



33rd PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-10-01)

PLENARY MEETING, 26-30 APRIL 2010, Norwich

Edited by John Casey & Hendrik Dörner

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The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

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TABLE OF CONTENTS

1.	Introduction	6
2.	List of participants.....	6
3.	Information from the Commission – Organisational matters	8
4.	Issues raised in plenum	8
4.1.	Framework for improvement of relationship between the STECF and RACs	8
4.2.	Communication with ICES	9
4.3.	MRAG questionnaire on DCF	10
5.	Assessment of working group reports.....	10
5.1.	SGMOS-09-02: Evaluation of management plans (sole in the Bay of Biscay, sole in the Western Channel, sole and plaice in the North Sea).....	10
5.2.	SGMED-09-03: Assessment of Mediterranean stocks (part 2)	12
5.3.	SGRN/ECA 09-04: Evaluation of NPs linked to the DCF and review of surveys	13
5.4.	SGMOS-09-03, 09-04 & 09-05: Assessment of Fishing Effort Regimes - Parts 2 & 315	
5.5.	SGMOS-10-01: – Methodologies for Impact Assessments of multi-annual plans....	20
5.6.	SGECA-10-01 and 10-02 - Discussion on methodologies, indicators and format of the 2010 Annual Economic Report – Review of the Annual Economic Report.....	21
5.7.	SGMED-10-01: – Preparatory work to the stock assessment process.....	26
6.	ADDITIONAL REQUESTS SUBMITTED TO THE STECF PLENARY BY THE COMMISSION	28
6.1.	General issues - Assessment of possible changes in technical measures.....	28
6.2.	Mediterranean Sea and Black Sea - Assessment of management plans for boat seines fisheries submitted by Italy	29
6.3.	Mediterranean Sea and Black Sea - Minimum landing size of Clams and selectivity of automatic sieve (crible) on board of hydraulic dredgers in Italy	32
6.4.	Atlantic Waters - Request for STECF opinion on a possible small-scale sentinel fishery to monitor the recovery of Porbeagle.....	36
6.5.	Atlantic Waters - Request for an STECF opinion on survival rates of some discarded species and on some alternative methods aiming to limit discards.....	39
6.6.	Atlantic Waters - Request for an STECF opinion on the Spanish and Portuguese reports on by-catches of sharks in gillnets and trammel nets fisheries below 600 m. in ICES areas VIII, IX & X	44
6.7.	Atlantic Waters - Impact assessments concerning Celtic Sea herring	48

6.8.	Atlantic Waters - Impact assessments concerning haddock VIa, Vb(EC) and Rockall haddock (as far as possible)	50
6.9.	North Sea & Western Waters - Assessment of a discard reduction trial in the South-West	52
6.10.	North Sea & Western Waters - Requests for exclusions in application of Article 11(2) of Regulation (EC) No 1342/2008	54
7.	Contact details of participants	61
8.	Annexes	64
8.1.	Annex I: Terms of reference for the SGMOS-09-02 Working Group	65
8.2.	Annex II: Terms of reference for the SGMED-09-03 Working Group	66
8.3.	Annex III: Terms of reference for the SGRN/ECA-09-04 Working Group	69
8.4.	Annex IV: Terms of reference for the SGMOS-09-03, 09-04 & 09-05 Assessment of Fishing Effort Regimes - Parts 2 & 3	71
8.5.	Annex V: Terms of reference for the SGMOS-10-01 Working Group	84
8.6.	Annex VI: Terms of reference for the SGECA-10-01 Working Group	86
8.7.	Annex VII: Terms of reference for the SGECA-10-02 Working Group	87
8.8.	Annex VIII: Terms of reference for the SGMED-10-01 Working Group	88
8.9.	Annex IX: STECF SGMOS Summary of main observations and findings at SGMOS-09-05	90

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PLENARY MEETING

26-30 APRIL 2010, NORWICH

1. INTRODUCTION

The STECF plenary took place at the Maids Head Hotel in Norwich (U.K.) from 26 to 30 April 2010. 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 30 April.

2. LIST OF PARTICIPANTS

Contact details are attached in ANNEX I.

MEMBERS OF THE STECF:

Abella, J. Alvaro (Rapporteur)
Andersen, Jesper Levring (Vice-chair, Rapporteur)
Bailey, Nick (Rapporteur)
Casey, John (Chair)
Curtis, Hazel
Daures, Fabienne
Di Natale, Antonio (Vice-chair, Rapporteur)
Döring, Ralf
Figueiredo, Ivone
Gascuel, Didier (Rapporteur)
Graham, Norman (Rapporteur)
Gustavsson, Tore (Rapporteur)
Hatcher, Aaron
Kirkegaard, Eskild
Kraak, Sarah (Rapporteur)
Kuikka, Sakari (Rapporteur)
Martin, Paloma (Rapporteur)
Somarakis, Stylianos (Rapporteur)
Stransky, Christoph (Rapporteur)
Vanhee, Willy (Rapporteur)
VanOostenbrugge, Hans (Rapporteur)

INVITED EXPERT:

Bertignac, Michel (Rapporteur)

Connolly, Paul (Rapporteur)
Malvarosa, Loretta
Revell, Andrew

Joint Research Centre (JRC) experts:

Rätz, Hans-Joachim
Simmonds, E. John (Rapporteur)
Anderson, John (Rapporteur)

EUROPEAN COMMISSION:

DG- Maritime Affairs and Fisheries (MARE)

Angot, Veronique
Daniel, Patrick
Goldmanis Edgars

JRC- STECF secretariat:

Dörner, Hendrik

Members of the STECF not present:

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

Balguerias, Eduardo
Cardinale, Massimiliano
Dobby, Helen
Parkes, Graeme
Polet, Hans
Prellezo, Raul
Sabatella, Evelina
VanHoof, Luc

3. INFORMATION FROM THE COMMISSION – ORGANISATIONAL MATTERS

Renewal of STECF plenary – state of play

P. Daniel (DG MARE) informed on the state of play of the new renewal of the STECF. The call for applications has been published on the DG MARE fisheries web site (http://ec.europa.eu/fisheries/call_for_application_stecf_en.htm). The call for applications will be open until 4 June 2010. It is addressed to highly qualified scientific experts in fisheries management, from the following scientific fields: marine biology, marine ecology, fisheries science, nature conservation, population dynamics, statistics, fishing gear technology, economics of fisheries, social sciences and aquaculture. A minimum of 30 scientific experts and a maximum of 35 scientific experts will be selected and designated as members of the STECF Plenary. Other scientific experts who are found suitable to serve in the STECF but who are not appointed will be included on a reserve list.

Information from the secretariat

STECF reports

The secretariat informed the STECF that a publications repository has been created at an institutional level by the JRC. The JRC publications repository is an online service giving access to publications produced by the European Commission's Joint Research Centre. This service has been established to assist with central storage, management and search of JRC's publications. All STECF reports published in the format of JRC Scientific and Technical reports can be found and downloaded (<http://publications.jrc.ec.europa.eu/repository>).

The secretariat further informed the STECF that it will create a dedicated report folder on the STECF website where all reports produced since the establishment of the STECF can be accessed in a user-friendly way. The secretariat aims that the restructuring of the STECF web site will be in place by the time the STECF summer 2010 plenary convenes.

4. ISSUES RAISED IN PLENUM

4.1. Framework for improvement of relationship between the STECF and RACs

The Commission has stated on numerous occasions its interest in improving the dialogue between scientists and stakeholders. STECF, as the scientific body of the Commission for issues related to fisheries management, may be primarily concerned by such an objective.

In addition, some RAC representatives have already invited STECF members to participate in specific stakeholders meetings.

STECF notes however that in relation to the above, two issues require clarification.

1. The first relates to how best to communicate scientific advice or opinions released by the STECF to RACs and other stakeholders.

2. The second relates to the advisory process itself and specifically whether RACs should have direct access to the advisory process for their own needs and whether they are able to submit requests directly to the STECF.

In relation to 1 above, the present administrative and budgetary rules linked to the Commission Decision establishing the STECF limit possibilities for STECF representatives to attend meetings organized by RACs and such rules may hamper the dissemination of scientific advice. To facilitate better communication of scientific advice released by the STECF and to improve the dialogue and comprehension between scientists and stakeholders, the STECF suggests that a series of dissemination meetings convened by DG Mare is incorporated into the annual STECF work programme.

With regards to 2 above, it has to be borne in mind that, as the advisory body of the Commission, the STECF is only able to respond to requests for advice or opinion submitted by the Commission. In practice this means that that requests of interest to Member States or Stakeholders should not be submitted directly to the STECF. Such requests must first be formally submitted to the Commission who will decide whether they should be included in the STECF work programme according to the Commission's priorities. Hence any request identified by RACs can only be addressed by the STECF after a dialogue with the Commission has taken place and the Commission has identified a need and has agreed that such requests should be addressed by the STECF.

In a similar context, the STECF chair recently received an invitation from the North Sea RAC to attend a meeting of the Demersal working group and clarify the rationale for STECF advice on a range of issues. While there is a desire from STECF to have closer and frequent communication with the RACs, there is presently no financial facility for STECF members to attend stakeholder meetings as STECF representatives.

This issue of extending the dialogue between scientists and stakeholders cannot be solved under the current Commission Decision establishing the STECF but could be addressed in the context of the reform of the CFP, where the role and the place of scientists, stakeholders, policy makers and policy managers in the scientific advisory framework will need to be further examined. STECF also requests a change to dialogue process between stakeholders and scientists, especially in relation to assessment and evaluation of proposed management measures and multi-annual plans. STECF therefore proposes that the Commission and RACs consider how best to improve the dialogue process so that all needs and priorities in terms of requests for opinion and advice are addressed in drawing up the annual STECF work programme.

4.2. Communication with ICES

STECF wishes to underline the importance of maintaining the initiative of joint planning meetings between the STECF Bureau and ICES to ensure appropriate allocation of responsibilities in dealing with requests for advice from the Commission and in achieving appropriate recognition for such advice. STECF also notes that because of the demanding workload for both ICES and STECF it is highly desirable to avoid duplication of tasks and joint planning meetings are an appropriate means to seek to achieve this.

Furthermore it is also important that the contribution of work undertaken by ICES and STECF respectively be duly recognised in advice given by each organisation. For example it is reasonable to expect that data provided by ICES and used by STECF is acknowledged in the reports of STECF and *vice versa*.

In addition, in an attempt to ensure that scientific advice arising from ICES is consistent with advice from STECF, there are occasions where joint advice would be desirable e.g. when the request for advice is generic to areas and fisheries that extend beyond the area of competence of ICES or when the request requires economic competence. STECF considers that in such cases, joint ICES/STECF advice could be published but only after the joint report has been adopted and endorsed by both ICES and STECF.

4.3. MRAG questionnaire on DCF

MRAG is currently engaged with an evaluation of the CFP for the European Commission. One of the areas MRAG needs to examine is the efficiency and effectiveness of National Programmes for data collection, ie the Data Collection Framework. To do this MRAG aims to assess the experience and satisfaction of the recipients and users of the data and thus contacted the STECF provide feedback by answering a short questionnaire. The STECF thought the best way to deal with this request would be for the secretariat to provide the questionnaire to the STECF working group chairs of those working groups associated with calls for data through the DCF.

5. ASSESSMENT OF WORKING GROUP REPORTS

5.1. SGMOS-09-02: Evaluation of management plans (sole in the Bay of Biscay, sole in the Western Channel, sole and plaice in the North Sea)

STECF is requested to review the report of the **SGMOS-09-02** Working Group of November 23 – 27, 2009 (Lisbon) meeting, evaluate the findings and make any appropriate comments and recommendations.

Terms of reference

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

STECF comments and conclusions

STECF welcomes the report of SG-MOS 09-02. STECF agrees with the conclusions of the subgroup regarding the evaluations of the management plans and draws the following additional conclusions from the report.

STECF observes that the generic framework was useful as guidance for evaluation. The report follows closely the outline provided, and the conclusions match the headings required by the Commission. STECF proposes continued use of the framework.

The timing of the review, at around 3 years after the plans were implemented, meant that only very limited analysis was possible. STECF notes that a period 48 months after implementation would be required for 3 years of biological data and 60 months for 3 years of economic data to be available (see Section 7 of the Working Group report¹). Very limited knowledge and expertise with the EIAA-model was available to the group. Additional forecast for the years

¹ Scientific, Technical and Economic Committee for Fisheries (STECF) - Report of the SGMOS 09-02 – Evaluation of management plans (sole in the Bay of Biscay, sole in the Western Channel, sole and plaice in the North Sea). (ed. Simmonds E. J.). 2010. Office for Official Publications of the European Communities, Luxembourg, ISBN XXXX, JRCXXXX, XXX pp. (awaiting identifiers from OPOCE)

covered by the evaluation would also be very helpful. An improvement of the EIAA extended to include segments with less than 50% catches of species under a TAC regulation would also be very useful.

STECF notes that during the short period evaluated, the stocks have changed in the direction intended by the plans and to a greater extent than would have been the case just following the Commission's annual policy statement on the principles to set fishing opportunities. However, STECF cannot attribute the changes in the stocks to the implementation of the plans because there were many additional external factors also influencing the stocks. STECF notes that the adoption of a management plan aids annual decision making, and explicitly links annual decisions to the longer term aims of changing an exploitation rate from historic PA objectives towards new MSY targets. The use of multi annual plans reduces uncertainty in future potential yields in the fisheries concerned.

STECF notes that during the period of evaluation, TACs for sole appear to have been restrictive for all three stocks, and effective at achieving Fs close to target Fs. However, STECF notes that the 2009 TAC for sole in Western Channel did not restrict catches but only landings, as there were significant discards of legal sized sole. In contrast to sole in the North Sea, the catch of NS plaice seems not to have been directly controlled by TAC but may have been influenced through being a by-catch in the sole fishery, and through a change in discarding practices of plaice during the period evaluated. Nevertheless Fs on plaice appear to have declined more quickly than envisaged by the plan. This is thought to be partly because TACs were set too low due to errors (retrospective bias) in the stock assessments. The observed effort reductions in the fleets exploiting NS plaice and sole may also have contributed to the reductions in F on plaice.

STECF notes that there is potential to use spatial management to help balance catches with F targets for plaice and sole in the North Sea.

The absence of specific economic objectives in the plans has impeded a comprehensive economic evaluation. Ideally STECF would have compared observed outcomes to the projections in the impact assessment for NS sole and plaice; but this was not possible mainly because of shortage of economic data. STECF recognizes that although the plans were compared with an alternative management approach based on the Commission's annual policy documents, the economic consequences of different rates of change were not compared in the impact assessment and observations were not made for the evaluation.

STECF recognizes that the time lag in availability of economic data currently restricts the timing of this type of evaluation. Although data on costs and earnings are only available one year after the reference year, information on effort, catches, fish prices, fuel prices, and interest rates are available with a shorter time delay. The recommended changes for the organization and data compilation for the AER (see section 5.6 of this report) would enable the use of more up to date economic data in the evaluation. Therefore STECF recommends that the proposed changes in procedures and in the models should be made.

STECF notes that the temporal and spatial scale of economic data provided in the AER is often inappropriate for evaluating the economic performance of fleets operating under management plans, particularly for small stocks. There is a need to ensure that both economic and biological data from fleets that are involved in a multi-annual plan are collected at a scale that is appropriate to allow separation of that fishery from any other fisheries that these fleets are

involved with. Provided such data are collected, it should be possible to provide these data using a specific data call.

The evaluation has shown that other factors, independent of the plans, such as fuel and fish prices, dominated economic performance during the period evaluated. STECF observed that the SGMOS 09-02 WG proposed fish prices as indicators for economic and social performance of the multi-annual plans. STECF agrees that information on prices is valuable in the evaluation of the economic effects of the plan, but does not agree on using these as an indication of the performance of the plan. Fish prices are affected by many more factors than those included in the plan.

5.2. SGMED-09-03: Assessment of Mediterranean stocks (part 2)

STECF is requested to review the report of the **SGMED-09-03** Working Group of December 14 – 18 2009 (Barza d'Ispra (VA)) meeting, evaluate the findings and make any appropriate comments and recommendations.

Terms of Reference:

The terms of reference for the SGMED-09-03 Working Group are to be found in Annex II.

STECF comments

With the aim of establishing the scientific evidence required to support development of long-term management plans for selected fisheries in the Mediterranean, consistent with the objectives of the Common Fisheries Policy, and to strengthen the Community's scientific input to the work of GFCM, the Commission made a number of requests to STECF.

STECF notes that SGMED 09-03 was able to answer exhaustively to all TORs, with only one exception due to time constraints. In accordance to the ToR, the SGMED 09-03 report deals mainly with the short and medium term forecasts for demersal and small pelagic Mediterranean stocks. Deterministic short and medium term forecasts for stock size and landings under various management scenarios were delivered. Fisheries management advice was provided considering the proposed management reference points $F_{0.1}$ and F_{msy} as applicable.

STECF endorses the calculated forecasts for 2 stocks of anchovy, 2 of sardine, 5 of European hake, 4 of red mullet, 3 of deepwater shrimp and only one for red shrimp, giant red shrimp, Norway lobster, and common sole, respectively. For all of them SGMED-09-02 had previously concluded on analytical assessments and advice regarding stock status and exploitation. All applied methodologies for the short and medium term forecast projections were fully documented as well as the data used and their origin. The layout of the short and medium term forecast was designed to allow scientists and managers to review in a consistent way the data underlying the outputs and the specific issues encountered during the short and medium term forecast, as well as the assumptions made and the management advice. The assessments confirmed the results of the analyses conducted in the previous SGMED meetings, showing a general condition of overfishing for most of the stocks. As for most of the stocks assessed current exploitation rates are larger or much larger than any level of fishing mortality associated with high and sustainable long term yields. Reductions in the catches and fishing mortality are

needed in the short term for most of the assessed Mediterranean stocks to improve stock status. Following reductions of fishing mortality and catches in the short term, in the long term improvements in terms of stock status and catches are expected.

STECF welcomes the efforts undertaken by SGMED to improve the quality of stock assessments and recommends increasing the number of stocks to be assessed in each area. STECF recommends the quality and availability of relevant stock assessment data should be further improved and differences in biological parameters used in the different GSAs for the same species being explained or harmonised.

STECF acknowledges the use of bio-economic models for the assessment of the short and medium-term economic consequences of changes in F. They were 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. Existing bio-economic models were used for producing advice on possible short-term and long-term economic consequences of the selected harvesting strategies. The analyses were performed for bottom trawl fisheries in GSA6 and 10. STECF encourages the SGMED group to extend such exercise to other stocks.

STECF notes that SGMED 09-03 identified serious discrepancies between the catches declared to various scientific and Regional Fisheries Management Organizations (ICES, STECF, GFCM, ICCAT, etc.). In particular, significant discrepancies in the average catches of the period 2005-2007, which was used as the reference period by the last RCM Med & BS (6th Regional Coordination Meeting for the Mediterranean and the Black Sea, Venice 13-16 October 2009) for planning and evaluation of the sampling intensity under the provisions of the DCF. STECF recommends that discrepancies in national catch declarations be cross-checked and corrected as a matter of urgency.

5.3. SGRN/ECA 09-04: Evaluation of NPs linked to the DCF and review of surveys

STECF is requested to review the report of the **SGRN/ECA-09-04 Working Group** of December 7 – 11, 2009 (Hamburg) meeting, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGRN/ECA-09-04 Working Group are to be found in Annex III.

STECF observations

STECF endorses the findings of SG-RN/ECA 09-04 and welcomes the strategic work programme outlined for 2010. STECF would like to stress that the availability and quality of data collected under the DCF is of utmost importance for the work of STECF working groups and other regular data users in RFMOs. Furthermore, STECF notes that the collection of data under the Marine Strategy Framework Directive needs to be addressed in future SGRN WG meetings.

STECF did not deal with the report section on ToR 1 (Revised DCF National Programmes 2010), as this part had already been sent to the Commission and was adopted by STECF written procedure in March 2010.

STECF comments and conclusions

Regarding the review of surveys to be undertaken in 2010, STECF recommends that the chair for the survey review group (SGRN-10-03) should be selected soon in order to arrange a timely preparation of the meeting including the collation and review of the relevant documentation. Among the relevant documents, the report of the ICES 'Working Group on Integrating Surveys for the Ecosystem Approach' (WGISUR), should be considered by the survey review group. STECF notes that SGRN 09-04 considers that surveys should be subject to frequent evaluation of their 'quality and usefulness'. STECF agrees and considers that this is an essential aspect of any on-going survey programmes. STECF also notes that to fully undertake such work requires rigorous analyses of within and between survey data time-series and their utility.

In relation to Regional Databases (RDB), STECF notes that the RDB meeting proposed by SGRN/ECA 09-04 already took place (Brussels, 22-24 Feb 2010) and its report will be reviewed by the DCF Regional Co-ordination Meetings (RCMs) in May.

The availability and high quality of data collected under the DCF is of vital importance to STECF working groups (effort, Annual Economic Report etc.) and STECF would thus like to highlight existing problems with data deficiencies:

Following implementation of the DCR and the subsequent DCF, it is to be expected that total catch figures should be consistent and reliable in international databases dealing with the list of species included in the DCF (Appendix VII of Commission Decisions 2008/949/EC and 2010/93/EU). However, on numerous occasions, STECF has noted unexplained discrepancies in basic fisheries-related data submitted by Member States to different organisations. A serious case was highlighted in the STECF-SGMED 09-03 WG report.

STECF notes that in principle there should be no discrepancies in data and stresses the need for appropriate quality checks on all fisheries data used in support of fisheries management advice. Such discrepancies not only impact on the quality of assessments and advice but also affect the distribution of sampling effort declared and carried out under the DCF. To this end STECF proposes:

1. to include the following request in Terms of Reference for all of its Working Group meetings:
"Examine all data for consistency and quality. Any discrepancies should be brought to the attention of the relevant responsible authority, Member State and the Commission."
2. that the issue of data consistency and quality is addressed under the DCF. To do so, STECF recommends that at the forthcoming SGRN WG meetings, a template and procedure for reporting data deficiencies by data user groups should be developed.

Provision of data that is funded under the DCF is proving a problem for STECF. This is particularly the case for both economic (SG-ECA-10-02) and effort data (SG-MOS 09-05). Several Member States have either failed to provide any data at all for a data call or provided data in such a poor state that the STECF working groups found it completely unusable.

The principles of management under the UN straddling stocks agreement are that there is a supply of 'complete and accurate data' in 'a timely manner'. Under the UN agreement, such information should come from national and international research programs such as those defined under the DCF.

STECF considers that the failure to provide data collected under the DCR/DCF is a serious problem that is directly affecting the completion of STECF work, particularly in preparation of the Annual Economic Report and the effort reports.

STECF would like to draw this matter to the attention of the Commission. As the matter is so significant, STECF considers that this matter needs to be addressed at a high level and in order to deal with this matter in the long term, STECF suggests that it may be appropriate to consider it in the context of the 2012 CFP reform.

The Commission already received information on data deficiencies from JRC on the data submitted by MS under the DCF. In line with point 2. above, STECF also intends to provide the Commission with a checklist of data discrepancies in Member States submissions under the DCF through its WG activities.

In response to the SGRN/ECA-09-04 recommendation to determine a core group of economists dealing with economic data collection under the DCF and to ensure continuity on economic issues within DCF-related STECF-SGRN WGs, STECF dealt with these issues in July 2009, (STECF-09-02).

5.4. SGMOS-09-03, 09-04 & 09-05: Assessment of Fishing Effort Regimes - Parts 2 & 3

Background

STECF is requested to review the reports part 2 & 3 of the **SGMOS-09-03, 09-04 & 09-05 Working Group** of 2009 meetings, evaluate the findings and make any appropriate comments and recommendations.

Terms of reference:

The detailed terms of reference for the SGMOS-09-03, 09-04 and 09-05 Working Group are to be found in Annex IV.

Background

STECF is requested to review the reports of the **SGMOS-09-03, 09-04 & 09-05 Working Group** meetings, evaluate the findings and make any appropriate comments and recommendations. A preliminary review was provided at the STECF autumn plenary meeting 2009² since the SGMOS group was at that time still receiving revisions of data and had not been able to finalise its reports.

The working group was requested for:

2 Scientific, Technical and Economic Committee for Fisheries (STECF) - 32nd Plenary Meeting Report. (eds. Doerner H. & Casey J. & Raetz H.-J.). 2009. Office for Official Publications of the European Communities, Luxembourg, ISBN 978-92-79-14352-6, JRC55699, 209 pp. <http://publications.jrc.ec.europa.eu/repository/handle/111111111/4896>

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

Since 2004, the STECF subgroup SGMOS Effort Management (previously SGRST), has performed the task of collating and evaluating effort and catch data for fisheries operating under the Annex II A-C regimes. In 2009 SGMOS was asked to provide analysis according to the original cod recovery plan and also the revised cod plan with its simplified gear categories. A significant management development in the new cod plan 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. During 2009, ongoing discussions about a cod plan for the Celtic Sea led to a request for STECF to update the effort information first provided for this area in 2008.

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. In view of the requirement once again for evaluation of effort data, the group was well placed to deal with this. However, there were specific deep sea issues and questions involved in this work and suitable experts attended an additional meeting to deal with these.

TOR addressed by the 2009 STECF-SGMOS WGs

The TOR given to SGMOS are listed in Appendix IV. These are organised by area. 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 TOR 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 met on three occasions in 2009. Inter-sessional work was carried out prior to the final meeting. STECF notes that data shortfalls and data revisions received throughout the process impaired the group's progress and restricted the time available for data synthesis and

interpretation. Two significant updates involving Danish and French data were received and incorporated after the final meeting (in November and December respectively). A decision was taken not to incorporate data revisions received after 9th December 2009 although STECF is aware that some member states made further submissions direct to the Commission after this date; these are not incorporated in the report.

The group agreed that the extensive and diverse data and issues addressed would benefit from presentation in three reports covering respectively Baltic Sea (part 1) Annex II and the Celtic Sea (part 2) Deep Sea and Western Waters and (part 3). STECF notes that decisions were taken to streamline the material contained in the reports by adopting an area based presentation and by posting the official data tables in EXCEL format together with the final report on the STECF website as agreed with DG MARE.

Progress and Status of Reports

The report covering the Baltic Area (STECF SGMOS 09 05 Report part 1 was completed in January 2010 and reviewed by STECF by written procedure during March³.

The report covering the Annex II effort management regime was completed in April 2010 and has been reviewed at the present STECF plenary meeting

Considerable progress has been made with the Deep Sea and Western Waters report and examination of some of the material shows promise in terms of understanding deep sea fishing activities and the catch compositions supporting them. This report requires further text preparation and will be completed shortly for review by correspondence. SGMOS has provided some preliminary comments.

Summary of STECF SGMOS 2009 WG findings

Summaries of the key observations made by the STECF SGMOS Effort Management Group are given in Appendix 2.

SGMOS highlights a number of general observations and issues affecting the overall process of collating and evaluating effort data before providing some area specific observations.

Summaries for the Baltic Sea effort regime and the Annex II/Celtic Sea report are in final form. The summary for the Deep Sea /Western waters report is preliminary but is unlikely to change substantively.

STECF comments and conclusions

General comments and conclusions are followed by area specific ones

- STECF has reviewed and adopted Parts 1 and 2 of the STECF SGMOS effort management report and plans to review Part 3 by correspondence as soon as Part 3 is completed.

3 Scientific, Technical and Economic Committee for Fisheries (STECF) – Opinion by written procedure - Report of the SGMOS-09-05 Working Group Fishing Effort Regime in the Baltic. (eds. Bailey N. & Rätz H.-J.). 2010. Office for Official Publications of the European Communities, Luxembourg, ISBN 978-92-79-15354-9, JRC57572, 86 pp. <http://publications.jrc.ec.europa.eu/repository/handle/11111111/13527>

- STECF considers that, for a number of areas, the aggregate effort data represent a further improvement on previous years and **endorses** the outputs produced by SGMOS-09-05 for use in the relevant effort management regimes.
- 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 recommends that particular attention is paid to the report sections dealing with CPUE and to the cases where only LPUE figures are provided owing to the shortage of discard data.
- STECF considers that it would be advantageous if further alignment could be achieved between the effort management regime gear categories and the requirements and rationale of the Data Collection Framework. This would enhance the prospects for obtaining improved catch data.
- STECF notes that the work of SGMOS is to collate and summarise data provided by member states. In this respect the output is dependent on timely submission of accurate material and STECF SGMOS is only able to provide an output which reflects the quality of these data. While every effort is made to accommodate updates and revisions from member states, it is not possible to capture all of these in the finalised reports.
- STECF notes that in common with previous effort evaluation work (covering other areas), the data compilation for the analysis covered in the three parts of the report was often absent, late or inconsistent
- Given the difficulties created, STECF particularly acknowledges the major contribution made by Hans-Joachim Raetz of the JRC in developing, maintaining and uploading data to the various databases. The facility with which the database can be queried to address ad hoc questions and terms of reference is extremely beneficial.
- STECF supports the view that more permanent future resourcing, support and succession planning to ensure 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.
- STECF considers that for future meetings it is vital that data are agreed and useable by the time of the first meeting.

Specific comments Part 1 Baltic Sea⁴

- STECF SGMOS made good progress with the available data but was hampered by the lack of adequate fishing effort information from some nations, and incomplete information from a number of nations. The most significant shortfall was effort data from Poland. Every attempt should be made by the Commission and Member State authorities to encourage a more complete submission in 2010 and future years.
- On the basis of the partial effort data supplied, the overall effort in the Baltic has reduced by about 16%. Given that there were marked reductions in Area A (one of the regions particularly important for cod) and in view of the shift from regulated gears to unregulated pelagic gears it seems likely that effort on cod has decreased.
- Landings and discards of cod are estimated to have declined markedly since 2003.
- Owing to incomplete information on special conditions, it is not possible to quantify the extent to which the Bacoma trawl has been adopted.
- Under 10m vessels account for about 13% of landings of cod but this is an underestimate since only a few countries supplied data.

Specific comments Part 2 Annex II and Celtic Sea

- 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 40/2009. This year a number of countries undertook revisions of data and overall the quality is considered to have improved.
- STECF considers that the simplification of the gear categories in the revised cod plan of Annex IIA has facilitated a more straightforward data compilation and evaluation.
- STECF-SGMOS notes that in respect of Review of Annex IIB of Council Reg. 40/2008 in the context of the recovery plan for Southern hake and *Nephrops* (Regulation 2166/2005), data were provided by Spain and Portugal but there were many inconsistencies and errors such that not all effort could be assigned adequately to regulated gears.

⁴ this section is included for completeness, part 1 on the Baltic has been published as STECF report by written procedure: Scientific, Technical and Economic Committee for Fisheries (STECF) – Opinion by written procedure - Report of the SGMOS-09-05 Working Group Fishing Effort Regime in the Baltic. (eds. Bailey N. & Rätz H.-J.). 2010. Office for Official Publications of the European Communities, Luxembourg, ISBN 978-92-79-15354-9, JRC57572, 86 pp. <http://publications.jrc.ec.europa.eu/repository/handle/11111111/13527>

- STECF notes that Portugal has recently spent some time improving the data available for use in 2010 and STECF suggests that this process is urgently required by Spain before an adequate evaluation of effort under Annex IIB can be carried out.
- STECF notes that the situation in Annex IIC continues of a high proportion of effort being attributable to unregulated gears
- STECF considers that further progress was made by SGMOS this year in collating data and preparing advice on the Celtic Sea

Specific comments Part 3 Deep Sea and Western Waters

- STECF notes that part 3 of the STECF SGMOS report, covering Deep Sea and Western Waters of SGMOS has not yet been finalised and that the text requires to be completed. STECF considers that the proposed layout for the report will provide a good basis to begin reviewing these effort regimes. Figures and tables have been completed and these form the basis of some preliminary comments.
- This is the first time an evaluation has been carried out of effort development under the Deep Sea and Western Waters regimes. A considerable amount of information has been collated covering the Deep Sea Regulation and the Western Waters Regulation but this remains to be fully analysed. STECF notes the preliminary nature of this work and the limited time available for deep sea experts to consider these data and recommends that care should be exercised in interpreting and using the outputs.
- STECF notes that discussion of the definition of Deep Sea fisheries is continuing and that the present approach, based mainly on quantities of deep sea species landed, should be regarded as an interim solution.
- STECF observes that good progress was made in the review of Annex I and Annex II species and recommends that the adjustments proposed are incorporated in a future revision of the Regulation.
- Despite several data updates, serious anomalies in the Western Waters summaries for some member states remain. Negative values appear in the estimates for the French effort.
- STECF encourages the analysis to continue and recognises that expertise from outside the 2009 STECF-SGMOS will be required to fully exploit the new data resource created. STECF proposes that deep sea experts be invited to the second effort meeting in 2010 to assist with interpretation of the information collated.

5.5. SGMOS-10-01: – Methodologies for Impact Assessments of multi-annual plans

STECF is requested to review the report of the **SGMOS-10-01** Working Group of February 1 - 5, 2010 (Hamburg) meeting, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGMOS-10-01 Working Group are to be found in Annex V.

STECF response

STECF welcomes the report of SG-MOS 10-01. STECF considers that the Generic Approach and Terms of Reference for Impact Assessments given in Annex A of the Working Group report form a good basis for carrying out Impact Assessments in the form required by the Commission. STECF also considers that it is particularly important that stakeholders are involved early in the process and notes that a meeting to start a dialogue has been arranged for May 2010. STECF considers the report framework (Annex B) provides a useful structure to deliver the information required by the Commission.

STECF stresses the need to reconcile resources and aspirations at the scoping meeting in order to ensure that impact assessments can be carried out to a satisfactory standard and in the required time to enable the SFECF to give advice to the Commission.

In future when the Commission considers what measures should be proposed for impact assessments, STECF suggests that it is preferable to assess fisheries or fleets rather than single stocks. The single species approach can make it very difficult or impossible to conduct an economic evaluation especially if the fisheries concerned are affected by more than one management plan. As it will probably not be possible to control catches of a single species independently in a mixed fishery, a mixed fishery assessment is likely to be more realistic than one for a single stock.

Integrated economic and biological models are an important tool for impact assessments and the scoping meeting should consider the availability and requirements for integrated modelling. Such an approach should also be addressed at the SGMOS 10-03 WG to be held in Rennes dealing with the ecosystem approach to fisheries management.

5.6. SGECA-10-01 and 10-02 - Discussion on methodologies, indicators and format of the 2010 Annual Economic Report – Review of the Annual Economic Report

STECF is requested to review the reports of the **SGECA-10-01 and 10-02** Working Groups of February 8 - 11, 2010 (Copenhagen) and of March 22 - 26, 2010 (Ispra) meetings, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGECA-10-01 Working Group are to be found in Annex VI.

The terms of reference for the SGECA-10-02 Working Group are to be found in Annex VII.

Background

The 2010 Annual Economic Report (AER) provides a comprehensive overview of the latest information available on the structure and economic performance of the EU Member States fishing fleets.

The report includes:

1. An economic and structural overview of the EU fishing fleet
2. A detailed economic and structural overview of the fishing fleets from each EU Member State
3. Qualitative economic performance assessments for 2009 and 2010 for most Member States fishing fleets

4. Economic performance projections of selected EU fishing fleets in 2009 and 2010 operating under EU management plans using the EIAA model
5. Detailed economic and structural analyses of fleet segments of special interest for most Member States
6. Analyses of EU regional fishing fleets
7. The latest information on EU fish prices and price trends
8. Summary tables of the data submitted by each Member States at fleet segment level

The report was produced by fisheries economists from JRC and by two working groups of economic experts (Sub-group of Economic Affairs (SGECA) 10-01 and 10-02) convened under the Scientific, Technical and Economic Committee for Fisheries (STECF). SGECA 10-01 took place from 8th - 11th February 2010 in Copenhagen and consisted of 12 invited experts from within the EU and two experts from the JRC, while SGECA 10-02 took place from 22nd - 26th March 2010 in Ispra and consisted of 19 invited experts and five experts from the Joint Research Centre (JRC).

The data used to compile the various analyses in the report were collected under the frameworks of the Data Collection Regulation (DCR); cf. Council Regulation (European Commission (EC)) No 1543/2000 of 29 June 2000 and the newly established data collection framework (DCF), cf. Council regulation (European Commission (EC) No 199/2008 of 25 February 2008). The data call requested economic data for the years 2002 to 2008.

The deadline of the data call for the production of the AER was 22nd February 2010. However, during April 2010, some MS were still uploading and correcting data, two months after the deadline of the data call.

As part of the AER production process, the European Commission requested Hans Frost and Jesper Andersen from the Institute of Food and Resource Economics (FOI) to undertake economic performance projections for selected EU fleet segments using the EIAA model.

The main findings of the 1st draft of AER are as follows and relate only to those Member States that provided data for 2008:

- No EU-level time series trends could be presented due to missing data for key MS
- Fleet capacity decreased in most MS – vessel numbers more than power and tonnage
- Age of EU fleet increased in most MS
- Employment on-board decreased in most MS
- Fewer days at sea and lower fuel consumption in 2008 compared to 2007
- Total income decreased, expenditure on crew wages decreased, expenditure on fuel increased in 2008, relative to 2007
- Assessment for 2009: Fuel price drop expected to have resulted in increased effort and small improvement in economic performance
- EIAA model results suggest that the selected fleet segments (operating under management plans) are performing well, i.e. show rate of returns on investment above 10%. The very poor result forecast for the Dutch beam trawlers in 2010 is mainly explained by the significant decreases in the TACs for sole (c. 20% decrease) and for plaice (c. 30% decrease).

STECF comments and recommendations

Most importantly, STECF notes that a number of countries failed fully to comply with the recent economic data call for the production of the report. These countries include Spain, Greece and Ireland which are significant MS in terms of overall EU fish production. Only 7 MS submitted all the data requested by the specified deadline. STECF urges the Commission to take action in order to remedy the situation. It is not possible to complete most parts of the EU overview chapter, some national chapters are incomplete, while the fish price and regional analyses chapters are also missing data for some countries. STECF recommends that the publication of the AER should not be delayed to allow inclusion of late data submissions.

In addition, STECF acknowledges the usefulness of the data quality and coverage checks carried out by the JRC and recommends that more time be allocated between the data call deadline and the AER meeting to allow improvements in this process. It is acknowledged that there are likely to be some minor errors in the first data submission and it will improve the quality of the final report if MS which complied with the data call deadline have a chance to make corrections. Table 5.6.1 summarises the main data gaps for each Member State, where applicable.

Table 5.6.1: Summary of missing data and quality issues for each Member State.

Country	DCR (2002-2007) missing data	DCF (2008) missing data
Portugal (Azores)	Financial position	Capital values and investments, Capacity, Employment, Expenditure, Fishing enterprises, Income, Effort, Landings
Belgium	Financial position	
Bulgaria	Employment, Financial position, Prices, Revenues, costs and fuel consumption	Fishing enterprises, Income - data quality questionable
Cyprus	Questionable quality of original data submission	Original capacity and effort data replaced on 7th April, upload procedure not followed correctly
Denmark		Fishing enterprises
Spain	Effort, prices, value of landings (likely submission of landings volume is incomplete)	Capital values and investments, Capacity, Employment, Expenditure, Fishing enterprises, Income, Effort, Landings
Estonia		Effort
France		Landings and Prices (submitted but using incorrect aggregation levels)
United Kingdom	Unresolved issues with landings and effort data	

Greece		Capital values and investments, Capacity, Employment, Expenditure, Fishing enterprises, Income, Effort, Landings
Ireland		Capital values and investments, employment, expenditure, fishnet, income
Latvia	Missing capital values and capital costs	Missing capital values and capital costs
Malta	Data quality questionable for some parameters	Data quality questionable for some parameters
Portugal (Madeira)	financial position, landings	Capital values and investments
Portugal (Mainland)	Financial position, capital costs	Capital values and investments, capital costs

STECF notes that the introduction of the new DCF and the consequent collection and reporting of new economic variables has highlighted methodological issues, related to calculating capital values, which require further attention.

In particular, it is not known whether capital value data for years before 2008 (under the DCR) include only the capital value of vessels or the value of vessels and the value of fishing rights. Therefore, it is inappropriate to present time series of capital value data for 2006 to 2008, when the 2008 capital value should include only the value of vessels. Further work is required to establish whether the time series data is consistent. This should be clarified by each MS. STECF recommends that in instances where insufficient information is available to assess this problem, time series data on capital values are not presented in the report.

In addition, there is currently a misspecification in the formula used to calculate the total capital value for 2008, which in turn has an impact on the calculations of opportunity cost of capital, return on investment and profits. Specifically, the estimated asset value of fishing rights (such as quota) has been included in the total value of capital, whereas it should be excluded, so that only the estimated value of *physical* capital is used in the calculation of economic profit and profitability. STECF recommends that the JRC, in collaboration with MS national correspondents, amends these calculations and adjusts the results accordingly before the report is published.

Consequently, STECF stresses that the report should contain adequate warnings to users about comparing ROI and capital value results for 2008 with previous years due to these necessary changes in methodology brought about by the introduction of the DCF.

Given the uncertainties surrounding Member States' capital value data, STECF once again urges the Commission to organise a workshop for national data correspondents and experts on how to calculate the various capital cost and capital value parameters requested under the DCF. It is imperative that this workshop takes place before the next call for economic data so that Member States have enough time to prepare. STECF also recommends that issues related to the capital

calculations are considered as a high priority in the TOR of the SGECA 10-03 meeting which will take place in Salerno in September.

STECF notes that there is a potential duplication of work with respect to effort data requested under both the economic and effort data calls for the AER and SG MOS working groups respectively. These datasets should be derived from the same databases in the respective MS. It is currently unknown whether the same methodology has been used to calculate the various effort variables e.g. days at sea, kW days etc requested under the two calls. STECF recommends that JRC investigate this issue, and if necessary, during SGECA 10-03 and the next effort meeting, experts should examine the calculations used and where sensible, standardise these calculations to a single agreed set. Where different calculation methods are necessary, the differences should be highlighted and the variable names should be different so as to avoid effort indicators with the same names being calculated using different methods in different WG reports.

STECF notes the improvements to the overall structure and format of the report that was decided during the SGECA 10-01 meeting in Copenhagen. In particular the national chapters, regional and fish price chapters are all well structured and contain more information than in the past. In addition, the inclusion of new sections on the report production process and quality indicators will help improve the completeness of the report and provide users with more information on these important factors than in the past.

On the EIAA model outputs, STECF notes that most of the fleet segments are projected to perform well i.e. show rates of return on capital above 10%. It is important to point out that the model is used for projections and not forecasts. The difference is that in a projection only one variable is changed exogenously at a time. In this case it is the TAC variable. In contrast, a forecast aims to provide the best estimate of the economic performance in the future, taking into account all possible future changes for example in prices of inputs and outputs. Hence forecasts are more demanding as they require estimation of functions forecasting the future development. On the other hand, forecasts also conceal the effects of each variable on the economic performance.

On the fish price chapter, STECF notes that SGECA has presented valuable information and STECF considers it important that the price and market analyses continue. Naturally these sections will be more valuable if all MS are included.

STECF notes that the Regional analyses followed SGECA 10-01 guidelines and DCF regional classifications. Regional analyses are presented for the Baltic Sea, the North Sea, North Atlantic, Mediterranean and Black Sea, and other fishing areas. For each area there is a general overview of the fisheries of the region and then the economic performance of the major fishing fleets of the area. STECF recognises that in some cases (i.e. Mediterranean and Black Sea) the completeness of the regional analysis is highly influenced by missing or poor quality data.

STECF considers the information presented in the AER valuable and useful and that this AER represents substantial improvements over the previous edition. When the issue of MS failing to supply data on time is solved, STECF suggests that the next priority is to improve qualitative analysis and conclusions.

STECF stresses the need to produce estimates, using forecasting techniques, for the year following the calculation year (i.e. the year most recently ended) in order to improve the relevance of the report. STECF recommends that SGECA 10-03 should explore the possibility of requesting some effort, landings, prices and capacity data for the year following the calculation year in the next call for economic data. STECF recommends that the EIAA model be

slightly amended to produce the estimates and then projections could be produced for the following 2 years. For 2011 this would mean that an estimate of outcomes could be made for the year 2010, with projections for 2011 and 2012. If this is to be done, the model should be slightly modified and price information for 2010 should be available in accordance with the call for data made by JRC.

In addition, STECF recognises that the EIAA model is only effective at producing economic performance projections for fleet segments whose catch composition is made up of more than 50% of TAC species. STECF also recommends that further modelling should be developed in order to allow projections for fleet segments whose target species are not subject to TACs.

STECF therefore endorses both SGECA 10-01 and 10-02 reports and recommends publication of both the AER and the EIAA model results, including reference to the issues mentioned in relation to the capital value data and estimates currently being rectified by the JRC.

5.7. SGMED-10-01: – Preparatory work to the stock assessment process

STECF is requested to review the report of the **SGMED-10-01** Working Group of March 22 - 26, 2010 (Barcelona) meeting, evaluate the findings and make any appropriate comments and recommendations.

The terms of reference for the SGMED-10-01 Working Group are to be found in Annex VIII.

STECF observations

STECF acknowledges the recent progress achieved by the SGMED 10-01 WG in its tasks related to the assessment of Mediterranean living resources and fisheries exploiting them. STECF encourages further standardization its input data for assessments and methods used to accomplish the reoccurring tasks in order to increase efficiency and credibility. STECF notes that such standardizations are best achieved through the identification of individual stock coordinators from the experts attending SGMED WG meetings. The stock coordinators should be responsible for the data preparation, assessments and presentation of results as defined by the ToR. STECF recommends that individual stock coordinators be identified and that such experts regularly attend future meetings. Stock coordinators are invited to closely cooperate with other SGMED WG colleagues and to coordinate their tasks with the JRC experts attending SGMED working groups i.e. in advance of the working group meetings.

STECF comments

STECF endorses the progress and findings as documented in the report of SGMED 10-01 in relation to its various ToR. STECF's comments regarding the specific tasks are given below.

ToR 1: STECF notes that SGMED 10-01 WG compiled synoptic tables of the requested biological parameters relevant for the assessments carried out by the WG and other scientific groups of the stocks of European hake (*Merluccius merluccius*), red mullet (*Mullus barbatus*), sardine (*Sardina pilchardus*), anchovy (*Engraulis encrasicolus*), common sole (*Solea solea*), blue and red shrimp (*Aristeus antennatus*), pink shrimp (*Parapenaeus longirostris*), giant red shrimp (*Aristaeomorpha foliacea*), and Norway lobster (*Nephrops norvegicus*) in the various areas (GSA) of the General Fisheries Commission of the Mediterranean (GFCM). STECF notes that this compilation does not include additional species not yet assessed. STECF notes that the

SGMED WG was not in the position to explain certain major differences in the biological parameters and thus did not harmonise them among stocks in adjacent areas. In those GSAs where no biological information is available for assessments to be carried out, the SGMED 10-01 WG recommends to use the values of the parameters from adjacent GSAs to perform preliminary stock assessments. STECF recommends that all parameters used for assessments are documented in future reports.

STECF agrees with SGMED 10-01 recommendations regarding the ranking importance of additional species/stocks to be assessed in its future meetings. In addition to the important annual updates of the stocks assessed analytically in the past SGMED WG meetings, STECF recommends undertaking assessments of the species listed above in GSAs where they constitute significant landings, relevant data are available, participants' expertise is available and they are not yet assessed. Furthermore, STECF agrees with SGMED 10-01 that stocks and fisheries assessments in the Mediterranean Sea should be focused on stocks of striped mullet (*Mullus surmuletus*), anglerfish (*Lophius budegassa*), and picarel (*Spicara smaris*) in GSAs where the above-mentioned criteria are fulfilled.

ToR 2: STECF notes that SGMED 10-01 successfully tested the computer programs (R-script) provided by V. Bartolino, G.C. Osio, F. Scott and G. Pilling through a short term contract with DG Mare. The programs are designed to facilitate SGMED WG evaluations of the international MEDITS survey data as provided by Member States through the DCF program and data calls. While individual errors in the MEDITS survey data base were identified through the testing procedures, the programs do not yet deliver all the results and features requested. While acknowledging the progress made so far, STECF recommends that the computer scripts and the respective user manuals be finalised and the various individual modules contained in the computer script should also be made applicable to other data sources of biological data than MEDITS. STECF recommends such remaining work, to be conducted during an additional short follow-up contract with the software experts in advance of the upcoming SGMED 10-02 meeting scheduled for 31 May-4 June 2010. This strategy would allow SGMED 10-02 to finalise the testing phase and to apply the software during its stock assessments planned for 2010. Alternatively, the computer experts could participate in the upcoming SGMED 10-02 meeting.

ToR 3: STECF notes that SGMED 10-01 provides in its report a comprehensive review of stock status indicators applicable in data poor situations. STECF recommends the various state and pressure indicators to be tested for stocks in data rich situations during upcoming the SGMED 10-02 meeting, before any conclusions regarding fisheries management advice on fisheries be drawn on the basis of such indicators. This recommendation explicitly applies to the elaboration of any state and pressure references points considered consistent with high long term yields.

STECF encourages SGMED WG experts to make individual length-weight data of the assessed stocks available on a voluntary basis to allow the computation and evaluation of condition factors.

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

6.1. General issues - Assessment of possible changes in technical measures

Background

"Mesh size ranges" included in the Commission proposal for Council Regulation on technical conservation measures created trouble during consultations going before the Fall Council. This mesh size ranges represent gears with very low selectivity generating high rates of by-catches of different species and/or discards.

Terms of Reference

As to reverse this trend STECF is asked to provide an opinion on an adequate mesh size to catch the species falling within these problematic mesh size ranges according to the desired catch composition to be achieved.

So the underlying principle is to increase the selectivity of gears that currently generate the highest rates of discards in fisheries and for metiers as specified below:

North Sea - Impact for an increased in mesh size for Towed gears using:

- 70-79 mm and catching less than 70% of *Nephrops* (in the Commission proposal *Nephrops* had to be caught with more than 70 mm, so anything below 70% of *Nephrops* with a mesh below the 70 mm is to be considered as a by-catch and therefore this gear had to increase the mesh size to improve its selectivity).

North Sea and North Western Waters - Impact for an increased in mesh size for Towed gears using:

- 80-99 mm, and 100-119 mm catching more than 5% cod, 5% hake and deep sea spp, 5% whiting or 10 % of a mixture of whitefish (in the Commission proposal cod had to be caught with more than 120 mm and below this limitations in the catch of 5% or 10% if is a mixture were suggested)

South Western Waters - Impact for an increased in mesh size for Towed gears using:

- 60-69 mm, 70-79 mm catching more than 5% hake, 10% of any mixture of hake, sole, *Nephrops* (in the Commission proposal hake had to be caught with more than 100 mm and below this limitations in the catch of 5% hake if using less than 80 mm or 10% if using less than 100mm were suggested)
- 80-99 mm catching more than 30% of hake (in the Commission proposal hake can be caught up to)

According to data made available by the STECF in the annual economic reports and in the reports on fishing effort regimes and to advice on stocks released by STECF and ICES, STECF is requested to provide information on the impact of such possible changes on fishing and mesh-sizes to be introduced in the fisheries above specified., both in terms of the dynamic of exploited stocks (possible modification of catches in the short terms and of yields in the long term), and in terms of economy of the fleet (impact on investments and on results) ?

STECF comments

STECF acknowledges that discarding remains problematic in a number of EU demersal trawl fisheries and improvements in the selection profile of these may result in a reduction in discards. However, while STECF is asked specifically to comment on appropriate mesh sizes relative to the desired catch composition, it is noted that there are a range of technical measures available (other than increasing mesh size) that may be more appropriate. Further, STECF notes that the mesh size bands and regions identified contain a significant number of discrete métiers, targeting different species assemblages, using different gears and that the catch profiles, and therefore, technical solutions are likely to be different for each of these métiers despite the fact that they use similar mesh sizes.

STECF also notes that the task of undertaking an assessment of the impact of individual devices from a technical, biological and economic perspective is outside the scope of STECF plenary and requires considerable data gathering and subsequent analysis, which is not possible in the time available.

The work implied by the request if taken literally is very extensive and quite outside the scope of a short term study. STECF considers that in the first instance, preparatory work is required to identify the métiers involved, their landings and discard profiles and the selectivity characteristics of the gears currently used. This should be combined with a review of the technical discard mitigation measures appropriate for each métier. STECF considers that combining these data will at least allow an assessment on how the mitigation measures (e.g. increased mesh size) may have on the length composition of catches. However, STECF further notes that undertaking a full economic and stock impact assessment will require considerably more resources and time to fulfil, even assuming that adequate data exists. The initial preparatory work identified is a prerequisite to a full bio-economic assessment. STECF considers that the preparatory work could be conducted within a 6 month window, but the full bio-economic analysis will take considerably longer and only if appropriate data become available. Given the complexity of the options, STECF suggests that the Commission opens a dialog with STECF to determine the most appropriate way forward.

6.2. Mediterranean Sea and Black Sea - Assessment of management plans for boat seines fisheries submitted by Italy

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.

Moreover, with a view to exploit the target species of transparent goby, of sandeel and the fry of sardine, the boat seine fisheries concerned should be granted both derogation to the minimum mesh size of 40 mm square or 50 mm diamond and to the minimum distance from the coast of 3 nautical miles or to the depth of 50 m isobath where that depth is reached at a shorter distance from the coast.

In order to benefit of such derogations, as stipulated by Article 9(5) and Article 13(5) and (9) respectively of the Mediterranean Regulation (Council Regulation EC No 1967/2006), the fisheries concerned, in addition of being managed within an adequate management plan, shall be highly selective, in order to ensure that catches of species mentioned in Annex III are minimal, have a negligible effect on the marine environment and shall not be carried out above seagrass beds of *Posidonia oceanica* or other marine phanerogames. For the latter issue a derogation to operate in the water columns above seagrass beds is available (Article 4(1) second subparagraph) provided that the lead-line and/or the hauling ropes of boat seines do not touch the seagrass bed during the fishing operations.

Moreover, in order to exploit the fry of sardine in derogation to the minimum catching size, as established by Article 15 of the Mediterranean Regulation, the national plan shall indicate that the stock of sardine is within safe biological limits.

Member States were expected to provide up-to-date scientific and technical justifications for such derogations.

Three reports of 25 pages have been submitted by Italy for fisheries exploited by seiners.

Terms of References

STECF is requested to review the plans submitted by the Italian authorities, to evaluate their findings, to make appropriate comments, also with respect to the elements/measures included in the management plans and to advice 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.

STECF is also requested to evaluate whether the fisheries carried out are highly selective, both in terms of species and sizes, have a negligible effect on the marine environment and if the fishing gear risk damaging the seagrass beds during the fishing operations. STECF shall also advice on the state of sardine stock in the Ligurian Sea.

STECF comments:

The three Plans submitted by the Italian authorities concern the Region of Liguria (northern GSA 09) and are entitled:

1. ‘Management plan on seine net use (Sciabegotto) for bianchetto (*Sardina pilchardus*)’
2. ‘Management plan on seine net use for transparent goby (*Aphia minuta*) fishing’
3. ‘Management plan on seine net (“Burzin”) use for Mediterranean sandeel (*Gymnammodytes cicerelus*) fishing’

The **STECF** reviewed the MPs and noted the following:

They MPs contain some information on catches per haul and length frequency distribution of catches from experimental studies carried out in the mid-90’s in the Ligurian Sea and some restricted information on by-catches for one of the three boat seine metiers (on gobies) during the same period. The only up-to-date information provided involves the value of catches, daily and annual estimates of income and a time series (1995-2009) of CPUEs (catch/vessel/day) for certain ports in the Ligurian Sea concerning the metiers of larval sardine and transparent goby. Some preliminary estimates of biological parameters of sand eels (growth and mortality parameters) are also provided.

No stock assessments are presented. STECF is therefore unable to evaluate whether the stocks targeted by these fisheries are exploited within safe biological limits. The MPs recognize that there is lack of sufficient scientific data to evaluate effects on the respective sardine, goby and Mediterranean sandeel stocks in the Region of Liguria and propose to retain the status quo situation with continuous future collection of relevant data in order to monitor the stocks and assess exploitation patterns.

The MPs state that because of particular skills in searching and identifying fish schools by skippers as well as the characteristic operation of the gear, the three boat seine metiers are practically mono-specific. However, no up-to-date scientific data and analyses are presented and STECF is unable to substantiate these statements.

Furthermore, given the documentation of the Plans, STECF is unable to conclude whether the seine net, in terms of vertical drop and bathymetry of fishing grounds as well as the specific operations during net retrieval, can affect the sea bed and/or benthos.

The MPs state that the three boat seine métiers are carried out near, but not directly above protected habitats (i.e., gears do not operate above *Posidonia oceanica* beds). However, no data are presented in the plans (e.g., maps of *Posidonia* beds) in order that STECF be able to evaluate these statements.

STECF conclusions:

STECF notes that there are no suitable elements in the three Management Plans to evaluate whether the exploited resources targeted by the fisheries identified in the plans have been, or are currently being fished sustainably. The MPs do not specify target reference points and harvest control rules that are typically incorporated in effective fishery management plans.

The MPs do not provide up-to-date scientific and technical justifications to support the derogation for retaining the operation of the three boat seine métiers beyond May 2010.

With regard to the sardine métier (sciabegotto), STECF concludes that because the same stock (sardine) is also exploited by other fisheries during its adult stage (e.g., the purse seine fishery), it is imperative that a MP for ‘sciabegotto’ (targeting the late larval stages of this species) does not conflict with the management objectives for other fisheries in the area exploiting the sardine stock. STECF notes that the sardine stock in GSA 09 has never been assessed and the effects of exploiting the larval stages on the sardine stock are unknown and should be evaluated. This is particularly important given that most sardine stocks in the Mediterranean have been showing declining trends in recent years.

STECF is unable at this stage to evaluate species selectivity and the effects of the three boat seine métiers on benthic habitats and species. More detailed, up-to-date data and analyses are required concerning species/size composition of catches and discards as well as the spatial distribution of fishing operations in relation to the distribution of the seagrass habitats. It must be clearly demonstrated that, in case that the gears in question might be used over seagrass beds, their operation will not cause damage to this habitat.

STECF notes that in a previous review of proposed Italian Management Plans (STECF Plen-09-03), it was noted that management plans for fry fisheries and other fisheries under a derogation regime should be provided by the Italian Authorities for all the areas in which such fisheries are carried out but that the current proposals only relate to such fisheries in the region of Liguria (Northern part of GSA 9).

6.3. Mediterranean Sea and Black Sea - Minimum landing size of Clams and selectivity of automatic sieve (crible) on board of hydraulic dredgers in Italy

Background

The carpet-clams and venus-shells are subject to a minimum catching size of 25 mm in the Mediterranean (Annex III of Council Regulation EC No 1967/2006); that is a marine organism which is smaller than the minimum size specified in Annex III shall not be caught, retained on board, transshipped, landed, transferred, stored, sold, displayed

or offered for sale. The size of any mollusk bivalve shall be measured across the longest part of the shell.

No tolerance is allowed to avoid undermining the effectiveness of controls. Carpet clams and venus-shells refer to mollusks bivalves of the genders *Venus* and *Venerupis* as well as any other synonymous gender names such as *Chamelea*.

It seems that the size-sort system for clams so far utilized on board of the Italian hydraulic dredge vessels is not very precise and accurate and does not allow for a very sharp size selection and a certain number of undersized clams appear in the final sorted product. With a view to tackle this issue and avoid administrative and penal consequences for the fishermen, Italy claims the possibility to replace the minimum legal size by length with the maximum number of specimens per kilogram.

Before envisaging actions in this direction, also in the light of the decline of clams stocks in the Adriatic (The long-term decline of the *Chamelea gallina* L. (Bivalvia: Veneridae) clam fishery in the Adriatic Sea: is a synthesis possible? ACTA ADRIAT., 50(2): 171 - 205, 2009), it is advisable to evaluate whether further technical improvements of the selection systems on board of vessels are possible so to match the minimum legal size of 25 mm while avoiding the risk of affecting the effectiveness of controls.

Several biological, economic and technical factors may, directly or indirectly, affect accurate clams grading such as the size composition of the exploited stocks, the type of grader/sieve, the relationships between different sizes of the shells and finally the economic value of different clams grading (e.g. length-weight relationships; length-width relationships; rotating drum vs shacking screen; fast vibration vs slow thump; selection on one shell dimension only or a combination of length and width; the dimension and shape of the holes on the flat screens; the dimensions of rods and space between them; abundance of clams over the selection grids and speed at which the clams travel across the selection grids; presence of baffles to slow the flow of clams; flexibility of the sorting system to account for changes in the length/width relationship, etc.).

Terms of References

Considering the short term notice and taking into account the different items already present in the agenda of the April session, STECF may consider addressing some issues at the April session while completing the advisory work by the July session.

The STECF is requested, to evaluate the selectivity of the graders/sieves on board of hydraulic dredges Italian vessels for clams and advise whether there are means and scope for further improvement of their selectivity to fully match the 25 mm minimum legal size without substantially affecting the economic performance and profits of the vessels while taking into account the fact that clams of bigger size categories obtain the highest prices on the market.

STECF shall also evaluate the suitability for this type of resources, and with reference also to the effectiveness of the controls, to measure the minimum legal size in terms of number of specimens per kilogram instead of by length.

STECF is requested, **in particular**, to review the background document submitted by the Italian authorities, to evaluate their findings and, on the basis both of its expertise and other background documents known to STECF, to make appropriate comments with respect to :

- the completeness of selectivity study regarding the major factors affecting the size-sort of clams and advice whether possible gaps may need to be further addressed,
- whether the minimum distance of 12 mm between the metal rods in the lower part of the dredge, as prescribed by the Italian legislation, is adequate to comply with the minimum legal size of 25 mm;
- whether the minimum hole of 21,5 mm on the grader plate, as proposed by the submitted study, is adequate to comply with the minimum legal size of 25 mm or if different dimensions, also on the basis of different studies, are more adequate.
- the appropriateness of using 220 specimens per kilogram as a proxy for the minimum legal size of 25 mm or if a lower number of specimens is more adequate.

Considering that the minimum landing size of 25 mm for clams is implemented since 1994 in the Mediterranean and the problem of undersized specimens in the sorted catch was never highlighted before, STECF is also requested to evaluate whether the state of clams stocks have been deteriorating over time so that the fraction of smaller animals has increased its relative importance in the catch over time.

STECF observations

STECF examined the following documents:

- 1) An anonymous study provided by the Italian Authorities, concerning the “Clams minimum size”.
- 2) A scientific paper published by Romanelli, Cordisco and Giovanardi (The long term decline of the *Chamelea gallina* L. The clam fishery in the Adriatic Sea: is a synthesis possible? Acta Adriat. 50(2): 171-205 (2009).

The first study is specifically related to several trials on the selectivity of the various gears used by the fleet working with hydraulic dredges in along the Adriatic coasts. The fishery and its evolution is also described. There is a specific Italian regulation on the clam fishery (Minister Decree 22/12/2000), including all the minimum technical requirements for the gear and the sorting equipment and the minimum size is set at 25 mm (DPR no.1639 on 02/10/1968). A 10% tolerance of undersize clams included in this previous Italian regulation was cancelled by the Reg.(CE) n.1639 on 27/06/1994 and by the Reg. (CE) no. 1967 on 21/12/2006 (art. 13), while the minimum landing size of 25 mm was retained. During the fishing operation, the hydraulic dredge used for harvesting the clams makes a first selection by size. The dredge must be equipped with metal rods having a minimum distance of 12 mm between each of them, with a tolerance of 1 mm. Removals from the seafloor are then sorted on board by sieves with bars set at 12 mm apart (selection is based on the vertical size of the clams) or sieves which comprise a perforated plate, having circular holes with a minimum diameter of 21 mm (selection is based on the minimum horizontal diameter of the clams). The type of vibration, the slope and the quantity of material to be sorted are factors influencing the selectivity of the sorting equipment. After the

sorting and grading, clams are packed inside light net bags of 10 kg each, by size, because larger clams usually have a better market price.

The study provides a selectivity analysis carried out during February 2010 by using different experimental sieves with holes of different diameter, ranging from 20 mm up to 23 mm in 0.5 mm intervals. Each experiment was replicated three times, in various areas of the same maritime Compartment and the study provides selection curves, graphs and detailed numerical tables.

The results indicate the following:

- Sieves of 21 mm hole diameter still retain from 51,9% to 59.7% of undersize clams. The size of the retained clams ranged from 20 to 32 mm.
- Sieves of 21.5 mm retain a percentage of undersize clams ranging from 22.5% to 35.8%, while the size of the retained clams ranged from 19 to 33 mm.
- Sieves of 22 mm still retain a minor percentage of undersize clams ranging from 4.6% to 7.2%, while the size of the retained clams ranged from 22 to 36 mm.
- Sieves of 23 mm, again, still retain a very minor percentage of undersize clams ranging from 0.3% to 0.6%, while the size of the retained clams ranged from 23 to 34 mm.

STECF notes that according to this document, the first sexual maturity of *Chamelea gallina*, according to this document, is reached at a diameter of about 10 mm.

For inspection and compliance with the minimum landing size, the study proposes setting a maximum number of 220 clams per kg, with a prohibition to sell clams not packed and or in packs of less than 1 kg.

The second document is much more complex, reporting the recent developments in clam fishery in the Adriatic Sea. The paper provides interesting information about the evolution of the fishery and stocks, taking into account many factors that may have affected the decline in the resource in this area.

According to this paper, first sexual maturity of *Chamelea gallina* is attained at 13-15 mm, while all clams have reached maturity is reached at 20-25 mm. Growth rates are reported to be different from area to area.

The paper attributes the decline of this stock to a combination of factors, with a major emphasis on environmental factors. Recent data collected within the DCR/DCF framework, indicate a decreasing mean size, but this is not clearly quantified and despite the fact that mean size seems to be decreasing in some areas, the data do not indicate that this is a general problem for the whole region.

STECF notes that although there is conflicting information on the size of first maturity, it appears that all individuals of 25 mm length (current mls) are likely to be mature.

STECF conclusions

STECF is not in the position to analyse if the minimum distance of 12 mm between the metal rods in the lower part of the dredge, as prescribed by the Italian legislation, is adequate to comply with the minimum legal size of 25 mm, because data on this particular point were not presented. However, according to the results provided by the selectivity study using different

sorting grids, and assuming that the experiments were undertaken using permitted commercial dredges, it is clear that a considerable amount of undersize clams are actually caught.

Based on the information presented, STECF concludes that the current legal size of grader/sieve equipment is not able to ensure full compliance with the minimum size regulation for *Chamelea gallina*. STECF notes that because of the selective properties of the sorting grids, it will be difficult to eliminate all undersized individuals (<25 mm) using such grids, without a significant loss of legal size individuals. The selectivity results indicate that a reduction in the proportion of undersized clams to less than about 1%, would require the use of sorting grids with holes of 23 mm diameter or greater. STECF therefore recommends that to achieve a proportion of undersized clams of less than 1%, sorting grids with holes of 23 mm diameter or greater be used in this fishery.

Due to the absence of suitable data, STECF cannot assess how selectivity changes will affect the economic performance of the vessels exploiting clams.

Regarding the proposal to set a maximum number of 220 clams per kg, STECF considers that this is unlikely to be an effective control measure, because a maximum number of 220 could be made up of both legal-sized and undersized individuals. Such a measure would only be effective if all individuals caught are greater than the legal minimum size.

STECF considers that to increase control and enforcement of the minimum landing size, a more suitable approach would be to provide inspectors with portable sorting grids of 23 mm hole diameter. These could be used together with a tolerance limit on undersized clams e.g. 1%-5%, to check whether the catch fulfills the minimum size requirements.

In relation to the state of the stock of clams in the Adriatic, STECF has insufficient information to evaluate whether the relative importance of smaller animals has increased over time or whether the stock is declining.

6.4. Atlantic Waters - Request for STECF opinion on a possible small-scale sentinel fishery to monitor the recovery of Porbeagle

Background

Considering Commission's statement issued during last December Council, 2009, stating:

"With a view to monitor the recovery of the stock of Porbeagle, the Commission will request advice from STECF on the appropriateness of conducting a small-scale sentinel fishery".

Terms of References

STECF is requested to evaluate this possibility, having in mind the latest assessment carried out by the joint expert group from ICCAT and ICES and any other source of data that could be useful for such purpose and considering the engagements defined in the sharks' action plan.

Available documents and STECF notes on them

STECF examined the available documents, and particularly:

- 3) The intermediate Report of “Study of the Longline Fishery of Porbeagle in the Île d’Yeu”, (programme EPPARTIY) produced by the Association pour l’Etude et la Conservation des Selaciens” in December 2009;
- 4) The proposal “NE Atlantic Porbeagle Shark Survey Proposal”, by IFREMER (without date);
- 5) A note addressed to the European Commission, Direction General for Maritime Affairs and Fisheries, from the French Authorities, concerning the request to maintain a “sentinel fishery” targeting the Porbeagle shark.
- 6) The Council Regulation (EU) 23-2010, on TAC and Quota for 2010.
- 7) The Com(2009) 40 fin, on a European Community Action Plan for the Conservation and Management of Sharks.
- 8) The ICES WGEF Report 2009 (pages 90-99).
- 9) The ICCAT Rec.07-06 “Supplemental Recommendation by ICCAT concerning sharks”.
- 10) The ICCAT-SCRS Report in 2009 (pages 198-199).
- 11) The STECF-SG-ECA/RST-09-03 about this stock (page 140-142).

The IFREMER proposal (document 2) makes reference to a porbeagle survey carried out in the NW Atlantic by Canadian fishermen working in conjunction with scientists and suggests that a survey in the NE Atlantic should follow the same overall design. IFREMER is investigating possible partnerships to make such a program possible in 2011. For 2010 IFREMER propose a program to be carried out by France only, involving an experimental conventional tagging programme on about 400-500 shark individuals, with landings of about 250 dead sharks (10 tons) using one or two vessels from Île d’Yeu. The proposed project also includes the use of a minimum of 20 pop-up archival satellite tags (PSATs) to provide detailed information on the spatial and temporal distribution of Porbeagle.

According to the EPPARTIY report, sampling in 2008 and 2009 included a total of 1770 individual of Porbeagle (79256 kg) only in the sampling harbour of Île d’Yeu, described as 18,7% of the total French catches sold in auctions along the Atlantic coast (equating to a total of about 424 tons). Landings of Porbeagle at Île d’Yeu were in the order of 217 tons in 2008 and 207 tons in 2009, following the declining trend starting from the peak of 730 tons reported for 1994. However, average CPUE seems to show no obvious trend between 1980 to 2008. The local fleet is of 6 vessels in recent years, but only 5 vessels carried out the fishery in 2009. The fishery was carried out in the Bay of Biscay and in the Celtic Sea and the porbeagle accounted for 89% of the catches in the targeted fishery in 2009, while minor quantities of *Prionace glauca* (9.98%), *Alopias vulpinus* (0.63%) and *Galeorhinus galeus* (0.30%) were also caught. According to the report, the by-catch can vary between years, and include various species of bony fish and sharks. Catches of Porbeagle in Île d’Yeu all comprised immature sharks and 71% of the individuals were alive when captured. The report states that each vessel, according to the French legislation, cannot land more than 5 tons of Porbeagle per year (page 39 of the report).

Doc. ICCAT-SCRS/2009/014 (SCI-032/2009) concludes, by applying a Bayesian surplus production model and an age-structured production model that in NE Atlantic the population is currently depleted. Under zero fishing mortality, the recovery to Bmsy was estimated to take 15-34 years. Uncertainty estimates are high, and further data sets would likely decrease such uncertainties.

The models, whose results are reported in the ICCAT_SCRS document, are based on commercial catch and CPUE data and do not utilize tag return data even though such data exist from a period of intensive fishing. The reasons for difficulties in using the existing tagging data sets are not clearly explained and STECF is not able to advise on how tagging data may be used in assessing the development in the stock.

STECF further notes that due to closure of the targeted fishery for porbeagle in 2010, the recapture rate in a standard tagging program, proposed by IFREMER will be very low and unlikely to provide useful scientific information.

Furthermore, while STECF notes that PSA tagging may provide useful information on behavioural aspects of porbeagle, it is unclear how PSA tagging experiments can be used to improve the assessment of stock status.

From the available documents, STECF notes that the quality of information obtained from historical CPUE data and total catch data of commercial fisheries is very variable. For example, the French and Spanish CPUE estimates have a totally different variance and in some there even seems to be a negative correlation after applying a GLM approach to get a standardized CPUE series (IFREMER proposal, Fig. 3). Moreover, ICCAT-SCRS/2009/014 (SCI-032/2009) considered that total catch information was unreliable and had to generate model estimates of unreported catches.

STECF notes that a thorough analysis of old data sets including tagging data (suggested by ICCAT-SCRS/2009/014 (SCI-032/2009) may improve the current assessment model estimates, and would form a good basis for setting up a proper monitoring system to support assessment of the development in the stock status.

STECF conclusions and recommendations

STECF advises that further development of appropriate assessment models is needed to evaluate and determine an appropriate monitoring and data collection programme.

STECF considers that candidate information collection systems, that would not increase mortality on porbeagle include observer programs in fisheries with by-catches of porbeagle, technical monitoring e.g. CCTV monitoring on commercial fishing vessels, improved reporting of total by-catches of porbeagle by commercial fishing vessels. The vessel operators may also have additional ideas to improve information on the stock.

STECF concludes that there is no scientific justification to open a “small scale sentinel fishery”. Such a fishery would result in additional mortality on a depleted stock and it is likely that the information obtained would not be useful for management purposes.

Following the idea put forward in the EU Green Paper on CFP reform, on reversing the burden of proof, STECF suggests that a well planned monitoring programme should be developed and funded by those parties who have an interest to re-open the fishery and who have knowledge to provide technical solutions to provide different types of data linked to practical fishing activities, to support stock assessment models.

6.5. Atlantic Waters - Request for an STECF opinion on survival rates of some discarded species and on some alternative methods aiming to limit discards.

Background

The NWW-RAC has expressed its concerns to the Commission about the importance of improving knowledge on discard survival rates.

The following concerns are raised:

1. improving knowledge on survival rates of discarded skates, rays and spurdog;
2. alternative methods for limiting discards of skates, rays and spurdog (e.g. an MLS);
3. improving knowledge of the survival rate of discarded cod, particularly in VIId;
4. improving knowledge of the survival rate of plaice discards in VIId.

The purpose of such research would be to improve the assessments of the state of the stock, to better quantify the fishing opportunities corresponding to management objectives and where possible to improve management provisions intended to reduce mortality of these species.

Terms of References

STECF is requested to:

1. Briefly review the state of knowledge concerning the foregoing, beyond that already described in STECF Plenary report PLEN-09-01 for all gear types and operational procedures of the fisheries concerned.
2. Having regard to the state of knowledge, suggest what research fields could best contribute to the four aims outlined above.

STECF response

STECF first notes that a similar request was made during PLEN-09-01. Although the 2009 request was limited to some Elasmobranch species while this one includes also cod and plaice, STECF already made a review of the state of knowledge and gave generic observations that still apply.

STECF also note that the species listed are caught using a wide range of gears and discard mortality rate is likely to be closely related to the specific gear type. Given the general paucity of survival data, it would be advantageous if specific gears are identified as being of particular concern, this is also a prerequisite to identify appropriate discard mitigation measures.

Discards mortality

Post-release or discard mortalities are not easy to quantify and are thus rarely known (Davis, 2002). More specifically, very few studies are available for the species or group of species listed in the current request. The updated review of the state of knowledge presented below is not limited to species listed in the request but includes other species or group of species without knowing how representative the results are: survival rates are species-specific (Chopin et al.,

1996) and conditional on technical and procedural factors associated with fishing operations. They are thus presented for illustrative purpose rather than being representative of the specific stock mentioned in the request.

Regarding Elasmobranch species, STECF already noted in PLEN-09-01 that studies conducted in the UK on demersal trawlers using on-board holding tanks (Enever et al., 2009) shown mean survival rate of 55% for four species of skates (blonde, cuckoo, thornback and small-eyed ray. This study together with the one from Mandelman and Farrington (2007) on spiny dogfish suggested that the short term survival rates of chondrichthyans caught and subsequently discarded were directly related to the codend weight. Mitigation measures using two experimental codends (100 mm diamond mesh and 100 mm diamond mesh turned on the square, compared to the standard gear of 80 mm codend) to reduce discards of skates were subsequently tested (Enever et al., 2010) and were found to reduce discards by about 70% with no commercial loss. Furthermore, fish caught in the control codend (80 mm) were found to have the lowest proportional good health score (25%), followed by the 100mm diamond mesh codend (34%) and the 100mm square mesh codend (47%). As visual inspection of “health” was found to be a good indicator of survival, Enever et al. (2010) conclude that technical measures aimed at reducing discards have an additional benefit; they indirectly increase discard survival.

Discard survival in blue-shark caught by the Canadian Atlantic pelagic longline swordfish fishery has been investigated using Pop-up archival tags (Moyes et al., 2006; Campana et al., 2009). In Campana et al. (2009), overall blue shark bycatch survival was estimated at 65%, while the estimated discard survival for sharks that were released alive was 81 %. There was a very clear linkage between the extent of trauma visible on the shark at the time of release and its subsequent survival probability: all apparently healthy sharks survived, while 33% of those that were badly injured or gut hooked subsequently died.

From a survival experiments carried out using on-boards tanks with plaice and sole discards caught by both commercial beam-trawl vessels and a research vessel using an otter trawl, Van Beek et al. (1990) have estimated survival rate of discards of plaice and sole less than 10% and found that the haul duration was a significant factor affecting survival: survival rate decreased when haul duration increased. The survival of soles escaping through the mesh was estimated at 60%.

For Atlantic cod, Palson et al. (2003) conducted survival experiments of undersized cod in the hand-line fishery in Iceland and found a survival rate of 57% on average after 9 days. The number of injuries was found to be a significant factor in survival of discards. In the Northwest Atlantic Demersal Longline Fishery, Milliken et al. (2009) estimated discarded cod survival rates from 31% to 100%. They found that depth and sea surface temperature affected survival more than the dehooking technique; survival was higher in shallow depths and at lower temperatures.

From the document listed above, STECF notes that the difficulty in quantifying post-release or discard survival is mainly due to the scarcity and/or cost of methods for tracking released fish in the wild over periods of time of up to several months. In this context, several approaches have been explored, each one being a potential research field which could contribute to a better knowledge of survival rate of discarded fish:

- a) Most studies have attempted to avoid the issues related to tracking by holding fish in cages or pens for several days after capture. This type of approach has been useful to quantify survival rate and better understand factors affecting discard mortality. However, when interpreting results, it should be kept in mind that holding pens provide a clearly artificial and spatially constrained environment, and thus have the potential to introduce (or avoid) sources of mortality that would not be present under natural, free-swimming conditions.

b) Tag-recapture (PSAT) or telemetry programmes have also been carried out to estimate the post-release survival rate of discarded fish (Davis 2002, Pollock & Pine 2007, Skomal 2007). The main disadvantage of PSAT tag use is largely related to cost (~\$4000 per tag), which limits the sample size. For ultrasonic telemetry the requirement to actively track the tagged fish after release is suited only for quantifying short-term mortality, on the order of hours or days.

c) Proxies of stress that could be correlated with mortality outcome can also be used (Skomal, 2007). Davis (2010) and Stephen et al. (2010) used the observation of reflex impairment as sign of stress while Moyes et al. (2006), Musyl et al. (2009) and Frick et al. (2010) used a biochemical approach. Such approaches are however unlikely to prove effective as independent quantitative measures of post release survival until further studies using pop-up satellite archival tags (PSATs) are completed (Campana et al., 2009b). This would provide some calibration to relate the proxy to the actual subsequent mortality rate, a work which largely remains to be done (Campana et al., 2009b).

STECF further notes that primary factors that affect the survival of discarded fish include: fishing gear type and characteristics, fishing time (haul duration for trawls and soak duration for longlines and gill nets), fishing depth, handling methods and time, fish species and size, volume and composition of the catch (for trawls), the stress of the capture, injuries and predation rates of injured individuals (particularly by seabirds), and environmental conditions at the time of release (Suuronen 2005, Campana et al. 2009). From those results, it is possible to draw general principles for mitigating discarding mortality. They have been already listed in PLEN-09-01 and are not repeated here.

Discards reduction of skates, rays and spurdog

STECF first notes that, as for survival rate of discards, little information is available on the specific reduction of discards of skate, rays and spurdog. Overall, most studies on by-catch and discards of Elasmobranch consider trawl and longline fisheries with, according to Baeta et al. (2010), no research on trammel net by-catch reduction.

For trawlers, gear modification experiments (Square mesh panel and mesh size) carried out in the UK beam trawl fishery (Wade et al., 2009) lead to a 60% reduction in overall discards in number and 40%-50% in discards of dogfish in number. There was no significant influence on the number of rays discarded. On the other hand, as already mentioned above, the introduction of two experimental trawls (100 mm diamond mesh and 100 mm diamond mesh turned on the square) to the Bristol Channel fishery reduced significantly the discards of skates (Enever et al., 2010).

For longline, hook type and bait may be important in reducing the incidental catch of sharks (Ward et al., 2008). For example, Watson et al. (2005) found that catch rates of blue shark (*Prionace glauca*) on mackerel bait were lower than those on squid bait. Gilman et al. (2008) report that some fishers avoid using certain types of bait in order to reduce shark interactions, e.g., Italian and Japanese fishers avoid using squid. Studies have reported mixed results for the effect of hook type on shark catch. Yokota et al. (2006), for example, found no significant difference in catch rates of blue shark between tuna hooks and circle hooks. However, Watson et al. (2005) found that blue shark catch rates were 8–9% higher on circle hooks compared to J hooks

Ward et al. (2008) investigated the use of nylon leaders as oppose to metal wire leaders in a longline fishery off northeastern Australia. They show that banning wire leaders substantially reduces catches of sharks although the fate of escaping shark (biting through the nylon leader) remains unknown.

Until specific details are obtained on the gear types and operational procedures of the fishery concerned, STECF is not in a position to make detailed recommendations for specific research

projects. However STECF note that an ICES manual (Wileman et al. 1996) is available to design appropriate selectivity experiments for towed gears.

STECF notes that any improvement in the selective characteristics of fishing gears to reduce discards does not guarantee that the fish escaping will always survive. Ideally, improvement in selectivity needs to be associated with studies on survival rate of fish escaping from the gear together with reduction on damage and stress incurred during the capture and escape process (Chopin and Arimoto, 1995).

Finally STECF notes that in order to ensure success in method to reduce discards and increase survival rates of discards, several elements should be taken into account: involvement of fishers at every stage, attractiveness of incentives; adequate levels of funding; scientific expertise; build leadership capacity in the fishing industry; and a secure fisher compliance with trialed gear (Catchpole et al. 2010).

Acknowledgment

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References

- Baeta F., Batista M., Maia A., Costa M.J., Cabral H. 2010. Elasmobranch bycatch in a trammel net fishery in the Portuguese west coast. *Fisheries Research* 102, (1-2), 123-129.
- Campana S.E., Joyce W., Manning M.J. 2009a. Bycatch and discard mortality in commercially caught blue sharks *Prionace glauca* assessed using archival satellite pop-up tags. *Marine Ecology Progress Series* 387, 241-253.
- Campana S.E., Joyce W., Francis M., Manning M.J. 2009b Comparability of blue shark mortality estimates for the Atlantic and Pacific longline fisheries *Marine Ecology Progress Series* 396: 161–164, 2009
- Chopin, F, Inoue, Y, Arimoto, T., 1996. Development of a catch mortality model. *Fish. Res.* 25, 377-382.
- Davis, M. W. 2002. Key principles for understanding fish bycatch discard mortality. *Can. J. Fish. Aquat. Sci.* 59: 1834-1843.
- Davis, M. W. 2010. Fish stress and mortality can be predicted using reflex impairment. *Fish and Fisheries* 11, 1-11.
- Enever, T.L. Catchpole, J.R. Ellis, A. Grant, 2009a. The survival of skates (*Rajidae*) caught by demersal trawlers fishing in UK waters. *Fisheries Research* 97, pp 72–76.
- Enever, A.S. Revill, A. Grant, 2009. Discarding in the North Sea and on the historical efficacy of gear-based technical measures in reducing discards. *Fisheries Research* 95, pp40–46
- Enever, A.S. Revill, R. Caslake, A. Grant, 2010. Discard mitigation increases skate survival in the Bristol Channel. *Fisheries Research* 102 pp 9–15
- Gilman, S. Clarke, N. Brothers, J. Alfaro-Shigueto, J. Mandelman, J. Mangel, S. Peterson, S. Piovano, N. Thomson, P. Dalzell, M. Donoso, M. Goren and T. Werner, (2008) Shark interactions in pelagic longline fisheries, *Marine Policy* 32, pp. 1–18

- Mandelman, J.W., Farrington, M.A., 2007. The estimated short-term discard mortality of a trawled elasmobranch, the spiny dogfish (*Squalus acanthias*). *Fisheries Research* 83, 238–245.
- Moyes CD, Fragoso N, Musyl MK, Brill RW (2006) Predicting post-release survival in large pelagic fish. *Trans Am Fish Soc* 135:1389-1397.
- Milliken, H.M, M. Farrington, T. Rudolph and M. Sanderson, 2009. Survival of Discarded Sublegal Atlantic Cod in the Northwest Atlantic Demersal Longline Fishery. *North American Journal of Fisheries Management* 2009; 29: 985-995
- Palsson, O.K., H. A. Einarsson, and H. Bjornsson. 2003. Survival experiments of undersized cod in a hand-line fishery at Iceland. *Fish. Res.* 61: 73-86.
- Pollock KH, Pine WE III (2007) The design and analysis of field studies to estimate catch-and-release mortality. *Fisheries Management and Ecology* 14:123–130
- Stephen J.A., Harris P.J. 2010. Commercial catch composition with discard and immediate release mortality proportions off the southeastern coast of the United States. *Fisheries Research* 103, 18-24. 2010
- Skomal, G.B., 2007. Evaluating the physiological and physical consequences of capture on post-release survivorship in large pelagic fishes. *Fisheries Management and Ecology* 14, 81-89.
- Suuronen, P. 2005. Mortality of fish escaping trawl gears. *FAO Tech. Pap. Rome, FAO.* 72. p.
- Van Beek, F.A., P.I. Van Leeuwen, and A.D. Rijnsdorp. 1990. On the survival of plaice and sole discards in the otter-trawl and beam-trawl fisheries in the North Sea. *Nether. J. Sea Res.*, 26:151-160.
- Wade, O., Revill, A.S., Grant, A., Sharp, M., 2009. Reducing the discards of finfish and benthic invertebrates of UK beam trawlers. *Fisheries Research* 97, 140–147
- Ward P, Lawrence E, Darbyshire R, Hindmarsh S (2008) Large-scale experiment shows that nylon leaders reduce shark bycatch and benefit pelagic longline fishers. *Fisheries Research* 90:100–108
- Watson, J.W., S.P. Epperly, A.K. Shah and D.G. Foster, Fishing methods to reduce sea turtle mortality associated with pelagic longlines, *Can. J. Fish. Aquat. Sci.* 62 (2005), pp. 965–981
- Wileman, D.A., Ferro, R.S.T., Fonteyne, R., Millar, R.B., 1996. Manual of methods of measuring the selectivity of towed fishing gears. *ICES Coop. Res. Rep.* 215, p.126.
- Yokota, M. Kiyota and H. Minami, Shark catch in a pelagic longline fishery: Comparison of circle and tuna hooks, *Fish. Res.* 81 (2006), pp. 337–341

6.6. Atlantic Waters - Request for an STECF opinion on the Spanish and Portuguese reports on by-catches of sharks in gillnets and trammel nets fisheries below 600 m. in ICES areas VIII, IX & X

Background

Point 9 of Annex III of Regulation (EC) No 43/2009, fixing for 2009 the fishing opportunities and associated conditions for certain fish stocks, lays down the conditions for the use of gillnets in ICES zones IIIa, IVa, Vb, VIa, VIb, VIIbcjk, VIII, IX, X, XII. According to point 9.3, Community vessels shall not deploy gillnets, entangling nets and trammel nets at any position where the charted depth is greater than 200 meters in the above mentioned areas, and as from 1 October 2009 in ICES zones VIII, IX and X. However, point 9.4 specifies derogations for the use of gillnets and trammel nets down to 600 meters targeting both hake and anglerfish. Moreover, point 9.12 of the same annex provides for the Commission to decide, after consultation of the STECF, to exclude certain fisheries in ICES Zones VIII, IX and X from the application of points 9.1 to 9.11 "where information provided by Member States shows that those fisheries result in a very low level of shark by-catches and of discards".

The Spanish government has requested the Commission to continue deploying gillnets, entangling nets and trammel nets below 600 metres chartered depth in ICES zones VIII, IX and X due to the observed low level of shark by-catches and discards. This information needs to be assessed by the STECF in order to substantiate a possible exclusion from the general rule.

The Portuguese government has submitted additional information in relation to their request of 03.04.2009 to the Commission requesting an extension of the current derogations on the use of gillnets and entangling nets, as laid down in point 9.4 of Annex III (Part A) of Regulation (EC) No 43/2009, to trammel nets. The STECF has issued an advice (No 43/2009) in August 2009 in response to the Portuguese request to use trammel nets in waters less than 600m depth.

Terms of Reference

The STECF is requested to examine the report submitted by the Spanish authorities and the data annexed concerning the activities of the Spanish vessels deploying gillnets, entangling nets and trammel nets below 600 metres chartered depth in ICES zones VIII, IX and X. The STECF is requested to advice, on the basis of the submitted information, and the state of knowledge regarding deep sea shark stocks and the impact of fishing on those stocks, whether the activities of the Spanish fleet concerned comply with the condition set out in point 9.12 of annex III of Regulation (EC) No 43/2009 that they must result in very low levels of shark by-catches and discards in order for the Commission to exclude them from the 600m depth limit.

The STECF is requested to advice whether, on the basis of the additional information provided by Portugal, the use of trammel nets in waters less than 600m depth targeting anglerfish in area IX comply with the condition set out in point 9.12 of annex III of Regulation (EC) No 43/2009 that they must result in a very low level of shark by-catches and of discards for the Commission to allow the deployment of these nets down to 600m.

The Portuguese submission

The Portuguese authorities present additional information that was not submitted when STECF dealt with the initial Portuguese request in September 2009.

- The Portuguese fleet with licence for trammel nets consists of 370 vessels. The data provided indicates that sharks occurred in the catches of only 20 of these vessels together with hake and anglerfish in the period 2000-2009. The total reported catch of deep water sharks from 2000-2009 amounted to 42 tonnes, of which 4% (1.7 tonnes) was gulper shark *Centrophorus granulosus* (the others being: 66% *Galeus melastomus*, 22% *Centrophorus squamosus*, 5% *Dalatias licha*).
- Graphical representations are presented of the trammel net catches from logbooks by statistical rectangle for 1988-2009, of hake and anglerfish and four deep water shark species (incl. gulper shark). The Portuguese authorities claim that the deep water sharks are primarily caught in areas with depths deeper than 600 m. However, as they acknowledge, because many of the relevant ICES statistical rectangles cover the steep shelf slope and thus include depths < 600 m as well as depths >600 m, their claim cannot actually be inferred from the data as presented in the graphs.
- Logbook data at trip level are represented as plots of the catch weights of hake and anglerfish versus the catch weights of various deep water sharks. The Portuguese authorities argue that those trips that resulted in high catches of hake and anglerfish resulted in low catches of deep water sharks and *vice versa*, thus supporting the notion that hake and anglerfish are caught at different localities – implying different depths – than the deep water sharks. In actual fact, however, this claim cannot be fully inferred from the plots as presented. The plots do suggest that only on 18 trips gulper sharks were caught together with hake/anglerfish.

The Portuguese submission reiterates that until 2005, when deep water shark catches were not regulated by TAC and constituted substantial economic benefits, the catch figures would represent true catches, as no sharks would have been discarded.

The Portuguese submission again draws attention to the inconsistency of permitting derogations to gill nets and entangling nets but not to trammel nets under point 9.4 of annex III of Regulation (EC) No 43/2009.

Furthermore, the Portuguese submission expresses disagreement with the fact that the STECF response of September 2009 referred to scientific evidence on the bathymetric distribution of the gulper shark that was based on mostly Mediterranean samples.

The information provided indicates that the Portuguese trammel net fishery targeting hake and anglerfish in ICES areas VIIIc and IX has caught deep water sharks only as incidental by-catches. The catches of gulper shark have been sporadic.

The Spanish submission

The Spanish authorities provided the following:

- Secretaría General del Mar (General Secretariat of the Sea) provide landings data from the gill net (rasco) fishery in ICES areas VIIIc and IX for 2006, 2007, and 2008 (similar information for earlier years also exists). These are annual landings per species in kg and

in % of the total landings. According to these data the fishery clearly targets anglerfish, and only one species of deep water shark, *Galeus melastomus*, was landed, 177 kg and 94 kg in 2006 and in 2007 respectively, representing 0.04% and 0.02% of the total gill net landings in ICES areas VIIIc and IX respectively.

- IEO provide a table of landings from logbook data in kg of 8737 trips in 2004-2006 by the gill net (rasco) fleet fishing in ICES areas VIIIc and IXa; the table shows that the fishery clearly targets anglerfish and reports 0 kg landings of deep water sharks
- In addition they presented gill net (rasco) observer information from 7 trips in 1994 and 3 trips in 2008 at > 600m depth. In 1994, in 2 fishing operations deep water sharks were caught and discarded, *Dalatias licha* and *Deania calcea*, amounting to ~16 kg per trip. In 2008, deep water sharks, *Scymnodon ringens*, were caught and discarded in only one fishing operation amounting to <1 kg per trip.
- The Azti report emphasizes the difference between the industrial deep water entangling net fleet fishing in community waters and the gill net (rasco) fleet of the Basque country fishing in the ICES areas VIIIc and IX. The exemption request relates to the latter which targets anglerfish and used to fish down to a depth of 1000 m before 1 October 2009 (after which the regulation prohibited this) with a maximum gear length of 11 km (compared with a maximum aggregated length of 100 km in the industrial fleet) and mesh size of 280 mm (compared with 220 mm in the industrial fleet). These differences result in different exploitation patterns, i.e. a low incidence of deep water shark catches by the Spanish gill net fleet.

The Spanish authorities also emphasize that should the catches of these sharks have provided substantial economic benefits before 2005, when they were not regulated by TAC, sharks would have been landed, implying that the fleet's shark catches were very low. Nevertheless, the observer data demonstrate that deep water sharks have actually been discarded at very low levels.

The information provided indicates that the Spanish gill net fishery targeting anglerfish in ICES areas VIIIc and IX, which differs from the community waters entangling deep water fleet, has caught deep water sharks only as incidental by-catches and has landed them only very incidentally. The bulk of the data presented refers to landings, while discard data have been provided for only 10 observed trips, the majority of which took place >15 years ago.

STECF considerations

With regards to both requests (the Portuguese and Spanish) the Commission requests that the STECF advises whether, on the basis of the information provided and in the light of the possible impact of fishing on deep water shark populations, the respective fishing activities comply with the condition set out in point 9.12 of annex III of Regulation (EC) No 43/2009 that they must result in a very low level of shark by-catches and of discards. This point 9.12 stipulates that the Commission may decide, after consultation of the STECF, to exclude certain fisheries, in ICES Zones VIII, IX, X, from the restrictions described under points 9.1 to 9.11, e.g. the prohibition to fish in waters deeper than 200 m. Such exclusion would effectively permit these fisheries to be active, without any further restriction, in waters where deep water sharks are common, including those sharks for which TACs have been set equal to 0. The intention of point 9.12 in the regulation is unclear, owing to the phrase 'very low level of by-catches and discards'. It appears that if the intention of the regulation were to exclude catches of deep water sharks then this could have been phrased more clearly; if, on the other hand, the intention were to keep levels of

catches low, then it would have been better to stipulate a quantitative threshold, such as a percentage of the catch, as in Article 9.11. STECF also considers that ‘very low’ catches of sharks relative to the total catches of a fleet does not necessarily equate to ‘very low’ fishing mortality on the stock (depending on the status of the stock).

STECF is not aware of the rationale for treating trammel nets differently from gill and entangling nets with regard to Article 9.4. STECF considers that, if the aim of the regulation is to prevent the catching of deep water sharks by fishing activities, derogations should be based on either technical decoupling through gear characteristics or spatial/bathymetric decoupling. In both cases evidence in support of the derogation should be based on the catch composition estimates.

STECF revisited the issue of the bathymetric distribution of the gulper shark. In the previous response of September 2009, STECF stated that Munoz-Chapuli (1984) showed that *C. granulosus* was distributed from 100 m to 550 m, with peaks at 100 m - 200 m and 400 m - 550 m. However, the identification of these peaks was based on a misinterpretation of the graphs in that paper. The paper did indeed show that *C. granulosus* occurs within the depth range of the study (100 m to 550 m), but Munoz-Chapuli (1985) indicates that the evidence was based on sharks mainly caught in the Mediterranean and off the African coast whereas only 1% of the sharks on which the evidence was based had been caught at the Iberian coast. It should be noted that bathymetric distribution may vary over the geographical range of a species. The evidence seems to indicate that the preferred depth of gulper shark may be deeper in the Atlantic than in the Mediterranean. As before STECF notes that the available data suggest that while gulper shark appear to occur over a wide range of depths, their predominant bathymetric distribution is not well understood.

STECF repeats from its response of September 2009 that the existing derogations which permit the use of gill and entangling nets at depths between 200 m and 600 m may negatively impact the populations of gulper shark, and of (other) deep water sharks, such as Portuguese dogfish (Clarke, 2000; Clarke *et al.*, 2001). The impact is, however, not quantifiable. STECF therefore recommends that managers reconsider whether the existing derogations to fish at depths between 200 m and 600 m are appropriate. STECF further recommends that if managers decide to maintain the existing derogations to fish with gill and entangling nets and extend a similar derogation to trammel nets, landings and discards from fisheries benefiting from the derogations should be closely monitored through an on-board observer scheme. Such a scheme, should collect and report all catches (landings and discards separately) by species, together with the amount of effort deployed to obtain such catches. Because sharks of the genus *Centrophorus* are difficult to identify to the species level, STECF recommends that on-board observers undertake the required level of taxonomic training.

STECF conclusion with regard to the Spanish request

STECF considered the observer trip data submitted is very sparse and may not be representative of the current catch compositions of the fleet. STECF therefore concludes that the data submitted may not reliably reflect the recent catch levels of sharks by the Spanish gill net (rasco) fleet.

STECF is therefore unable to judge whether the activities of the Spanish fleet concerned comply with the condition set out in point 9.12 of annex III of Regulation (EC) No 43/2009 that they

must result in very low levels of shark by-catches and discards. The impact of the fishing activities on the shark populations in Divisions VIIIc and IX is not quantifiable.

STECF conclusion with regard to the Portuguese request

STECF considered the Portuguese data on deep water sharks, including gulper sharks, submitted and notes that no data on other sharks were submitted. STECF concludes that, owing to the lack of discard information and the lack of information on other sharks, the composition of sharks in the catches of the Portuguese trammel net fleet fishing in Division IX cannot be reliably quantified.

STECF is therefore unable to judge whether the use of trammel nets in waters less than 600m depth targeting anglerfish in area IX comply with the condition set out in point 9.12 of annex III of Regulation (EC) No 43/2009 that they must result in a very low level of shark by-catches and of discards. The impact of the fishing activities on the shark populations in Subarea IX is not quantifiable.

Clarke, M., 2000. Aspects of the biology of three exploited deepwater sharks *Centrophorus squamosus*, *Centroscymnus coelolepis* and *Deania calcea* (Elasmobranchii, Squalidae) from the continental slopes of the Rockall Trough and Porcupine Bank. PhD. Thesis, national Univeristy of Ireland, Dublin, 310p

Clarke, M. W., Connolly P. L., Bracken J. J., 2001. Aspects of reproduction of the deep water sharks *Centroscymnus coelolepis* and *Centrophorus squamosus* from west of Ireland and Scotland. ; *Journal of the Marine Biological Association of the United Kingdom*, 81(6):1019-1029

Munoz-Chapuli, R. (1984). "Ethologie de la reproduction Chez Quelques Requins de l'Atlantique Nord-Est." *Cybiurn* 8(3): 1-14.).

Munoz-Chapuli (1985) Análisis de las capturas deesqualos demersalos en el Atlántico NE (27°N – 37°N) y Mar de Alborán (Mediterráneo occidental). *Inv.Pesq.* 49(1):121-135.

6.7. Atlantic Waters - Impact assessments concerning Celtic Sea herring

Background

ICES has been requested to prepare a biological assessment of long-term plan options concerning Celtic Sea herring.

STECF is requested to assess economic consequences of implementing the various options advised by ICES compared to continuing to fish under current arrangements. STECF is particularly invited to liaise with ICES on the compatibility of evaluation systems. Account should be taken of national fisheries management arrangements put in place by Ireland.

Terms of Reference

Based on ICES biological assessments and stochastic future time-streams of TACs and fishing effort, STECF is requested to evaluate probable future trends in:

- catches and the value of those catches;
- fishing effort, in terms of vessel numbers, activity and kWh deployed, and the costs (both fixed and variable) of deploying such effort;
- employment associated with this activity
- net revenue from the resource
- if possible, additional incidental impacts on populations of other marine organisms.

Such trends should be contrasted with the probable consequences of continuing to fish the stock according to rates of fishing mortality as recently experienced, or according to ICES advice according to the precautionary approach.

A 20-year time frame should be used for the evaluations.

STECF comments

This ToR asks STECF to carry out an economic impact assessment of a management plan for Celtic Sea Herring and, if possible, to evaluate probable future trends in additional incidental impacts on populations of other marine organisms.

STECF notes that, ideally, impact assessments of management plans should be carried out in a fully integrated manner from the outset, as detailed in SG-MOS 10-01, and should not be carried out during an STECF plenary meeting.

STECF notes that in this case, it appears that there is a lack of required economic data and STECF advises that without more recent data, any economic impact assessment of this plan would be not sufficiently reliable to inform the Commission's choice of management plan.

Specifically, STECF notes that Celtic Sea Herring is exploited almost exclusively by Irish vessels and also notes that the AER contains no costs and earnings data for the relevant Irish fleet segments later than 2006. STECF expects that the cost structure of the fleet will have altered substantially since 2006.

With regard to the request to evaluate probable future trends in additional incidental impacts on populations of other marine organisms, STECF suggests that the Commission could ask appropriate experts to answer this question and prepare a report before the STECF 2010 summer plenary meeting.

6.8. Atlantic Waters - Impact assessments concerning haddock VIa, Vb(EC) and Rockall haddock (as far as possible)

Background

ICES has been requested to prepare a biological assessment of long-term plan options concerning haddock in zone VIa and EC waters of Vb. It is also expected that a similar request will be agreed by NEAFC in respect of haddock at Rockall (as far as possible).

STECF is requested to assess economic consequences of implementing the various options advised by ICES compared to continuing to fish under current arrangements. STECF is particularly invited to liaise with ICES on the compatibility of evaluation systems.

This evaluation should apply to stocks of haddock in the North Sea, in zones VIa and EC waters of Vb, and at Rockall (as far as possible).

Terms of Reference

Based on ICES biological assessments and stochastic future time-streams of TACs and fishing effort, STECF is requested to evaluate probable future trends in:

- catches and the value of those catches;
- fishing effort, in terms of vessel numbers, activity and kWh deployed, and the costs (both fixed and variable) of deploying such effort;
- employment associated with this activity
- net revenue from the resource
- if possible, additional incidental impacts on populations of other marine organisms.

Such trends should be contrasted with the probable consequences of continuing to fish the stock according to rates of fishing mortality as recently experienced, or according to ICES advice according to the precautionary approach.

A 20-year time frame should be used for the evaluations.

Further to this request, STECF is also asked to evaluate the consequence of implementing in addition to the provisions of the harvest rule as modelled by ICES a constraint on inter-annual TAC changes of no more than +/- 25%, irrespective of the size of the stock.

STECF comments

This TOR asks STECF to carry out an economic impact assessment of a management plan for stocks of haddock in the North Sea, in zones VIa and EC waters of Vb, and at Rockall (as far as possible) and, if possible, to evaluate probable future trends in additional incidental impacts on populations of other marine organisms. STECF notes that mention of the North Sea does not appear in the heading of the TOR and was not intended to be included.

STECF is not aware of any management plan relating to Rockall (Area VIb) haddock. STECF notes that, ideally, impact assessments of management plans should be carried out in a fully integrated manner from the outset, as detailed in SG-MOS 10-01, and should not be carried out during an STECF plenary meeting.

Because there is not enough time to carry out the recommended process, STECF advises the Commission to appoint appropriate experts to carry out a restricted impact assessment, using the TOR proposed below. STECF recommends that SG-MOS 10-01 report is used as much as possible as a template for reporting the outcomes of the economic impact assessment. STECF could review the impact assessment report during the July plenary meeting, and give advice relating to the report.

STECF notes that, according to ICES stock advice (ICES 2009) the principle fleets prosecuting the Area VI and Area Vb haddock fisheries are Irish (one third) and UK (two thirds). The fleets prosecuting the Rockall fishery are Irish (20%), UK (40%) and Russian (40%). STECF notes the absence of relevant economic data for the Irish fleet in the AER and believes that it is unlikely that an economic impact assessment relating to the Irish fleet would be robust enough to inform Commission decisions on management plan options. Appropriate data relating to the UK fleet are available for the years 2006 to 2008.

Proposed Terms of Reference

If possible, evaluate probable future trends in additional incidental impacts on populations of other marine organisms arising as a result of the management plan options.

Assess likely economic consequences of implementing the various options advised by ICES compared to continuing to fish under current arrangements. The experts carrying out the assessment are requested to liaise with the stock assessment scientists who prepared the biological scenarios on the compatibility of impact assessment systems.

Specific requests

1. Provide a description of the UK and Irish fleets which prosecute Area VIa and Vb(EC) haddock, their recent activity and, as far as possible, their economic outcomes. This will highlight the vessels which are likely to be affected by the management plan.

2. Based on the predicted landings arising from the options advised by ICES, estimate for the relevant UK fleet segments likely future trends in:

a) the entire landings of the vessels involved. It might be appropriate to make qualitative assessments and comments with regard to likely responses of vessel businesses to reductions in TACs of these haddock stocks, specifically, the extent to which they are likely to exploit other fisheries or simply to reduce their overall activity.

b) the value of catches, with appropriate assumptions about prices that can realistically be made given lack of data to suggest specific relationships between volume of landings and sales price achieved.

c) fishing effort, in terms of vessel numbers, activity and kW deployed

d) costs (both fixed and variable) of expected activity levels

e) employment onboard vessels associated with this activity

f) expected cash flow and gross value added (as defined in The 2009 Annual Economic Report on the European Fishing Fleet) of the vessels involved in these fisheries

Appropriate assumptions should be made and described regarding the remainder of the fishing opportunities of the vessels involved being held stable for all the options assessed.

Expected trends should be contrasted with the probable consequences of continuing to fish the stock according to rates of fishing mortality as recently experienced, or according to ICES advice.

A 20-year time frame should be used for the evaluations. Detailed modelling outputs might only be appropriate for a shorter time frame, but comparative likely outcomes for the longer term, implying the effects of investment decisions, should be considered qualitatively at least.

Reference:

ICES Advice 2009, Book 5

6.9. North Sea & Western Waters - Assessment of a discard reduction trial in the South-West

Background

The UK is planning to run a "discard reduction trial in the south-west". The project is planned to be carried out under the normal quota, but the vessels participating would get extra quota under the scientific derogation of the Fishing Opportunities Regulation. The project, before it is granted a scientific derogation, needs to be evaluated by STECF.

Terms of References

STECF is therefore requested to evaluate the UK proposed project "discard reduction trial in the south-west" considering the following points:

- evaluate the practical application of the 50% project results, where the gear modifications in the beam trawls were developed;
- assess the potential feasibility and effectiveness of a trial to test a catch quota system for sole as a management tool in the south west beam trawl fishery;
- to assess the risk of a higher TAC against the background of the present status of the Western Channel sole stock, considering the review of the ICES advice and the current uncertainties regarding the status of the stock.

STECF comments

STECF notes the outline of the proposed UK Scientific discard reduction study in the South West Sole (*Solea solea*):

1. Study restricted to ICES subarea 7e and focussing on Dover Sole (*Solea solea*)

2. UK 7e sole quota (2010) is 363 tonnes
 3. Project will aim to recruit UK 5-10 beam trawlers for the study (with sole track record)
 4. Vessels selected for study will agree to a zero sole discard policy for the year (i.e. land all sole caught)
 5. Discarding of sole in this fleet is estimated to be around 30-40% of the sole catch in numbers
 6. Participating vessels to be given additional sole quota as an incentive (up to 30% maximum - of present sole allocation)
 7. The total additional quota made available will not exceed 5% (or 10%) of the national quota (18 / 36 tonnes)
 8. The 5% additional quota is likely to attract about 5 vessels to the scheme (10% additional quota will attract around 10 vessels)
 9. Participating vessels will be required to use larger meshed trawls developed under Project 50% / or use other specified sole avoidance tactics if the first option is not chosen
 10. Once the sole quota is reached, a participating vessel cannot engage in any form of fishing in 7e which is likely to result in sole catch / by-catch for remainder of the year
 11. Participating vessels will be required to measure and record every sole caught during the study
 12. Verification of the catch process will be provided by a compulsory onboard CCTV provided by Cefas / defra (held in situ onboard throughout the study)
 13. Cefas observers must be permitted by the vessel owners to undertake sampling trips at any time throughout the study
 14. An evaluation of the study will be made upon completion by Cefas scientists and made available to both the Commission and STECF
- a) evaluate the practical application of the 50% project results, where the gear modifications in the beam trawls were developed

Dr Andrew Revill presented the results of a Defra-funded project aimed at reducing discards in the English beam trawl fishery in ICES Division VIIe (Project 50%). The approach used was based on social marketing / social science principles and successfully produced a desirable behaviour change of the fishermen. STECF acknowledges the potential benefits of this approach used to engage industry in the development of new selective fishing gears within project 50% and notes that such an approach may have broader applications in fisheries management.

STECF notes that the overall results of Project 50% indicated that the modified nets gave a reduction in discards of all species of about 50% compared to the standard nets. However, in the information presented, it is difficult to determine whether the observed changes in discarding are

due to a reduction in overall catch by the modified gears or a change in the landings/discard ratio. An examination of CPUE on landings and discards from the different nets would provide such information.

STECF acknowledges that some of the new trawl designs developed within project 50% appear to have the potential to reduce discards in the English beam trawl fishery in VIIe.

- b) assess the potential feasibility and effectiveness of a trial to test a catch quota system for sole as a management tool in the south west beam trawl fishery

STECF notes that the UK's proposal is both feasible and a potentially effective mechanism to test a catch quota system for UK beam trawl sole fishery in area VIIe. However, in order to assess the effectiveness of such a trial, it is important to ensure that appropriate monitoring and evaluation procedures are put in place. In this respect the experience gained in similar trials that have taken place elsewhere will be informative and should be taken into account e.g. Danish trials in the North and Baltic Seas. Furthermore, STECF notes that it is important to treat those vessels participating in the trials as a separate metier from those that do not participate, in order to draw meaningful comparisons about the effectiveness of the trials.

- c) assess the risk of a higher TAC against the background of the present status of the Western Channel sole stock, considering the review of the ICES advice and the current uncertainties regarding the status of the stock

An additional 5% portion of UK VIIe national sole quota would equate to approximately 18t of sole in 2010. STECF notes that in a worst case scenario and assuming the trials do not result in a decrease in discarding of sole, the impact of an additional 5% of quota to the UK in VIIe will result in an increase in catch of about 3% of the TAC.

STECF also notes that an additional 5% of UK quota for one year will not be measurable at the stock dynamic level.

STECF wants to emphasise that when setting up trials involving additional fishing possibilities in the form of catches or fishing effort, possible impact on the stocks involved should be assessed. The additional fishing possibilities should only be allowed in cases when the assessment indicates that the additional fishing possibilities are unlikely to compromise the desired stock development.

STECF stresses that continuation or further expansion of the scheme should only be considered after an evaluation of the effectiveness of the trial has been carried out.

6.10. North Sea & Western Waters - Requests for exclusions in application of Article 11(2) of Regulation (EC) No 1342/2008

Background

Article 11(2) of Council Regulation 1342/2008 establishing a long-term plan for cod stocks and the fisheries exploiting those stocks lays down the conditions under which the Council, acting on a Commission proposal and on the basis of the information provided

by Member States and the STECF advice, may exclude certain groups of vessels from the effort regime.

Following requests by Member States to the European Commission, the STECF has in 2009 assessed German, French, UK, Polish and Spanish vessel groups against the criterion mentioned in Article 11(2) of the cod plan, in particular based on the concept of technical or biological decoupling. The Commission's approach to vessel exclusions under the cod plan has taken into account the STECF's concept of technical and/or biological decoupling and also accepts vessel exclusions based on distinct vessel group activities or characteristics that result in current cod catch rates below 1,5% within the vessel group concerned, provided that:

- a) the Member States provide appropriate information to the Commission and STECF in order to establish that the conditions are and remain fulfilled in accordance with the detailed rules adopted by the Commission and;
- b) the Member States concerned put in place a monitoring system that provide representative catch data enabling the Commission to assess whether the fulfilment of the exclusion criterion at the group or vessel level continues to be met.

Member States exclusion requests sent to the Commission after 11 April 2010 should follow the requirements prescribed by Commission Regulation (EU) No 237/2010 laying down detailed rules for the application of Council Regulation (EC) No 1342/2008. The three requests here presented have been submitted on 25 March 2010, (France) and 26 March 2010 (Ireland and Germany).

Terms of Reference

The STECF is requested to evaluate the following requests for exclusions of groups of vessels from the cod effort regime, as laid down in Article 11(2) of Regulation (EC) No 1342/2008 establishing a long-term plan for cod stocks:

- (i) re-submission of a request accompanied by information and data sent to the European Commission by France, following comments from the last STECF assessment carried out in November 2009;
- (ii) submission of a request accompanied by information and data sent to the European Commission by Ireland and;
- (iii) resubmission of two requests accompanied by information and data sent to the European Commission by Germany.

Following the approach described in the background and taking into account the information and data provided by France, Ireland and Germany, the STECF is requested to advice on the following:

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

2) In cases of scientific uncertainty with regard to question 1), please specify the information and data that have to be improved; in particular concerning the sampling strategy including sampling precision levels and intensities in relation to catch and discards data and, where relevant, the description of gear properties and its effect.

3) In cases of scientific uncertainty with regard to question 1), please specify whether the information presented gives indications that the non-fulfilment of the assessment criterion is due to a specific activity of the vessel group, e.g. when the group fishes in a particular area.

In carrying out its assessment, the STECF should consider the rules on vessel group reporting established in Article 3 of Commission Regulation (EU) No 237/2010 laying down detailed rules for the application of Council Regulation (EC) No 1342/2008. However, these rules and its corresponding reporting requirements are only directly applicable in future submissions.

The STECF is requested to complete the table below summarising its findings in relation to the requests for exclusion.

Table 6.10.1: Summary of STECF findings in relation to vessels groups requests for exclusion.

Country	Description of vessel group	Data submitted	STECF previous advice in 2009	STECF advice in April 2010

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.

Table 6.10.2: Summary of STECF findings in relation to vessels groups requests for exclusion.

Country	Description of vessel group	Data submitted → and STECF comments (Criteria a. b c etc relate to the requirements of the data requested by STECF in the report STECF-09-03.)	STECF previous advice in 2009 (Criteria a. b c etc relate to the requirements of the data requested in the report STECF-09-03.)	STECF advice in April 2010
FR	9 high-sea trawlers targeting saithe in the North Sea (metier 1)	<p>. List of vessels and characteristics (criteria a)</p> <p>. Map of fishing effort (Kw.d) per year → A large part of the fishing effort occurs in depths shallower than 300m.</p> <p>. Raw landings for the whole group of vessel, per year and per rectangle (no data per month or per vessel ; criteria c) → The annual proportion of cod in the landings for the group of vessels is equal to 0.3, 0.5 and 0.3 % in 2006, 2007 and 2008 respectively. → Over the 3 years, the 1.5% limit is reached in 15% of rectangles where effort occurred (but in these rectangles effort is limited).</p> <p>. Sampling results (5 fishing trips = 32 hauls) → The mean proportion of cod in the catches per haul is 0.88%, with a standard deviation equal to 0.99%. Therefore, the 1.5% limit is within the 95% confidence interval of catch rate estimate.</p>	<p>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 November: No data on landings and discards weights (criteria b) presented from which a weighted estimate could be derived. No data on observed hauls (position, depth) provided (criteria e,f). Observer data does not cover full calendar year. Range of cod catches (metier 1) indicates some degree of spatial overlap with cod indicating <u>depletion decoupling</u></p>	<p>Data support the conclusion that the proportion of cod in the landings has been (annually on average) less than 1.5% of the total landings of all species by this vessel group.</p> <p>Due to a small sampling effort, scientific observations do not significantly prove that catch estimate, including discards, is below 1.5%. Increased sampling is required in order to provide a precise estimate of the proportion of cod caught.</p> <p>The data provided confirm that low cod catch rates could at least partially result from a <u>depletion decoupling</u> process.</p>
FR	9 high-sea trawlers targeting saithe in western Scotland (Metier 2)	<p>. List of vessels and characteristics (criteria a)</p> <p>. Map of fishing effort (Kw.d) per year → A large part of the fishing effort seems to occur in depths shallower than 300m.</p> <p>. Raw landings for the whole group of vessel, per year and per rectangle (no data per month or per vessel ; criteria c)</p>	<p>July: in certain statistical rectangles, higher cod catches, substantial effort deployed shallower than 200m November: No data on landings and discards weights (criteria b) presented from which a weighted estimate could be derived. No data on observed hauls (position, depth) provided</p>	<p>Data support the conclusion that the proportion of cod in the landings has been (annually on average) less than 1.5% of the total landings of all species by this vessel group.</p> <p>No appropriately disaggregated data were provided to determine whether the proportion of cod in the catches is below 1.5%.</p>

		<p>→ The annual proportion of cod in the landings for the group of vessels is equal to 0.16, 0.05 and 0.04 % in 2006, 2007 and 2008 respectively.</p> <p>. Sampling results (10 fishing trips for metiers 2 and 3 gathered)</p> <p>→ No cod catches reported, but no indication that these samples relate to metier 2.</p>	<p>(criteria e,f) Observer data does not cover full calendar year 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></p>	<p>Provided that the sampling levels achieved are in line with the requirements of the DCF, the information provided is sufficient to demonstrate that the proportion of cod in the catches is less than 1.5%.</p> <p>The data provided confirm that low cod catch rates could at least partially result from a <u>depletion decoupling</u> process.</p>
FR	8 deep-sea trawlers targeting deep sea species in western Scotland (metier 3)	<p>. List of vessels and characteristics (criteria a)</p> <p>. Map of fishing effort (Kw.d) per year</p> <p>→ Fishing effort seems to occur in depths deeper than 300m.</p> <p>. Raw landings for the whole group per year and per rectangle</p> <p>→ The annual catch rate of cod, for the group of vessels, is equal to 0.03, 0.02 and 0.02 % in 2006, 2007 and 2008 respectively.</p> <p>. Sampling results (10 fishing trips for metiers 2 and 3 gathered)</p> <p>→ No cod catches reported.</p>	<p>July: decoupling possible if the operations are limited to depths higher than 300m November: Exemption currently being processed based on earlier STECF advice.</p>	<p>The fishing activity occurs outside the normal distribution of cod.</p> <p><u>Spatial Decoupling</u> is confirmed by the data provided. Data also support the conclusion that the vessel group has (annually on average) caught less than 1.5% of cod.</p> <p>STECF does not understand why exemption has not already been granted according to its previous advice.</p>
FR	3 long line vessels targeting hake from the Bay of Biscay to the western Scotland	<p>. List of vessels and characteristics (criteria a)</p> <p>. Map of fishing effort (Kw.d) per year</p> <p>→ Fishing effort seems to occur partly in depths shallower than 300m.</p> <p>. Raw landings for the whole group per year and per rectangle</p> <p>→ Zero Cod landings reported in 2006, 2007 and 2008.</p> <p>. No observer's data provided.</p>	<p>July: no data on discards November: No catch data provided.</p>	<p>Data support the conclusion that the proportion of cod in the landings has been (annually on average) less than 1.5% of the total landings of all species by this vessel group.</p> <p>Landings data suggest that technical or spatial decoupling might occur for this gear.</p> <p>Nevertheless, no observer data are provided regarding discards. Thus it is not possible to demonstrate that the proportion of cod in the catches is less than 1.5%.</p>
FR	8 Gillnet vessels targeting Hake from	<p>. List of vessels and characteristics (criteria a)</p> <p>. Map of fishing effort (Kw.d) per</p>	<p>July: no data on discards November: data presented insufficient to estimate proportion of cod in catches</p>	<p>Data support the conclusion that the proportion of cod in the landings has been (annually on average) less</p>

	the Bay of Biscay to the western Scotland, GN 100mm	<p>year</p> <p>→ Fishing in the West of the 200m depth line is not allowed. Nevertheless, maps indicate that fishing effort seems to occur partly in depths shallower than 200 or 300m.</p> <p>. Raw landings for the whole group per year and per rectangle</p> <p>→ Zero Cod landings reported in 2006, 2007 and 2008.</p> <p>. Sampling results (1 fishing trip = 4 hauls in VIa)</p> <p>→ The mean proportion of cod in the catches per haul is 0.05%, with a standard deviation equal to 0.8%. (6.6 kg for the whole sample). The 1.5% limit is respected but the sample size is extremely small.</p>	with any statistical certainty. Only percentages from hauls presented, estimating a reliable global percentage not possible.	<p>than 1.5% of the total landings of all species by this vessel group.</p> <p>Landings and observer data suggest that technical decoupling might occur for this gear.</p> <p>Nevertheless, the low sampling size prevents STECF drawing any conclusion on the proportion of cod in the catches.</p>
FR	2 gillnet vessels targeting anglerfish, GN 280mm	<p>. List of vessels and characteristics (criteria a)</p> <p>. Map of fishing effort (Kw.d) per year</p> <p>→ Maps indicate that fishing effort seems to occur in waters deeper than 200 m.</p> <p>. Raw landings for the whole group per year and per rectangle</p> <p>→ Zero Cod landings reported in 2006, 2007 and 2008.</p> <p>. No observer's data provided.</p>	<p>July: decoupling possible if the operations are limited to depths higher than 300m</p> <p>November: Exemption currently being process based on earlier STECF advice</p>	<p>Data support the conclusion that the proportion of cod in the landings has been (annually on average) less than 1.5% of the total landings of all species by this vessel group.</p> <p>Landings data suggest that spatial decoupling is occurring for this gear.</p> <p>If the French request is based on a spatial decoupling, STECF renews its previous advice. A rule has to be defined limiting the fishing operations to depths deeper than 300m.</p> <p>Conversely, is the request is based on the 1.5% limit, observer data have to be provided.</p>

Country	Group	Description	Previous advice from STECF	% Cod in catches from observer data supplied	Additional comments/information
DE	OTB targeting saithe in ICES Div. IVa	TR1 (>100mm) 4 vessels operating in Q1	STECF considers that the submissions do not present sufficient data to make a full evaluation that could lead to the exclusion of vessels listed in Annexes 1 and 2 from the effort management system under the provisions	0.14% with a standard deviation of 0.2%	Data support the conclusion that the proportion of cod in the catches has been (annually on average) less than 1.5% of the total catches of all species by this vessel

			of Article 11.2 of the ‘Long-term plan for cod stocks’ Regulation (EC) No 1342/2008.		<p>group.</p> <p>High level of observer coverage relative to overall effort (>50% for 2 of the 4 vessels).</p> <p>Depth profile 150-400m may indicate some degree of spatial overlap therefore it is possibility that low catches are due to depletion decoupling.</p>
DE	TBB targeting sole in ICES Sub-area IV	BT2 (80-99mm) 198 vessels targeting shrimp and sole	Information on the discarded quantities observed required. Details of individual vessel characteristics, timings and locations of each sampling should also be supplied. Spatial and temporal coverage, and the precision of the estimation of the cod proportions in the catches should be given for onboard observer schemes for the considered group(s) of vessels.	0.68% with a standard deviation of 1.28%	<p>None of the vessels seeking exemption have been sampled for catches. Submission assumes that sampled vessels are representative of applicants.</p> <p>STECF notes that no data were made available for STECF to assess the percentage of cod catches made by the group of vessels concerned (applicant).</p>
IE	OTB targeting <i>Nephrops</i> in the Irish Sea (ICES Div. VIIa)	TR2 (80 mm), 3 vessels using a rigid sorting grid	(no previous submission)	0.06% (range 0.0-0.13%)	<p>The 3 vessels seeking exemption have been sampled on 12 trips (81 hauls), including the period of traditionally high cod LPUE associated with the TR2 fishery in ICES Div. VIIa.</p> <p><u>Technical decoupling</u> is given based on the selectivity effects of the rigid sorting grid, shown in the submission documents.</p> <p>These vessels are subject to ongoing enhanced observer coverage. The coverage levels are elevated compared to DCF sampling requirements of the TR2 group in VIIa.</p>

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8. ANNEXES

List of Annexes:

- Annex I: Terms of reference for the SGMOS-09-02 Working Group.
- Annex II: Terms of reference for the SGMED-09-03 Working Group.
- Annex III: Terms of reference for the SGRN/ECA-09-04 Working Group.
- Annex IV: Terms of reference for the SGMOS-09-03, 09-04 & 09-05 Working Groups.
- Annex V: Terms of reference for the SGMOS-10-01 Working Group.
- Annex VI: Terms of reference for the SGECA-10-01 Working Group.
- Annex VII: Terms of reference for the SGECA-10-02 Working Group.
- Annex VIII: Terms of reference for the SGMED-10-01 Working Group.
- Annex IX: STECF SGMOS Summary of main observations and findings at SGMOS-09-05.

8.1. Annex I: Terms of reference for the SGMOS-09-02 Working Group

The Terms of Reference for the STECF/SGMOS-09-02 Evaluation of Management Plans (sole in the Bay of Biscay, sole in the Western Channel, sole and plaice in the North Sea) (23-27/11/2009) were defined as follows:

Background:

R(EC) No 2371/2002 introduces the concept of multi-annual management plans for stocks at or within safe biological limits, as a means towards multi-annual approach to fisheries management. Two types of multiannual management plans are defined in the Regulation: recovery plans (Article 5) and management plans (Article 6). In practice both concepts have been combined into multi-annual / long term management plans.

According to rules established in adopted regulations, multi-annual plans have to be regularly assessed against their objectives. Aside of that, according to new Commission practices, management plans have to be evaluated with regard to its effectiveness, utility, efficiency (cost-effectiveness), sustainability. This means that the evaluation should consider all biological, fisheries, ecosystemic and economic and social impact.

Plans should also be reviewed where necessary and new options should be proposed. Here the evaluation get a strong interest in that it should help to judge on the efficiency of the existing plan and to identify the main weaknesses of the plan. The conclusions will then form the basis for the elaboration of new options for a revised management plan. On top of that the individual evaluation will feed into a more general process of evaluating the interest and the sustainability of management plans as tools for the sustainability of the fisheries and the ecosystemic management of the see.

Terms of Reference

The SG-MOS 09-02 is requested to deliver an evaluation of the following plans:

1. R(EC) No 388/2006 – multi-annual plan for sole in the Bay of Biscay
2. R(EC) No 209/2007 – multi-annual plan for sole in the Western Channel
3. R(EC) No676/2007 – multiannual plan for sole and plaice in the North Sea

by taking into account the framework specified below.

If the SG-MOS 09-02 is not able to deal completely with all tasks and questions listed in the following framework, priority will have to be given to the evaluation of the multiannual plan for sole and plaice in the North Sea.

8.2. Annex II: Terms of reference for the SGMED-09-03 Working Group

The Terms of Reference for the STECF/SGMED-09-03 (14-18/12/2009) were defined as follows:

The working group is asked to:

a) Provide short term and medium term forecasts of stock biomass and yield for the stocks assessed during the SGMED-09-02 meeting in June for the species listed below, under different management options with a view to evaluate the consequences fishing effort/mortality changes on equivalent time scale, by fleets where possible:

- Sardine (*Sardina pilchardus*)
- Anchovy (*Engraulis encrasicolus*)
- European hake (*Merluccius merluccius*)
- Red mullet (*Mullus barbatus*)
- Deep water rose shrimp (*Parapenaeus longirostris*)
- Red shrimp (*Aristeus antennatus*)
- Giant red shrimp (*Aristaeomorpha foliacea*)
- Norway lobster (*Nephrops norvegicus*)
- Common Sole (*Solea solea*)

b) Advise on stock-size dependent harvesting strategies and slope-based approaches decision control rules to avoid risk situations for the stocks while ensuring high fisheries productivity, taking into account the recommendations of the SGMED-09-02 meeting in June and the following STECF comments. Such advice should consider mixed fisheries effects and ecosystem approach to fisheries management.

c) Identify any needs for management measures required to safeguard the production potentials of the stocks assessed.

d) Review the applicability and fully document all applied methodologies for the projections and determination of alternative management approaches.

e) Fully document the data used and their origin for the projections and determination of the proposed biological reference points.

f) Provide and review marine population and community indicators.

g) 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, review existing bio-economic models for producing advice 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.

h) Discrepancies in estimates of growth parameters for several demersal and small pelagic stocks which are likely to be attributed more to differences in methods used to estimate mean length at age and interpretation of ring patterns on otoliths than to genuine differences on growth patterns have been noted by SGMED. STECF has advised to organize a specific workshop on improving ageing accuracy and reduce uncertainty. Define the specific ToR for a methodological workshop to be held in 2011 with the aim of improving the precision and accuracy of individual ageing of exploited stocks as a prerequisite to age-based stock assessments. Such ToR should be forwarded to PGMed or ICES PGCCDBS before March 2010 for review and possible endorsement. This work could also be useful for further methodological standardization in the multilateral framework as also underlined in paragraph 104 of the 33° GFCM report.

i) Suggest adjustments and provide guidance on data needs and quality, on methods and on interpretations, so that SGMED work can further progress in 2010 towards the goals of the overall mandate given to STECF, focusing its attention, in particular, on the various stocks of the following species, which are either included in Appendix VII of the Commission Decision (2008/949/EC) for the Mediterranean and the Black Sea or specifically regulated under the Mediterranean Regulation (Council Regulation (EC) No 1967/2006):

- European hake (*Merluccius merluccius*),
- Red mullet (*Mullus barbatus*),
- Striped red mullet (*Mullus surmuletus*),
- Blue whiting (*Micromesistius poutassou*),
- Common Pandora (*Pagellus erythrinus*),
- Blackspot seabream (*Pagellus bogaraveo*),
- Axillary seabream (*Pagellus acarne*),
- Common sole (*Solea solea*),
- Horse mackerel (*Trachurus trachurus*),
- Mediterranean horse mackerel (*Trachurus mediterraneus*),
- Greater forkbeard (*Phycis blennoides*),
- Poor cod (*Trisopterus minutus*),
- Sargo breams (*Diplodus* spp.),
- Picarel (*Spicara smaris*),
- Bogue (*Boops boops*),
- Sea bass (*Dicentrarchus labrax*),
- Anglerfish (*Lophius piscatorius*),
- Black-bellied angler (*Lophius budegassa*),
- Gilthead seabream (*Sparus aurata*),
- tub gurnard (*Trigla lucerna*),
- grey gurnard (*Eutrigla gurnardus*),
- grey mullets (*Mugilidae*),
- Mackerel (*Scomber* spp.),
- Common dolphinfish (*Coryphaena hippurus*),
- Sardine (*Sardina pilchardus*),
- Anchovy (*Engraulis encrasicolus*),
- Sprat (*Sprattus sprattus*),
- Deep-water rose shrimp (*Parapenaeus longirostris*),
- Norway lobster (*Nephrops norvegicus*),
- Red shrimp (*Aristeus antennatus*),
- Giant red shrimp (*Aristaeomorpha foliacea*),

- Caramote prawn (*Penaeus kerathurus*),
- Spottail mantis squillids (*Squilla mantis*),
- Atlantic bonito (*Sarda sarda*).

k) for each species listed above, provide the following information needed for the different variables of the official data calls:

- length type, length class and length range
- age class interval and age range

ADDITIONAL TERMS OF REFERENCE

Background:

The assessment of the status of small pelagic stocks in the Adriatic has been completely changed at the GFCM-SCSA meeting in Malaga on 2 December last. SGMED is requested to evaluate this new assessment and comment as adequate also in respect to its advice already expressed by SGMED-09-02 of June last.

Terms of Reference:

SGMED is also requested to:

- evaluate possible consequences on the biological reference points as advised by STECF at the November plenary session
- run the short term forecast taking into account both the previous and most recent assessments for both sardina and anchovy.

8.3. Annex III: Terms of reference for the SGRN/ECA-09-04 Working Group
SG-RN/ECA 09-04 - Evaluation of NPs linked to the DCF and review of surveys

TERMS OF REFERENCE

TOR 1: Revised 2010 National Programmes

To check the revised 2010 NP's submitted by Member States following the 2009 RCMs. SGRN participants will be asked to review the concerned programmes before the meeting.

TOR 2: Regional Co-ordination

To review the recommendations of the Liaison meeting and ensure that these recommendations are addressed in the TOR's of various fora during 2010.

TOR 3: Regional Databases

To review progress on the establishment of regional databases.

TOR 4: Availability of data

To identify possible bottlenecks, gaps and quality problems compromising links in the data flow from national sampling to stock assessment input. A presentation of two case studies from the Mediterranean and the Baltic Sea will illustrate the discussion.

Under this ToR, the economists will be invited to discuss on whether the currently agreed date for submission of data for the Annual Economic Report is adequate and, if necessary, propose an alternative schedule.

TOR 5 Review of Surveys (only biologists)

To develop TOR's and a roadmap for the 2010 review of the list of surveys in Annex IX of the DCF.

ToR 6. Methods to allocate economic data (earnings, operative costs, labour costs, capital costs) at the level of metiers. (only economists).

SGECA/SGRN could also consider the case of vessels that may be active in more than one fishing area during the same year and it will propose suitable methods to evaluate the cost structure within each area and suggest a methodology to split, if necessary, economic variables among different areas.

TOR 7: Comments of STECF from their November Plenary Meeting

To review comments from STECF, of relevance to SGRN, with particular focus on comments to the Report from the SGRN Guidelines and Procedures Group (GPG).

TOR 8: Planning for 2010

To develop a list of priority tasks and issues to be addressed by SGRN in 2010. A provisional list of all relevant meetings and dates will be mapped out for 2010. This includes the drafting of TORs for a SGECA meeting in the field of the DCF (to be held in the second semester of 2010)

TOR 9: Transversal variables:

- Review of NP in order to verify that MSs had a common interpretation of variables listed in appendix VIII (List of transversal variables with sampling specification) of DCF
- how to assure a link among estimations at the level of metiers and estimations at the level of fleet segment
- how to define the quality of estimates

8.4. Annex IV: Terms of reference for the SGMOS-09-03, 09-04 & 09-05 Assessment of Fishing Effort Regimes - Parts 2 & 3

TERMS OF REFERENCE

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 VIId)

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 VIII+VIIg with the data submitted for ICES rectangle 28E2 and conclude on whether exploitation of cod shows similar characteristics;

(ii) For VIII+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 VIII+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 maps⁵ 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);

5 As of end of March, it is planned that JRC will produce those maps prior to meeting.

other provisions of Regulation 2347/2202, in particular the one on the on-board observer coverage (Article 8).

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 SGMOS-10-01 Working Group

SG-MOS 10-01 – Methodologies for Impact Assessments of multi-annual plans

TERMS OF REFERENCE

Objectives

The process aims at assessing social and economic, fishery and environmental impacts of the various scenarios for a future multiannual plan.

The impact assessment will answer the following questions:

What are the likely economic, social and environmental impacts and the potential (dis)advantages, synergies and trade-offs of those options?

How do the main options compare in terms of effectiveness, efficiency and coherence in solving the problems?

How could future monitoring and evaluation be organised?

Are the objectives proposed appropriate at ensuring sustainable management (2015 MSY objective – 2020 for the good environmental status of marine ecosystems)

Identification and collection of the necessary data

- (1) Data used for and conclusions of the evaluation will form the basis for the impact assessment. In particular the social and economic situation observed at the end of the evaluation period will define the baseline situation for the impact assessment process.
- (2) Review of the structure and performance of the fleet segments (flatfish) affected by the measures.
 - (a) Review the economic, catch and effort data available of the fleets involved in the fishery to carry out the impact analysis. In particular, special attention needs to be given to the economic variables and aggregation levels of data needed for the bio-economic modelling and analysis. (Please take into account remarks made during evaluation process, if it has taken place)
 - (b) Analysis of compatibility between the fleet segments used by the biologists and economists. Explain the way any discrepancy has been dealt with.
- (3) Selection of a suitable modelling approach given the current economic data availability for the fleets involved.
- (4) Collection of any other data that will be needed for the completion of the impact assessment work and review the literature.

Analysis of scenario

1. To define the baseline situation: the baseline situation is the social and economic situation observed at the end of the evaluation period, it should be defined during the evaluation process.

If not, define the economic and social baseline situation for the fishing fleets, onshore industries and communities that depend on the fishery concerned and of associated fisheries (e.g. size, turnover, costs, profits, employment in 2004-07) for each Member State and fishery affected.

Data shall primarily be sourced from the Data Collection Framework, although additional information should be sourced where necessary.

2. Assess at least 3 scenarios of multi-annual management (including a status quo scenario). Given expected stock recoveries under the long term proposal, for each Member State, the analysis shall look into what economic, social, fishery and environmental impacts can be expected in the short, medium and long run.

An appropriate bio-economic model shall be chosen, in agreement with the Commission.

3. Identify potential positive and negative, economic and social spillover effects on the other fisheries sectors (processing, marketing) or other capture fisheries.
4. Identify any needs for long term data collection from the fisheries affected in support of future impact assessments or for monitoring purposes.

8.6. Annex VI: Terms of reference for the SGECA-10-01 Working Group

TERMS OF REFERENCE

Background:

The focus of the meeting will be to discuss and seek agreement on content, indicators, methodologies and format of the 2010 Annual Economic Report. We will also discuss the latest (DCF) data call requirements and how they affect the content. The 2010 AER will include new Economic and Transversal parameters collected under the DCF. This gives us the opportunity to include new indicators in the report and modify the current ones. The inclusion of new indicators and the use of different parameters may imply major changes in the national chapters. We would like to discuss proposals for a better structure and content for the national chapters. Additionally, the representatives of DG MARE will provide an indication of the economic advice needs related to the AER, for example socio-economic scientific data for supporting evaluation of long term management plans.

With the DCF, data is available at the supra-region level (Area 27, Area 37 and Other Fishing Regions). It is not straight forward to obtain the desired regional level for the economic data relating to Area 27 (North Sea and Eastern Arctic, Baltic Sea and North Atlantic). With last year's experience in mind, an agreement on the methodology to perform the regional analysis should be agreed. JRC will present possible methodologies.

The 2010 AER will use data relating to 2002-2008. To improve the relevance and timeliness of the report, the EIAA model will be used to estimate 2009 and 2010 economic performance for important fleet segments. Specifications of the model, the fleets to be estimated, the analytical outputs and structure of the chapter require agreement. Discussions will include input from Hans Frost and Jesper Andersen of FOI.

Taking into account the above issues and potential modifications, we would like to discuss proposals for a better structure and format for the 2010 AER.

Terms of Reference:

1. Discuss and assess proposals for new indicators and contents of all chapters of the 2010 AER, taking into the account the availability of new DCF data.
2. Discuss and assess proposals on method for regional analysis (allocation of cost and income data to regions). This discussion could also include allocation of economic data to metiers.
3. Discuss and assess proposals for EIAA model outputs and chapter contents for future economic performance projections.
4. Discuss and assess proposals for a better overall structure and format of the 2010 and future AER

8.7. Annex VII: Terms of reference for the SGECA-10-02 Working Group

TERMS OF REFERENCE

Background:

Following the latest DCR call for economic data, SGECA 10-02 is requested to analyze and comment on the economic performance of MS national fishing fleets, regional EU fishing fleets and EU fish prices between 2002 and 2008. In addition the working group will comment on EIAA model outputs for selected fleet segments in 2009 and 2010. Prior to the meeting the JRC will have compiled the data tables and briefly described the data for the national, regional and price analyses. The EIAA model outputs will be generated and evaluated during the meeting.

The content of AER-2010 will include:

1. EU fishing fleet economic overview
2. National chapters on the economic performance of EU fishing fleets, providing:
 - a) *National fleet overview, production and prices for national fleet and composition by fleet segment*
 - b) *Description of trends and drivers for change (e.g. relevant information on fisheries management measures that affect economic performance)*
 - c) *Qualitative projections on economic performance for 2009 and 2010*
 - d) *'Fleets of special interest' for each country will be subject to separate and detailed analyses*
3. EU Regional analyses of economic performance (e.g. Atlantic, North Sea, Mediterranean etc) if possible
4. Examination of trends in EU fish prices. Price trends for each species will be split by:
 - a. mobile and passive gear types
 - b. vessel length classes
 - c. region (if possible)

The species will be selected according to volume and value criteria

5. Special chapter: economic assessment of 2010 TACs on selected fleet segments using EIAA model outputs
6. Appendix of tables

8.8. Annex VIII: Terms of reference for the SGMED-10-01 Working Group

TERMS OF REFERENCE

1. Fixing biological parameters and model set-up for more stocks (finalization of the work done in Murcia (SG-MED 09-01) and subsequent SG-MED meetings).

SGMED is requested to provide synoptic tables on the parameters agreed for each stock

1. Finalise and agree on growth parameters for currently assessed stocks;
2. Final check and confirmation of what already agreed on the natural mortality;
3. Length-Weight relationship
4. Size at first maturity
5. Agree on M, growth, L-W parameters and size at first maturity for stocks not yet currently assessed by SGMED. Those species or group of species should be selected in accordance to their importance as assigned by the ranking system developed by SGMED 09-03

2. Development and testing of trawl survey index standardization procedures with R

- a) Develop R scripts to import, merge and select species specific data from MEDITS database
- b) Develop R scripts to run GLM/GAM models on the imported MEDITS data to derive stock specific standardized yearly trends of CPUE (biomass/area) and numbers at length and at age and weight at age to be used into SURBA and tuned VPA. Those scripts should also produce detailed model diagnostics to assess best performing type of models, link function, family distribution and predictors
- c) Develop R scripts to perform age slicing to transform numbers at length in numbers at age to be exported in a SURBA ready format

3. Development of methodologies for the estimation of empirical indicators of stock status in data poor situations

- a) Provide a critical overview of empirical indicators (i.e. calculated directly from a specific set of raw data or after statistical standardization) published for the different Mediterranean stocks in the various GSAs and currently used to assess the status of the stock in data poor situation. (*Data poor situations are defined as those stocks or species for which individual age information, also via LFD, are not collected and/or data on catches are highly uncertain or lacking.*)
- b) on the basis of the scientific literature and data availability, identify for each species or group of species, the most adequate empirical indicators of stocks and fisheries status

that could be used in the assessment made at SGMED working groups. The list of empirical indicators should include, as much as possible, both fishery independent (scientific surveys) and fishery dependent (commercial catches/landings) information. Possible indicators might be selected from those listed below:

- trends in mean age/length/weight of the stock
- trends in raw/standardized catch or catch per unit of effort;
- estimation of and changes of area distribution (stock or specific life-stages)
- proportion by weight of large fish in the stock
- trends in the average maximum length
- others (open list according to expert knowledge)

The species or group of species should be selected in accordance to their importance as assigned by the ranking system developed by SGMED 09-03

- c) Report on the methodologies for the calculation of empirical indicators. On the basis of the indicators chosen and on the methodology to be applied check if the format of the data calls carried out so far is adequate or, otherwise, establish the needed data call format to be included in the future data calls
- d) develop a working plan and terms of reference for the 2nd and 3rd SGMED meetings to be held in 2010, in order to estimate, under non-equilibrium conditions, the trend of the total mortality (Z) of selected stocks. The methodology used should refer to the mean length mortality estimator for application in non-equilibrium conditions. The estimation of the mean Z should be done on the basis of the agreed von Bertalanffy growth parameters (VBGF) and length at first capture (L_c) and the mean length above L_c as estimated either via the scientific surveys and/or commercial catches. The species or group of species should be selected in accordance to their importance as assigned by the ranking system developed by SGMED 09-03 and on the basis of the availability of VBGF parameters and information on length composition.

8.9. Annex IX: STECF SGMOS Summary of main observations and findings at SGMOS-09-05

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 40/2009. 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 Baltic Sea catch and effort in the context of the management plan for Baltic cod Council Reg 1098 2007

- STECF SGMOS made good progress with the available data but was hampered by the lack of adequate fishing effort information from some nations, and incomplete information from a number of nations.
- The most significant shortfall was effort data from Poland.

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

Review of Annex IIA of Council Reg.s 40/2008 and 40/2009 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 40/2009 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 Deep Sea and Western Waters effort Regimes

- STECF SGMOS provided, for the first time, an evaluation of deep sea and western waters effort and catches. This should be regarded as a work in progress and experiences gained during this first evaluation will inform subsequent developments in approach and presentation.
- TORs were partially achieved by SGMOS but there was insufficient time to address quite a number of the specific questions. Generic comments relating to the preparation of data for SGMOS apply to the Deep Sea evaluation and contributed to the delay

- STECF SGMOS has provided figures and tables and the text is being completed. The final report will be dealt with by an STECF communication
- The first TOR implied that deep sea data supplied by Member States directly to the Commission under the requirements of the Deep Sea Regulation 2347/2002 could be used as part of the evaluation. In practise the information was either absent or of poor quality and so was of limited use.
- SGMOS discussed definitions for what should constitute Deep Sea activity. Several options were identified and it was felt that the definition embedded in the Regulation is not necessarily the most appropriate. A 'decision tree' approach has been employed for the present the most appropriate. Discussion of approaches using bathymetric data linked to VMS were considered for future development.
- STECF SGMOS presented effort trends for each member state and gear by ICES (and CECAF) areas. The general position is that effort in a number of gears (particularly otter trawls) and countries has declined in recent years. This is most evident in the most northerly areas. Increases in the effort of longliners has occurred in a number of areas.
- SGMOS also presented information on catches and catch composition. This is very detailed but in general shows reductions in the landings of a number of species across the range of areas reported. One exception is the landings of certain deep water sharks in the more southerly ICES areas.
- A detailed review of the Annex I and II lists of species was provided by the group with recommendations for some adjustments when the Regulation is reviewed.
- STECF SGMOS had insufficient time adequately to consider overlaps with other effort regimes and encountered difficulties in interpreting the Western Waters effort information where some very aberrant numbers were generated for some member states. It is hoped these issues will be rectified at the next effort meeting in 2010.

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Abstract

The Scientific, Technical and Economic Committee for Fisheries hold its 33rd plenary meeting on 26-30 April 2010 in Norwich. 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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