008 was established, was 2004-2006. The STECF dataset contains the effort data for the German BT1 and BT2 fleets targeting flatfish as well as for the unregulated beam trawl fleet targeting brown shrimp fishing in the North Sea and Skagerrak for the years 2000-2008, and is thus able to make the comparison.

STECF notes that the activity of neither BT1 nor BT2 in 2004-2006 was atypical as compared to the previous period (2000-2003; see Figure 6.5; t-tests of 2000-2003 versus 2004-2006, $p > 0.6$). After the reference period, in 2007-2008, only BT2 effort seems to have a decreasing trend.

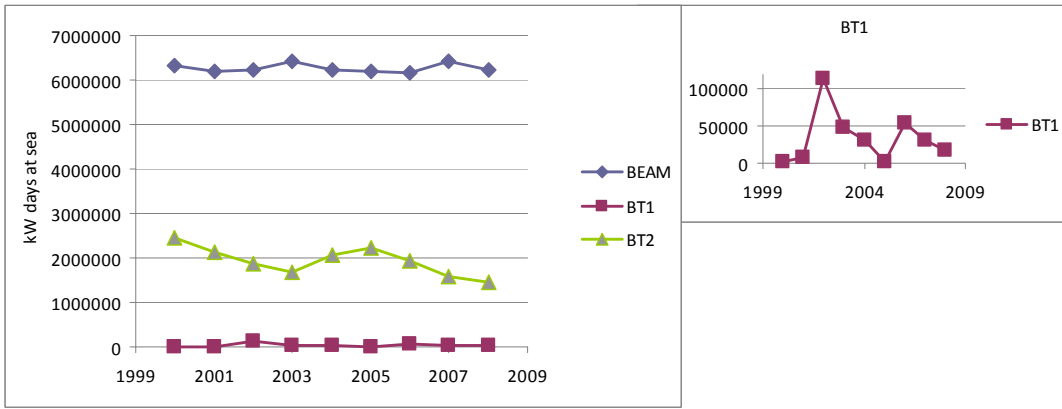


Figure 6.4.1. German effort in kW days at sea in the North Sea and Kattegat by BT1, BT2, and BEAM (unregulated brown shrimp fishery) over 2000-2008. Note that the data for BT1 are replicated with a different scaling of the y-axis, for better visual resolution.

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8. ANNEXES

List of Annexes:

- Annex I: Terms of reference for the SGMED-09-02 Working Group.
- Annex II: Terms of reference for the SGBRE-09-01 Working Group.
- Annex III: Terms of reference for the SGECA/RST-09-03 Working Group.
- Annex IV: Terms of reference for the SGMOS-09-05 Working Group.
- Annex V: Terms of reference for the SGECA-09-03 Working Group.
- Annex VI: Terms of reference for the SGRN/ECA-09-03 Working Group.
- Annex VII: Draft Rebuilding Plan for Herring in VIaS/VIIb,c, prepared by the Federation of Irish Fishermen. As supported by the Pelagic RAC, October 2009.
- Annex VIII: Scientific information in support of a Proposal for Closure of the Porcupine *Nephrops* Fishery
- Annex IX: Request by the UK Authorities for the Scientific Technical and Economic Committee for Fisheries to consider if the latest scientific evidence supports a TAC increase for Irish Sea herring in 2010.

8.1. Annex I: Terms of reference for the SGMED-09-02 Working Group

The Terms of Reference for the STECF/SGMED-09-02 (8-12/6/2009) were defined as follows:

a) Update and assess the status and trends of the stocks by all relevant GSAs, or, if the case, by bigger areas merging adjacent GSAs, in the Mediterranean Sea, taking into account the recommendations of the SGMED workshop in March and the following STECF comments. Advise on the status of the exploited stocks of the species listed below, with respect to high yields harvesting strategies and to maintain their reproductive capacity and ensure a low risk.

- Sardine (*Sardina pilchardus*)
- Anchovy (*Engraulis encrasicolus*)
- European hake (*Merluccius merluccius*)
- Red mullet (*Mullus barbatus*)
- Deep-water rose shrimp (*Parapenaeus longirostris*)
- Other species out of the list given to STECF and recalled both under point i) of the ToRs for SGMED 09 03 and in tables 1 and 2 of the data call

b) Assess the status and trends of the stocks by all relevant GSAs, or, if the case, by bigger areas merging adjacent GSAs, in the Mediterranean Sea. Advise on the status of the following exploited stocks of the species listed below, with respect to high yields harvesting strategies and to maintain their reproductive capacity and ensure a low risk.

- Red shrimp (*Aristeus antennatus*)
- Giant red shrimp (*Aristaeomorpha foliacea*)
- Norway lobster (*Nephrops norvegicus*)
- Other species out of the list given to STECF and recalled both under point i) of the ToRs for SGMED 09 03 and in tables 1 and 2 of the data call

c) Review and propose biological reference points related to high yields and low risk of fishery collapse in long-term of each of the stocks assessed.

SPECIFIC QUESTIONS UNDER POINT C)

- advice whether 300 tonnes for deep water rose shrimp and 2200 tonnes for hake may be considered as adequate minimum biological acceptable level (MBAL= Blim) in GSA 6 or in any other more appropriate spatial aggregation of adjacent GSAs; otherwise advice on which values could be used to this end.

- advice whether 1200 tonnes for deep water rose shrimp and 4000 tonnes for hake, which correspond to the long-term average over the last 8 and 16 years respectively, may be considered as precautionary biomass reference point (=Bpa) in GSA 6 or in any other more appropriate GSA spatial aggregation of adjacent GSAs; otherwise advice on which values could be used to this end.

- advice whether $F \leq 0.2$ per year on appropriate age groups can be considered as an adequate F_{pa} both for hake and deep water rose shrimp in GSA 6 or in any other more appropriate GSA spatial aggregation of adjacent GSAs.

- advice whether the exploitation rate $E \leq 0.4$ per year on appropriate age groups is an adequate precautionary reference point both for anchovy and sardine stocks in all GSAs; otherwise advice on likely value to be used to this end.

- advice whether 50000 tonnes may be considered as adequate minimum biological acceptable levels (MBAL= B_{lim}) both for anchovy and sardine stocks in GSA 17; otherwise advice on which values could be used to this end.

- advice whether 300000 tonnes for sardine and 80000 tonnes for anchovy may be considered as precautionary biomass reference point (= B_{pa}) in GSA 17; otherwise advice on which values could be used to this end.

d) Update and assess historic and recent trends (capacity, technological creep, nominal fishing effort) in the major fisheries by GSAs or, if the case, by bigger areas merging adjacent GSAs exploiting the stocks assessed. The trends should be interpreted in light of management regulations applicable to them.

e) Review the applicability and fully document all applied methodologies for the assessments and determination of the proposed biological reference points.

f) Fully document the data used and their origin for the assessments and determination of the proposed biological reference points.

g) To review proposed methodologies to standardize the MEDITS and GRUND surveys time series to account for unbalanced sampling designs and appropriate data distributions. Specific work has been initiated in this regard.

h) Investigate the requirements for reorganising the MEDITS database that result from the recommendations of STECF for combining some GSAs for some species.

i) Based on the “Survey of existing bio-economic models” under Studies and Pilot Projects for carrying out the Common Fisheries Policy No FISH/2007/07 and data made available by MS, develop specific case studies for Mediterranean fisheries (e.g. anchovy, sardine and *Nephrops*), and advise on possible short-term and long-term economic consequences of the selected harvesting strategies. Evaluate the possibility to use existing bioeconomic models for comparing the proposed harvesting strategies with long-term economic profitability (MEY) of the main fisheries exploiting the assessed stocks (to be continued in SGMED-09-03).

j) With a view to enhance the number of stocks jointly assessed on the spot at the forthcoming GFCM-SAC working groups, either within one or by merging more than one adjacent GFCM-GSAs, identify for each selected assessment methodology the data needs, data format and start data-sets preparatory work.

k) - PROTECTION OF JUVENILES AND SPAWNING AGGREGATIONS:

1) Provide relevant information on spatial and temporal distribution of seasonal or persistent juveniles aggregations and provide scientific elements indicating that possible

protection of these areas may allow to control and reduce the overall fishing mortality on the stock and further improve the exploitation pattern with a view to increase the yield.

2) Provide relevant information on fishing gear selectivity (mesh size/shape, twine thickness, hanging ratio, hook size, hook shape, etc.) with a view to further improve the exploitation pattern, reduce the fishing mortality on juveniles and increase the yield.

3) Provide relevant information on spatial and temporal distribution of seasonal or persistent aggregations of spawners and provide scientific elements indicating that possible protection of these areas may reduce the risk of stock collapse and maintain the reproductive capacity of the exploited stocks.

TABLES 1 and 2 of the Data Call

SGMED is requested to provide for each species listed below the following information needed for the different variables of the data calls:

- length type, length class interval and length range
- age class interval and age range

TABLE 1: Additional species as included in the data collection regulations and for which Member States are invited to provide relevant data before 24 November 2009.

Species common name	Species scientific name	FAO CODE
1. Bogue	<i>Boops boops</i>	BOG
2. Common dolphinfish	<i>Coryphaena hippurus</i>	DOL
3. Sea bass	<i>Dicentrarchus labrax</i>	BSS
4. Grey gurnard	<i>Eutrigla gurnardus</i>	GUG
5. Black-bellied angler	<i>Lophius budegassa</i>	ANK
6. Anglerfish	<i>Lophius piscatorius</i>	MON
7. Blue whiting	<i>Micromesistius poutassou</i>	WHB
8. Grey mullets (Mugilidae)	Mugilidae	MUL
9. Striped red mullet	<i>Mullus surmuletus</i>	MUR
10. Common Pandora	<i>Pagellus erythrinus</i>	PAC
11. Caramote prawn	<i>Penaeus kerathurus</i>	TGS
12. Mackerel	<i>Scomber</i> spp.	MAZ
13. Common sole	<i>Solea solea</i> (= <i>Solea vulgaris</i>)	SOL
14. Gilthead seabream	<i>Sparus aurata</i>	SBG
15. Picarel	<i>Spicara smaris</i>	SPC
16. Spottail mantis squillids	<i>Squilla mantis</i>	MTS
17. Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	HMM
18. Horse mackerel	<i>Trachurus trachurus</i>	HOM
19. Tub gurnard	<i>Trigla lucerna</i> (= <i>Chelidonichthys lucerna</i>)	GUU

TABLE 2: Additional species not included in the data collection regulations and for which interested Member States are invited to provide relevant data before 24 November 2009.

Species common name	Species scientific name	FAO CODE
1. Sargo breams	<i>Diplodus</i> spp.	SRG
2. Axillary seabream	<i>Pagellus acarne</i>	SBA
3. Blackspot seabream	<i>Pagellus bogaraveo</i>	SBR
4. Greater forkbeard	<i>Phycis blennoides</i>	GFB
5. Poor cod	<i>Trisopterus minutus</i>	POD

8.2. Annex II: Terms of reference for the SGBRE-09-01 Working Group

The Terms of Reference for the STECF/SGBRE-09-01 (7-11/09/2009) were defined as follows:

The working group is asked to:

1. Evaluate the Member States' reports on their efforts during 2008 to achieve a sustainable balance between fishing capacity and fishing opportunities and the Commission's summary made thereof. To what extent do the MS reports comply with Art. 14 of Council Regulation No 2371/2002 and Art. 12 of Commission Regulation no 1438/2003?
2. Evaluate Member States' application of the indicators proposed in the "Guidelines for an improved analysis of the balance between fleet capacity and fishing opportunities". Assess the extent of the application of the guidelines and the problems encountered by Member states.
3. To assess the problem of availability of data for the calculation of the proposed indicators. Particular attention should be paid to biological data.
4. To assess the appropriateness of the proposed indicators for small scale coastal fleets and fisheries, identify problems related to their use for this part of the fleet and consider possible alternatives.

8.3. Annex III: Terms of reference for the SGECA/RST-09-03 Working Group

SG-ECA/RST 09-03 - Review of stock assessments

TERMS OF REFERENCE

The STECF is requested, on the basis of the outcomes of the RST/ECA Sub-Group 09-03, which may be organized in working-groups according to eco-regions to review and comment as adequate scientific advice released in 2008 – 2009 in particular for the stocks specified below. Stocks reviewed in previous STECF reports, and for which no updated advices have been delivered meanwhile, shall be maintained in the report; this is to facilitate easy reference and consultation.

STECF is requested, in particular, to pinpoint possible inconsistencies, if any, between the available assessments and the ICES advice or advice delivered by scientific committees of RFMOs.

In addition, when reviewing and commenting available **scientific advices released by ICES**, including presentation of management recommendations, STECF will have to take into account either Harvest Control Rules adopted in any type of multi-annual management plans or Harvest Control Rules suggested in the Communication from the Commission COM(2009)224-final on a consultation on fishing opportunities for 2010 (see documents supporting terms of reference).

For those stocks, excluding naturally short-lived species, where it will not be possible to provide an advice based on a catch forecast in relation to precautionary limits, STECF is requested advising on a TAC corresponding to the application of the following rule corresponding to category 6 to 9 of the Commission communication on fishing opportunities for 2010:

1. Where there is evidence that a stock is overfished with respect to the fishing mortality that will deliver maximum sustainable yield, a reduction in TAC as needed to reach F_{MSY} , but no greater than 15% would apply.
2. Where there is evidence that a stock is underfished with respect to the fishing mortality that will deliver maximum sustainable yield, an increase as needed to reach F_{MSY} , but no greater than 15%, would apply.
3. The considerations in paragraphs 1 and 2 override subsequent paragraphs.
 - a. Where abundance information either indicate no change in stock abundance, is not available or does not adequately reflect changes in stock abundance, an unchanged TAC would apply.
 - b. Where STECF considers that representative stock abundance information exists the following rule applies:
 - i. If the average estimated abundance in the last two years exceeds the average estimated abundance in the three preceding years by 20% or more, a 15% increase in TAC applies.

- ii. If the average estimated abundance in the last two years is 20% or more lower than the average estimated abundance in the three preceding years, a 15% decrease in TAC applies.
 - 4. Where TACs have not been restrictive, and a reduction is required according to paragraph 1 or paragraph 3.b.ii, STECF shall advise on an appropriate level of TAC reduction necessary to achieve the intended reduction in catches.
 - 5. STECF shall decide on an appropriate F_{MSY} proxy in each case.
- **Sub-Group on stocks assessed by ICES and which advice have been released sine end of June 2009**
 - **Widely distributed and migratory stocks**
 - Hake (*Merluccius merluccius*) in ICES division IIIa, ICES subareas IV, VI & VII & ICES divisions VIIIa, VIIIb & VIIIc
 - Blue Whiting (*Micromesistius poutassou*) in ICES subareas I-IX, XII & XIV
 - Herring (*Clupea harengus*) in ICES subareas I & II (Norwegian Spring Spawners)
 - Horse mackerel (*Trachurus* spp.) in ICES divisions IIa, IVa, Vb, VIIa-c, VIIe-k & VIIIa-e
 - Mackerel (*Scomber scombrus*) in the North East Atlantic (Southern, Westerns and North Sea spawning components)
 - **North Sea stocks**
 - Northern prawn (*Pandalus borealis*) in ICES division IVa (Fladen Ground)
 - Northern prawn (*Pandalus borealis*) in ICES divisions IIIa West & IVa East
 - Horse mackerel (*Trachurus* spp.) in ICES divisions IIIa East, IVbc & VIId
 - Norway pout (*Trisopterus emarki*) in ICES subarea IV & ICES division IIIa
 - Sandeel (*Ammodytidae*) in ICES division IIIa
 - Sandeel (*Ammodytidae*) in ICES division IVa (excluding the Shetland area)
 - Sandeel (*Ammodytidae*) in ICES division IVa – North of 59°N West of 0°W (Shetland area)
 - Sprat (*Sprattus sprattus*) in ICES division IIIa
 - Sprat (*Sprattus sprattus*) in ICES subarea IV
 - **Northern & Southern Western Waters stocks**
 - Horse mackerel (*Trachurus* spp.) in ICES division IXa
 - Norway pout (*Trisopterus emarki*) in ICES division VIa
 - Sandeel (*Ammodytidae*) in ICES division VIa
 - **Deep Sea stocks (p.m. advice were released in 2008 and cover the years 2009 & 2010)**
 - **Stocks located in waters of Outermost regions**
 - Shrimps (*Penaeus* spp.) in waters of the French Guyana
 - **Stocks assessed by RFMO's scientific committees**
 - *Stocks of Community interest in areas of CECAF*

- ***Stocks of Community interest in areas of WECAF***
- ***Stocks under the jurisdiction of NAFO***
Review of all advice released for stocks of Community interest distributed in NAFO areas, with particular attention to be paid to the following stocks:
 - Cod (*Gadus Morhua*) in area 3M
 - Redfish (*Sebastes* spp.) in area 3M
 - Redfish (*Sebastes* spp.) in areas 3LN
 - Redfish (*Sebastes* spp.) in area 3O
 - Northern prawn (*Pandalus borealis*) in area 3L
 - Northern prawn (*Pandalus borealis*) in area 3M
 - Greenland halibut (*Reinhardtius hippoglossoides*) in areas 3LMNO
 - Skates & Rays (*Rajidae*) in areas 3LNO
 - White hake (*Urophycis tenuis*) in area 3NO
- ***Stocks under the jurisdiction of SEAFO***
Review of all advice released for stocks of Community interest distributed in SEAFO areas, with particular attention to be paid to the following stocks:
 - Orange roughy (*Hoplosthetus* spp.)
 - Patagonian toothfish (*Dissostichus eleginoides*)
 - Alfonsinos (*Beryx* spp.)
 - Deep Sea red crab (*Chaceon* spp.)
- ***Stocks under the jurisdiction of CCALMR***
Review of all advice released for stocks of Community interest distributed in CCALMR areas, with particular attention to be paid to the following stocks:
 - Antarctic toothfish (*Dissostichis eleginoides*) in FAO 48.3
 - Antarctic toothfish (*Dissostichis eleginoides*) in FAO 48.4
 - Antarctic toothfish (*Dissostichis eleginoides*) in FAO 58.5.2
 - Krill (*Euphausia superba*) in FAO 48
 - Krill (*Euphausia superba*) in FAO 58.4.1
 - Krill (*Euphausia superba*) in FAO 58.4.2
 - Skates & Rays (*Rajidae*) in FAO 58.5.2
- ***Stocks under the jurisdiction of GFCM (Mediterranean Sea and Black Sea fish and shellfish stocks. Highly migratory stocks are dealt with in ICCAT section)***
 - Review advice explicitly released by GFCM-SAC and by STECF-SGMED on demersal and small pelagic stocks.
 - Review advice on elasmobranchs as released by GFCM-SAC, STECF and Scientific Committee of other relevant international Convention operating in the Mediterranean region: sharks, skates and rays excluding pelagic sharks already dealt with in the NE Atlantic and ICCAT sections if a single population is distributed in the whole area. Special attention must be given to highlight scientific elements and considerations indicating whether distinct populations exist in the Atlantic and the Mediterranean Sea.
- ***Stocks under jurisdiction of ICCAT & IATTC***
 - Main species of pelagic sharks. (indicates if distinct stocks between the Atlantic and Mediterranean can be identified)

- Bluefin tuna (*Thunnus thynnus*) in the Atlantic Ocean, east of Longitude 45° W and in the Mediterranean Sea
 - Bluefin tuna (*Thunnus thynnus*) in the Atlantic Ocean, west of Longitude 45°W
 - Yellowfin tuna (*Thunnus albacares*) in the Atlantic Ocean
 - Yellowfin tuna (*Thunnus albacares*) in Eastern Pacific Ocean
 - Swordfish (*Xiphias gladius*) in the Atlantic Ocean, north of Latitude 5°N
 - Swordfish (*Xiphias gladius*) in the Atlantic Ocean, south of Latitude 5°N
 - Swordfish (*Xiphias gladius*) in the Mediterranean Sea
 - Swordfish (*Xiphias gladius*) in the Eastern Pacific Ocean
 - Northern albacore (*Thunnus alalunga*) in the Atlantic Ocean, north of Latitude 5°N
 - Southern albacore (*Thunnus alalunga*) in the Atlantic Ocean, south of Latitude 5°N
 - Albacore (*Thunnus alalunga*) in the Mediterranean Sea
 - Bigeye Tuna (*Thunnus obesus*) in the Atlantic Ocean
 - Bigeye Tuna (*Thunnus obesus*) in the Eastern Pacific Ocean
 - Skipjack tuna (*Katsuwonus pelamis*) in Eastern Atlantic
 - Skipjack tuna (*Katsuwonus pelamis*) in Western Atlantic
 - Small tunas (blackskipjack, frigate tuna, Atlantic bonito, spotted Spanish mackerel, king mackerel and others) in the Atlantic Ocean and in the Mediterranean Sea
 - Blue marlin (*Makaira nigricans*) in the Atlantic Ocean
 - White marlin (*Tetrapturus alba*) in the Atlantic Ocean
 - Spearfish and sailfish in the Atlantic Ocean
 - Spearfish (*Tetrapturus belone*) in the Mediterranean Sea
 - Luvarus (*Luvarus imperialis*) in the Mediterranean Sea
- ***Socks under jurisdiction of IOTC***
Review of all advice released for stocks of Community interest distributed in IOTC areas, with particular attention to be paid to the following stocks:
 - Main species of pelagic sharks
 - Swordfish (*Xiphias gladius*)
 - Bigeye Tuna (*Thunnus obesus*)
 - Skipjack tuna (*Katsuwonus pelamis*)
 - Yellowfin tuna (*Thunnus albacares*)
 - ***Stocks of Community interest in the South East Atlantic***
 - ***Stocks of Community interest in the South West Atlantic***
 - ***Stocks in the South Pacific***
Review of all advice released for stocks of Community interest distributed in the South Pacific, with particular attention to be paid to the following stocks
 - Jack mackerel (*Trachurus symmetricus*)

STECF is requested to have particular attention to the following management option proposal to be possibly implemented in the CCAMLR sub-area 48.2.

Bakground:

The Commission aims to propose designation of Marine Protected Area in CCAMLR sub-area 48.2, more concretely in South Orkney Islands for the consideration of CCAMLR Plenary.

The region surrounding the South Orkney Islands has been previously identified by CCAMLR as one of 11 priority areas in which work to establish spatial protection should be focused.

At the last Working Group on Ecosystem Monitoring and Management (WG EMM), the UK presented a paper "Towards a System of Marine Spatial Protection for the South Orkney Islands". The WG EMM agreed that the data used in this paper have been used appropriately and that the analyses are likely to yield a conservative and unbiased estimate of target areas for MPAs in the South Orkney Islands region. WG EMM therefore recommended that the Scientific Committee consider these results and any extension to the analysis in the paper to identify MPAs in Subarea 48.2 for inclusion of representative system of MPAs. The preliminary report of the WG EMM is attached.

The Scientific Committee meeting will be held just before the CCAMLR Plenary and we expect it to elaborate on the findings of this paper. CCAMLR is a unique organisation due to its ecosystem approach and it is managing a very fragile ecosystem. It has the competence to declare closed areas, closed seasons and can also impose prohibition of certain fishing activities in certain areas. Most recently, the performance review Panel called on CCAMLR to take on more proactive role with respect to the designation of MPAs.

Request:

STECF is requested to advice on this possible management option and its possible impacts on stocks distributed within the 48.2.

Scientific papers, the report of last and the previous years' meetings of the CCAMLR Scientific Committee can be found on this publicly available website:
http://www.ccamlr.org/pu/E/e_pubs/sr/drt.htm

8.4. Annex IV: Terms of reference for the SGMOS-09-05 Working Group

TERMS OF REFERENCE

1 – An 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

Terms of Reference:

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

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

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

The data should also be broken down by

Member State ;

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

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

for the following parameters:

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

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

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

2 – An 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 43/2009)

Terms of Reference:

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 designed in **Annex II to R(EC) No 40/2008** and in **Annex I to R(EC) No 1342/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** 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, 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. The following **specific questions** should be answered as well:

Concerning effort in kW-days by gear grouping deployed during the years 2004, 2005, 2006 and 2007: to what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?

3. 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.

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

5. 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.

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

3 – an 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 43/2009)

Terms of Reference:

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 II and ICES sub-area IV),
- (iii) Eastern channel (ICES division VIIId)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex II to R(EC) No 40/2008** and in **Annex I to R(EC) No 1342/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** as far as relevant) ;

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 and in number of vessels concerned
- 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. The following **specific questions** should be answered as well:

- a. Concerning effort in kW-days by gear grouping per area deployed during the years 2004, 2005, 2006 and 2007: To what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?
- b. Concerning effort in kW-days and gear grouping (also per Member State), catches and cpue/lpue in the **Eastern Channel** (division VIIId): Describe the development of these parameters in 2008 compared to previous years, overall and per Member State, and compare these developments to developments observed in the rest of the area (Skagerrak and North Sea), in particular: Can effort displacement from the North Sea towards the Eastern Channel be identified in certain gears?

3. 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.
4. If relevant data are available, to comment on the quality of estimations on total catches and discards.
5. 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.
6. To describe, as far as possible, the spatial distribution of the fishing effort deployed in the 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 first fishing effort regime for the first time in such areas.

4 – An 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 43/2009)

Terms of Reference:

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, in 2009 for the first time, EC waters of Vb)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex II to R(EC) No 40/2008** and in **Annex I to R(EC) No 1342/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** 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, sole and plaice in areas covered by Annex IIA, 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. The following **specific questions** should be answered as well:

- a. Concerning effort in kW-days by gear grouping per area deployed during the years 2004, 2005, 2006 and 2007: To what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?
- b. Concerning effort in kW-days, catches and cpue/lpue for 2004, 2005, 2006 and 2007: What effect, at Member State level, does the inclusion of EC waters of division Vb have on the data concerning the area **West of Scotland** ?

3. 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.

4. If relevant data are available, to comment on the quality of estimations on total catches and discards.
5. 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.
6. To describe, as far as possible, the spatial distribution of the fishing effort deployed in the the West of Scotland, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine to what extent fishing effort has moved from long distance to coastal areas since the implementation of first fishing effort regime for the first time in such areas.

5 – An 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 43/2009)

Terms of Reference:

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

(d) Irish Sea (ICES division VIIa)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex II to R(EC) No 40/2008** and in **Annex I to R(EC) No 1342/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** 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, 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. The following **specific questions** should be answered as well:

Concerning effort in kW-days by gear grouping per area deployed during the years 2004, 2005, 2006 and 2007: To what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?

3. 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 in areas covered by Annex IIA to **R(EC) No 43/2009**.

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

5. 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.

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

6 – An 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

Terms of Reference:

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

(g) Celtic Sea (total of ICES divisions VIIb, VIIc, VIIe, VIIf, VIIg, VIIh, VIIj and VIIk and total for the subset of ICES divisions VIIf and VIIg)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex II to R(EC) No 40/2008** and in **Annex I to R(EC) No 1342/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** 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 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 questions** should be answered as well:
- a. Concerning effort in kW-days by gear grouping per area deployed during the years 2004, 2005, 2006 and 2007: To what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?
 - b. Concerning effort, CPUE/LPUE and catch data linked to the **Celtic Sea**:
 - (i) Compare the fishing effort level evaluated per fishery and per gear groupings in VIIf+VIIg with the data submitted for ICES rectangle 28E2 and conclude on whether exploitation of cod shows similar characteristics;
 - (ii) For VIIf+VIIg only, evaluate how much of the overall fishing effort per gear groupings would be framed by a management of fishing effort that relates to cod catches of 2 or 3 or 5 or 7,5 % in the catch composition per vessel and per year ?

(iii) For VIIIf+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.

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.

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

7 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Atlantic waters of the Iberian Peninsula (Annex IIB to Regulation (EC) No 43/2009)

Terms of Reference:

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

Atlantic waters of the Iberian Peninsula (ICES divisions VIIIc and IXa, excluding the Gulf of Cadiz)

The data should also be broken down by

Member State ;

regulated gear types designed in **Annex II to R(EC) No 40/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** as far as relevant) ;

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 non-hake and non-Norway lobster in areas covered by Annex IIB (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 to R(EC) No 43/2009**).

2. The following **specific questions** should be answered as well:

Concerning effort in kW-days by gear grouping per area deployed during the years 2004, 2005, 2006 and 2007: To what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?

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 hake, Norway lobster and Anglerfish, 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 describe, as far as possible, the spatial distribution of the fishing effort 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 first fishing effort regime for the first time in such areas.

8 – An assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in the Western Channel (Annex IIC to Regulation (EC) No 43/2009)

Terms of Reference:

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 II to R(EC) No 40/2008** (and by associated special conditions defined in Annex II to **R(EC) No 40/2008** 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 in areas by weight and by numbers at age.

c. Catches (landings and discards provided separately) of non-sole in areas 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 (such data shall be issued by Member state, fishing gear and special conditions listed in **Annex IIB to R(EC) No 43/2009**).

2. The following **specific questions** should be answered as well:

Concerning effort in kW-days by gear grouping per area deployed during the years 2004, 2005, 2006 and 2007: to what extent does data provided by Member States differ from data provided in the **2008 data call**, which are the reasons given for such differences, and are the differences reasonably explained so that the working group considers reporting on the revised data being more accurate?

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 hake, Norway lobster and Anglerfish 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.

6. To describe, as far as possible, the spatial distribution of the fishing effort 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 first fishing effort regime for the first time in such areas.

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

Terms of Reference:

A) Deep sea access regime

Background

Council Regulation 2347/2002 established specific access requirements to fishing for deep-sea species, aiming at limiting fishing effort on deep-sea species at levels observed prior to that Regulation (1998 to 2000). In addition, the yearly overall maximum effort in terms of kilowatt-days has been fixed by annual decisions emanating from the December regulation on TACs & Quotas in order to comply with NEAFC provisions regarding the effort reduction policy within the Regulated area in international waters. The Commission presented an evaluation report on the management of deep sea fish stocks to the Council and the Parliament in 2007 (COM(2007)30). In this report, the Commission concluded on a number of steps to be taken in order to improve the access regime. In 2008 the European Parliament adopted a report that reflects on the access regime and the Commission's view on future development (A6-0103/2008). The Commission plans to propose amendments to the access regime in 2009, after stocktaking of Member State and stakeholder views and of scientific advice.

Detailed Request

STECF is asked to

1) in view of the management objective to target effort measures towards specific fisheries:

a) Related to maps⁹ that show by ICES statistical rectangle the distribution of catch volumes (species in order of importance) and related effort volumes (per gear category): Define the deep-sea fisheries by analysing per year, including trends observed, at Community and Member State level, gears and related effort in kW-days catching in distinct areas the species listed in Annex I and II of Regulation 2347/2002. Analyse the catch composition observed by gear category including trends over recent years, catch per unit effort and, where possible, the likely level of discards. Comment on any fishing practices that can be identified as influencing the differences in catch composition from haul to haul. Can the species be grouped into target species and by-catch species in each fishery?

b) Advise on possible improvements to

the definition of data that Member States are obliged to send to the Commission in accordance with Article 9 of Regulation 2347/2002, with a view to improving the definition of deep-sea fisheries as undertaken under litera a);

other provisions of Regulation 2347/2202, in particular the one on the on-board observer coverage (Article 8).

9 As of end of March, it is planned that JRC will produce those maps prior to meeting.

2) in view of the management objective to define most relevant species of the deep-sea fisheries, to target effort measures towards specific fisheries, and to define the measures according to the conservation needs of the species,

Review the species lists of Annex I and II of Regulation 2347/2002 according to the following criteria:

a) In the fisheries identified, are there any other deep-sea species being caught in quantities that would merit their inclusion in Annex I or II? For example: *Physis spp.*; *Alepocephalus bairdii*.

b) Are any of the species listed in the annexes often or predominantly caught in fisheries that target non-deep sea species? If so, should they continue to be included in the list of deep-sea species in Annexes I or II?

c) Could the species listed in Annex I and II be grouped into:
species that based on their life history characteristics are particularly vulnerable to fishing and should therefore not be exploited
species that based on their life history characteristics are less vulnerable to fishing and could thus be sustainably exploited.

d) Following from the exercise described under point 1), could the species listed in Annex I and II be grouped according to target/by-catch species combining all fisheries observed?

3) See point 2 a) of the Western Waters part of the ToR. This point concerns deep sea and Western Waters regime likewise.

B) Western Waters access regime

Background

The Commission is held to review the Western Waters access regime in force since 2004, based on Regulations 1954/2003 and 1415/2004. The objective of the Western Waters access regime is to avoid an increase in fishing effort compared to recent levels (1998-2002), defined as overall effort directed towards demersal stocks, and effort on some benthic fisheries. A separate constraint on maximum effort levels within a special conservation zone, the so-called "Irish Box", is designed to accompany the restrictions on the use of demersal gears in that area, in view of the area's importance as a spawning and nursery ground, in particular for hake.

Detailed request

STECF is asked to

1) Concerning the functioning of the WW effort regime:

a) Aggregate at Member State and Community level fishing effort per year in kW-days and GT-days by demersal gear types, by vessel length >10m and >15m, and by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area, gear and main species composition, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

b) Aggregate at Member State and Community level fishing effort directed towards scallops per year in kW-days and GT-days by gears and by vessel length >10m and >15m by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area and gear, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

c) Aggregate at Member State and Community level fishing effort directed towards edible crab and spider crab per year in kW-days and GT-days by gears and by vessel length >10m and >15m by ICES areas V to X and CECAF divisions 34.1.1, 34.1.2, 34.2.0; provide a description of yearly effort trends since 2000 per area and gear, compare these aggregated data with effort ceilings in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

d) Aggregate at Member State and Community level fishing effort per year in kW-days and GT-days by vessel length >10m and >15m and by demersal gear types, by gears catching scallops, and by gears catching edible crab as well as spider crab, in the Biologically Sensitive Area as defined in Article 6 of Regulation 1954/2003; provide a description of effort trends since 2000 in this area, compare these aggregated data with effort ceilings established in Regulation 1415/2004 and with Member State data submissions to the Commission under Regulation 2104/2004.

2) Concerning the definition of the WW effort regime:

a) Assess the definition of the WW effort restrictions in the context of overlapping or neighbouring effort regimes, in particular the deep sea access regime (Regulation 2347/2002), the cod plan (Regulation 1342/2008), the Southern hake plan (Regulation 2166/2005) and the Western Channel sole plan (Regulation 509/2007). In particular:

The present Western Waters regime aims at excluding fisheries directed towards deep-sea species. Discuss possible alternative criteria for the delimitation of both regimes (e.g. according to the depth of the waters in which the vessels operate or according to catch composition) or specific rules for addressing vessels that catch both deep sea species and other species;

Discuss possible redefinition of the scope of Western Waters effort restrictions in areas where fishing effort is restricted by the cod plan (VI a, V b, VII a);

b) Evaluate the precision of the definition in Regulations 1954/2003 and 1415/2004 of "fishing effort" in terms of area, time, and fishing pattern;

c) Evaluate whether fishing effort defined in GT-days or in kW-days is better correlated to the fishing mortality on edible crab and spider crab;

d) Assess possible reasons for excluding gears directed towards pelagic fisheries from the regime, in particular whether effort restrictions for pelagic fisheries in those areas might be less correlated to fishing mortalities than effort restrictions for demersal fisheries.

3) Concerning the possible evolution of the WW effort regime

a) Describe in a standardised way at Community level the characteristics of the demersal fisheries by main effort (by overall amount in kW-days and by gear category according to DCR) and main quota species (by catch volume), per ICES division in areas V to X and in CECAF 34.1.1, 34.1.2, 34.2.0, for the years 2005 to 2008;

b) Assess the relationship between the development of demersal effort in these areas and the development of TACs of main demersal species abundant in those areas, for the years 2005 to 2008.

8.5. Annex V: Terms of reference for the SGECA-09-03 Working Group

TERMS OF REFERENCE

Taking the first DCR call for fish processing data, SGECA 09-03 is requested to analyse and comment on the data delivered and if possible economic performance of MS national fish processing sector. JRC shall compile the data into similar tables for each of the MS as far as possible.

SGECA 09-03 is especially requested to work on and comment on the following items:

- 1) Data Coverage and quality
- 2) Data Analysis and description:
 - a) National level (preparing a chapter for each MS)
 - b) EU level
 - c) Description of trends and drivers for change (e.g. relevant information on policies that affect economic performance)
- 3) Discussion of future possible issues following the data analysis:
 - a) Dependence of the industry on the EU-fleet and, therefore, also the quotas
 - b) Regional level (defining of regions, comparability of data etc.)
 - c) Are there possibilities for a deeper economic analysis?
 - d) Regional importance of the industry, sector specifics in connection with the industry
 - e) Analysis of cost structures and vulnerabilities

8.6. Annex VI: Terms of reference for the SGRN/ECA-09-03 Working Group

TERMS OF REFERENCE

1. Review existing guidelines for the submission of NP's already addressed by SGRN-08-01, in particular by taking into consideration the preliminary work done during SGRN-09-02 and the review of the set of tables done during the 2009 RCMs. Propose any obvious modifications that are required.
2. Establish new guidelines and templates for the submission of technical reports based on Council Regulation (EC) No. 199/2008, Commission Regulation 665/2008 and Commission Decision 2008/949/EC. Propose a final document based on the structure given by SG-RN-09-02.

8.7. Annex VII: Draft Rebuilding Plan for Herring in VIaS/VIIb,c, prepared by the Federation of Irish Fishermen

**Draft Rebuilding Plan for Herring in VIaS/VIIb,c,
prepared by the Federation of Irish Fishermen**

AS SUPPORTED BY THE PELAGIC RAC, OCTOBER 2009

Introduction

The ICES advice for 2007, 2008, 2009 and 2010 has been that there should be no targeted fishing without a rebuilding plan. No rebuilding plan is in place. Without a plan being in place, the terms of the EU TAC Decision Rule apply. This rule implies a 25% reduction in TAC for 2010.

This document presents a rebuilding plan submitted to the pelagic RAC. The plan incorporates elements of the EU TAC Decision Rule process, along with concerns of the Irish industry. These concerns surround the issue of changes in the fishing pattern. The industry is concerned that, due to the change in fishing pattern because of restrictive quota, an incomplete account is being taken of the stock structure and some "missing fish" have prevented an accurate stock assessment being conducted.

Missing fish

The catch at age matrix (see Figure 1) for this stock is not thought to be informative of the current stock situation. For instance, for the past number of years, no one-year old fish have been detected, while the two-year olds' abundance remained rather stable. This suggests that the one-year olds are not absent from the stock, but just not found.

In addition, since 2000 the TAC has been reduced to such an extent that the present fishery cannot be compared with the earlier fishery. On the spatial scale, the fishery has become much more restrictive, because vessels tend to target fish at closest proximity to port. On the temporal scale, the fishery is now much shorter because vessels catch their quota in very few days. For these reasons the range of ages in the catches may be reduced. In other words, it is likely that catchability at age has significantly changed, which may be wrongly interpreted as lower relative abundance at age, and consequently, as higher mortality on these ages, in the catch at age matrix.

Rebuilding plan

1. In 2011 and subsequent years, the stock will be harvested at a rate of $F_{0.1}$. The present F is unknown, but measures to locate missing fish it is hoped, will improve the estimation of abundance at age and thus of F .
2. If, in the opinion of ICES and STECF, the catch should be reduced to the lowest possible level, the TAC for the following year will be reduced by 25%.

3. If the SSB is deemed to have recovered to a size equal to or greater than B_{pa} in three consecutive years, the rebuilding plan will be superseded by a long-term management plan, with a fishing mortality of F_{MSY} .
4. ICES and STECF will be asked to advise on the reference points, considering periods of high and low productivity¹⁰.
5. Every three years, the Commission shall request ICES and STECF to evaluate the rebuilding plan.

Sentinel fishery

6. At least 10% of the Irish quota will be allocated to a Sentinel Fishery to locate the “missing fish”. Fishing will take place throughout the year and in areas other than those currently being fished by the main fishery.
7. The TAC for 2010 should be rolled over, to accommodate the fishing vessels that will be investing time and effort thus expenses for carrying out the sentinel fishery.

¹⁰ The stock is in a period of lower productivity than in the 1980s (figure 2). It appears to exhibit productivity similar to that of the 1970s. ICES/STECF is asked to comment on whether the precautionary reference points should be revised to take account of differing productivity regimes.

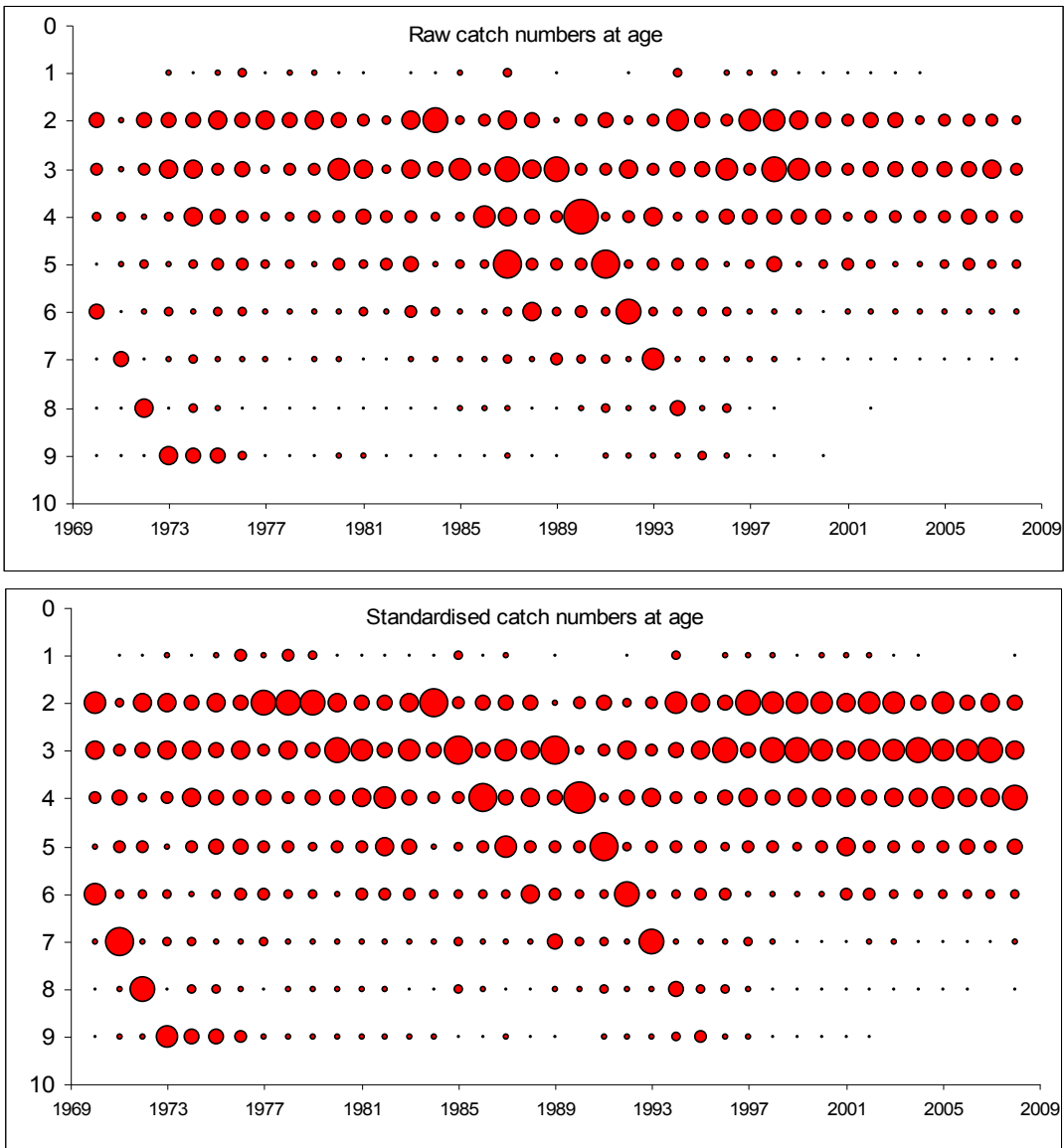


Figure 1. Catch at age matrix for herring in VIaS and VIIbc. Lower panel shows numbers standardised by yearly mean.

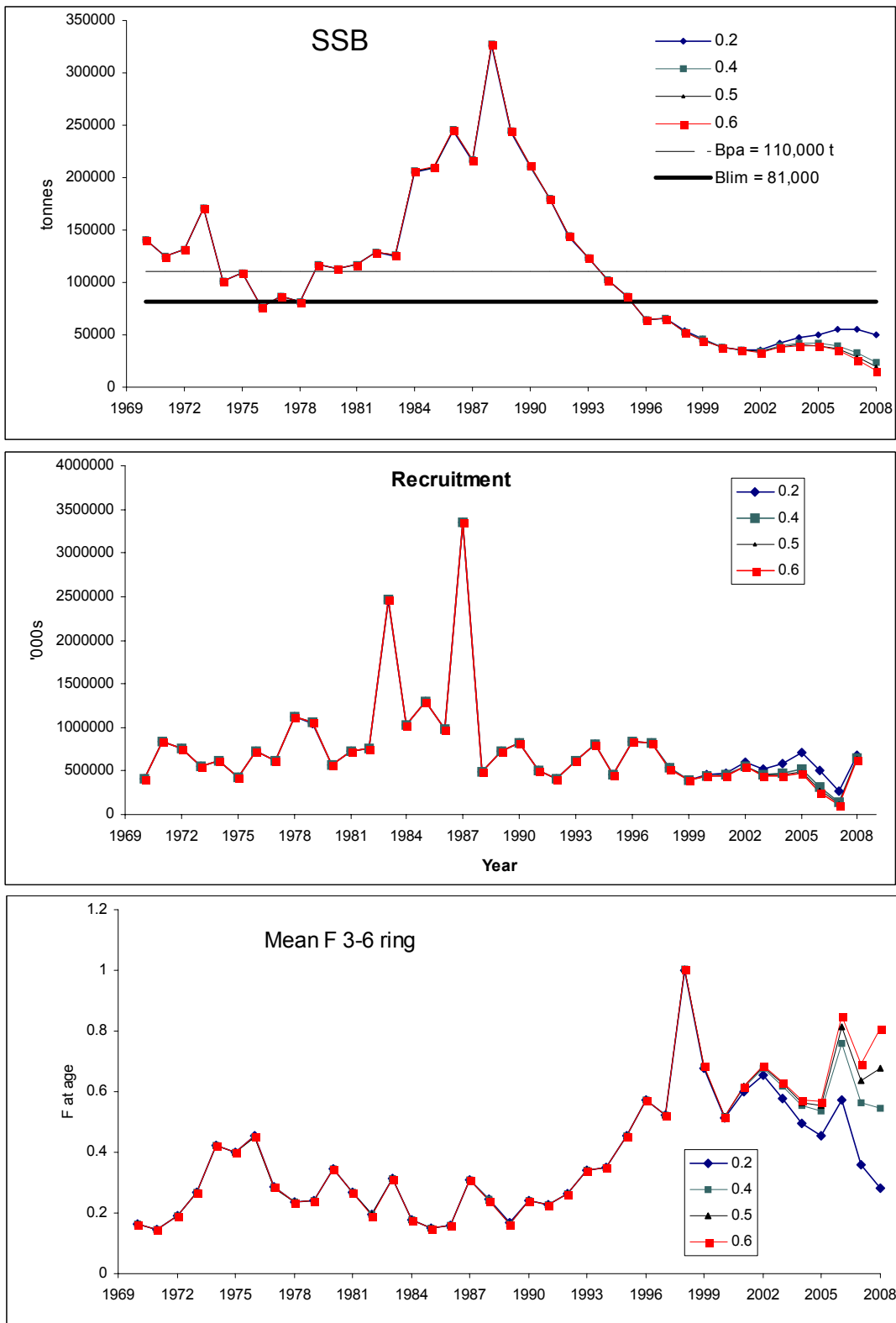


Figure 2. SSB, recruitment and fishing mortality over time for herring in VIaS and VIIbc. It can be seen that productivity, in terms of recruitment, was much higher in the 1980s, than before and since.

8.8. Annex VIII: Scientific information in support of a Proposal for Closure of the Porcupine Nephrops Fishery

Annex 1: Scientific information in support of a Proposal for Closure of the Porcupine *Nephrops* Fishery

Version 1 24/09/2009

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Background

In June 2009 ICES advised that *Nephrops* catches in 2010 from the Porcupine Bank should be reduced to the lowest possible level ([ICES, 2009a](#)). Under management considerations ICES also point out the following:

- ICES advises that management should be at a smaller scale than the ICES Sub-area VII. Management at the Functional Unit level could provide the controls to ensure that catch opportunities and effort are at the same scale as the resource.
- *Nephrops* on the Porcupine Bank are fished in relatively deep waters occurring over a fairly widespread area at relatively low abundance. Given the sedentary nature of *Nephrops* populations closed areas may be an appropriate management tool to recover the stock.
- Productivity of deep water *Nephrops* stocks is generally lower than those on the shelf although individual *Nephrops* grow to relatively large sizes and attain high market prices. Other deep water *Nephrops* stocks off the Spanish and Portuguese coast have collapsed and have been subject to recovery measures for several years, e.g. FUs 25, 26, 27 and 31.

On the 21 July 2009 a meeting took place between the Federation of Irish Fishermen (FIF) and Marine Institute scientists to discuss the status of the Porcupine *Nephrops* stock and possible management to conserve the stock in the future. There was widespread agreement between the fishers present at the meeting that the stock status had deteriorated and something had to be done. The meeting agreed that the FIF should develop proposals, with the Marine Institute, for new management measures. The management measure favoured by the industry was a seasonal closure of the entire *Nephrops* grounds during the peak fishing months of May, June and July.

This document examines several aspects of such a proposal including the area and temporal scope of the closure. The document also looks at the impact of such a closure in terms of countries and gears that might be affected. Options for scientific monitoring of the stock are also briefly described.

Area of the Closure

To define the geographic scope of the closure a polygon was defined around the area where the Irish *Nephrops*-directed¹¹ fisheries took place on the Porcupine Bank during the years 2005-8. This was based on VMS data filtered for vessel speeds in the range of 0.1-5kn to exclude any VMS pings that correspond to steaming, rather than fishing activity. (Figure 1). The boundaries of the defined polygon are given in Table 1. This polygon is thought to encompass the majority of the *Nephrops* distributional area on the Porcupine Bank. It corresponds well with the spatial

¹¹ Fishing effort was considered *Nephrops*-directed if 30% or more of the daily catch (by weight) consisted of *Nephrops*.

distribution of *Nephrops* catches on the Spanish Ground Fish Survey that takes place on the Porcupine Bank.

Table 1: Co-ordinates of the polygon shown in Figure 1.

ID	X	Y	Latitude	Longitude
1	-13	52.9	52°54 N	13°00 W
2	-12.5	52.9	52°54 N	12°30 W
3	-12.2	52.5	52°30 N	12°12 W
4	-12.2	52.25	52°15 N	12°12 W
5	-12.75	52.5	52°30 N	12°45 W
6	-13.4	52	52°00 N	13°24 W
7	-14	51.2	51°12 N	14°00 W
8	-14.25	51.2	51°12 N	14°15 W
9	-14.75	51.75	51°45 N	14°45 W
10	-14.5	51.75	51°45 N	14°30 W
11	-14	52.4	52°24 N	14°00 W
12	-13.5	52.4	52°24 N	13°30 W

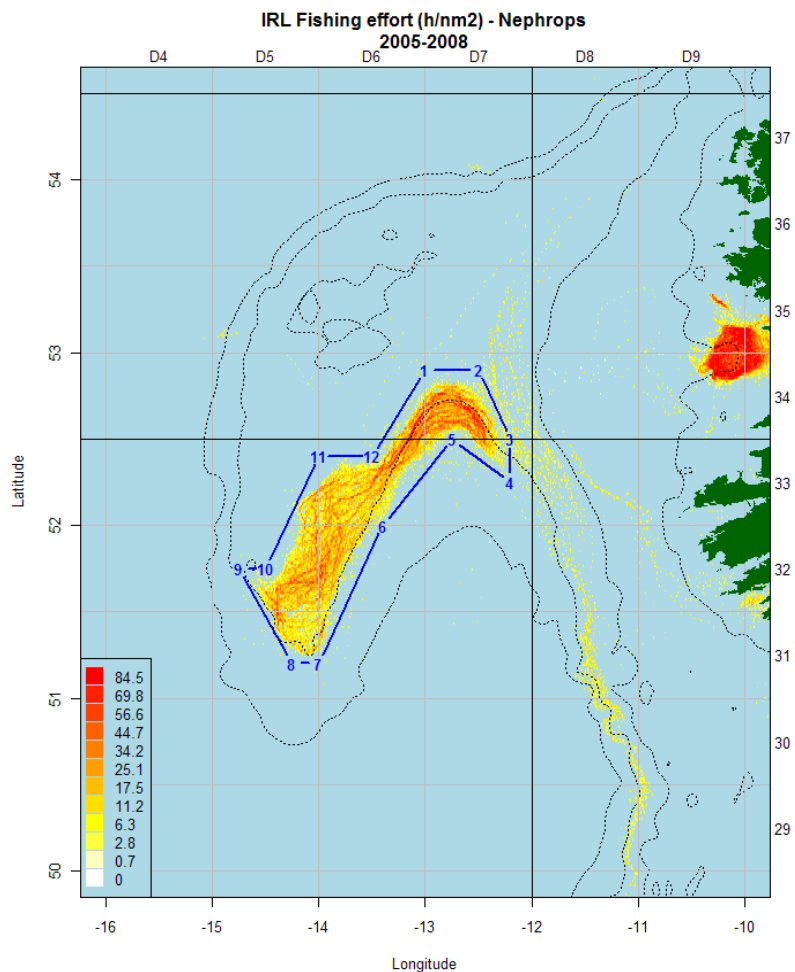


Figure 1. A map of fishing activities by Irish *Nephrops* targeting otter trawler in the years 2005-2008 on the Porcupine Bank. The 200, 500 and 1000m depth contours are shown. The blue line is a closed area defined by the co-ordinates in Table 1.

The next stage was to evaluate international bottom trawl effort in the area over the last 3 years. The international bottom trawl effort is shown below (Figure 2). The EU fleet register was used to determine the primary gear type for non-Irish vessels. The gear type of Irish vessels was obtained from the logbooks. The area of the polygon corresponds with a hot spot in international fishing effort.

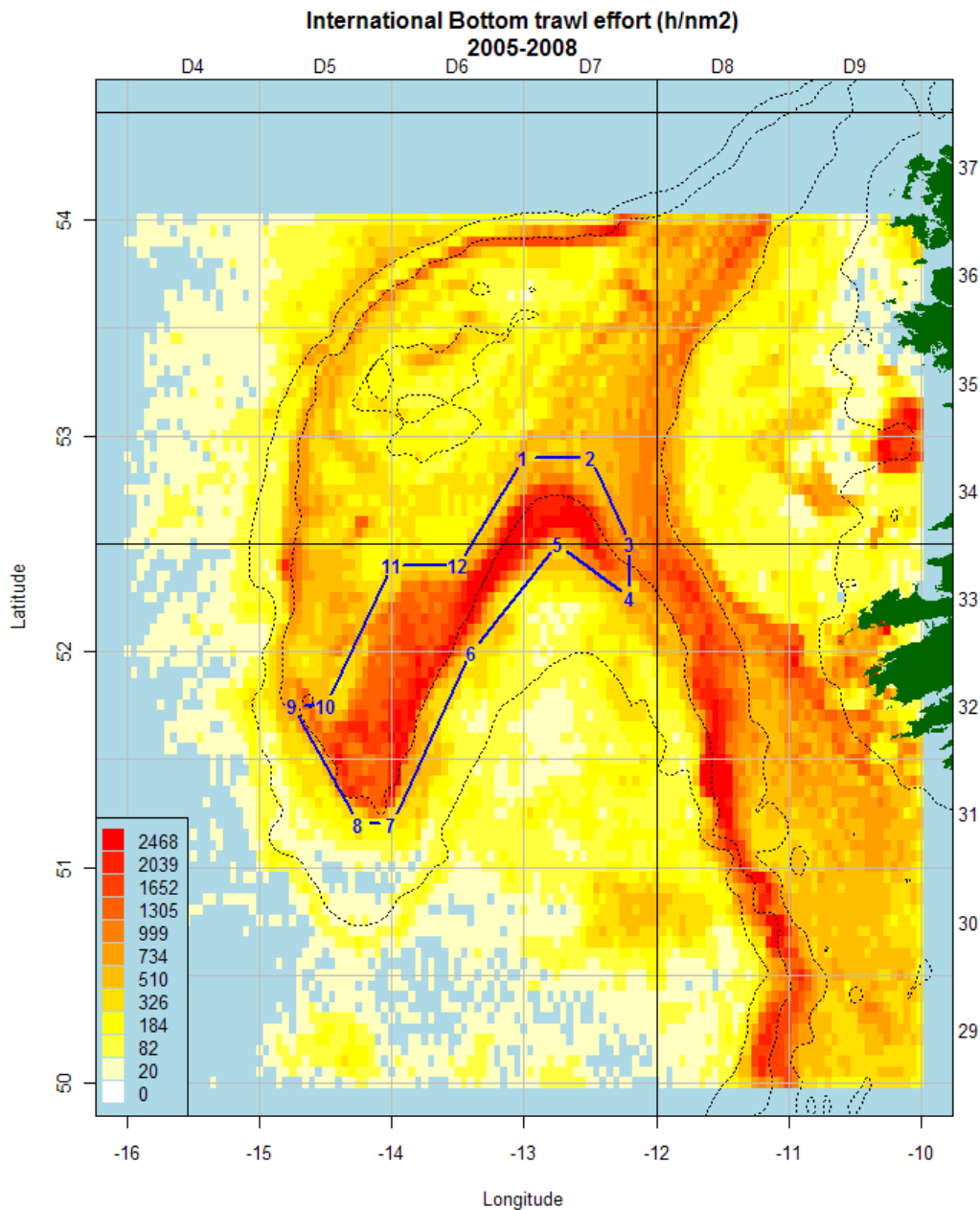


Figure 2. International bottom trawl effort on the Porcupine bank and surrounding areas, 2005-2008. The blue line is a closed area defined by the co-ordinates in Table1.

Temporal Scope

The Porcupine Bank *Nephrops* fishery has always had a strong seasonal pattern with highest activity between May-July. This is mainly caused by increased activity levels of *Nephrops* outside their burrows during the early summer. This behaviour is linked to their annual

biological cycle of hatching, feeding, moulting, mating, feeding, maturing, spawning etc. Better weather during those months also improves fishing opportunities and efficiency.

The highest reported Irish landings occur in a three month period; May, June and July (Figure 3). Between 1995 and 2008 74% of Irish landings occurred in these months (Figure 4). This corresponds exactly with the closure period suggested by the Irish fishing industry. A further 11% of landings occurred in adjacent months April and August.

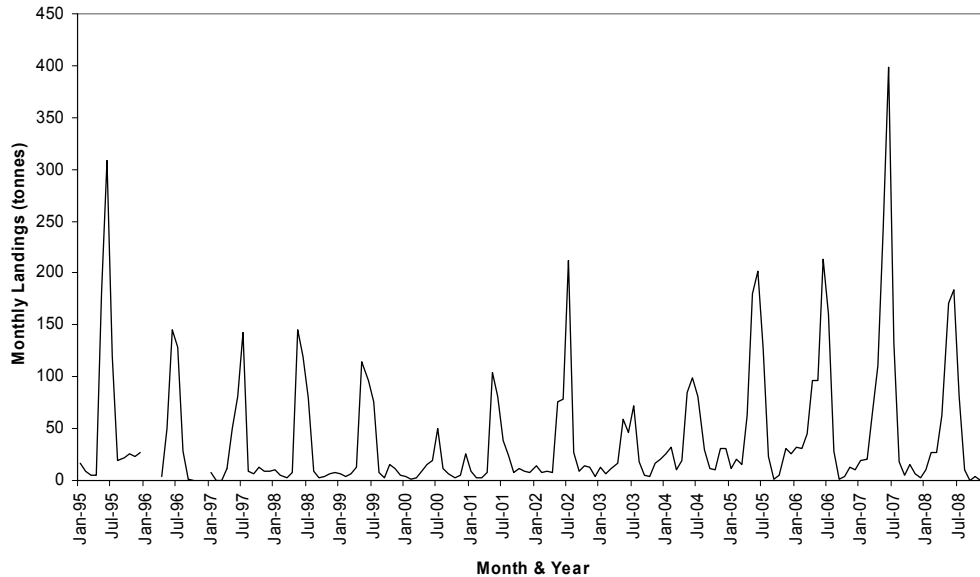


Figure 3: Irish monthly *Nephrops* landings between 1995-2008 from the Porcupine Bank (FU16).

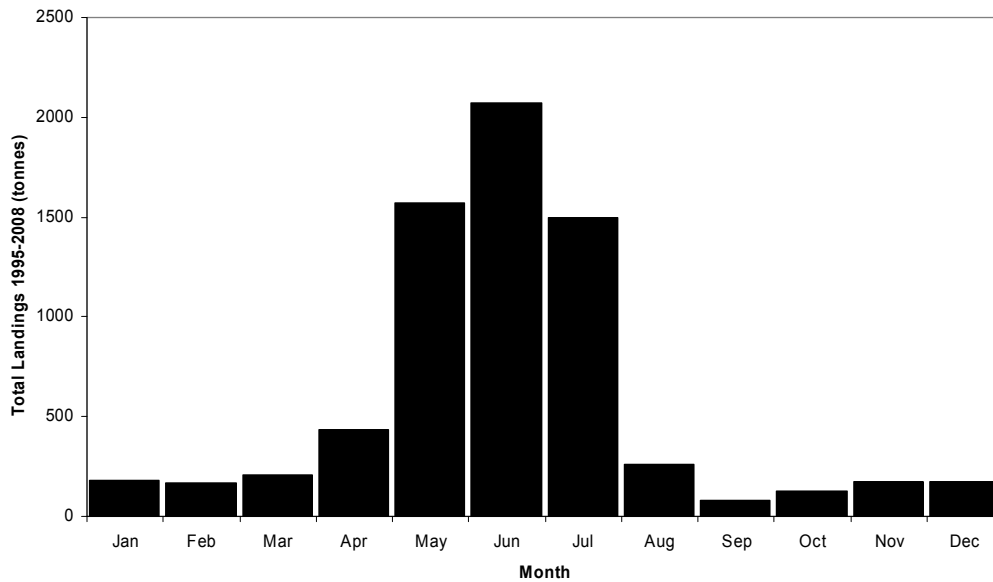


Figure 4: Pooled Irish monthly *Nephrops* landings between 1995-2008 from the Porcupine Bank (FU16).

Impact assessment

Section 2 and 3 above examine the spatial and temporal aspects of the closure as suggested by FIF. Here we evaluate the likely impact by looking at fishing activity within the polygon defined in Table 1 in the last 3 years. This analysis also used VMS data linked to logbooks or EU fleet register data on primary gear.

The fishing effort by gear type is shown in Figure 5. The majority of effort in the polygon is expended by vessels using bottom otter trawl gear. This is the gear used to mainly target *Nephrops* although there may be minor activity targeting anglerfish, megrim, and hake also. The activity of other gears was relatively small with some long-line activity and some activity in the other gears category. These other gears are mid-water gears and would not impact directly on the *Nephrops* stocks. If the area were closed to all gears for the three months suggested, the largest impact will be on demersal otter trawls which target *Nephrops*. These gears account for 85% of the effort in hours and 98% of the effort in kW.hours in the polygon.

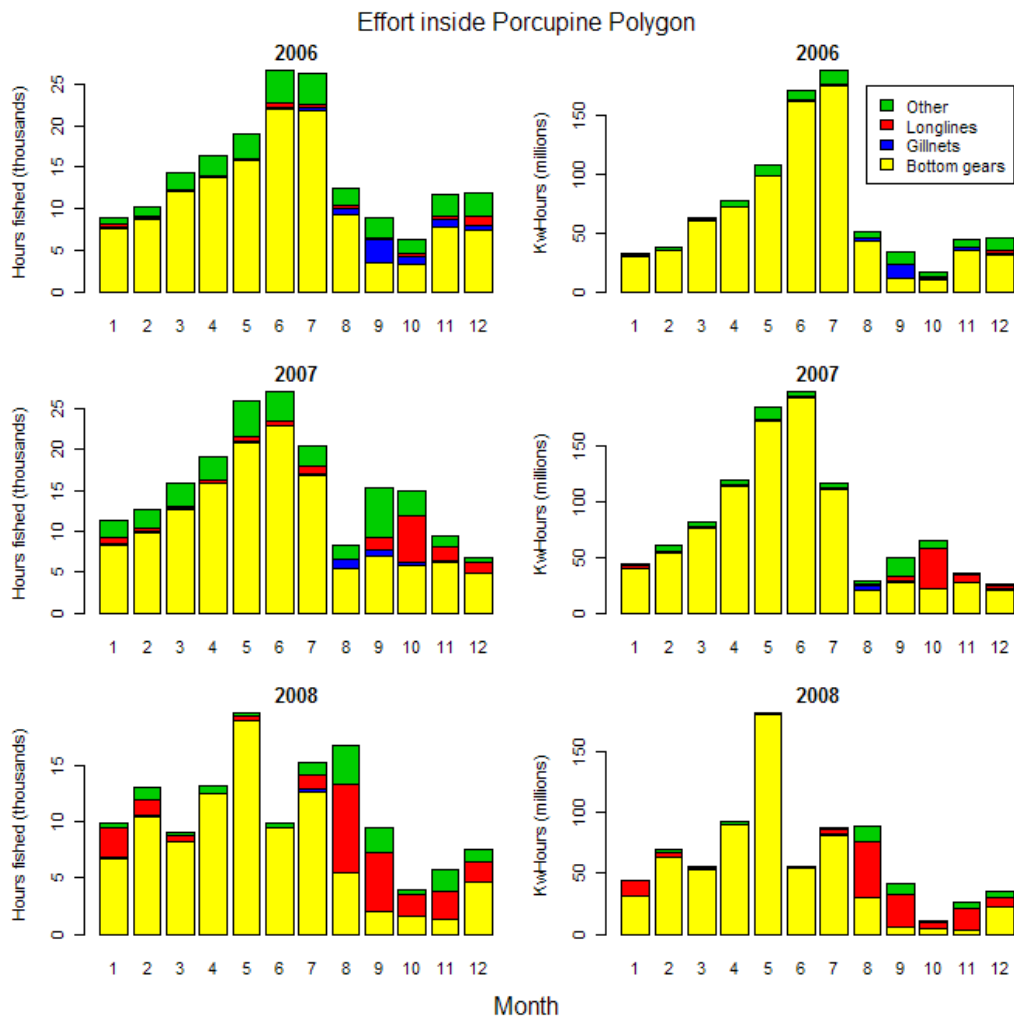


Figure 5. Effort in the proposed closed area, defined in Table 1, by month by country and main gear type.

The fishing effort (hours fished and kW.Hours) inside the polygon for 2006-8 by country (mobile bottom gears only) is shown in Figure 5. The patterns are similar in terms of hours and kW.hours with a peak in effort during the months May-July. The pattern is similar between years, although the activity in 2008 was lower in June and July than the previous two years.

Different countries exhibit slightly different patterns with Irish, French and other vessel's effort being fairly seasonal whereas Spanish and UK effort was more homogenous across months. The text table below summarises the proportion of annual effort expended in the polygon during months May to July based on 2006-2008 data.

ESP	34%
FRA	53%
GBR	38%
IRL	60%
UNK	55%
Total	44%

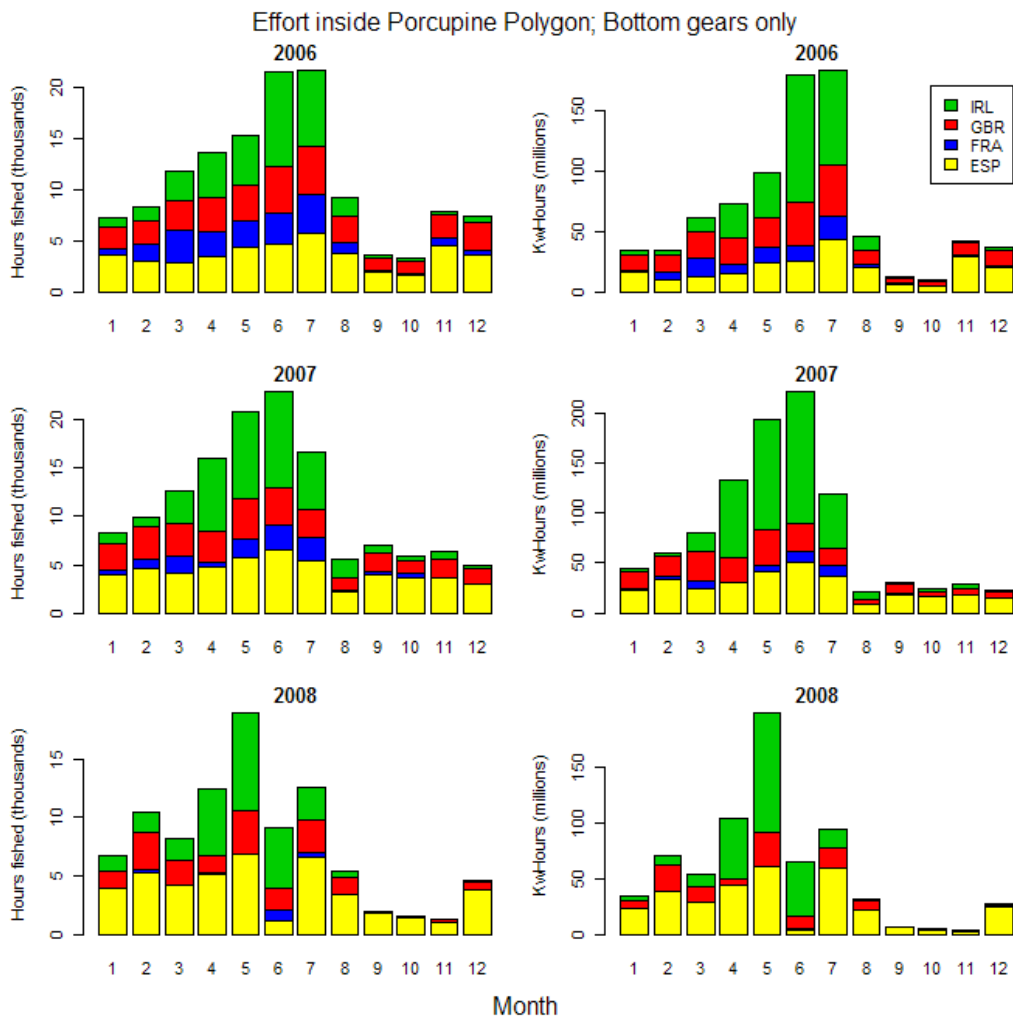


Figure 6: Fishing effort by year, month and country for mobile bottom gears inside the polygon defined in Table 1.

Detailed impact assessment the Irish fleet

For the Irish fleet it was possible to carry out a detailed assessment of the impact of the suggested closures. This involved looking at the landings profiles and effort by trip data from the logbook and assigning trips to metiers based on statistical clustering methods.

Vessels in the *Nephrops* metier¹² have, in recent years concentrated their effort within six main ICES rectangles, 31D5, 32D5, 32D6, 33D6, 33D7, 34D7 (Figure 7). *Nephrops* fishing is the primary bottom trawl activity within these rectangles (Figure 8).

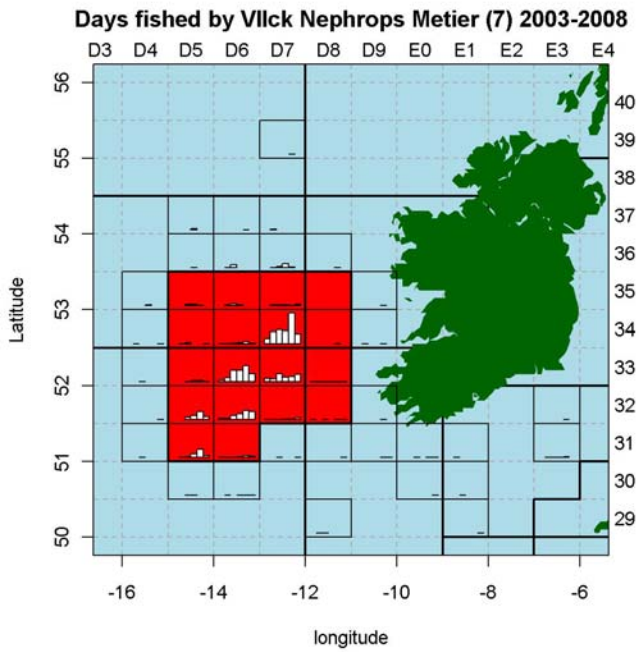


Figure 7. The distribution of fishing effort by the VIck *Nephrops* metier ($\geq 50\%$ trip landings is *Nephrops*) in recent years (2003-2008). Red box shows FU16 area.

¹² Metier 7 where trip landings composition of *Nephrops* is equal to or above 50%

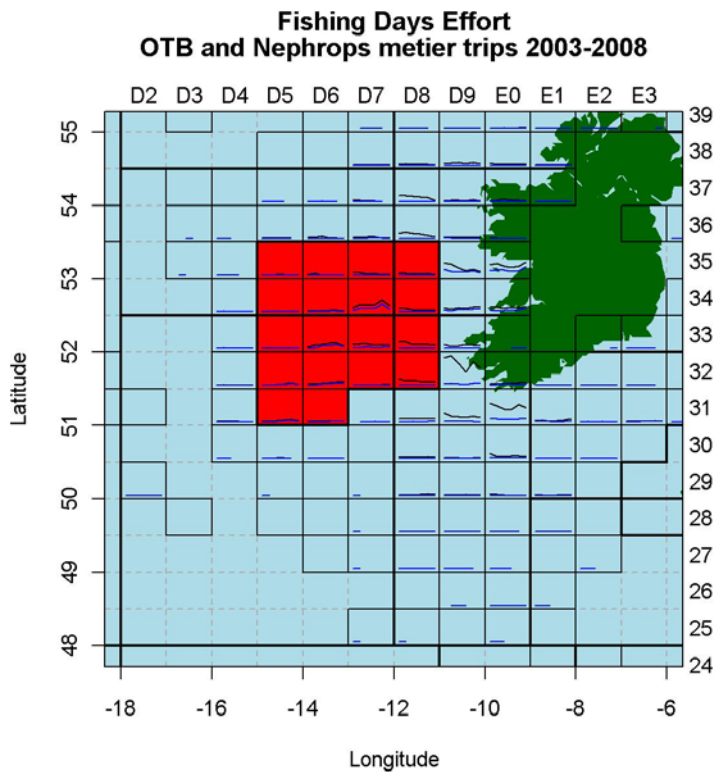


Figure 8. Effort distribution within ICES divisions VIIb, VIIc, VIIj, and VIIk of all bottom otter trawl landings (black) and those associated with *Nephrops* metiers (blue) in recent years (2003-2008). Red box shows FU16 area.

Effort data by month over time show increasing effort from the VIIck *Nephrops* metier over recent years, declining in 2008. This metier's effort is greatest in May, June and July, with a more recent trend for effort to begin to increase a month earlier, in April (Figure 9). In weight, June shows the greatest landings, peaking at over 300 t in 2007. May and July also show significant landings. As with effort, there appears a more recent trend of increased weight in April (Figure 10). The numbers of VIIck *Nephrops* metier vessels operating within the rectangles covering the proposed closed area indicate the same seasonal pattern as both landings and effort, with up to 27 vessels operating at the height of the fishery (Figure 11).

Vlck Nephrops Metier Fishing Effort Within ICES rectangles of the Proposed Polygon

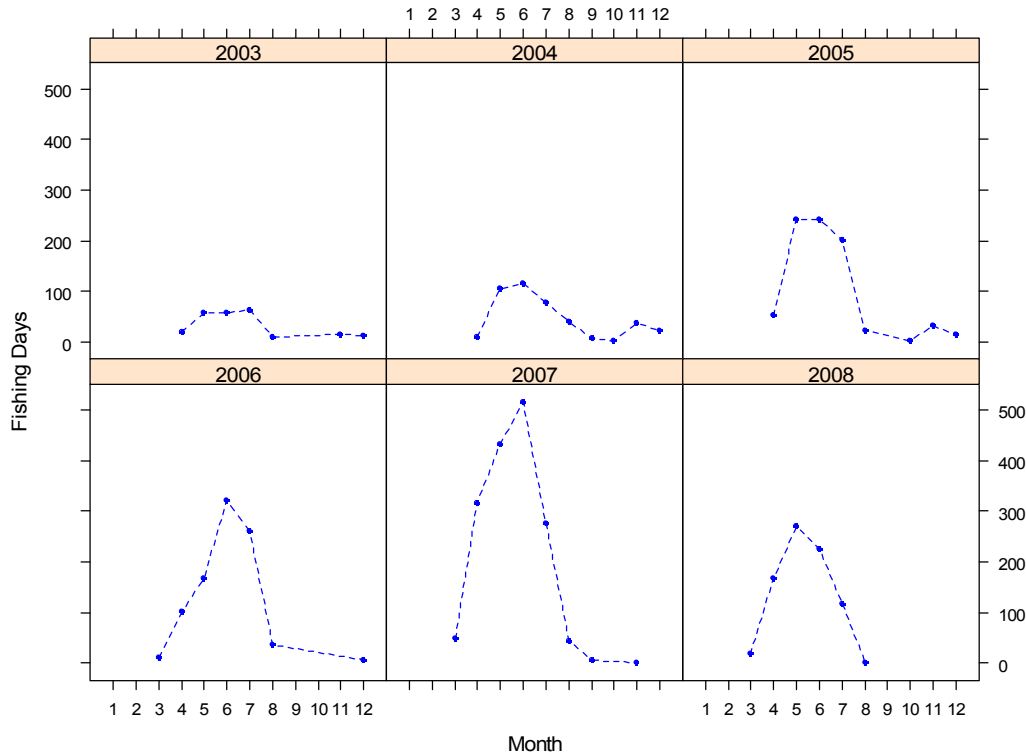


Figure 9. Monthly effort for the Irish *Nephrops* directed otter trawlers from within ICES rectangles overlapping with the polygon in Table 1, 2003-2008.

Nephrops Live Weight from the Proposed Polygon Rectangles by the Vlck Nephrops Metier

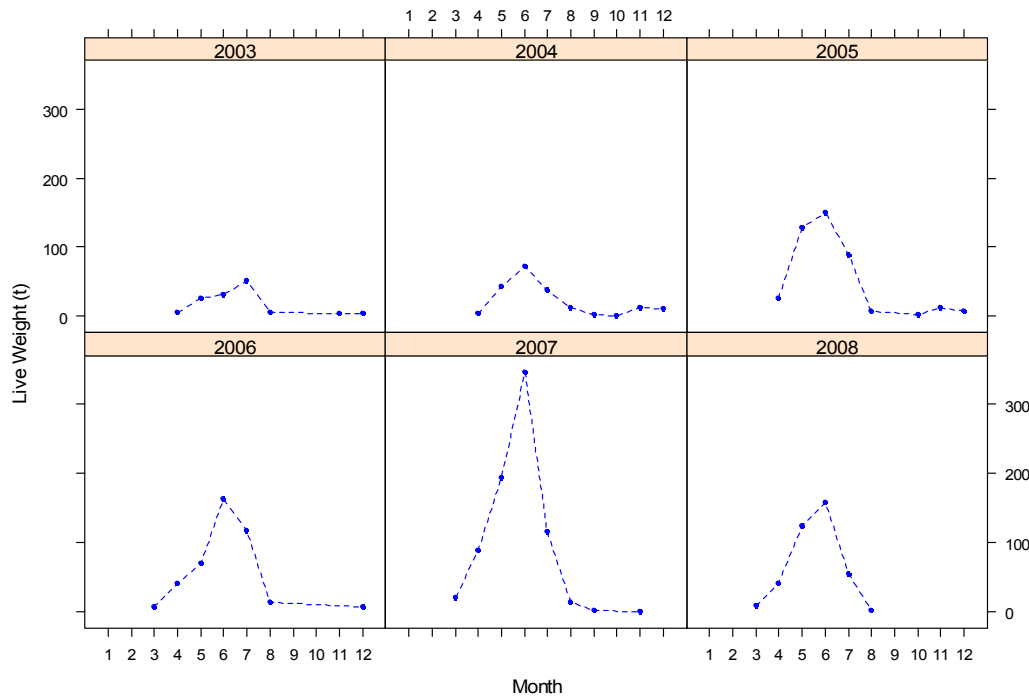


Figure 10. Landings for the Irish *Nephrops* directed otter trawlers from within ICES rectangles overlapping with the polygon in Table 1, 2003-2008.

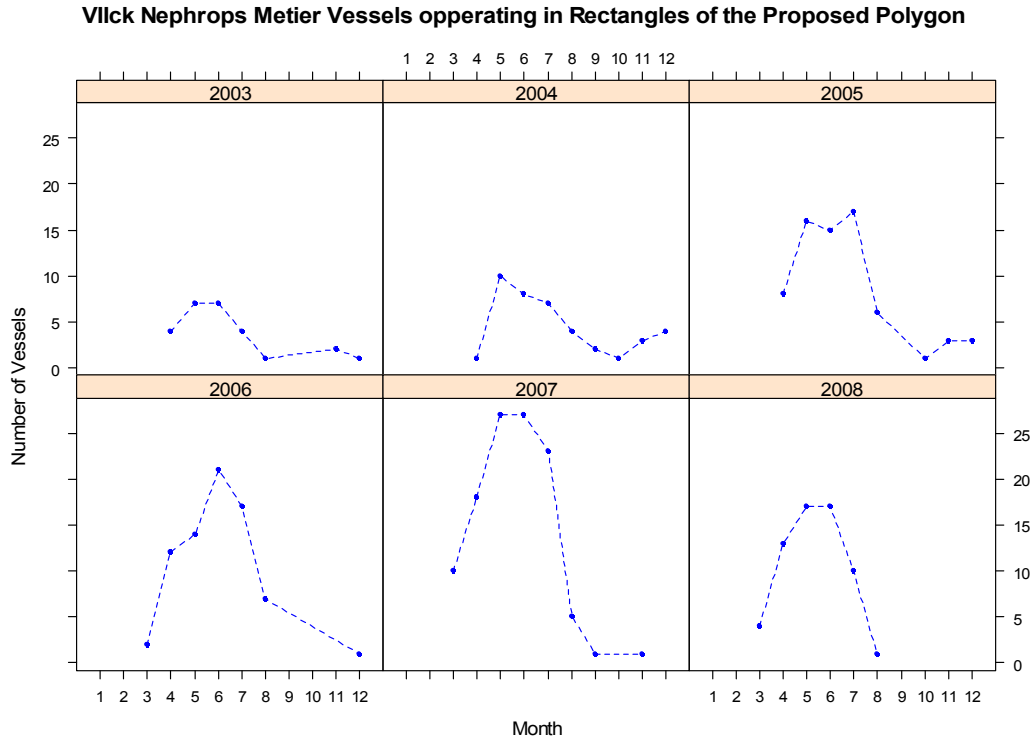


Figure 11. Number of vessels in the Irish *Nephrops* directed metier operating within the polygon in Table 1, 2003-2008.

The *Nephrops* metier (Metier 7) dominates landings from rectangles overlapping with the polygon, particularly within recent years (Figure 12). In 2003, 2004, and 2005 there were other metiers, such as the slope species metier (ling, witch, forkbeard and hake Metier 21) and the deepwater metier (Metier 23). The slope species metier still occurs within the area, primarily out of the *Nephrops* season (May-July). Pelagic fishing also occurs within the area, for example horse mackerel (Metier 44) and tuna (Metier 50). Figure 12 also shows significant landings by “Metier 999”, this group represents all otter trawls (both pelagic and demersal) not belonging to a definable metier. The greatest weight from this group primarily occurs in early and late in the year and may be less impacted by a closure.

Figures 13 and 14 respectively plot effort and numbers of vessels by metier in recent years per month. These figures indicate similar trends to those in the landings. Vessel numbers show greater proportion of the non-metier otter trawls (Metier 999) than landings or effort. Vessel numbers also reveal the presence of the large mesh megrim and monkfish metier (Metier 11) in the area not picked up in landings or effort (Figure 14).

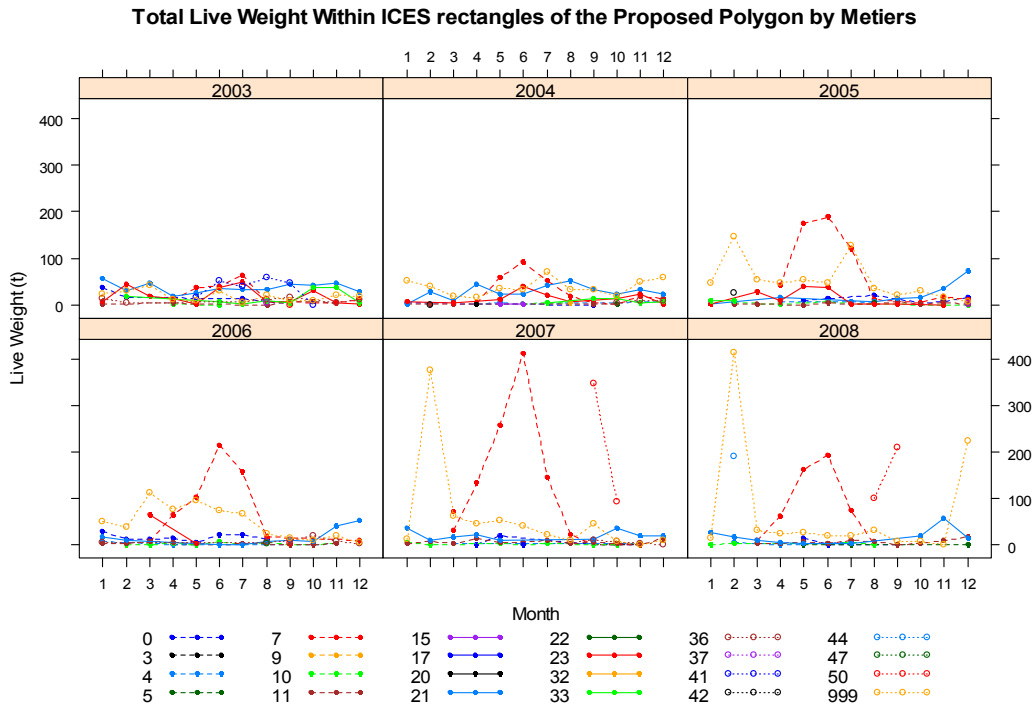


Figure 12. Landings by metiers per month from ICES rectangles overlapping with the polygon in Table 1, 2003-2008.

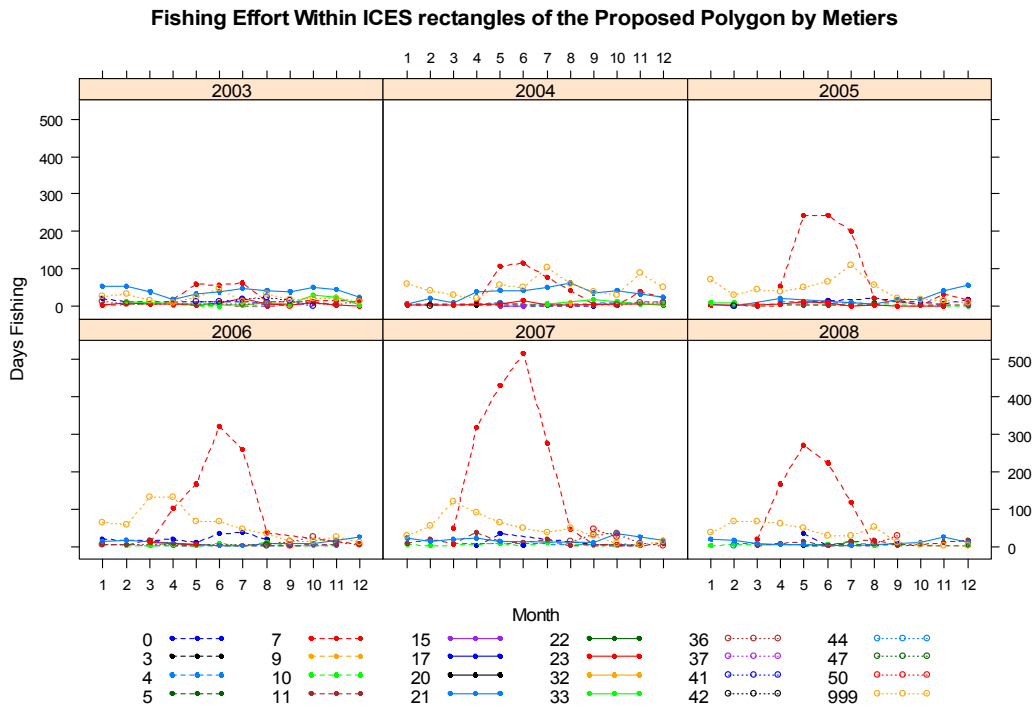


Figure 13 Effort by metiers per month, from within ICES rectangles overlapping with the polygon in Table 1, 2003-2008.

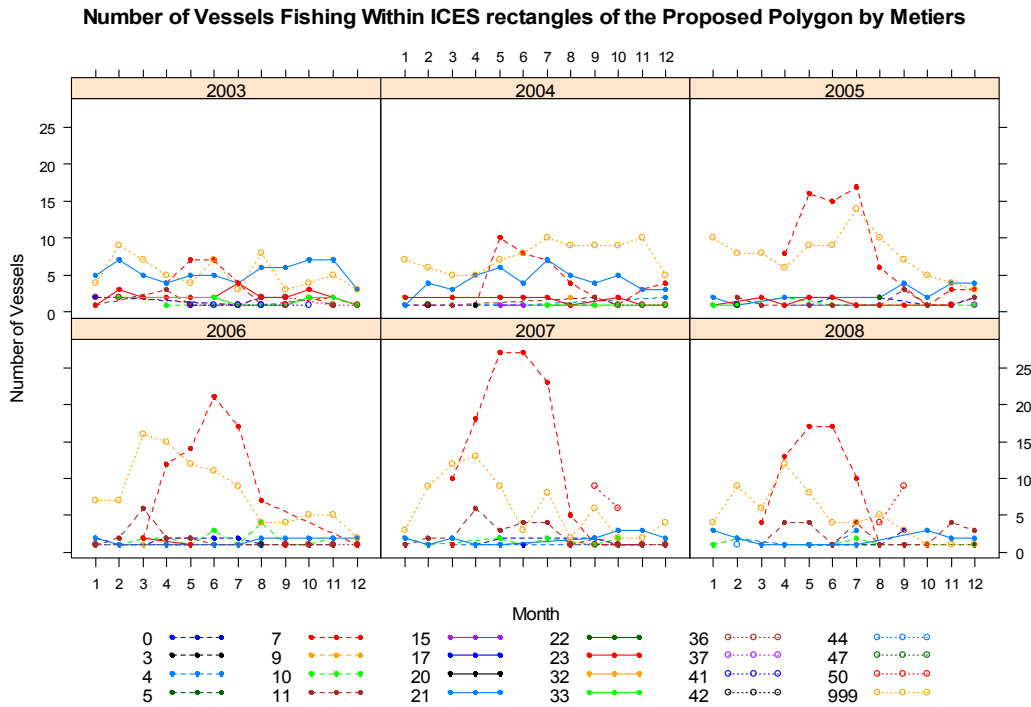


Figure 14 The number of vessels operating within metiers per month in ICES rectangles overlapping with the polygon in Table 1, 2003-2008.

This detailed analysis of the recent Irish fishing activity at a metier level confirms that a closure of the polygon defined in Table 1 between May-July would have minimal impact on non-*Nephrops* directed activity.

If this area is closed as suggested there will be displacement of effort into other metiers unless the measure is accompanied with a tie-up scheme. Although the displacement is not easy to predict it is likely that some of the effort will be displaced into other *Nephrops* fisheries, particularly those in the Celtic sea (Labadie, Jones and Cockburn Banks). This is because those fisheries are the most similar in terms of catch composition and bio-economics to the Porcupine Bank (i.e. they would be targeting larger high value *Nephrops*). The status and sustainability of *Nephrops* populations in these areas is not well known. There may also be displacement to the Aran Grounds, Irish Sea and Smalls since some of the vessels also fish these areas at other times of the year. These stocks are considered to be over fished in terms of long-term yield by ICES, but their biomasses are not at as lower levels as the Porcupine Stock appears to be.

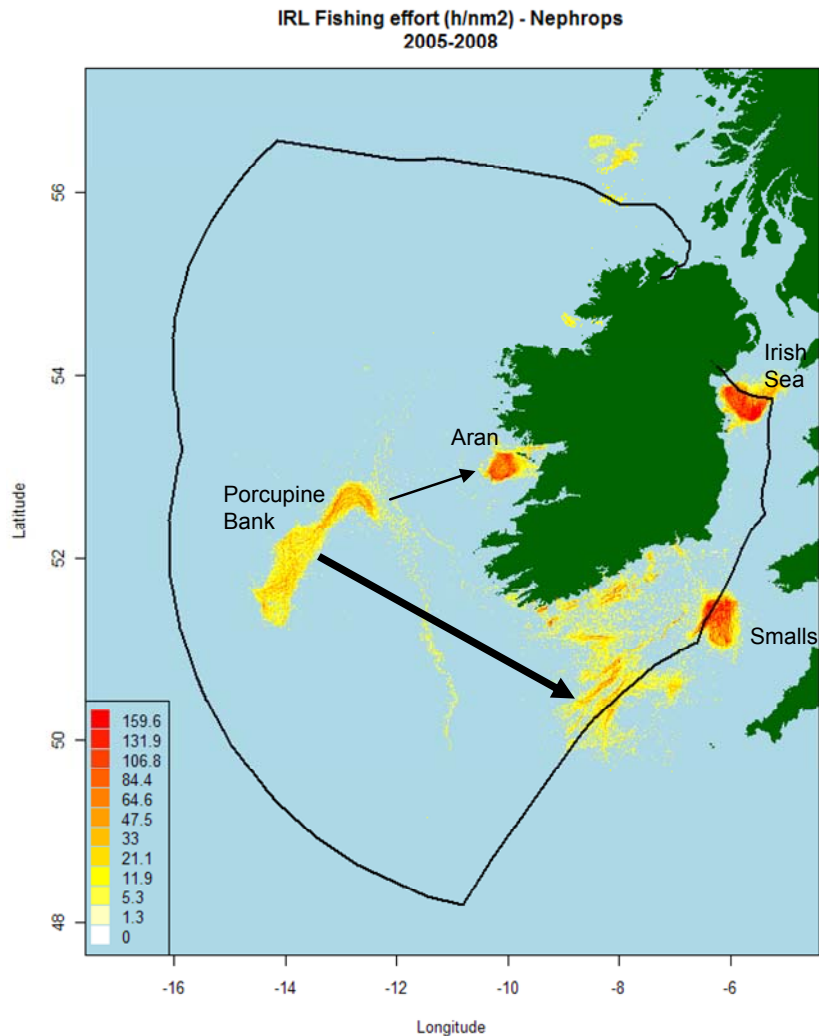


Figure 15. The spatial distribution of effort by Irish *Nephrops* targeting metiers between 2005-2008 from VMS and logbook data. The possible displacement of effort into other areas is indicated by the arrows.

Other Spatio-temporal closures for *Nephrops* stocks

In 2003 ICES have given similar advice for zero catches previously for *Nephrops* stocks in West Galicia, Southwest Portugal and the Gulf of Cadiz. The management response is documented below:

A recovery plan for southern hake and Iberian *Nephrops* stocks was approved in December 2005 (Council Regulation (EC) No.2166/2005) and implemented in January 2006. The management objective is to rebuild the stock within safe biological limits within a period of 10 years. This recovery plan includes a procedure for setting the TACs for *Nephrops* stocks, complemented by a system of fishing effort limitation (i.e. a reduction of 10% in fishing mortality in the year of its application compared with the fishing mortality rate estimated for the preceding year, within the limits of +/- 15% of the preceding TAC year.

Article 15 of the recovery plan includes two seasonal closures to the trawl and creel fishery: June to August for *Nephrops* fishing grounds in FU 26 West Galicia and May to August for FU 28 Southwest Portugal corresponding to the period of highest catches for these FUs (Appendix

1). Several derogations were included in the regulations. To date, no evaluation of the impact of the closures on the FUs 26-30 *Nephrops* stocks has been carried out. However, some of the stocks in the recovery plan have shown signs of recovery whilst others have not.

Is a seasonal closure enough to recover the stock to sustainable levels?

The above question was posed by the fishing industry at the FIF meeting and it is critically important to the discussion as it outlines the primary objective; to recover the stock to sustainable levels using a seasonal closure as a management tool.

Unfortunately from a scientific perspective this is a very difficult question to answer. In the absence of a formal assessment and defined reference points it is not possible to say what are “sustainable levels”. It is clear however that the current fishery is not sustainable ([ICES, 2009b](#)). The recent biological data from the fishery suggested that the male stock had been over-fished, that sperm limitation may have resulted in females not being mated¹³ (hence the switch in sex ratio in the landings and survey catches). All indications show reduced recruitment and declining stock size in recent years.

Rebuilding the stock will require two key ingredients; continued recruitment of juveniles into the population and a reduction in fishing mortality to allow the individuals alive now to contribute to future spawning stock biomass (SSB). Considering the recruitment issue first, from a theoretical perspective, the form of the stock and recruitment relationship (SRR) is critical since it will determine the rebuilding capacity of the stock. Several factors may influence the SRR including;

- unknown larval retention mechanisms
- changing hydrographic and environmental conditions
- size distribution and sex ratio of adult lobsters on recruitment

Rather than focusing on the above uncertainties in the SRR, which are largely uncontrollable, it is better to focus on the benefits that will accrue from a closure in terms of fishing mortality reductions.

Simulation models have shown that a closed area in a *Nephrops* (or similar) fishery would protect a portion of the spawning stock and enhance recruitment to the remaining fished area (Smith and Jensen, 2008). These simulations have not explicitly tested the type of temporal closure of the whole area as suggested here. Nor do they consider the utility of a closed area as a rebuilding tool. Their findings do suggest that a full temporal closure may be preferable to a partial area closure thus avoiding some of the undesirable consequences¹⁴ of a partial closed area that they discovered.

Closing the entire area as suggested is likely to result in a fishing mortality reduction in the order of 70% assuming the catching patterns¹⁵ of other countries are similar to those in the Irish fleet. It would be important to ensure that a closure does not result in a re-targeting of *Nephrops* to other times of the year negating the potential F reductions.

¹³ This is something that has been observed in other crustaceans but not directly in this stock. This should be investigated further by sampling of maturing females.

¹⁴ The larval subsidy did not compensate for the loss of fishing ground, fishery yield was reduced. Reduced average size and oscillations in stock biomass, recruitment, and yield over several years was also observed in the simulations.

¹⁵ 74% of Irish landings were in May-July and other countries are likely to have similar landing patterns.

The number of years the closure should remain in place is obviously linked to the main objective to recover the stock to sustainable levels. An adaptive approach could be considered but it would require adequate and improved scientific monitoring of the stock.

Scientific monitoring regime

The scientific information for this stock is relatively poor and there is an acceptance by scientists and industry that steps should be taken immediately to improve this situation. Currently the stock is mainly monitored using fishery dependent data; landings, effort, biological sampling of landings (ICES, 2009b). Given the remote nature of the fishery the observer coverage has been low and sporadic. Clearly if the fishery is closed for most of the traditional season a new monitoring regime is required to evaluate the effectiveness of the closed area.

There is an existing Spanish Porcupine Survey (2001-> present) that will be a very important source of fishery independent data on the stock. Though further fishery independent data is needed. Ireland currently carries out three underwater television surveys on other *Nephrops* stocks in VII. This direct survey method could prove to be the most appropriate to monitor stock development. The Porcupine Bank stock occurs at depth ranges beyond the current capability of the Marine Institute system, so alternative systems or upgrades might be required. Currently four options are being considered:

- 1) Using a self powered and recording camera on a sledge.
- 2) Using a self powered and recording camera on a trawl or scientific beam trawl.
- 3) Modifying the existing systems to work in deeper water.
- 4) Using an ROV to carry out a survey.

These have very different associated cost implications for monitoring. The best monitoring solution is probably some form of routine UWTV survey. However it may well also require some research into critical assumptions such as burrow occupancy and “edge effect”. In the more stable deepwater environment burrows may well persist unoccupied for longer periods than in shallower shelf area.

Summary points

- An area for closure can be easily defined (Table 1).
- The months suggested by FIF, May, June and July coincide with peak landings and effort in the *Nephrops* directed fishery.
- The majority of the impact of closing the area for the three month will be to *Nephrops* directed otter trawlers (effort by other gears is minimal).
- The closure will mainly impact on Irish, French, UK and Spanish vessels.
- Seasonal closures have been introduced in other *Nephrops* fisheries as a management tool.
- The closure could deliver fishing mortality reductions in the order of 70%.
- Stock recovery will require improved recruitment which will be affected by stock size but also uncontrollable factors.
- Any closure must be accompanied by improved scientific information to monitor the impact of the measure.
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References

- ICES. 2009a. ICES advice for *Nephrops* stocks in VII. ICES advice 2009, Book 5. <http://www.ices.dk/committe/acom/comwork/report/2009/2009/Nep-VII.pdf>
- ICES. 2009b. Report of the Working Group on the Celtic Seas Region (WGCSE), 13–19 May 2009, Copenhagen, Denmark. <http://www.ices.dk/workinggroups/ViewWorkingGroup.aspx?ID=357>

Smith, I. P., and Jensen, A. C. 2008. Dynamics of closed areas in Norway lobster fisheries. – ICES Journal of Marine Science, 65: 1600–1609.

8.9. Annex IX: Request by the UK Authorities for the Scientific Technical and Economic Committee for Fisheries to consider if the latest scientific evidence supports a TAC increase for Irish Sea herring in 2010

Request by the UK Authorities for the Scientific Technical and Economic Committee for Fisheries to consider if the latest scientific evidence supports a TAC increase for Irish Sea herring in 2010.

Summary

The state of the Irish Sea (VIIa N) herring stock is not known precisely and the stock is therefore classified as a Category 6 stock by the Commission. Consequently a rollover in the TAC has been proposed for 2010. However the UK believes that there is sufficient new scientific evidence to justify an increase in the TAC that is within sustainable limits. The UK requests that STECF considers the evidence presented in this paper and the potential for a 15% TAC increase for 2010.

Background

The Total Allowable Catch (TAC) for the Irish Sea (VIIaN) herring stock has remained unchanged since 2002 at 4,800t. The Commission in their proposals for catch opportunities for 2010 proposed a roll-over TAC of 4,800 t in line with the ICES advice.

The ICES advice for 2010 states: *“The advice for the fishery in 2010 is, therefore, the same as the advice given in 2008 for the 2009 fishery, SSB is unknown but thought to be stable at a low level. The recent TACs do not appear to have been detrimental to the stock.”*

A number of closed areas were put in place after the collapse of the stock in the 1970s and when industrial fisheries operated in the Irish Sea. The closed areas consist of: all year juvenile closures along part of the east coast of Ireland, and the west coast of Scotland, England and Wales; spawning closures along the east coast of the Isle of Man from 21st September- 15th November, and along the east coast of Ireland all year round.

Biomass reference points are set at B_{pa} of 9,500t and B_{lim} of 6,000t. There are no F reference points defined for this stock.

The period of highest landings, above 20,000t, was in the early to mid 1970s. Landings peaked at ~40,000t in 1974 after which they rapidly declined to around 5,000t in the early 1980s and remained there since. This period was associated with spawning stock biomass estimates of 20,000-35,000t and total biomass estimates of 70,000 to 120,000 tonnes (ICES Herring assessment working group 2007).

The fishery is well regulated with the majority of the catches being taken by one pair of UK trawlers during the 3rd and 4th quarters. Landings are restricted by the TAC and discarding is not thought to be a feature of the fishery (ICES Herring Assessment Working Group 2009). There is no indication that fishing pressure and activity has varied considerably in recent years.

A small local fishery records landings on the traditional Mourne herring grounds during the 3rd and 4th quarters. A revival of this fishery has been observed in recent years, catches varying from 20t to 135t.

Current stock status

The stock is assessed using catch-at-age data derived from the landings, a larval survey series (SSB estimates) and an annual acoustic survey (age-structured indices, and estimates of total biomass and SSB).

Current problems with the assessment are mainly related to:

- proportion-at-age data from survey and commercial landings which suggest that conflicting year effects are present causing a divergence in total mortality rate estimates from the acoustic and catch-at-age data
- mixing between fish of different seasonal origins during the acoustic survey that introduces further noise (mixture of Celtic and Irish Sea fish at younger ages)

As a consequence of these effects, no assessment has been accepted by ICES for a number of years. Accordingly, STECF and the Commission have classified this stock as a Category 6 stock in line with the Commission's Policy Statement of 12 May 2009 and subsequent working paper for discussion by ACFA and the RACs of 29 September 2009. The Policy Statement says that for category 6 stocks, where the state of the stock is not known precisely, the aim is to set the TAC according to STECF advice but the TAC should not change by more than 15%.

The current proposal for the TAC in 2010 is for a roll over, however the UK believes that there is sufficient new scientific evidence to justify an increase in the TAC that is well within sustainable limits.

The analysis of stock trends based on the acoustic survey data indicates a significant increase in SSB and 1-ring + biomass estimates in the 2007-2008 (Table 1 and Fig. 1), the highest in the time series. Acoustic and catch-at-age data both provided indications that a strong 2005 year class had entered the stock (1-ring in 2007, Table 2). Recruitment estimates of 0-group herring from the acoustic survey and indices from the March and October Northern Irish groundfish surveys (Fig.2) suggest continued strong recruitment in recent years.

SSB estimates from larval surveys show conflicting signals to the acoustic survey estimates, particularly in recent years. This is most likely a consequence of the timing of the narrow survey window, as the low occurrence of larvae on the Douglas bank in some years and on the Mourne coast in recent years, suggest a temporal difference between larval emergence and survey timing.

The difference in total mortality rate estimates derived from survey data and commercial landings is considered to be associated with the variation in migration of herring entering the spawning area of the Irish Sea. Current knowledge suggests a north to south and west to east migration route to the main spawning grounds to the east of the Isle of Man. The variation in acoustic survey estimates between areas depending on migration and survey timing is illustrated in Table 3. The increase in biomass of herring around the Isle of Man in the autumn is not only restricted to the spawning component, but includes younger fish. Significant differences in age composition of survey trawls are thus observed within relatively small spatial scales, making the numbers-at-age estimates from the survey very sensitive to the location and timing of survey trawls as well as the overall timing of the survey. The commercial fishery also focuses increasingly on the western Irish Sea, and in some years relatively limited catches are made on the eastern Irish Sea before the closure. This spatially selective fishing pattern would be expected to result in bias leading to the largest (and oldest) fish not always being included in the samples from commercial landings.

To investigate the temporal and spatial variability in the population estimates from the acoustic survey, a series of additional acoustic surveys was conducted since 2007, the timing following

the annual Northern Irish pelagic acoustic survey (conducted during the beginning of September). A science: industry partnership was established to facilitate the enhanced survey series, with one of the scientific surveys each year being carried out by scientists on board a fishing vessel. These surveys concentrated on the spawning grounds surrounding the Isle of Man and the Scottish coastal waters (strata 2 and 5-9, Fig. 3), representing on average 85% of the total Irish Sea SSB estimate since 2001 (80% of 1-ringer + biomass).

Results from additional acoustic surveys

The surveys were timed approximately every fortnight, except for the last survey. The density distributions from the 2007 and 2008 surveys illustrate the temporal and spatial complexity of the herring distributions (Fig. 4 and 5). Problems with timing of the survey are further exacerbated by the significant inter-annual variation in the migration patterns, evident from the changes in density distributions. In 2007 the biomass estimates from the surveys were heavily driven by a few large observations (both on and off the spawning grounds), typical of acoustic surveys on spawning grounds. Herring distributions were, however, more homogenous in 2008, a view corroborated by the coefficient of variation (CV) of the first survey being at the lower limits of CVs for the survey series (Table 1).

Given that the survey area of the additional surveys contributed on average 80% of the 1-ringer + biomass estimate and 85% of the total SSB estimate, the results confirms the high estimate of abundance observed during the routine annual acoustic survey estimate in the last two years (Fig. 6). In both 2007 and 2008, biomass estimates for the first three surveys of the year were above the previously observed maximum of the time series.

The expected dissipation of herring off the spawning ground is evident from the marked decline in the survey estimates in late October/November. The estimates of the 1-ringer + biomass by strata from the additional four surveys in 2007 and 2008 are given in Table 4a and 4b, respectively. The results again highlight the complexity of the herring distributions and the importance of correct timing of the survey to correctly reflect population abundance estimates.

In 2008 corroborative data were collected during additional transects, with the aim of further improving the survey design. These included surveying a relatively small area to the west of the Isle of Man and higher intensity transecting on the Douglas Bank spawning grounds. The overall estimates were recalculated adding these additional transects in as very small strata of 32 and 1 nm², respectively, to reduce the overall leverage on the stratified estimate and subsequent variance of the estimate. The resulting estimates are illustrated in Fig. 6 as series 2008B and indicate similar biomass estimates to those observed during the first survey.

Preliminary indications from the 2009 survey series show a wide spread distribution and high incidence of strong acoustic targets, both east and west of the Isle of Man.

Additional information from groundfish surveys and the demersal trawl fleet suggest a more widespread distribution of herring in the Irish Sea. This is also evident from consistent significant biomass estimates observed in areas not previous observed in the survey series.

Conclusions

In the interim, the best available indicators of stock trend show:

- recent acoustic survey biomass estimates are at higher levels than at anytime in the 15 year time-series ;

- acoustic survey biomass estimates for the past two years are of similar magnitude to that estimated for the 1970s during the height of the Irish Sea herring fishery (52kt and 77kt in 2007 and 2008, respectively) and are well above the B_{PA} of 9.5kt;
- acoustic survey biomass estimates are consistent from consecutive surveys conducted over the spawning period, giving confidence in estimates; and
- recruitment estimates remain high, suggesting continued strong recruitment since 2005 (highest estimate of 0-group herring in the acoustic time-series was observed in 2008).

The Commission's Policy Statement for setting TACs for 2010 makes provisions for stocks where state of the stock is not known precisely (Category 6), but where representative stock abundance information exists. Whereas the representativeness of the acoustic survey as indicative of stock trends could have been questioned based on the exceptionally high estimates in the last two years, the results are corroborated by repeat surveys and this gives further confidence in the results. The UK therefore believes that in the case of the Vlla N herring stock, Annex III Rule 5a (if average estimated abundance in the last two years exceeds the average estimated abundance in the three preceding years by 20% or more) of the Commission's Policy Statement can be applied, resulting in a 15% increase in the TAC.

Additional years of extended survey data will increase understanding of the distribution pattern and it is anticipated that this information will be used to further improve the timing and design of the survey to better reflect age-specific abundance of herring in the Irish Sea. The partnership developed between science and industry is strongly driving the enhanced focus on resolving stock assessment challenges for the Irish Sea herring. The issue of stock mixing is also being addressed simultaneously. Significant progress has been made in investigations of the utility of otolith microstructure analysis to separate Irish Sea and Celtic Sea stocks by origin, based on early growth pattern before stock mixing. The issue of juvenile stock mixing has little impact on the current case of an increasing SSB trend based on acoustic survey data.

The UK requests STECF to consider whether, in the light of information from the extended survey series, the acoustic survey estimates on Irish Sea herring are representative of stock trends and could be used to set management measures in line with the Commission's Policy Statement for setting TACs for 2010 for Category 6 stocks where the state of the stock is not known precisely.

Table 1. Biomass estimates from AFBI acoustic surveys in September

Year	Herring			Sprat & 0-gp herring			
	1-ring +	CV	SSB	CV	Biomass	CV	% sprat
1994	31,400 t	0.36	25,133 t	N/a	68,600 t	0.10	95
1995	38,400 t	0.29	20,167 t	N/a	348,600 t	0.13	n/a
1996	24,500 t	0.25	21,426 t	0.25	n/a ¹	n/a ¹	n/a
1997 ²	20,100 t	0.28	10,702 t	0.35	(45,600 t) ²	0.20	n/a
1998	14,500 t	0.20	9,157 t	0.18	228,000 t	0.11	97
1999	31,600 t	0.59	21,040 t	0.75	272,200 t	0.10	98
2000	40,200 t	0.26	33,144 t	0.32	234,700 t	0.11	94
2001	35,400 t	0.40	13,647 t	0.42	299,700 t	0.08	99
2002	41,400 t	0.56	25,102 t	0.83	413,900 t	0.09	98
2003	49,500 t	0.22	24,390 t	0.24	265,900 t	0.10	95
2004	34,437 t	0.41	21,593 t	0.41	281,000 t	0.07	96
2005	36,866 t	0.37	31,445 t	0.42	141,900 t	0.10	96
2006	33,136 t	0.24	16,332 t	0.22	143,200 t	0.09	87
2007	120,878 t	0.53	51,819 t	0.42	204,700 t	0.09	91
2008	106,921 t	0.22	77,172 t	0.23	252,300 t	0.12	83

¹ Data for Irish and English coastal waters considered unreliable due to instrument fault in second half of survey (data O.K. for Isle of Man waters).

² Reduced survey coverage - data available for Isle of Man waters only.

Table 2. Estimated numbers of herring at age (1 ring and older only, in thousands) from AFBI acoustic surveys in September.

Year	1-ring	2-ring	3-ring	4-ring	5-ring	6-ring	7-ring	8+ring
1994	66830	68290	73529	11860	9299	7550	3867	10118
1995	319116	82256	11935	29246	4574	3500	4887	6894
1996 ¹	11340	42372	67473	8954	26469	4171	5911	5815
1997 ²	134146	49977	14812	10985	1751	4553	571	1910
1998	110438	27312	8083	9266	6479	1778	2254	780
1999	157756	77722	34017	5108	10260	13521	1586	6289
2000	78524	103439	105291	27543	8072	5432	4899	2359
2001	387559	93402	10194	17489	7704	1372	626	2263
2002	390982	71935	31701	24804	31277	14830	2756	4461
2003	349216	220014	31984	4735	3921	4089	977	906
2004	241014	115529	29593	15398	2067	2299	238	240
2005	94330	109938	97111	17023	8029	810	607	5804
2006	374731	96623	15625	9982	530	369	478	469
2007	1316673	251276	46570	21101	20818	1200	718	556
2008	475675	452364	114210	39076	26370	17063	4254	599

¹ Potential underestimate, mainly of 1-ringers, due equipment fault off Irish and English coasts

² Potential underestimate, mainly of 1-ringers, due to reduced survey coverage

Table 3. Annual acoustic survey estimates of biomass of 1-ring and older herring by survey stratum ('000t). See Fig. 1 for survey strata.

Area:	North Channel	Irish Coast	North IOM	IOM West Coast	IOM East Coast	North Wales	English Coast	TOTAL	Approx. CV
Strata:	1,2	3,4	5	7	8,9	11	6,10,12		
1992	n/s	0.7	n/s	5.5	6.5	0.0	n/s	12.7	0.23
1994	0.0	2.0	9.0	10.7	7.8	0.0	1.9	31.4	0.36
1995	1.8	2.8	0.0	18.7	7.4	4.0	3.6	38.4	0.29
1996	0.2	(0.1)	0.0	13.2	9.6	(0)	(1.4)	24.5	0.25
1997	<0.1	n/s	0.0	14.0	6.1	n/s	n/s	20.1	0.28
1998 ¹	n/s	4.6	0.1	5.7	2.5	1.7	0.2	14.5	0.20
1999	0.0	0.3	0.0	5.4	20.5	0.0	1.4	31.6	0.59
2000	9.1	0.0	0.0	15.1	15.9	0.0	0.0	40.2	0.26
2001	7.3	0.0	0.1	21.7	2.6	3.5	0.1	35.4	0.40
2002	1.4	9.1	0.0	6.2	23.8	0.0	0.9	41.4	0.56
2003	0.0	1.0	0.4	25.5	7.1	12.9	2.7	49.5	0.22
2004	11.1	0.0	0.0	15.9	7.4	0.0	0.0	34.4	0.41
2005	0.0	0.0	0.0	11.8	25.0	0.0	0.0	36.9	0.37
2006	0.6	2.7	2.8	19.6	7.5	0.0	0.1	33.1	0.24
2007	19.3	1.3	59.6	33.3	6.5	0.7	0.3	120.9	0.53
2008	0.1	31.7	0.0	53.8	20.0	0.0	0.8	106.9	0.22

Notes: 1997 survey: North Channel not fully surveyed; IOM west and east coast strata expanded;

n/s = not surveyed ¹ revised

1996 survey: values for strata 3, 4, 6, 10, 11 and 12 underestimates due to transducer fault. Error affects mainly 0-1 ring herring.

Table 4a. Annual acoustic survey estimates of biomass of 1-ring and older herring by survey stratum ('000t) for all the repeat surveys in 2007. See Fig. 1 for survey strata.

Area:	Strata:	Survey date				
		29 Aug-8 Sep	9-11 Sep	26-28 Sep	10-13 Oct	12-14 Nov
North Channel	1,2	19.3		0.6 ¹	0.1 ¹	
Irish Coast	3,4	1.3				
North IOM	5	59.6		0.3	3.1	
IOM West Coast	7	33.3	35.1	13.7	18.5	9.5
IOM East Coast	8,9	6.5	4.6	45.2	10	0.1
North Wales	11	0.7				
English Coast	6,10,12	0.3				
TOTAL:		120.9	39.6	59.9	31.8	9.6

¹ Only stratum 1 estimates

Table 4b. Annual acoustic survey estimates of biomass of 1-ring and older herring by survey stratum ('000t) for all the repeat surveys in 2008. See Fig. 1 for survey strata.

Area:	Strata:	Survey date				
		27 Aug-9 Sep	10-14 Sep	23-26 Sep	11-13 Oct	14-17 Nov
North Channel	1,2	0.7	2.5 ¹	4.1 ¹	0 ¹	0 ¹
Irish Coast	3,4	31.7				
North IOM	5	0	6.6	26.1	2	0.9
IOM West Coast	7	53.8	31.7	22.4	10.5	0.8
IOM East Coast	8,9	20	15.1	8.3	5.8	0.6
North Wales	11	0				
English Coast	6,10,12	0.8				
TOTAL:		106.9	55.9	60.9	18.3	2.3

¹ Only stratum 1 estimates

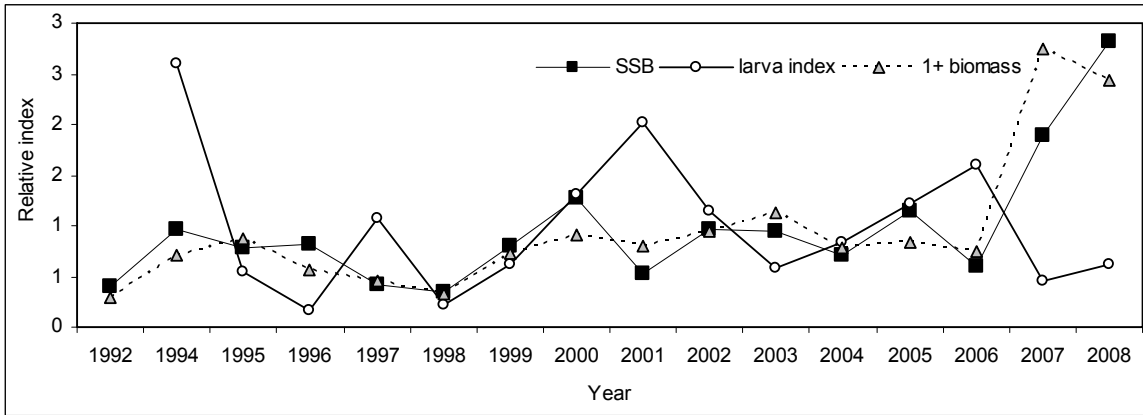


Fig. 1. Acoustic survey estimates of biomass for 1+ ring herring, and SSB of herring, and larval production estimates, expressed relative to the 1994-2008 mean for each series.

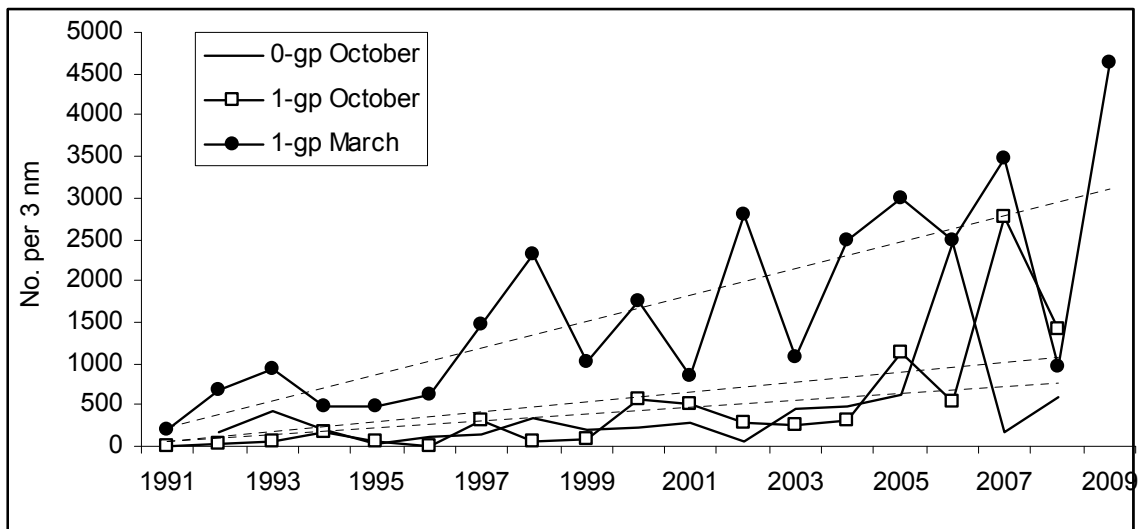


Fig. 2. Trends in 0-gp and 1-gp herring indices from the Northern Irish March and October groundfish surveys in the northern Irish Sea. [Ages are length sliced]

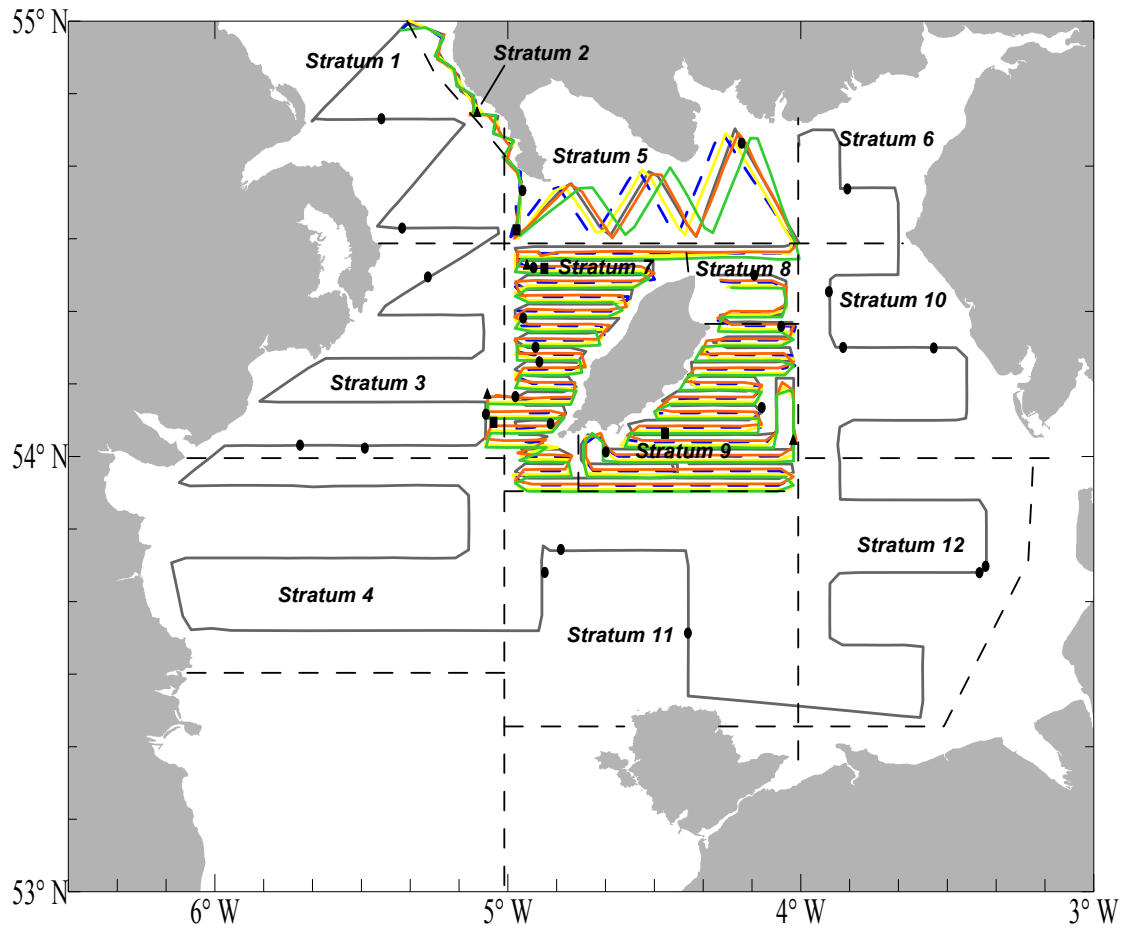


Fig. 3. Transects, stratum boundaries of the routine September 2008 acoustic survey. The repeated survey transects around the Isle of Man and Scottish Coastal areas are illustrated in colours. Trawl positions (35 trawls) are indicated by solid black symbols.

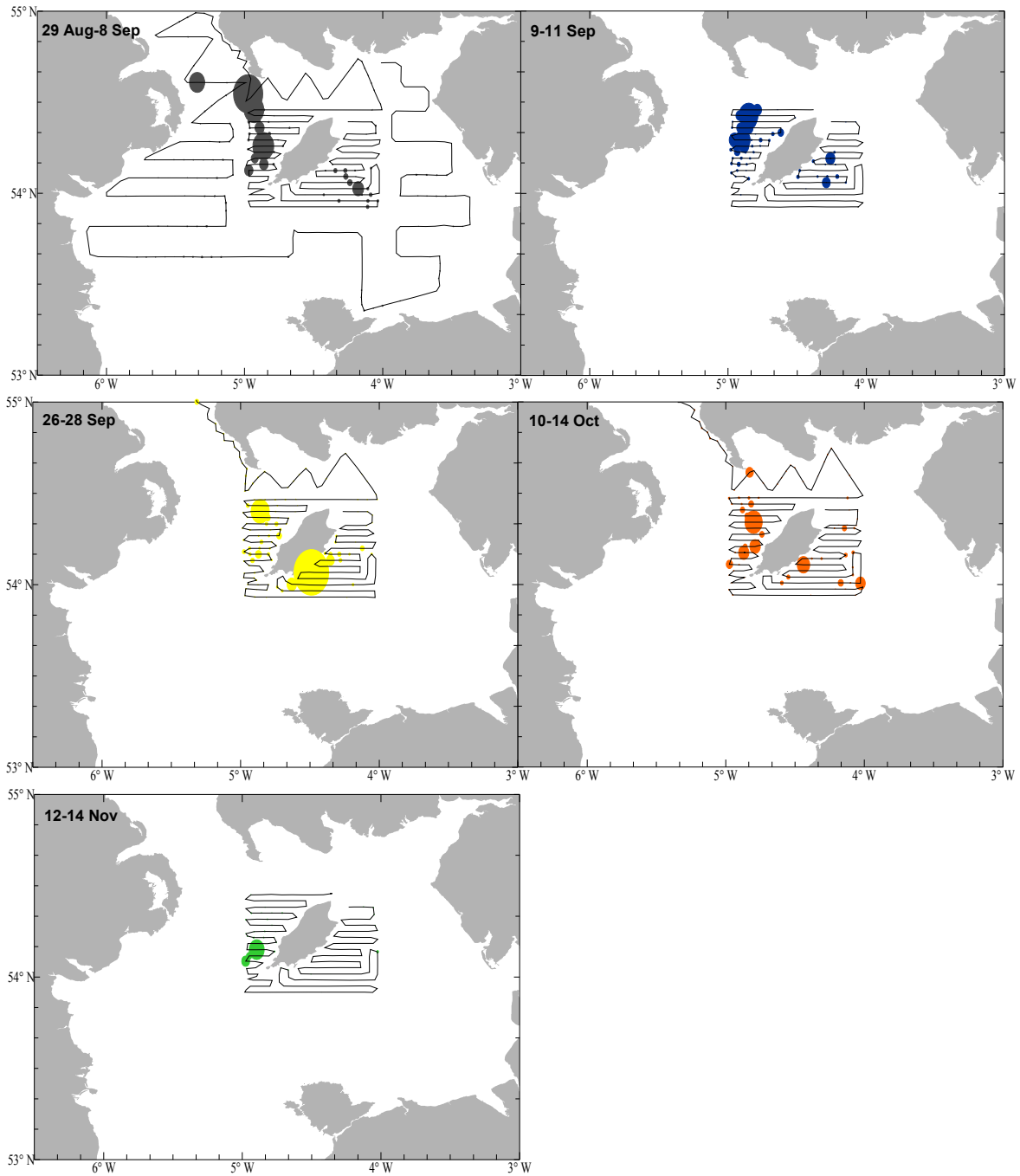


Fig. 4. Density distribution of 1-ring and older herring in 2007 (size of ellipses is proportional to square root of the fish density ($t \text{ n.mile}^{-2}$) per 15-minute interval). Maximum density for the surveys in sequence were 4900, 2150, 6900, 1700, 1300 $t \text{ n.mile}^{-2}$. Note: same scaling of ellipse sizes on Fig. 4 and Figs 5.

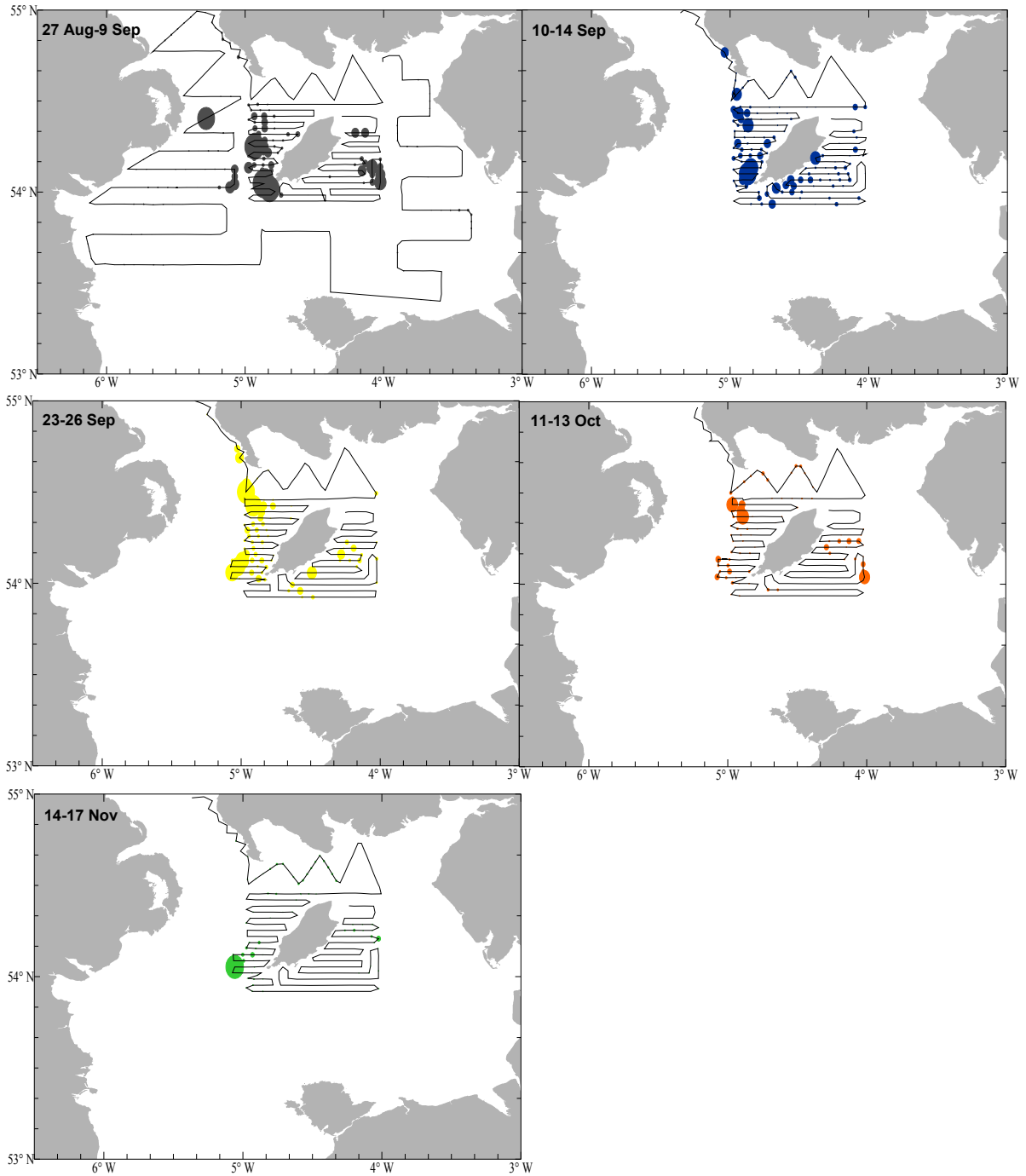


Fig. 5. Density distribution of 1-ring and older herring in 2008 (size of ellipses is proportional to square root of the fish density (t n.mile⁻²) per 15-minute interval). Maximum density for the surveys in sequence were 2650, 1600, 1700, 750, 1800 t n.mile⁻². Note: same scaling of ellipse sizes on Fig. 4 and Figs 5.

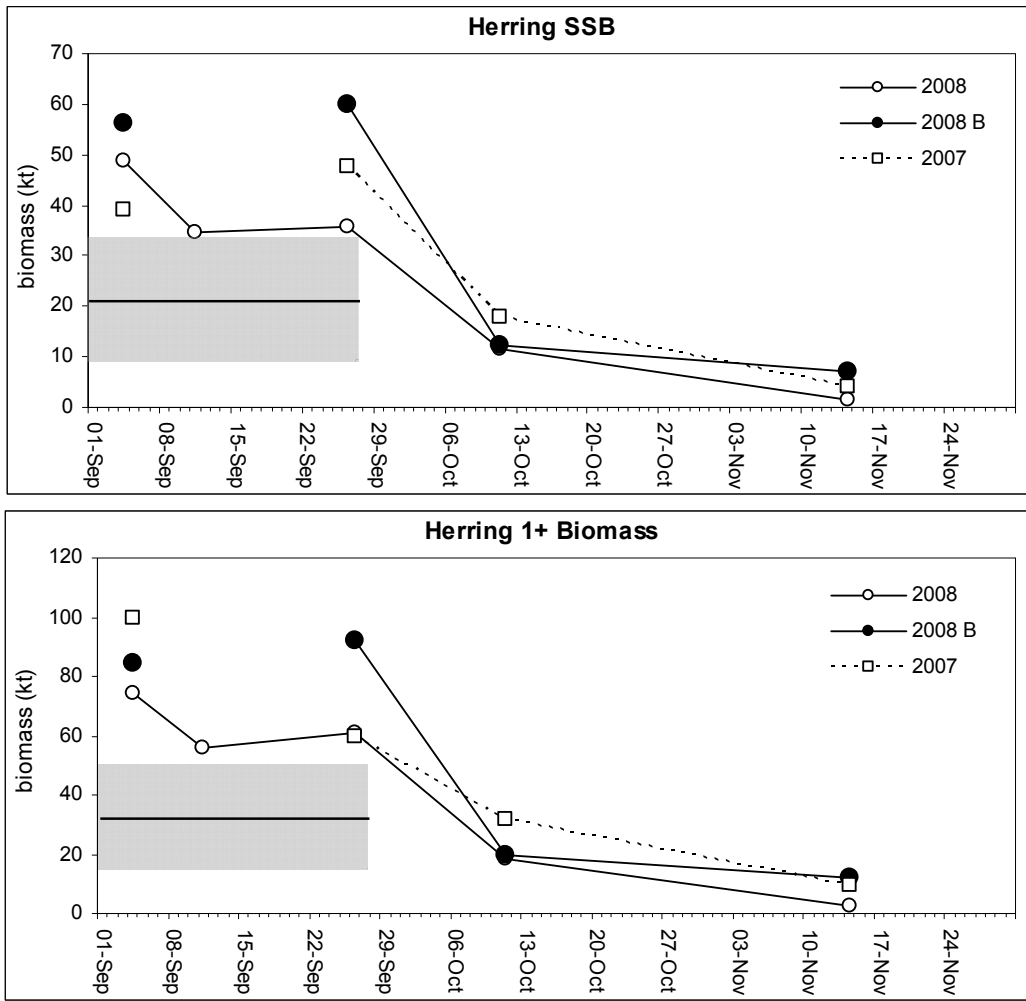


Fig. 6. Comparison of SSB (top panel) and 1-ring and older herring biomass (bottom panel) from the five surveys, 2007-2008. Only information from surveys covering around Isle of Man and Scottish Coast are plotted. Additional data series for 2008 includes estimates of additional small strata and additional survey transects. Shaded areas illustrate historic (1994-2006) average and range of estimates during routine survey in September.

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Abstract

The Scientific, Technical and Economic Committee for Fisheries hold its 32nd plenary on 9-13 November 2009 in Brussels. The terms of reference included both issues assessments of STECF working group reports and additional requests submitted to the STECF by the Commission. Topics dealt with ranged from fisheries economics to management plan evaluation issues.

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