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Scientific, Technical and Economic Committee for Fisheries (STECF)

Review of Proposed DCF 2014-2020

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Part 1 (STECF-12-07)

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This report was reviewed by the STECF during its' 39th plenary meeting
held from 16 to 20 April 2012 in Brussels, Belgium

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SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

Review of Proposed DCF 2014-2020 – Part 1 (STECF-12-07)

THIS REPORT WAS REVIEWED DURING THE PLENARY MEETING HELD IN BRUSSELS BELGIUM 20-24 APRIL 2012

Background

In parallel with the development of the new EU Common Fisheries Policy and the European Maritime and Fisheries Fund (EMFF), the Commission is currently preparing a proposal for a new EU Multi-Annual Program for data collection for the period 2014-2020. Articles 37 and 38 of the CFP reform proposal set out the broad obligations for Member States to collect biological, technical, environmental and socio-economic data and to cooperate regionally. The EMFF will serve as the financial pillar of the future EU data collection program, providing the basis for national programs implementing the EU MAP 2014- 2020. This new EU multiannual program for data collection will be adopted as soon as the new Basic Regulation is adopted by Council and the European Parliament. Throughout this year, consultations on the new EU multiannual program for data collection with a wide-range of stakeholders are planned. This item has been on the agenda of several STECF EWG meetings:

- STECF EWG 11-02 was dedicated to a reflection on the requirements of the current and future DCF
- STECF EWG 11-19, which carried out a SWOT Analysis of DCF

Request to the STECF

STECF is requested to review the report of EWG-12-01 held from March 12 –16 2012 in Barza, Italy, evaluate the findings and make any appropriate comments and recommendations. EWG 12-01 will be followed up by STECF EWG 12-15 (DCF - Review of proposed DCF 2014 - 2020 - part 2) in October 2012.

STECF observations

The current DCF will expire at the end of 2013.The Commission is currently drafting a new DCF that will be in force throughout the years 2014-2020.

EWG 12-01 was requested to evaluate options provided by DG MARE for the new EU Multi-annual programme for data collection 2014-2020. The terms of reference of the meeting were divided into three main parts: design of the multi-annual plans, quality issues and regional data bases.

During EWG 12-01 representatives from the European Commission introduced the new DCF and the proposed structure of future data collection in the framework of the Common Fishery Policy. Also, two major end users (JRC and ICES) explained that in general, the DCF is considered to be a good tool for

meeting end users' needs, but more flexibility of the data collection and estimation of variables was proposed. Presentations on the possibilities and constraints of matching biological and economic data and the need for changes in the biological part of the new DCF gave further input to the EWG work and discussions.

STECF notes that some of the terms of reference of EWG 12-01 had also been addressed by EWG 11-19: Evaluation of 2012 NPs related to the DCF, held on the 28th November 2011 - 1st December 2011 in Brussels. Any overlap will be addressed by the STECF answer to ToR 5.1 of this plenary meeting.

STECF notes that all terms of reference had been answered by the working group.

STECF conclusions

STECF concludes that a move towards regionalisation of collection of biological data could increase the usability of data for end users and improve the efficiency of the collection in the MS. The regional approach is also in line with the shift towards a more regionalised management of fish stocks as proposed in the CFP reform proposal (COM(2011)425 final). STECF, however, emphasises that it is important that the core of the methodology as well as the definition of collected parameters is stable over time. If that is not the case, there is a risk that end users' changing data needs as well as changing political objectives on the regional scale, could result in interrupted or effectively truncated time series. Furthermore, it is important that regional sampling schemes do not affect the ability to standardise the data collected for the DCF with pan-European data requirements in other EU regulations, particularly the Control Regulation (COM Council Reg. 1224/2009).

STECF concludes that to ensure a common understanding of the terms of the DCF, a glossary with clear definitions should be produced. STECF therefore reiterates its previous recommendation from PLEN 11-03.

STECF concludes that the JRC web-based storage space for reference documents and tables should be continued and be further developed to take account of future requirements of the DCF in order to continue to facilitate the application of best practices in designing Annual Work Plans.

Regional databases for biological data could facilitate the work in the RCMs. STECF concludes that it is essential that the legal basis for regional databases is created so that funding for development and management of these can be ensured.

STECF notes that concurrent sampling of different fish stocks in the same catch is carried out differently in different Member States leading to inconsistent estimates of catch compositions from sampling schemes. There is a need to explain and define concurrent sampling in order to ensure consistent sampling by MS.

STECF recommendations

In relation to the revision of the new DCF, STECF would like to reiterates its previous recommendation from PLEN 11-01. *"STECF recommends that overlap in the Control Regulation (CR) and the DCF should be avoided. Data collected under the CR should not be included in the DCF unless it is to be expected that the quality of the data collected under the CR does not fulfill the quality requirements of the DCF.*

STECF further recommends including in the new DCF commitments for Member States to set up at national or regional level, a system to encourage cooperation between control authorities and the National Programmes of the DCF. The cooperation system should address all issues of relevance for the collection and processing of data to be collected under the CR and the DCF.

Before this is achieved, STECF concludes that scientific analysis in MS could be improved if MS scientists had access to online data from VMS and logbooks, as well as to data collected under the Control Regulation etc.

The CR includes commitments for Member States to develop and implement sampling plans for vessels not subject to logbook requirements and landing declarations. STECF recommends that when Member States develop the sampling plans, due notice is taken to the data requirements under the DCF. This could be done by actively involving at national level, the DCF experts in the development of the sampling plans."

STECF recommends that the roles of the institutions involved in the collection and analysis of transversal data should be discussed and clearly defined in a dialogue between all relevant parties, i.e. research institutes, control & enforcement agencies and fishing industry representatives. Furthermore, efforts should be made to ensure that the data needs of end-users are being considered in the new DCF.

REPORT TO THE STECF

EXPERT WORKING GROUP ON
Review of Proposed DCF 2014-2020 – Part 1 (EWG-12-01)

Barza, Italy, 12-16 March 2012

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

1 EXECUTIVE SUMMARY

The STECF Expert Working Group (EWG 12-01) on the Review of Proposed DCF 2014-2020 Part 1 met at Casa Don Guanella, Barza from 12th March to 16th March 2012. The terms of reference for the EWG are given in annex 1 and the agenda is given in annex 2. The expert group worked through a series of Sub Groups, presentations and plenary discussions. The main conclusions and recommendations from the meeting are given in the section that immediately follows this executive summary.

At the beginning the European Commission introduced the topic of the new DCF and the proposed structure of future data collection in the framework of the new Common Fishery Policy. The Group proceeded with two presentations of major end users, the JRC and ICES. In general the DCF was assessed to be a good tool for meeting end users needs, but e.g. some more flexibility was proposed. Presentations on the possibilities and constraints of matching biological and economic data and the need of changes in the biological part of new DCF gave further input to the EWG work and discussions. For a discussion on a potential integration of genetics into the new DCF, another initial presentation was given. Finally a presentation was given on the status quo and challenges of the regional data base. All presentations are available on the meeting's web page (http://stecf.jrc.ec.europa.eu/web/stecf/ewg01).

STECF-EWG 12-01 discussed the need for more flexibility in implementing the programme and take better account of end users needs. The group agreed that a core data collection programme has to be defined with possibilities of adding future needs. But, there is a trade-off between stability and flexibility. Adding new data to be collected or deleting parts from the data collection programme causes costs in an economic sense, e.g. by the decision making process. The group concluded, that the costs of changing or adding or deleting parts of the data collection programme shall be taken into account, when the governance structure of the new data collection programme is set up legally. Those parts which are assumed to be core and are expected to be harmonized all over Europe should be changeable with more costs, e.g. being part of MAP. Those issues, that are needed for more flexibility, shall be more easy to integrate and less costly, e.g. to be decided on a regional level. The Commission should have in mind, that there has to be a clear decision-making frame set-up. Who has the right to make an initiative for changes, do all end users (all their wishes) have the same priority, who decides, what will be the majority rule (simple majority, qualified, with veto rights), what is/are decision making body, who is member of the decision making body? Are decisions meant to be legally binding are coherent with the legal framework in the European Union?

In its discussions during the meeting STECF-EWG 12-01 highlighted necessary decisions on the governance structure, but did not deal with it in depth. The EWG was concentrated on the content issues for the new DCF.

During the week the work was partly allocated to six sub-groups in order to address the several TOR´s. The results of the sub-groups work were presented in a final plenary to assure an agreement on the conclusions and recommendations. The reports of the several sub-groups are presented in section 5. The relevant reports, remarks and recommendations of STECF in 2011, EWG 11-02, EWG 11-18, EWG 11-19 as well as PGCCDBS 2012, Liaison Meeting 2011 were also taken into account and checked if all issues have been addressed.

At the end of the meeting the group reviewed its TOR's and concluded each TOR had been addressed and where possible, clear conclusions and recommendations made.

2 CONCLUSIONS OF THE EXPERT WORKING GROUP

Conclusions from TOR 1

a) The present DCF is considered to be very prescriptive in defining which data needs to be collected but also in the way they should be collected. EWG opinion is that the new DCF should be more flexible. The collection of the core data needed for provision advice should maintain, but the way they are collected (sampling schemes) should be decided on a regional level by the relevant Regional Coordination Meeting (RCM). Also, the priority fisheries to be sampled should be selected on a regional basis rather than on a national basis.

The proposed flexibility in the new DCF should result in data which can be better used by end users. Therefore, end users should be in a position to be able to explain what data they need.

When designing Annual Work Plans, best practices for sampling (e.g. statistically sound sampling schemes) have to be applied and implemented. This obligation should be defined in the legal text on the EU MAP. The best practice must be documented, stored centrally (e.g. in a document repository) and referenced in MS OPs and Annual Work Plans. EWG 12-01 further endorses the need of a common glossary for biological, transversal, economic and ecological parameters and variables as already recommended by EWG 11-18. The group made some suggestions in particular for the economic part, including proposal for variables to be deleted and variables to be included in the new DCF. The suggestions and remarks may be found in section 6.1 of this report. It was pointed out, that this work needs to be done by a special working group or by ad-hoc contracts.

EWG 12-01 discussed the option to delete data collected by Control Regulation (CR) from the future DCF, however there is no obligation in the control regulation to provide the information at the aggregation level as DCF needs. It is advisable to keep the list of the variables needed by DCF. Moreover not all fleet segments are covered by CR and MS are using different approaches to collect effort data for coastal fleets.

In addition, the 36th STECF Plenary recommended that data collected under the CR should not be included in the DCF unless it is to be expected that the quality of the data collected under the CR does not fulfil the quality requirements of the DCF. STECF further recommended including in the new DCF commitments for MS to set up at national or regional level, a system to encourage cooperation between control authorities and the NP of the DCF. This co-operation system should address all issues of relevance for the collection and processing of data to be collected under the CR and the DCF. EWG 12-01 endorses this.

b) EWG 12-01 discussed the relevance of metiers to fishery-based management, and data on landings and effort by metier can be collected commonly as census data collected under the requirements of the control regulation; EWG 12-01 concluded that metiers are not appropriate to be identified as a targeted unit for sampling of the biological characteristics of landings – this is for a number of reasons that have been outlined by the various ICES workshops on sampling. It was

concluded to not have the sample requirements of a revised DCF mapped out in terms of the requirement to target metiers for sampling.

c) In the proposed revised DCF, the role of the RCM must change. It should become a platform for planning of sampling activities on a regional scale, agreeing the national shares in the regional sampling programme, evaluation of the quality of the data on a regional level, and the calculation of biological parameters. Also the RCM could be dialogue platform with legitimate end users. RCM would need participation of MS representatives which have a mandate to take decisions. MS would need to spend more time in preparation for the RCM. The group identified the following areas that could be dealt in a regional context from an economic point of view:

a. Level of aggregation for transversal data
b. Identification of specific needs for disaggregated economic fleet data
c. Aggregation of fleet data that cannot be disseminated at national level because of confidentiality problems
d. Discussion on compilation of indicators to assess the importance of fishery and related activities at the level of administrative areas.

d) Eligible research vessel surveys should be frequently subject to evaluation against criteria which justify eligibility. In order to maintain stability, it is proposed that, if a survey no longer qualifies, it should be put on an observation list. If it remains on this list for three successive years, it will be removed from the list of eligible surveys.

e) The following issues should be addressed by economists during RCM or equivalent meetings:

- Definition of effort variables and of the level of aggregation
- Identification of specific needs for disaggregated economic fleet data
- Aggregation of fleet data that cannot be disseminated at national level because of confidentiality problems
- Discussion on compilation of indicators to assess the importance of fishery and related activities at the level of administrative areas.

f) EWG 12-01 considered that in the DCF there should be clear rules on when a MS may reject delivering data to the end-user on the basis on confidentiality and what is the process or dialogue which then follows between MS and end-user. The European Commission should consider the options provided by EWG 12-01 (chapter 5.4 of this report) for dealing with the issues related to data confidentiality, seeking advice from other parts of the Commission (e.g. Eurostat) with experience in these issues.

g) It was concluded that the current DCF already provides for the possibility to apply methods which are currently not routinely used (e.g. genetic/genomic, tagging, parasite load, stomach content analysis etc.) if these are considered appropriate to collect the required information.

Acknowledging the need to be able to accommodate opportunities arising from technology advancements and new data needs, the EWG DCF endorses to maintain this level of flexibility, also in the future DCF MAP 2014-2020.

In order to strengthen awareness building and communication between stakeholders about the opportunity for the inclusion of non-routine data, workshops attended by scientific experts, data

providers, end-users and other stakeholders could be held. Ideally, the outcome of such workshops should be properly reviewed by STECF and reported to the European Commission.

Conclusions from TOR 2

a) There is no need to set a priori precision targets for the variables to be collected. Presently, there is no basis for setting such targets. In many cases, it would also be impossible to evaluate how many sampling resources would be needed to meet predefined targets. Instead EWG 12-01 proposes to set a minimum sampling target, remaining at least at the present level. However, it would be required to evaluate the quality of the data every year at the regional level (RCM) and end user aggregation level. This would also apply to economic data by maybe having a different evaluation body.

EWG 12-01 considers the existing requirements for MS to provide quality indicators for economic variables in the Annual Reports should remain, and that no quantitative targets for quality should be included in the new DCF. PGECON should investigate quality indicators achieved by Member States in order to compare the results and improve the methodologies adopted in case of low qualitative results.

b) With regard to data poor stocks it is essential that the end user specifies what kind of data is needed to provide advice. Increasing sampling on these, mostly small, stocks will be very expensive. For most data poor stocks, it is unlikely that increasing sampling resources will result in possibilities for analytical assessments to support advice. It was noted that many of these stocks are not data poor, but the quality or structure of the available data does not allow traditional assessments.

Conclusions from TOR 3

a) The role of the Regional Data Bases (RDB) was discussed. RDBs already exist in the Baltic, North Sea and Atlantic regions. It is the intention to implement a RDB also in the Mediterranean. For economic data an implementation of a RDB is foreseen at supra-regional level. Their primary function is to serve the RCM process with coordination of data collection and evaluation of the results on a regional level.

b) The EWG 12-01 concludes, and agrees with the RCMs, that the RDB has a considerable potential to facilitate the work in the RCMs and make it much more effective. The RDB can further play an important role in increasing the transparency in the data collection – assessment – advice process. The usage of the RDBs is though for most MS novel ground and it is important to facilitate the process for the MS and the development of the RDBs themselves. To achieve this, EWG 12-01 realises that a step by step approach needs to be taken and advices that requirements for the RCMs are prioritised. If the RCM needs are met, the RDB could further be developed towards preparing data for assessments as proposed by EWG 11-08.

In a revision of the DCF it is important to create a legal basis for the RDB and to secure funding for development and management of the RDBs.

The implementation of a central database on a supra-regional level for economic data from where end users can get the data at the desired aggregation level, presents several issues to be addressed:

- Identification of possible end users and their scientific needs
- Definition of common formats for transmission of data to the central database

- Consideration of confidentiality and privacy problems related to the dissemination of socio economic data
- Identification of resources (technical and monetary) to implement the database
- Identification of the organization that should handle the database

With regards to regional data bases that are currently under implementation for the biological data, the group considers that:

- transversal variables should be available also at the resolution level necessary for the economic analysis
- the Mediterranean regional data base could include economic data as in this case the region matches with the supra-region

Conclusions from TOR 4

None

3 RECOMMENDATIONS OF THE EXPERT WORKING GROUP

3.1 General recommendations

1. DCF Glossary	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends a glossary with the terms used in the DCF (Biological, transversal, ecological and ecological part of the data collection program). Clear definitions are to be given in this glossary in order to ensure a common and harmonized understanding. The glossary should be a single annex with general definition for all three sectors (fleet, aquaculture, processing). As part of this, it is also recommended to delete last two columns of the Appendixes VI, X and XII (Definition and Guidelines) of the Commission Decision in the future DCF.
Follow Up Action Needed :	Ad-hoc contract or WG. Await Review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	During 2012

2. Governance Structure	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends a clear and coherent proposal for the governance structure of the future DCF. In particular it should be clarified who can make changes by which means and which bodies have decisions rights. This includes the rules of decision making.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	Before October 2012

3.2 Recommendations from TOR 1

3. Survey – Proposed revision list	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that in terms of timing, proposals for revisions of the list of surveys should be available in June 2012, discussed at the RCMs in July-September 2012, incorporated into STECF EWG 12-15 on the DCF review (part 2) and endorsed by STECF Plenary in November 2012.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	During 2012

4. Surveys - Weighing criterion	
EWG 12-01 Recommendation :	The STECF-EWG 12-01 recommends that the weighing criterion used in the evaluation of the surveys for inclusion in the list of eligible surveys should be reviewed as for some regions the management of the fish stocks in near future probably will be based on an ecosystem management approach.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	During 2012

5. List of research surveys and review	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that the different RCMs during 2015 should complete a list of all the research surveys carried out within each the region and at the same time conduct a review of these surveys.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, RCMs
Time Frame	During 2015

6. Annual Work Plans – Web Space for best practice documents	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that a web-based storage space for reference documents and tables is being created in order to facilitate the application of best practices in designing Annual Work Plans.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, RCMs
Time Frame	Needs to be in place prior to first national annual programme submission

7. Annual Work Plans – Transversal data collection	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that future guidelines for preparation of MS Annual Work Plans also provide for a description of the procedures for collecting additional information on transversal variables that cannot be derived from existing data sources.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE,
Time Frame	2013

8. Access to VMS and logbook data	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that MS scientific institutions involved in data collection have online access to VMS and logbook data, as well as data collected under the Control Regulation.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE and National Correspondents
Time Frame	2012 and following

9. Transversal data - Organisation of data collection and analysis	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that the roles of the institutions involved in the collection and analysis of transversal data should be discussed and clearly defined in a dialogue between all relevant parties, i.e. research institutes, control & enforcement agencies and fishing industry representatives. The roles and tasks of these parties have to be described in the relevant legislation or at least in the MS Operational Programmes.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, National Correspondents
Time Frame	2012 and following

10. EU DC MAP – General character	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that the EU DC MAP (Data Collection Multi-Annual Plan) should define the general rules for the selection, on a regional basis, of fisheries to be sampled and data quality requirements and refer to the RCMs for the detailed technical planning of sampling. This includes RCMs to identify the metiers that are the priority for work at the EU level within a region, and those should be the priorities for work in Member States.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, RCMs
Time Frame	Needs to be in place prior to RCMs in advance of first national annual programme submission

11. AWP – Detailed description of sampling scheme	
EWG 12-01 Recommendation :	STECF-EWG 12-01 recommends that predefined sampling procedures, such as concurrent sampling, should not be dictated, but the applied sampling methods should comply with guidelines of good practice (to be referred to in the DCF) and be fully justified and documented in the Annual Work Plans.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	2012 and following

12. RCM – Reconsidering geographical scope	
EWG 12-01 Recommendation :	Reconsider the geographical scope of the RCMs in the light of new tasks and scope under the new DCF.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, RCMs
Time Frame	September 2012

13. RCM – Greater authority	
EWG 12-01 Recommendation :	For RCM activities to be given greater authority in determining regional sampling programmes.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, RCMs
Time Frame	Needs to be in place prior to RCMs in advance of first national annual programme submission

14. RCM – Identification of relevant end-users	
EWG 12-01 Recommendation :	To identify relevant end-users whose active contribution to RCM duties will be required to ensure full collaboration with Member States in defining the regional sampling programme.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	Needs to be in place prior to RCMs in advance of first national annual programme submission

15. New DCF Content	
EWG 12-01 Recommendation :	EWG 12-01 reviewed the list of variables and parameters to be collected under current DCF and recommends including the remarks and suggestions listed in section 3.5 of this report.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	Before EWG on new DCF meeting in October 2012

16. **Study on Data Disaggregation**	
EWG 12-01 Recommendation :	EWG 12-01 recommends that the study to disaggregate economic variables at metier and/or geographical areas, proposed by STECF EWG 11-18, is carried out as it would be useful for additional data disaggregation purpose in the future.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	As soon as possible

17. **TOR for EWG and WG on aquaculture**	
EWG 12-01 Recommendation :	The EWG 12-01 recommends adding questions on future DCF needs and possible changes of the current aquaculture segmentation to the ToRs of both STECF EWG 12-13 on economics of aquaculture and DCF WG on aquaculture which is proposed by STECF EWG 11-18 and should meet in 2012.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	2012

18. **Integration of raw material data in the processing sector into new DCF**	
EWG 12-01 Recommendation :	STECF EWG 12-01 recommends adding parameters of volume and value of raw material by species for the processing sector in the future DCF. Otherwise, there is no need to collect additional data for this sector as Structural business statistics and PRODCOM data could be used to assess the sector.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	Before EWG on new DCF meeting in October 2012

19. **Transversal variables – less obligatory collection**	
EWG 12-01 Recommendation :	EWG 12-01 endorses the recommendation from RCM NS&EA in 2009 to make submission of the following Transversal Variables optional The need for collecting data on such indicators and their aggregation level are to be discussed and agreed upon on a regional level: number of trips / hours fished for RCM Med&BS number of rigs number of fishing operations number of nets/length number of hooks/number of lines number of pots, traps soaking time.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE, RCMs
Time Frame	Before EWG on new DCF meeting in October 2012

20. **Market Observatory study – RElevance for New DCF**	
EWG 12-01 Recommendation :	EWG 12-01 recommends that the Commission seek to present the objectives of the market observatory project, report on the current progress with the project and discuss its relevance to the revision of the DCF with PGECON.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	Before EWG on new DCF meeting in October 2012

3.3 Recommendations from TOR 2

No specific, but see Recommendation 10 and conclusions on TOR 2

3.4 Recommendations from TOR 3

21. **Regional Data Base – Funding**	
EWG 12-01 Recommendation :	In a revision of the DCF it is important to create a legal basis for the RDB and to secure funding for development and management of the RDBs.
Follow Up Action Needed :	Await review by STECF Plenary in April 2012
Responsible For Follow Up Action :	DG MARE
Time Frame	Before EWG on new DCF meeting in October 2012

3.5 Proposed detailed changes and amendments for economic data collection, agreed by EWG 12-01

EWG12-01 discussed the previous recommendations and agreed with the need to change the footnote n. 13 in the Appendix VI to ensure that debt and asset information come from consistent sources – it is recommended that Member States derive these two items from balance sheets.

EWG 12-01 recommends that the collection and reporting of the concentration indicators such as number of enterprise/units by size category is not required at fleet segment level, and so they should only be asked for at the national level only.

EWG 12-01 also recommends using total GT and total kW instead of average GT and average kW (Appendix VI of Com. Decision) in the future.

EWG 12-01 agrees with the proposal of EWG 11-18 to separate debt indicator in Appendix X and XII to short and long term debts (as defined in article, 9, item C of the IV Council Directive 78/660/EEC).

For the fish processing sector, STECF EWG 12-01 recommends reducing number of costs items collected and combine operation costs including energy costs, raw material costs and other operational costs to harmonise it with the provisions of the Structural Business Statistics.

For Subsidies, the EWG 12-01 agreed that there is a need to improve the definition of subsidies to be clear on the exact nature of the funding involved. PGECON should consider this issue and determine whether there is a need for new indicators related to subsidies, incorporating views from the Commission and other end users.

For details on age and gender structure, due to the costs and effort involved in collecting this data and the stability of this kind of data, Member States should be allowed to request derogations so that this data could be collected on a biennial or triennial basis (e.g. second and fifth year of data collection) rather than on an annual basis.

With regards to the possible necessity to analyse spatial distribution of fishery, the necessity for this kind of data presentation and administrative disaggregation level (NUTS 2 of NUTS 3) should be assessed at the regional and national level involving end users to identify the needs for the analysis.

4 INTRODUCTION AND TERMS OF REFERENCES

4.1 Introduction

Commission Regulation (EC) No. 665/2008 of the 14 July 2008 establishes the Data Collection Framework (DCF), a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy (CFP).

Under this regulation the European Commission requires Member States to collect data on Biological and Economic aspects of many European fisheries and related fisheries sectors.

The Commission Decision (2010/93/EU) of the 18 December 2009 describes in detail the Multiannual Community Programme to support the DCF.

With the reform of the Common Fishery Policy, DCF will be reformed as well. This EWG 12-01 meeting is one Expert Working Group meeting in line with several others. Here are to mention STECF plenaries in 2011and 2012, EWG 11-02, EWG 11-18, EWG 11-19 as well as PGCCDBS 2012 and Liaison Meeting 2011. During 2012 several meetings dealing with the reform of the DCF are forthcoming: PGECON, EWG 12-15, EWG 12-13, Liaison meeting 2012 and STECF summer and winter plenary in 2012.

EWG 11-02 gave a SWOT analysis of the current DCF. Having this background and the remarks, conclusions and recommendations of the above mentioned meetings' report as reviewed by the STECF, EWG 12-01 in particular dealt with the Design of the new Multi Annual Programm, with data quality issues and the regional database (compare TORs). To address all this issues, work was allocated to several sub-groups. Those sub-groups reported their findings to the plenary, which was deciding then which recommendations and conclusion are to the opinion of the whole EWG 12-01. This means, that the reports of the sub-group (chapter 5) are not the view of the whole group in any case, in particular the integration of the genetic tools was considered to be actually not relevant for the reform of the DCF. Genetic tools could already be used under current DCF if this method is scientifically superior or analogue to other tools for stock assessment and there is no need to deal with it specifically.

In general there was large unanimity within this Expert Working Group concerning the direction the new MAP should develop.

4.2 Terms of Reference for EWG-12-01

Evaluation of options proposed by DG MARE on the new EU Multi-annual programme for data collection (MAP) 2014-2020

1. Design of the new MAP

Design of Annual Work Plans for data collection – what should be in there

Metier approach – live with it or leave it?

How to improve regional coordination – future role of RCMs

Selection of surveys at sea – fixed list or flexible alternative?

Harmonization of aggregation levels of biological and economic data

Problems with confidentiality of data

Genetic information for stocks needed?

2. Data Quality issues

CVs – define precision targets for sampling of economic and biological variables

Data poor stocks – how to improve the current situation

3. Regional data base

Current state of play in the different regions

How will future DCF needs be addressed by it?

4. AOB

5 SUB-GROUP REPORTS

Although there was a general agreement on the conclusions of the sub-groups which were presented to the plenary, the text of the sub-group reports should not referred to as the opinion of EWG 12-01 as the text of the sub-group reports has not been discussed in the plenary meeting. Agreed conclusions, recommendations and opinions are reported in chapter 2 and 3 of this report.

5.1 SG 1 - Design of Annual Work Plans

5.1.1 Background

In the current DCF, data collection carried out by the MS is based on a multi-annual National Programme, the most recent period being 2011-2013. There are provisions which allow updating the NP annually if this is considered necessary.

In the proposal for a European Maritime and Fisheries Fund (EMFF, COM(2011) 804 final) for the period 2014-2020, data collection carried out by the MS is based on an Annual Work Plan which is a flexible element to the Operational Programmes (OP). The OP describes the MS implementation of the seven-year EU Multi-annual Programme (MAP)

5.1.2 General aspects

Based on the experience gained during the DCR and DCF periods, there is a general need to reach a balance between a stability (i.e. reliability in planning for MS) of a 'core' set of elements and 'adaptability' of the work plans. The core elements are basically those included in the current DCF, and proposals for adaptations have to be evaluated against their value in improving current DCF standards.

When designing Annual Work Plans, best practices for sampling (e.g. statistically sound sampling schemes) have to be applied and implemented. This obligation should be defined in the legal text on the EU MAP. The best practice must be documented, stored centrally (e.g. in a document repository) and referenced in MS OPs and Annual Work Plans. This implies the need for a web-based storage space for reference documents and tables.

Recommendation: STECF EWG 12-01 recommends that a web-based storage space for reference documents and tables is being created in order to facilitate the application of best practices in designing Annual Work Plans.

5.1.3 Regional work plans

As the main part of the Annual Work Plans will be regional, the role and working agenda of the Regional Co-ordination Groups (RCGs) should be clearly defined.

All regional aspects of the current DCF should be revised within regional co-ordination groups and translated into regional work plans. This includes catch sampling from fisheries (using 'sampling

frames', concurrently but not by schemes) and the collection of biological data (length, age, sex, maturity).

The participants in meetings of the RCGs should be able to make decisions and agree on commitments on behalf of a MS. The constellation of participants can (and should) vary according to the tasks of the particular meeting. Besides the meeting participants, a network of contact persons that are committed to regional coordination work has to be established.

Regional co-ordination activities should be no means be limited to one annual physical meeting, but be expanded to a regular forum with several (most likely two) meetings a year, partly by video-conferencing (e.g. WebEx-like tools), and frequent exchange of information. A web-based collaboration platform should facilitate these activities.

The RCGs should use a two-step approach when designing regional work plans: 1) Setting up a regional programme, and 2) agree on task-sharing.

Need for increased involvement of data end-users and improvement of transparency on both sides. This implies participation of RFMO and Commission representatives in the RCG meetings that have the mandate to act in the name of their organisations.

End-user priorities, however, have to be ranked by the RCGs in order to design regional work plans within the (limited) capital and human resources.

Bilateral/multilateral activities/meetings following regional task-sharing should be eligible for MAP (EMFF) funding.

5.1.4 Consideration of data types in the Annual Work Plans

Transversal data: With respect to fisheries statistics, any duplication with respect to data collection requirements under the Control Regulation (Council Reg. 1224/2009 and Commission Reg. 404/2011) and other relevant legislation should be avoided. MS, however, need to have access to these data for aggregation and analysis. In order to secure sufficient quality of transversal variables, MS Annual Work Plans should provide procedures for collecting additional information that cannot be derived from existing data sources.

In order to avoid duplication of work and to allocate work tasks to the appropriate bodies, the roles of the institutions involved in the collection and analysis of transversal data have to be discussed and clearly defined in a dialogue between all relevant parties, i.e. research institutes, control & enforcement agencies and fishing industry representatives. The roles and tasks of these parties have to be described in the relevant legislation.

VMS data: Scientific institutions must have full access to VMS data, to be defined (or referred to if already existing) in relevant regulation(s).

Recommendations:

MS scientific institutions involved in data collection need to have access to VMS data and data collected under the Control Regulation.

MS Annual Work Plans should provide procedures for collecting additional information on transversal variables that cannot be derived from existing data sources.

The roles of the institutions involved in the collection and analysis of transversal data have to be discussed and clearly defined in a dialogue between all relevant parties, i.e. research institutes, control & enforcement agencies and fishing industry representatives. The roles and tasks of these parties have to be described in the relevant legislation.

5.1.5 Basic elements of Annual Work Plans

In general, the current DCF should be seen as a set of 'minimum requirements' to be included in the Annual Work Plans. In order to achieve a less prescriptive approach, however, the EU MAP should define the general rules for sampling strategies and data quality requirements and refer to the RCGs for the detailed technical planning of sampling.

Catch sampling: Concurrent sampling of fisheries should not be dictated by fixed schemes but the applied methods should be fully justified and documented in the Annual Work Plans. Under a discard ban (landing obligation), it is foreseen that less sampling effort will be employed on observer trips and deferred to harbour sampling.

Collection of biological data: Data on length, age, sex, maturity (and fecundity) shall remain to be collected, as far as possible regionally co-ordinated.

Small-scale fisheries: Annual Work Plans should include provisions for collecting data on the small-scale fleets that are not available through other sources.

Recreational fisheries: As for transversal data, only those data additional to the provisions of the Control Regulation have to be collected. The specifications for recreational fisheries data needs should be defined by the relevant end-users. If used in stock assessments, the required species/stocks, spatial, temporal and technical (gear types etc.) resolution should be defined.

Ecosystem parameters and MSFD data: The current Appendix XIII of the DCF Decision (2010/93/EU) needs to be revised in order to design data collection for MSFD (Maritime Strategy Framework Directive) descriptors that can be addressed under the EU MAP and MS Annual Work Plans. As the data sources for the state and pressure indicators are described in other places of the DCF Decision, the appendix in its current form appears redundant.

Stomach sampling: The data derived from stomach analysis relate to MSFD Descriptor D4 (Food webs), see SG report section 5.3. For the economic parameters see section 5.4 (report of SG 4)

5.2 SG 2 – Regional co-ordination and regional data base

5.2.1 Regional Co-ordination

5.2.1.1 The Current Role of RCMs

According to EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its technical Decision 2010/93/UE specifying practical aspects for data collection, actions planned by MS in their national programme shall be presented according to

the predefined regions. The scope of these regions were slightly modified by the RCMs 2008 and the following Liaison Meeting as follows

- the Baltic Sea (ICES areas III b-d),
- the North Sea (ICES areas IIIa, IV and VIId), the Eastern Arctic (ICES areas I and II), the ICES divisions Va, XII & XIV and the NAFO areas.
- the North Atlantic (ICES areas V-X, excluding Va and VIId),
- the Mediterranean Sea and the Black Sea,
- long distance fisheries : regions where fisheries are operated by Community vessels and managed by Regional Fisheries Management Organisation's (RFMO) to which the Community is contracting party or observer.

Regional coordination is recommended at this regional level and specific meetings (RCMs) are in charge of facilitating it and aim to identify areas for standardisation, collaboration and task sharing between MS. RCMs are held annually and involve National Correspondents and both biologists and economists from each MS involved in the DCF programme. As a consequence of the new regions definition, the RCM-NA was established in 2008 and arose from the merging of former RCM for the Atlantic North-East (RCM-NEA) and RCM for the Atlantic North-West (NAFO areas) (RCM-NAFO).

Within the Data Collection Framework, the role of the RCMs and their tasks in regional co-ordination are clearly defined. In Article 5 of the Council Reg. 199/2008, it is stated that "the Commission may organise Regional Coordination Meetings in order to assist Member States in coordinating their national programmes and the implementation of the collection, management and use of the data in same region". Following recommendations made at Regional Coordination Meetings, "Member States shall where appropriate submit amendments to their national programmes during the programming period".

In the Commission Regulation 665/2008, article 4, it is mentioned that RCMs "shall evaluate the regional co-ordination aspects of the national programmes and where necessary shall make recommendations for the better integration of national programmes and for task-sharing among Member States".

The terms of references of the RCMs are quite extensive, have been mostly stable for the last 3 years. They are agreed between DG MARE and the chairs of the RCMs.

1. Review progress in regional co-ordination since the [the previous] RCM (follow-up of recommendations) and [previous] Liaison Meeting report. Evaluate the outcomes of the [previous] RCM Long distance, in terms of complementarities and actions to be carried out by MS in the RCM region of competence.
2. Review feedback and recommendations from data end users; STECF EWGs and ICES benchmarks meetings.
3. Harmonise and coordinate the regional aspects in the [next year] NP proposals following the DCF framework, with particular emphasis on the following:

    a) Metier-related variables

        Ranking system following regional harmonisation of the metiers at level 6, update of the [previous] regional view on fishing activities; creation of a regional ranking system to assess the Member States obligations and demands for derogation.

Landings - sampling agreement for landings abroad; discussion/agreement on concurrent sampling; agreement on merging of metiers for sampling; sampling intensities and data quality.

Discards - creation of a regional view of the discard sampling programmes, identification of gaps and discrepancies for optimising the spatial, time and metiers coverage. Complete the list of métiers important to sample and provide scientific justification for not sampling certain metiers for discards.

Recreational fisheries - review of the actions proposed in the NP proposals, identify whether there is scope for regionally co-ordinated actions.

b) Biological stock-related variables

sampling intensities and data quality; identification of stocks suitable for International age-length keys and task sharing for ageing; possibilities for extension to regional collection of data for maturity, sex-ratio and mean weights.

Coordinate biological sampling for stocks where the sum of MS having a share of quotas/landings less than 10%, altogether exceeds 25%. (exemption rule III.B2.5.1.(b) in Decision 2010/93/EU).

c) Transversal variables

Common understanding of effort definitions in relation to data collection methodologies.

Review the discrepancies between the data recording according to the Control Regulation and the data to be collected according to the DCF as for the transversal variables.

4. Propose actions and where possible conclude regional agreements on the collection of data outlined under ToR 3.
5. Quality issues

Review progress on quality control, validation etc. in NP proposals.

Regional databases: agreement on a precise roadmap for the upload of data into FishFrame and suggest any new features/reports to be developed.

Review the outcomes of the use of COST and recommend on the best practises for quality evaluation of the collected data and in addition propose future development of the COST tool.

6. Review potential new surveys that in the future could be included in the DCF list of surveys (update the list of surveys that was made at the [previous] RCM).
7. Studies and pilot projects

The RCMs reports are further integrated into a Liaison Meeting (LM) report, where inputs from end-users and DG MARE contribute to channel RCM recommendations to the right recipient. In 2011, the LM discussed the role and added value of the LM in relation to the DCF framework. The role of the LM is to co-ordinate the work being carried out in the development of the DCF. LM provides a coherent overview of the RCM issues at both a local and generic level. The LM prevents

duplication of tasks and guides the evolution of the DCF. The LM prioritises RCM recommendations and reviews the follow up actions required.

5.2.1.2 Recent Proposals for Strengthening the Role of RCMs

Strengthening the role of the RCM has permanently been a subject of discussion, mainly in the LM. In 2009, LM specifically addresses this issue recalling that article 4 of Commission Regulation (EC) No 665/2008 stipulates that "The Regional Coordination Meetings referred to in Article 5(1) of Regulation (EC) No 199/2008 shall evaluate the regional co-ordination aspects of the national programmes and where necessary shall make recommendations for the better integration of national programmes and for task-sharing among Member States".

Also in 2009; LM acknowledged the achievements made during all the RCMs, in particular in terms of agreement on fishing grounds, naming conventions and production of comprehensive overviews of international fishing activities in all fishing grounds. The production of this information was critical for all countries to start with the new DCF, talking the same language and having the same level of understanding of the data collection programme to implement. LM advised that the RCM should now focus more on coordination at the highest level (national correspondents) and on task sharing. To that aim, the 2008 RCMs have recommended MS to provide a more detailed description of their métiers selected at the regional level.

One important point to consider for the future is the LM idea that the agenda for the next RCMs was important in preparation of the National Programmes to be written before end of March 2010. The next RCMs could then be the forum where national correspondents begin drafting pieces of programmes agreed regionally, to be put jointly within each NP proposal.

5.2.1.3 Next Steps – The Role of RCMs in the Future DCF

<u>Sampling commercial fisheries</u>

A major part of the coordination efforts of RCMs under the current DCF has revolved around the standardisation of data gathering according to a range of prescribed metier definitions and species lists. This has been coupled to the target-orientated length and age measurement requirements as elaborated in successive Commission Decisions. This approach developed further with the regional 'ranking' of metiers as compared to the national ranking procedures that were originally adopted by Member States to select the metiers to be sampled.

Parallel to these developments, a series of ICES workshops provided additional insights into various issues regarding robust statistical approaches to sampling the commercial fisheries and this led to a modified perception of the revised DCF in which 'quota sampling' of metiers was deprecated and replaced, or with planned replacement, by schemes that incorporate probability-based sampling of units defined within a larger sample frame. In addition, experience of the current DCF implies that within the resources available, there are limits to what the Member States can deliver with meaningful precision.

Set against this, the development of statistically sound sampling schemes is likely to have consequential effects on the concept of regional coordination. If it can be assumed that Member States within a region develop statistically sound schemes for sampling commercial fisheries, then regional coordination will revolve around the stock/species-orientated sampling priorities based on regional assessment and advisory needs. At one extreme an individual Member State's scheme

could be seen as a stratum within the overall regional sampling activity, but with its priorities and sampling levels coordinated at the regional level. Where an appropriate sample frame could be defined across borders, then supra-national strata could also be defined and in either case, nationally important issues that may have a lesser priority in regional terms could also be accommodated.

In this framework, although it is envisaged that priorities would be set at the regional level, RCMs cannot be allowed to establish unreasonable obligations upon Member States and any regional programme would need to be achievable at the available resource levels. This in turn requires end-users (specifically the advisory bodies with MoUs reporting ultimately to the Commission and the Commission itself) to liaise closely with the RCMs regarding the species/stocks for which sampling must be prioritised and for the RCMs to liaise also with Member States over any potential derogations from sampling obligations. In this way a regional sampling programme could be elaborated with responsibilities devolved to individual Member States via their annual operational plans.

This comprises a fundamental shift away from the coordination of an overly prescriptive set of sample requirements, and reformats the RCMs as 'enabling groups' to deal more efficiently with data collection; a move towards collaborative decision-making on what actually needs to be collected regionally. In addition, it would be for the RCMs to determine whether for a given resource base it was preferable to take fewer samples from more species or vice versa. Again, this implies close liaison with the end-users.

As part of the overall process, the RCMs would also act as a channel to help evaluate Member States' sampling programmes and to convey common standards from expert groups where appropriate.

End-user involvement as described above is considered essential to this process in part to manage expectations and to avoid increasing (demand-led) obligations set against a static or diminishing national resource availability, but more importantly to improve transparency between Member States' activities and the end-user requirements. On their behalf, Member States must ensure that their staff attending the RCMs have the authority to take part in decision-making to which the Member State can consent. Similarly, end-user and Commission representatives must also have sufficient authority to consent to such decisions. Without effective collaboration by the participants in these roles, the preceding proposals amount solely to wishful thinking.

Recommendation: For RCM activities to be given greater authority in determining regional sampling programmes and to oblige Member States and relevant end-users to collaborate fully in RCM activities when assessing and agreeing priorities within regional sampling programmes.
Recommendation: To identify relevant end-users whose active contribution to RCM duties will be required to ensure full collaboration with Member States in defining the regional sampling programme. By whom: Liaison Meeting and STECF By when: needs to be in place prior to RCMs in advance of firtst national annual programme submission

Additional points:

- RCMs may require external funding to invite otherwise unfunded experts to attend their meetings on specific issues. Such participation to be agreed between the Chair and the Commission;
- Task-sharing is alluded to under the discussion of supra-national strata, above, but additional avenues would also have to be explored, for example, operational decisions on sharing activities such as otolith reading between institutes ;
- Since 2010, five RCMs are established for clearly defined regions: Baltic (BAL), North Sea & Eastern Arctic (NS&EA), North Atlantic (NA), Mediterranean (MED) and Long Distance Fisheries (LDF). The rationale between the area split is mainly based on regional differences concerning the countries involved in the fisheries, types of fisheries and the RFMO serving a certain region. Given the expected changes in scope of the RCMs and an anticipated additional workload, RCMs may wish to reconsider the geographical scope of their operation whilst seeking to maintain an alignment with the areas covered by the RACs. For example, amongst the RCMs, NS&EA and NA share the most of common issues in terms of species involved (including widely distributed species), types of fisheries and Member States involvement. This might be considered as a basis for further cooperation.

Recommendation: Reconsider the geographical scope of the RCMs in the light of new tasks and scope under the new DCF. By whom: RCM NS&EA and NA 2012, Liaison Meeting and STECF By when: September 2012

5.2.2 Regional database

Current state of play in the different regions

The STECF EWG 11-19 pointed out that regional databases (RDB) have a considerable potential to

i. were appropriate enable implementation of a regional approach to sampling programs and regional management of data,
ii. in cases were data is collected but for different reasons not transmitted to end-users, decrease problems with data deficiencies through more centralised transmission processes and
iii. increase transparency on how data sets are compiled enabling assessment of quality.

All these issues are of fundamental importance for the Data Collection Framework. The EWG thereby recommended that regional databases are considered in a revision of the present DCF and that efforts are made by the Commission to facilitate the use of RDBs where Regional Coordination Meetings find it appropriate. The RDB concept is also supported by the STECF plenary (e.g PLEN 11-01).

Needs and perceived benefits of a regional database for different regions and for the different modules in the DCF have been discussed throughout the years in the RCMs and were examined by the workshop on "Regional scenarios and roadmap on Regional Database" (2010). A strong need for a regional database (containing detailed sampling data and transversal data (incl. VMS)

aggregated at a low level) was expressed by participants from the Baltic (where a regional database already is used) and North Sea regions. For the North Atlantic region the opinions were divided. Participants from some Member States saw the possibility to improve the quality of data and data management through a regional database while other considered the present situation with national databases satisfactory and saw a risk with increased workload. At the time of this meeting participants from Mediterranean Member Stares saw no need for a regional database holding biological and transversal data since stock distributions in most cases are limited to a given country. Data on large pelagics, which are the most prominent shared stocks, are already shared by RCM Med&BS to establish common annual sampling plans by other easily usable ways and further already managed by ICCAT.

The economists saw at the time being no need for a regional database for economic variables since these are collected on a supra regional level. Data collection on the economic situation of the aquaculture and processing industries are new and the participants did not have a clear view if a regional database was needed to store these data at the time of the meeting (Anon, 2010).

5.2.2.1 Regional databases for biological data

The RCMs responded to the outcome of the workshop in their 2010 meetings and the RCM Baltic, RCM NS & EA and RCM NA suggested a steering committee for the RDB to be set up. This was supported by the 7th LM. As a consequence an interim steering group for the RDB was compiled and this group developed a proposal on how the regional databases could be managed (Fig 6.2.1). This proposal included i) identification of the RCMs as the bodies governing content in the database and responsible for development of data processing features within the database from a user perspective, ii) establishment of a formal steering committee responsible for technical governance, operational and strategic issues, iii) composition of the steering committee (host, 3 persons appointed by each participating RCM), iv) establishment of ICES as the database host and v) selection of the existing database FishFrame as platform. The proposal intrinsically implied that there will be one supra regional database from a technical point of view for these RCMs but that the regional databases will be kept from a content point of view since the RCMs could prioritise differently. The proposal was accepted and in 2011 a formal steering committee was put together.

The present proposal covers regions (RCM Baltic, RCM NS&EA and RCM NA) and Member States (RCM reports 2010) that have expressed a need and support for a regional database. It is however by no means exclusive to other Member States or regions that perceive a regional database beneficial.

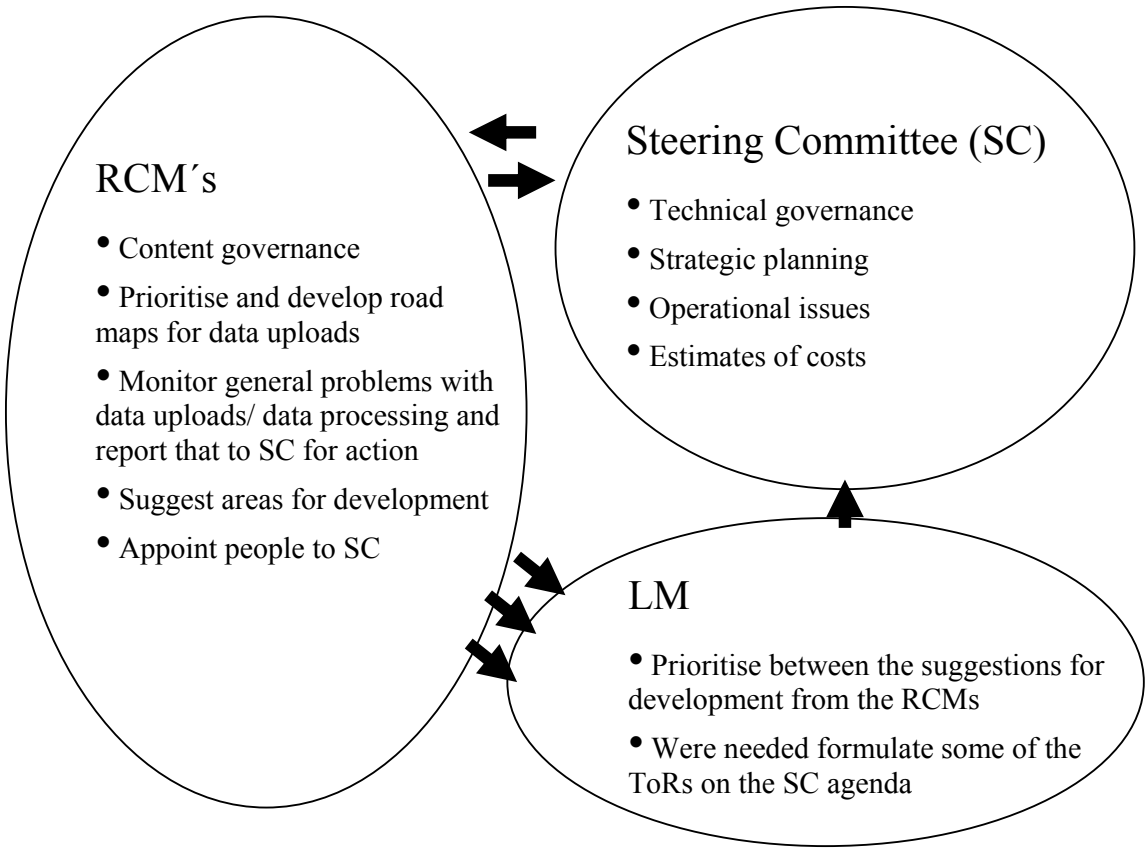

Fig 6.2.2.1. Governance model for the Regional Database in the Baltic, NS & EA and NA regions

Most MS in the RCMs supporting the RDB uploaded transversal data into the RDB prior to the RCMs allowing the RCMs in their 2011 meetings to work more or less on the basis of the RDB. For 2012 there are plans for RCM data calls also for sampling data.

Most MS participating in the RCM Med&BS 2011, have reconsidered their position from its Varna meeting in 2010 on the usefulness and adequacy of a Mediterranean RDB and want no longer to limit a RDB to large pelagics and surveys. The reconsideration is a response to the outcomes and recommendations from the STECF plenary (STECF PLEN 10-1) and SGRN (EWG 11-01) but also considering

- the general trend of DCF to improve the use of data collected under the DCF;
- the improvements to facilitate extraction of validated datasets under common formats by implementing RDB;
- the LM, SGRN and STECF recommendations pushing MS to collaborate for implementing such data bases at least at RCM level;

- the possible changes in stocks assessment (i.e. a better knowledge on stocks boundaries for the Mediterranean species);
- the increasing GFCM requirements, especially with annual Task 1 data calls;
- the future DCF requirements.

To analyze the relevant perimeter and covering of the future Mediterranean RDB, RCM Med&BS requested PGMed to propose priorities in terms of thematic and technical issues, types of data and aggregation levels, management and financial issues. RCM Med&BS 2011 also appointed members to a steering committee and proposed that the steering committee will review the outcomes of PGMed 2012, propose a framework and a roadmap to NCs and to RCMMed&BS 2012 for advice. The PGMed provided in their meeting 2012 a road map on how a regional database can be implemented in the Mediterranean region.

5.2.2.2 Database for economic data

At present, economic data (fleet, aquaculture and processing) are requested every year by the Commission for the compilation of the Annual Reports on the Economic Performance of the fleet, the aquaculture sector and the processing sector. These reports are based on economic analysis of economic data aggregated at the level required by the current DCF. These reports are public and contain statistical appendixes with a compilation of all relevant data. The reports, as well as aggregated data, are downloadable from the data collection web site managed by the JRC.

Disaggregated economic data at the level of sample units (vessel, aquaculture enterprise, processing enterprise) are stored in national databases.

The implementation of a central database from where end users can get the data at the desired aggregation level presents several issues to be addressed:

- Identification of possible end users and their scientific needs
- Definition of common formats for transmission of data to the central database
- Consideration of confidentiality and privacy problems related to the dissemination of socio economic data

- Identification of resources (technical and monetary) to implement the database
- Identification of the organization that should handle the database

With regards to regional data bases that are currently under implementation for the biological data, the group considers that:

- transversal variables should be available also at the resolution level compatible with the economic analysis
- the Mediterranean regional data base could include economic data as in this case the region matches with the supra-region

<u>How will future DCF needs be addressed by the regional databases?</u>

The RDBs have so far been promoted by the RCMs primarily as a tool to enable regional overviews of fishing activities and sampling in order to facilitate task sharing at the regional level. This means that the RDB constitute a depository for sampling and transversal data allowing for regional analysis of available data as well as sampling coverage on a temporal and spatial scale. As such the RDBs will be a prerequisite for effective work in the RCMs and thereby an essential part of a new DCF if the role of the RCM is strengthened. The RDBs could also provide other end users with meta information of available data implying that the RDBs could play an important role to increase the transparency on data collected within the DCF to the outside world. The RDB further constitutes a platform from which standard reports can be produced. These reports could supply international data calls and thereby simplify data management within the MS.

The RDBs have however considerable potential to meet more requirements if/when the RDB is evolving. In the Baltic region, the RDB is also used to raise and process some of data for stock assessment allowing for transparency in how the data sets are compiled. This process has recently been supported by a WK hosted by ICES. However, if the process should be expanded to other regions, this may need evolvement of data processing moduls and revision of exchange formats. The RDBs further have potential to allow for quality estimation on a regional (and national) level. This is though dependent on recourses to develop and integrate tools (e.g the tools developed in the COST project) for quality estimation within the RDB as well as requirements on statistically sound sampling designs at the MS level.

It is important to realise that what limits the RDB in long run, is the type and aggregation level of the data put into the database. If data is aggregated at any level it will restrict the analysis to this level of aggregation. The usage of the RDB will in the long run also be dependent on how data processing modules are allowed to evolve. In the governance model of the RDB in the Baltic, NS & EA and NA regions the RCMs are responsible for the content governance the RDB. The RCMs can also indicate priority areas for development, reports and data requirement. This means that the RCMs will be responsible for how the RDB evolve and what future needs the database can meet.

The EWG 12-01 concludes that the RDBs have a considerable potential to facilitate the work in the RCMs and make it much more effective. The RDB can further play an important role in increasing the transparency in the data collection – assessment – advice process. The usage of the RDBs is though for most MS novel ground and it is important to facilitate the process for the MS and the development of the RDBs themselves. In order to achieve this, EWG 12-01 realises that a step by step approach need to be taken and advice that requirements for the RCMs are prioritised since the RDBs would facilitate this work considerably. When the RCM needs are met, the RDBs could further be developed towards preparing data for assessment.

In a revision of the DCF it is important to create a legal basis for the RDB and to secure funding for development and management of the RDBs.

5.3 SG 3 - Survey sub-group report

Most EU Member States regularly conduct research surveys of marine fish resources to provide fundamental data for assessing the condition of the exploited fish stocks and for monitoring general conditions of the marine ecosystem. Some of these surveys have been eligible for funds within the present EU Data Collection Framework (DCF). In 2010 all MS surveys have been reviewed by the Sub-Group on Research Needs (SGRN 10-03). At the SGRN 10-03 meeting an approach for reviewing the surveys was established. The STECF-EWG 12-01 found that this approach could be used for future review of surveys.

At the EWG 12-01 the pros and cons for having a fixed survey or a more flexible survey list have been discussed. There is a general agreement was that a more flexible approach would be preferable. Though, flexibility should be managed carefully for consistency reasons. It should be bared in mind that for all survey data time series are crucial.

5.3.1 Review of the research surveys prior to the implementation of the new DCF

EWG 12-01 regards the survey review procedure used by SGRN 10-03 and endorsed by STECF as appropriate for future evaluation of (the list of) surveys. This implies that any proposals for changes (additions and deletions) of the list of surveys should be accompanied by the necessary information, discussed at the appropriate Regional Co-ordination Meeting (RCM) and put forward to the attention of STECF (eventually via a separate survey review expert working group).

In terms of timing, proposals for revisions of the list of surveys should be available in June 2012, discussed at the RCMs in July-September 2012, incorporated into STECF EWG 12-15 on the DCF review (part 2) and endorsed by STECF Plenary in November 2012.

The review approach is as follows:

- Standard criteria, scoring rules, and criteria weightings for evaluating the surveys should be adopted and approved by the STECF before the surveys review meeting rather than abrogating this responsibility to the coming Review Group.
- Surveys should be evaluated on the completeness of the background information. They should be rejected for funding if the background information is seriously incomplete.
- The evaluation should include a criterion that measures data quality. At a minimum the background documentation should provide basic information on survey design (e.g., fixed versus random stations) and coverage (e.g., km2 of survey area per station). Sampling errors of survey indices for key target species would be even more informative.
- The evaluation of ecosystem variables should include a criterion that measures a survey's potential to produce ecosystem data for fisheries management in addition to the data actually produced.
- The evaluation should include a criterion that measures the "importance" of the target stock(s) (e.g., "value" or overall size). Because this criterion has political, economic and social dimensions, and because surveys require significant expenditures of public funds, discussions regarding how to define and measure importance should involve fisheries management authorities and a broad range of users.
- Given that the Member States provide substantial part of the funding that supports these surveys, the evaluation criteria, rules and weightings should be developed in full cooperation with the Member States.
- Given that the surveys may provide information that is critically important to stock assessment working groups and advisory bodies, these entities should be informed of the review process and the rules governing its operation.
- To provide background documentation for the review the responsible party for each proposed survey should prepare a brief proposal that (a) clearly states what information each survey is designed to supply (data gap or data requirement by species) and (b) responds to the specific criteria against which the surveys are to be evaluated. Proposals for new surveys should also explain what added contribution they would provide relative to existing surveys. These proposals should conform to a standard template that has been approved by STECF in 2010 (table 1).

- For any fully integrated survey the responsible survey working group (e.g., WGMEGS, IBTSWG) should be asked to prepare the master document describing the survey and its ability to address the evaluation criteria.
- Well in advance of the surveys review the evaluation criteria, rules and weightings should be advertised to the parties responsible for the surveys to allow them adequate time to prepare appropriate documentation.
- Prior to the review meeting the reviewers should be given a summary for each survey reporting the main information that will be used for the evaluation.

5.3.2 Assigning the overall scores

The EWG 12-01 reviewed the approach used by the SGRN 10-03 where six criteria was specified and to use priority (1, 2, or 3) for each proposed survey. Furthermore, weightings were assigned to the eight criteria (1b, 1b, 2a, 2b, and 3 to 6).

Criteria weightings:

Criterion	Weight	Criterion	Weight
1a. Internationally coordinated	15%	3. Data access	5%
1b. Harmonised	15%	4. Survey coverage	10%
2a. Fisheries management	35%	5. No duplication	10%
2b. Ecosystem management needs	5%	6. History of use	5%

The SGRN 10-03 documented the weighing as the following: Down-weighted criterion (2b), ecosystem management needs, because the agreed scoring system gave unfair advantage to bottom trawl and beam trawl surveys, which are the only types of surveys required under the current DCF to produce ecosystem indicators 1-4. The SGRN 10-03 could not evaluate other possible ecosystem variables because the background information did not provide the required information. Also, as yet there are no clear uses being made of the DCF ecosystem indicators nor are there accepted objectives for ecosystem based fisheries management. In contrast, criterion (2a), fisheries management, was up-weighted because stock assessments and the process of providing fisheries management advice make regular and direct use of survey indices and data. Criteria (3), data access, and (6), history of use, were down-weighted because these criteria are already measured by criterion (2a), fisheries management. A survey that did not have accessible data and did not have a history of use would score poorly with respect to fisheries management. Also, data access is already a requirement under the DCF. Criteria (4), survey coverage, and (5), no duplication, were slightly down-weighted because these criteria were difficult to fairly evaluate from the available information.

The EWG 12-01 suggest that the weighing criterion should be reviewed as for some regions the management of the fish stocks in near future probably will be based on an ecosystem management approach.

5.3.3 Survey evaluation after the implementation of the new DCF

As mentioned above it is recommended that the survey list should be flexible in sense that new surveys could enter the list. Furthermore, if a surveys it could be one MS part of a survey of the whole survey as such (like IBTS) do not meet the standards for the specific survey or the data from a surveys is not used by the data end-user it is proposed that the survey is put on an observation list. If a survey after three years on the observation list the survey will no longer be DCF eligible.

In order to obtain an update of the present surveys no matter whether they are DCF eligible or they are carried out on MS national funding and to obtain a comprehensive overview of the survey needs and in particular the gaps in the information needed to provide advice for the CFP and if the survey can provide useful information for the MSFD (e.g. descriptor 4 –food webs), it is proposed that the different RCMs during 2015 should complete a list of all the research surveys carried out within each the region and at the same time initiate a review of these surveys

Table 6.3.3.1. Survey evaluation criteria and scoring rules.

Criterion Score = 1 Score = 2 Score = 3

Criterion	Score 1	Score 2	Score 3
1a. Internationally coordinated	Activities for this survey and related surveys are coordinated by a specific expert group associated with an international organization such as ICES.	The survey has some international coordination (e.g., bilateral agreements); or, the survey details are available to expert groups but are not fully coordinated.	The survey is only national in scope and is not governed by any international group; or, the survey is not coordinated with other related surveys; or, insufficient information was provided for this evaluation.
1b. Harmonised	There exists a survey manual or protocol, developed by an appropriate international working group; and, there is broad compliance with the agreed protocol.	There exists a survey manual or protocol, developed by an appropriate international working group; and, there is broad compliance with the agreed protocol.	A survey manual exists but there are non-compliance issues; or, harmonisation and the manual fail to agree on critical issues (e.g., acoustic target strength); or, harmonisation and a manual are in development but not in use (e.g., Nephrops television surveys). There is no appreciable harmonisation with surveys of a similar kind.
2a. Fisheries management	Survey indices are used to provide a basis for management advice, either as tuning fleets in the assessment(s) or in other ways such as providing biomass or recruitment trends, or identifying essential fish habitats.	Survey indices not actively used in assessment(s) or to provide advice, but their use is expected in the near future; or, indices are used in assessment(s) but provide very short or unproven time series.	No evidence of survey indices being used in assessment(s) or to provide advice.

2b. Ecosystem management needs	The survey provides the DCF ecosystem indicators 1-4 and additional ecosystem-level data are available.	Improvements are needed to provide fully the four DCF ecosystem indicators; or, the survey is limited in scope (e.g., one target species, small geographic area).	The survey does not collect the four DCF ecosystem indicators and does not provide any substantial ecosystem-level data.
3. Data access	Data are freely available to working groups and other data users. For bottom and beam trawl surveys: data are available in an international database like DATRAS (ICES). For other survey types: data are available through integrated databases managed by individual institutes.	Data are available from Expert Group chairs but are not fully available in integrated databases. For bottom or beam trawls in the Atlantic or North Sea or Baltic Sea regions: data are not submitted to DATRAS.	No data are provided to any appropriate Working Group; or, no information was provided for this evaluation.
4. Survey coverage	The survey completely covers one or more management units for one or more target species.	The survey does not completely cover any single management unit for any target species.	The survey does not completely cover any single management unit for any target species; and, it is not supplemented by other harmonized surveys that cover the rest of the distribution area.
5. No duplication	The survey does not overlap with any other survey in space, season or survey type.	The survey has partial overlap with another survey in space, season or survey type.	Where a survey appears to have almost complete overlap in space, season or survey type with another survey.

5.4 SG 4 – Economic issues

5.4.1 Harmonization of aggregation levels of biological and economic data

The Group discussed the way that the DCF had helped to improve the provision of data and the areas where it has not been able to produce the desired outcomes.

The incorporation of clearer definitions for variables and outputs has been seen to be a very positive impact. For example, over the period of the DCR and the DCF there has been increasing levels of refinement of definitions of concepts and definitions for Member States to use when collecting data. For example, the DCR/DCF has seen the increased availability of definitions for economic variables, with these being developed to be consistent with other areas of data collection.

The differences that exist between Member States in terms of fleet structures and industry composition means that methodologies that work for one Member State are not necessarily transferrable to others. As such it is considered that the experience of this work across several areas in addition to the collection of data related to economic indicators needs to be recognised within the DCF.

It was thus a general conclusion from the discussions that the DCF should not prescribe the detailed level of work that should be done in a Member State. Rather that the DCF should define the data to be provided, and set requirements on Member States to provide such data along with details of how it was produced in response to data calls, but the DCF would **not** include detailed elements that set out how such data should be collected. Member State should have the flexibility to decide on the exact nature of the method used to provide the data that suits their circumstances – be it actual collection of data or estimation.

The DCF should provide standard definitions for the variables that should be collected so that the outputs collected across the EU are of a consistent definition across the EU and are thus comparable. The DCF should not prescribe the detailed collection process that a Member State should follow.

Such a position is an acceptance that the more detailed data cannot be collected consistently across all Member States, and as such specifying that it has to be collected is not a valid position. This does have a clear implication for the future development of the use of bio-economic modelling – by allowing more pre-aggregations this does mean that the information at the more detailed levels may only be seen through derived imputation rather than direct estimation. This principle is consistent with the work so far to investigate methods for using transversal variables for the disaggregation of high level economic data.

Member States should not be required to produce estimates for ALL fleets within its industry. Rather there needs to be a process under the RCMs to identify the fleets that are the priority for work at the EU level within a region, and those should be the priorities for work in Member States. This prioritisation of work would have two benefits:

- The work to produce economic indicators would be focussed on key metiers so that both biological AND economic data would be available at comparable levels of detail that would allow bio-economic modelling to be carried forward.
- The costs of producing economic data for "minor" fleets are usually proportionally greater than for key fleets. As such removing the requirements for such collection would allow for the available resources to be more flexibly used – for example,
    - more resources could be devoted to work related to the key metiers identified at the EU level,
    - resources could be targeted at fleets that are national rather than EU priorities,
    - exercises to help with the disaggregation of economic data to more detailed levels (for example, funding exercises to gather more detailed cost information from vessels that will provide "benchmark" patterns of cost).

During the discussions of the Group and of the meeting as a whole there have been several statements that the DCF needs to be driven by the needs of end-users. The exact details of who the end-users are has not been defined, but it has been stated that this needs to be a very open definition. This could give a very wide expectation of what data would be available, and so the role of the DCF in terms of what it is there to support and thus the areas where end-users can expect to find covered in the data collected does need to be clearly stated to manage these expectations. (?)

5.4.2 Confidentiality of data

The Group discussed the issues related to the confidentiality of data and the resulting impact on the supply of data from Member States in response to Data Calls, where some Member States refuse to supply data due to usually the low numbers of vessels or enterprises involved.

Some general comments were raised:

Firstly, this is a complex area where there is a conflict between the requirements to supply data and the legal responsibilities on organisations within member States to preserve the confidentiality of data. There has already been a significant level of work on this issue by commission legal services and as such if there is a solution then a consideration of the legal issues needs to be made, which the Group could not do. However the discussion of the group did identify some possible methods that could be investigated further. The group considered that in the DCF there should be clear rules on when a MS may reject delivering data to the end-user on the basis on confidentiality and what is the process or dialogue which then follows between MS and end-user.

Secondly, this problem is likely to get worse. The reductions being seen in the numbers of vessels involved in some segments and the reduction in the number of primary producing companies for parts of the processing and aquaculture sectors, along with the data calls becoming more and more detailed does mean that this conflict is likely to be seen more frequently.

The group discussed the use of various options – for example, the use of clustering within Member States. However, this was not seen as a viable solution for all cases in that with a very varied fleet structure clustering may be a possible way of incorporating the data for a fleet that would otherwise be disclosive, it cannot be guaranteed as a way of suppressing confidential data. For example, if there is only a limited level of clustering involved, comparison of the national totals and available fleet data can lead to the data being identifiable.

The discussion identified that a key concern should not be related to the supply of data related to a data call but rather the state of data when published. Note - a key point in these options is that the supply of the fully detailed level data from a Member State is possible, with the assumption that final published results are NOT disclosive as such various options for aggregation at the EU level were identified for investigation:

Option	Points in favour	Points against
Aggregate with other data within other fleets at national level	Preserves integrity of data within the national data	May not be possible to do this – for example if activity can still be identified by difference – as such to be viable it may require suppression of data across several fleets rather than just the one for which data would be disclosive

Aggregate results at national level – as such	Preserves integrity of data within the national data	May not be possible to do this – for example if activity can still be identified by difference – as such to be viable it may require suppression of data across several fleets rather than just the one for which data would be disclosive
Aggregate results for fleet with those from other Member States at the EU level at the region level	Would allow conclusions at the EU level to be drawn as the data would include the full EU data	May not be possible to do this – for example if activity can still be identified by difference by comparison with the national level results for the fleet/region concerned– as such to be viable it may require suppression of data across all Member States rather than just the one for which data would be disclosive
Aggregate results for fleet at EU level for the supra-region	Would allow conclusions at the EU level to be drawn as the data would include the full EU data	May not be possible to do this – for example if activity can still be identified by difference by comparison with the national level results for the fleet/supra-region concerned – as such to be viable it may require suppression of data across all Member States rather than just the one for which data would be disclosive

5.4.3 Precision targets

There were clear targets for the economic data collection in the previous DCR regulation defined in terms of precision level. However due to methodological problems and high variability of economic data, especially those indicators dependent on the effort (economic data should be collected for vessels fishing more than 1 day per year) any clear quantitative targets been withdrawn from current DCF regulation. MS are requested to provide quality indicators in the Annual Reports, as recommended by STECF.

STECF EWG 12-01 discussed possibility to include clear quantitative targets for economic data collection in the future DCF and agreed to keep current system where MS are providing targets in terms of planned sample and assess quality of data collected. It is agreed that PGECON could investigate quality indicators achieved by Member States in order to compare the results and improve the methodologies adopted in case of low qualitative results.

5.4.4 Economic variables

STECF EWG 11-18 recommended compiling the glossary of definitions of economic variables which should be available for the revision of the DCF. The group proposed that only one annex with general definition for all three sectors (fleet, aquaculture, processing) should be included in the future DCF. This will ensure that definitions across the three modules are the same for common variables. STECF EWG 12-01 discussed the importance of glossary for the future DCF and Recommends to the Commission to compile the glossary as soon as possible. It is also recommended to delete last two

columns of the Appendixes VI, X and XII (Definition and Guidelines) of the Commission Decision in the future DCF as glossary would be part of DCF.

Addition important revisions of variables could come from the compilation of the glossary that will improve some definitions of the current economic DCF variables. All footnotes in the Appendixes with the economic variables should be reviewed and harmonized with the provisions of the proposed glossary.

The Group discussed if there is a need to expand subsidies data collection, defining subsidies in more precise way and including subsidies for investment (horizontal for fleet, aquaculture and processing sectors) as well as necessity to collect data on indirect subsidies as fuel subsidies for fleet in the future, as it could have a crucial importance for the cost structure. Group agreed, that the information regarding the investment and cessation subsidies paid per enterprise/vessel is publically available through the administrative data sources, however there is no information to which fleets or aquaculture segments it is targeted. The EWG 12-01 agreed that there is a need to improve definition of subsidies however the necessity of additional indicators should be decided by the end users.

The EWG discussed the possibility to add some new socio-economic variables as age structure of employees and gender distribution. Due to stability of this kind of data it is considered to collect it few times per programming period (e.g. second and fifths year of data collection). The age structure is considered as very important for fishery, while gender is more important for aquaculture and fish processing where women are more involved in the production.

Due to new regional approach in fisheries management and possible necessity to analyze spatial distribution of fishery, aquaculture and fish processing it is recommended to evaluate possibility to report data on spatial distribution of some socio-economic indicators (e.g. employment, value added, number of vessels/enterprises, value of production, etc). This should not lead to the collection of additional information and could be done few times during programming period as there is no need to do it annually. The necessity of this kind of data presentation and administrative disaggregation level (NUTS 2 of NUTS 3) should be assessed and justified on the regional level depending on the needs of end users.

EWG pointed out, that market information is missing under the current DCF. There were projects funded by the Commission with the purpose to establish the market observatory in the fishery sector, however the results are not available for the public yet. May be DCF should consider results of the market observatory programme in the future.

5.4.4.1 Fleet data

EWG agreed on importance to keep the current segmentation of the fleets in order to ensure consistency between data series. However additional disaggregation of the data could be justified and discussed on the regional basis depending on the management tools used. The study to disaggregate economic variables at metier and/or geographical areas, proposed by STECF EWG 11-18, would be useful for additional data disaggregation purpose in the future.

EWG 11-18 made an exploratory analysis to investigate possible new topics to be included in the future DCF. Some additional variables have been suggested (financial depreciation and interest costs, number of unpaid FTE), while historical depreciated capital value is proposed to be removed.

EWG reviewed the recommendation produced by EWG 11-18 and agreed that the following points should be revised in the present DCF:

- change the word “replacement” into “current”;

- delete the variable “Value of physical capital: depreciated historical value” from appendix VI;

- include financial (monetary) costs related to capital flows: depreciation costs (calculated on actual financial statements like balance sheets) and interest costs

- rename the variable "Wages and salaries of crew" into "paid labour of the crew" and "Imputed value of unpaid labour" into "unpaid labour of the crew".

- include in the DCF an additional variable on the number of unpaid FTE, in order to be consistent with SBS.

EWG discussed the previous recommendations and agreed with necessity to change the footnote n. 13 in the Appendix VI as it is misleading because it specifies that the financial position ratio can be regarded as "% debt in relation to total capital value (as defined above)", in this referring to the capital value estimated by the PIM method (note 9 of the same Annex). Since financial position is a ratio, debt and assets should come from sources that are consistent. PIM includes only tangible assets while the balance sheet - the most used source for getting the value of debts - could include also intangible assets in case they have been purchased. Those it is recommended that the two item of the ratio (debts and total asset) should be drawn from the same source (balance sheets).

Regarding the concentration indicator as number of enterprise by size category, the necessity of having this information on fleet segment level is questionable, as one enterprise could be accounted in several fleet segments and the benefit of this information is unknown, it is recommended to collect and provide number of fishing enterprises/units by size category only on national totals level.

EWG recommends using total GT and total kW instead of average GT and average kW (Appendix VI of Com. Decision) in the future as MS are already asked for this information and averages are not used for the analysis and could be calculated in the future if needed.

5.4.4.2 Aquaculture and fish processing

EWG 12-01 recommends following proposal of EWG 11-18 to separate debt indicator in Appendix X and XII to short and long term debts (as defined in article, 9, item C of the IV Council Directive 78/660/EEC).

EWG recommends to amend Footnote 7 of Appendix X and harmonize it with the proposed glossary.
There is also question if extraordinary costs, which are not dependent on the ordinary activity of the enterprise, should be collected or now.
Regarding the enterprises by size category, the necessity of having this information on segment level is questionable, those it is proposed to collect this data on aquaculture sertor level.

Group discussed possibility to harmonize the segmentation with EUROSTAT. EUROSTAT recently started to collect data for aquaculture (Reg. No 762/2008 of 9 July 2008 on the submission by Member States of statistics on aquaculture). Some indicators as value of production (by specie), structure of the sector (capacity), input to capture-based aquaculture (volume and value) are collected by EUROSTAT. The data is segmented by technique which is more precise then in DCF. Main land based techniques are not distinguished in DCF as collection of fresh water aquaculture was not obligatory in DCF. Possibility to separate ponds, tanks and raceways, enclosures and pens and recirculation systems for fish aquaculture should be assessed. Possible costs of increasing disagregation level should be evaluated as well.

The EWG 12-01 recommended adding questions on future DCF needs and aquaculture segmentation to the ToRs of STECF EWG 12-13 on economics of aquaculture and DCF WG on aquaculture which is proposed by STECF EWG 11-18 and should meet in 2012.

The main issue with processing data collection is absence of the link between fish processing and fishery, closing the possibility to evaluate the influence of fisheries management decisions on the behavior of fish processing sector.

STECF EWG 12-01 strongly recommends adding volume and value of row material by specie in the future DCF, otherwise there is no need to collect additional data for this sector as Structural business statistics and PRODCOM data could be used.

STECF EWG 12-01 is also recommending collecting raw material by origin. It is proposed to use this origination:

- Domestic
    - Aquaculture
    - Capture production
    - Other
- EU
- Non EU

STECF EWG 12-01 recommends reducing number of costs items collected and combine operation costs including energy costs, raw material costs and other operational costs. However value of raw materials needs to be separated as stated

5.4.5 Transversal variables

EWG discussed the option to delete data collected by CR from the future DCF, however there is no obligation in the control regulation to provide the information at the aggregation level as DCF needs. It is advisable to keep the list of the variables needed by DCF. Moreover not all fleet segments are covered by CR and MS are using different approaches to collect effort data for coastal fleets.

In addition, 36th STECF Plenary recommended that that data collected under the CR should not be included in the DCF unless it is to be expected that the quality of the data collected under the CR does not fulfil the quality requirements of the DCF. STECF further recommended including in the new DCF commitments for MS to set up at national or regional level, a system to encourage cooperation between control authorities and the NP of the DCF. This co-operation system should address all issues of relevance for the collection and processing of data to be collected under the CR and the DCF.

RCM NS&EA in 2009 recommended considering making submission of the following Transversal Variables optional:

- number of trips / hours fished for RCM Med&BS
- number of rigs
- number of fishing operations
- number of nets/length
- number of hooks/number of lines
- number of pots, traps
- soaking time

STECF EWG 12-01 discussed this possibility and agreed that necessity of collection of such indicators and their aggregation level should be discussed and agreed on the regional level. However core indicators, which are covered by control regulation or could be derived from control data (GT days and kW days), should be covered by future DCF.

5.4.6 Database for economic data

At present, economic data (fleet, aquaculture and processing) are requested every year by the Commission for the compilation of the Annual Reports on the Economic Performance of the fleet, the aquaculture sector and the processing sector.

These reports are based on economic analysis of economic data aggregated at the level required by the current DCF. These reports are public and contain statistical appendixes with a compilation of all relevant data. The reports, as well as aggregated data, are downloadable from the data collection web site managed by the JRC.

Disaggregated economic data at the level of sample units (vessel, aquaculture enterprise, processing enterprise) are stored in national databases.

The implementation of a central database from where end users can get the data at the desired aggregation level presents several issues to be addressed:

- Identification of possible end users and their scientific needs
- Definition of common formats for transmission of data to the central database
- Consideration of confidentiality and privacy problems related to the dissemination of socio economic data
- Identification of resources (technical and monetary) to implement the database
- Identification of the organization that should handle the database

With regards to regional data bases that are currently under implementation for the biological data, the group considers that:

- transversal variables should be available also at the resolution level compatible with the economic analysis
- the Mediterranean regional data base could include economic data as in this case the region matches with the supra-region

5.4.7 Regional coordination

The group identified the following areas that should be dealt in a regional context:

- Definition of effort variables and of the level of aggregation
- Identification of specific needs for disaggregated economic fleet data
- Aggregation of fleet data that cannot be disseminated at national level because of confidentiality problems
- Discussion on compilation of indicators to assess the importance of fishery and related activities at the level of administrative areas.

These issues should be addressed by economists:

- during the Regional Coordination meetings (RCM)
- or, in case RCM will be restructured to address only the coordination of biological activities, during a specific session of the PGECON where economists could work in regional subgroups.

5.5 SG 5 - Exploring possibilities for the integration of genetic monitoring into the DCF

5.5.1 Rational

The integration of genetic data into the DCF could provide valuable information for fisheries management as well as spatial and temporal trends within exploited fish stocks. At the 36th Plenary Meeting of the **STECF (PLEN-11-01)** outcomes of the FP7 funded project FishPopTrace, which performed extensive population genetic analysis on marine fish, including on historical samples, were presented and documented in the resulting report. STECF "noted a number of 'key' outcomes of potential direct relevance to fisheries management and the provision of scientific advice to the European Commission, namely: Spatial and temporal genetic stock identification and differentiation." Furthermore "STECF acknowledges that the identification of discrete stocks is an important requirement for their effective management (see Figure 2). In particular, further work to compare the spatial and temporal trends of known European genetic stocks with those used for current stock assessment purposes would have some merit. An outcome of interest would be to identify and describe the stocks with the greatest match/mismatch by comparing genetic *versus* present stock units and to consider the implications of the results in terms of current stock assessment and fisheries management practices." And finally "STECF considers that genetic techniques could help to identify which stocks are at the greatest risk to possible fishing induced local extinctions, by mapping their connectivity and assessing resilience. Such information could be of value in developing more effective fisheries management plans and in establishing more appropriately designed networks of Marine Protected Areas."

The STECF report showed that currently, due to the fast advancements in the field of biotechnology and DNA analysis, major opportunities arise to support sustainable fisheries management, and research projects using genetic analysis to tackle fisheries relevant questions accumulate potentially valuable data. However a robust data collection structure for genetic and genomic data, relevant for fisheries management is still lacking. As a consequence such data is highly dispersed difficult to access and prone to get lost. This important issue has been repeatedly addressed by the ICES Working Group on the Application of Genetics in Fisheries and Mariculture (WGAGFM; e.g. Verspoor et al. 2010).

The need to integrate genetic data collection into DCF is also emphasised by the ICES Working Group on the Application of Genetics in Fisheries and Mariculture (WGAGFM) in their 2011 report where it is recommended to ICES to favour the integration of genetic data collection into DCF and to initiate a stakeholder workshop where the potential of genetic data and their integration into DCF is discussed.

During the STECF – EWG 12- 01 Meeting on the future DCF Multi Annual Plan (MAP) 2014-2020, opportunities for fisheries management under the CFP remit, provided by modern genetic and genomic analytical approaches were presented as well as emerging challenges concerning the collection of genetic data. It was discussed whether and how data resulting from genetic and genomic analysis and monitoring with relevance for fisheries management under the CFP remit, could be collected and included under the DCF remit.

5.5.2 Genetic principles and potential value for fisheries management

The application of genetic principles and methods to fisheries biology and management, often referred to as "fisheries genetics", can help to elucidate the factors underpinning the dynamics and resilience of exploited marine species. Many topics of relevance for fisheries management, such as connectivity among marine populations (Cowen et al., 2006, Treml et al., 2008), the spatial and temporal scale of population differentiation (Jørgensen et al., 2005, Ruzzante et al., 2006), effective population size (Hauser et al., 2002, Waples and Yokota, 2007), fisheries-induced evolution (Olsen et al., 2004), and the analysis of adaptive variation in the wild (Conover et al., 2006), enhance our understanding of the

mechanisms shaping fish abundance and distribution. While classical fisheries approaches focus typically on factors driving short-term demographic changes in populations, genetic approaches examine the extent of changes in population composition and traits influencing both short-term alterations in phenotypic traits and longer-term response to natural and anthropogenic perturbations (Frankham, 2005). Traditional fisheries biology makes scant reference to genetic factors when examining fish populations or stocks, as evidenced by recent texts in the area (e.g. (Jennings et al., 2001); but see (Hallerman, 2003)). However the high number of publications lately emerging in the field, shows that "genetic thinking" about and approaches to fish and fisheries biology is on the rise. This generates new insights into the temporal and spatial scale of change in fish populations and communities (Conover et al., 2006, Larsen et al., 2007), providing a major opportunity also for sustainable fisheries management.

Broadly there exist three levels of utility in fisheries:

- Use as physical "tags" (e.g. stock identification; mixed stock analysis; population assignment, dynamics);
- Use to infer biological information (e.g. gene flow, breeding relationships, population size, response to environmental change);
- Use in conservation/sustainable management (population diversity "biocomplexity").

The scope of this STECF report does not provide for an in-depth discussion on available genetic technologies and applications for fisheries management. More information can be found in the 36th Plenary Meeting of the STECF report (11-04_PLEN 11-01_JRC64828) and in recent reviews (Kochzius et al., 2008, Martinsohn (2011)). A valuable discussion on how to achieve a better integration of genetic information into fisheries management is provided in a recent review by Waples et *al*. (2008).

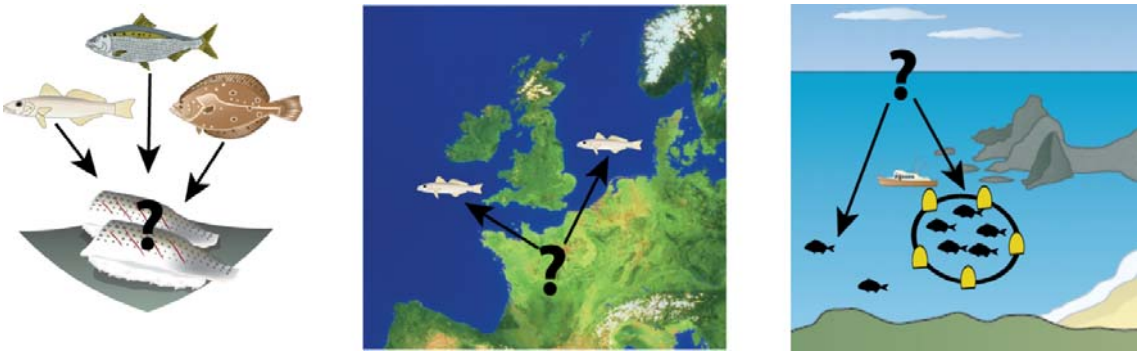

Figure 6.5.2.1: Three essential questions, relevant for fisheries management and conservation, which can be tackled by genetic approaches. a) What species? b) Where from? c) Wild or cultured? Genetic species identification is shown here in the context of product authentication in a control and enforcement context but can also be used for fisheries management e.g. when performed on Ichthyoplankton. The genetic distinction between wild and farmed fish will become more relevant in the near future, due to the steep rise in aquaculture activity worldwide. See text for details. Fish symbols courtesy of the Integration and Application Network, University of Maryland Center for Environmental Science. Map: © European Union, 2010.

5.5.3 Application of genetic principles for fisheries management: examples

In the following, a number of examples are depicted where genetics is being successfully applied as a tool in the management of marine fisheries, clearly demonstrating the feasibility and value of genetic approaches to fisheries management and conservation measures:

5.5.3.1 Norwegian coastal cod:

Norwegian coastal cod are being managed in real-time using among other techniques, genetic screening of fisheries to define the origin of the stock proportions present. The fishery can then be opened or closed depending on the proportions found and the management needs to preserve important stock components (Geir Dahle – personal communication).

5.5.3.2 Atlantic salmon

Another example using the same techniques of mixed stock fishery analysis is the Atlantic salmon coastal and inshore drift net fisheries off the coast of Ireland. Here again samples are obtained from the fishery and the fishery opened or closed depending on the stock components found at a particular point in time. Together with such mixed stock fishery management scenarios genetics has also been utilized to help managers define stock structures (Hauser and Seeb 2008; Waples et al. 2008).

5.5.4 FishPopTrace

(http://fishpoptrace.jrc.ec.europa.eu)

This international collaboration, funded by the European Union under FP7 with 4.5 million Euros, set out to build a framework in support of sustainable fisheries management and conservation by integration of new and established technologies based on molecular genetics, otolith microchemistry and morphometrics. Emphasis was put on revealing the genetic population structure of the four target species cod (*Gadus morhua*), European hake (*Merluccius merluccius*), Atlantic herring (*Clupea harengus*) and common sole (*Solea solea*). Genetic marker analysis (Single Nucleotide Polymorphims - SNPs) on samples across all EU waters (see interactive sampling map at http://fishpoptrace.jrc.ec.europa.eu/map/geobrowser.html), clearly revealed population structure at small geographical scales for all four species (the results are currently under review by Nature Communications). For example the analysis allows unambiguous distinction of cod of the Skagerrak and North Sea, herring of the North Sea and North Atlantic, sole of the Irish Sea and English channel and hake of the Mediterranean and Atlantic. Additionally, using historical samples, it could be shown that the distinct population structure for cod North Sea-Baltic Sea-North east Arctic, remained stable over decades. Since the analysis is based on SNP markers, the developed analytical protocols are easily transferable between laboratories, which should greatly facilitate inter-laboratory and international collaboration. After publication the underlying data and results will be made available to scientists and stakeholders (see http://fishpoptrace.jrc.ec.europa.eu/data-access), and enhanced integration of the research results is aimed at through collaboration with stakeholders. The FishPopTrace data and findings can be used to analyse the state and putative boundaries of fish populations and also to monitor changes that are known to impact stock recovery and resilience. The approach can therefore be a valuable accompanying measure to existing fishery management schemes. STECF reviewed FishPopTrace in its 36th Plenary meeting report and acknowledged the value of the research outcomes for sustainable fisheries management (STECF, 2011, and see also above).

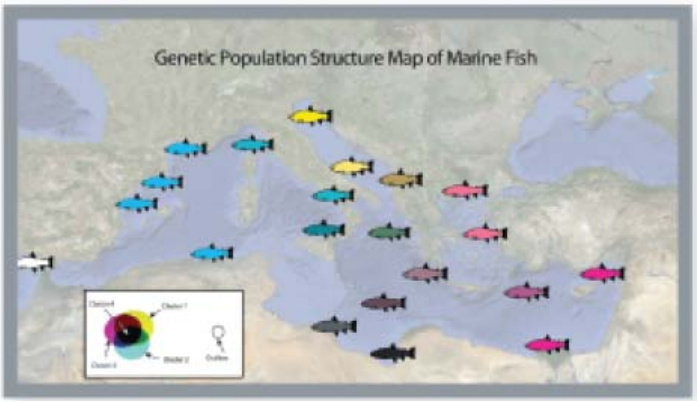

Figure 6.5.4.1: Schematic representation of the genetic population structure in a marine fish inhabiting the Mediterranean. Genetic similarity is elucidated through colour similarity. Major genetic groupings are assigned their own basal colour. Mixed genetic groupings are shown as a mix of the appropriate colours. Revealing genetic population structure of marine fish and creating genetic baselines describing the population structure can provide valuable support to sustainable fisheries management in various ways. One example is the identification of discrete stocks or the comparison of existing management units with genetic population units. (Source: "Traceability of Fish Populations and Fish Products. – Advances and Contribution to Sustainable Fisheries" from The FishPopTrace Brochure; Downloadable at http://fishpoptrace.jrc.ec.europa.eu))

5.5.5 Eastern and Western Baltic cod: What is fished where?

(Source: Einar Eg Nielsen (DTU Aqua, DK); - personal communication)

Western Baltic cod is fished at a very high intensity, beyond MSY, but has not collapsed, while the Eastern Baltic cod stock is generally in a good shape. Lately the fishing pattern has changed so that a larger proportion (28%) of cod is fished at the border between Western and Eastern Baltic. The question arises, whether in reality Eastern Baltic cod is fished in the Western Baltic. Also resulting from a request for advice to STECF issued by the European Commission, a project has been embarked on to reveal where fished cod in the Baltic comes from. The project, funded by the European Fisheries Fund, lead to the development of genetic markers that can identify the true origin of cod in the Baltic Sea. Only 20 markers (SNPs) are sufficient to unambiguously assign cod to the sea area of origin. Genetic analysis will now also applied to historical samples to test the population structure and dynamics over time.

5.5.6 Challenges and prospects: capacity building, database

While examples clearly show the value of genetics for marine fishery management, routine use of genetic information in this field in the EU remains exceptional. A variety of reasons are responsible for the conspicuous absence of genetics. Some are historical, others arise due to a lack of communication between fish geneticists, fisheries managers and regulators. Current management infrastructure is not conducive to the uptake of genetics: Fisheries genetics remain confined largely to the academic realm and research projects where there is a lack of long-term perspective and funding. As described in Reiss et al. (2009) and Hauser and Carvalho (2008) and as shown in the examples above there are already genetic data available that are or could be used for fisheries management purposes. Although there is genetic information already available for many species of interest in relation to both sustainable exploitation and the maintenance of biodiversity, this information is often not taken into consideration in fishery management programs simply because there is not sufficient communication. A major challenge for the future will be to establish communication to communicate these data to the relevant positions such as fisheries management and stock assessment groups. Also to fully understand the potential of the genetic tool box communication between fish geneticists, stock assessment groups, fisheries managers and regulators has to be established.

Another shortcoming of this already existing genetic data is that they are neither organized in a standard format nor stored in a common data base as other biological data produced under the DCF remit. They are mainly gained on a project basis, more or less fragmented and stored in different formats on personal computers rarely accessible from outside. Currently there is no central data-hub available for this type of information and it is not routinely collected and updated (Verspoor et al. 2010). Implementing genetic data into the DCF could provide a platform were genetic data can be made easily accessible.

Also genetic data are already available for a range of commercially exploited fish by far not all important species are covered. Baseline samples, genetic markers and subsequently genetic data for these species would be required especially for those where the traceability of a single fish, a catch or processed products to its origin are important issues. There are already some cases as the example of the cod fisheries in the Baltic described above where there might be sufficient justification for the integration of genetic data into the DCF. Furthermore, to fully understand the potential of a longer time series of genetic data gained on a routine basis those data should be made available at least for one selected species. Considering the precautionary approach it is debatable whether stocks/species in danger of being overfished or otherwise under pressure should be monitored precautionary to avoid surprises in the future. For some species the lack of genetic data from the past was overcome by extracting DNA from archived samples of otolithes or scales but the availability of those archived samples is the exception rather than the rule.

5.5.7 How to accommodate genetic data under the DCF remit

Before the collection of data derived from genetic monitoring into the DCF can be envisioned concrete questions and issues have to be identified through communication between the different stakeholders, - fisheries managers, assessment groups and geneticists -, involved, where genetic data collected under the DCF remit could provide the basis for answers.. This communication could be initiated/established through an initial stakeholder workshop as recommended by the ICES Working Group on the Application of Fisheries and Mariculture (WGAGFM Report 2011). During the STECF DCF EWG meeting the ICES representative already signalled potential support for such an initial workshop for 2012.

If specific issues are considered to be addressable with genetic analysis the integration of genetic data collection into DCF should be envisioned. In that case it will have to be specified at which time intervals genetic data should be collected.

Like for any other biological data collected under the DCF a standard data format and standard laboratory protocols to create the data would have to be established. It should also be considered that some member states might currently not have the capacity to collect genetic data under the DCF remit. However it is expected that currently most of the questions, which might initially be subject to genetic monitoring will be restricted to some species only, and to well defined regions and populations. For data creation national laboratories could largely rely on sampling schemes already undertaken under the DCF remit for other purposes like stock assessment. Also molecular genetic methods are constantly getting cheaper which favours the cost efficiency of genetic data integration under the DCF remit.

As described above, the integration of genetic data into DCF requires preparation, which is why the new EU Multi-annual programme for data collection (MAP) 2014-2020 should be held flexible enough to react to upcoming issues concerning stock identification, stock management or biological diversity that could benefit from genetic data.

5.5.8 Conclusion and suggestions

During the STECF EWG meeting on the future DCF Multi Annual Plan (MAP) 2014-2020 opportunities and possibilities to accommodate data resulting from genetic and genomic monitoring under the DCF remit were presented and discussed. It was generally agreed that genetic and genomic information can help to elucidate fisheries management relevant questions and provide support to the Common Fisheries Policy.

It was concluded that the current DCF already provides for the possibility to collect data stets which are currently not routinely included (e.g. genetic/genomic data, tagging data, parasite load, stomach content analysis etc.) under its remit, on specific request by end-users.

To this end, also studies addressing the use of any specific analytical approaches and technologies, species-specific issues and regions can be carried out and co-funded under the DCF provisions.

Acknowledging the need to be able to accommodate opportunities arising from technology advancements and new data needs, the EWG DCF endorses to maintain this level of flexibility, also in the future DCF MAP 2014-2020.

In order to strengthen awareness building and communication between stakeholders about the opportunity for the inclusion of non-routine data, workshops attended by scientific experts, data providers, end-users and other stakeholders should be held. Ideally, the outcome of such workshops should be properly reviewed by STECF and reported to the European Commission.

5.5.9 References

Conover, D.O., Clarke, L.M., Munch, S.B., Wagner, G.N. (2006) Spatial and temporal scales of adaptive divergence in marine fishes and the implications for conservation. Journal of Fish Biology 69, 21-47.

Cowen, R.K., Paris, C.B., Srinivasan, A. (2006) Scaling of connectivity in marine populations. Science 311, 522-527.

Frankham, R. (2005) Stress and adaptation in conservation genetics. Journal of Evolutionary Biology, 18 (4), pp. 750-755.

Hallerman, E.M. (2003) Population genetics: principles and applications for fisheries scientists, Vol., American Fisheries Society, Bethesda, Md.

Hauser, L., Adcock, G.J., Smith, P.J., Ramirez, J.H.B., Carvalho, G.R. (2002) Loss of microsatellite diversity and low effective population size in an overexploited population of New Zealand snapper (*Pagrus auratus*). Proceedings of the National Academy of Sciences of the United States of America 99, 11742-11747

Hauser, L. & Carvalho, G. R. (2008) Paradigm shifts in marine fisheries genetics: ugly hypotheses slain by beautiful facts. Fish and Fisheries, 9, 333.

Hauser, L., Seeb, J.E. (2008) Advances in molecular technology and their impact on fisheries genetics. Fish and Fisheries, 9 (4), pp. 473-486.

Jennings, S., Kaiser, M.J., Reynolds, J.D. (2001) Marine Fisheries Ecology, Vol., Blackwell Publishing

Jørgensen, H.B.H., Hansen, M.M., Bekkevold, D., Ruzzante, D.E., Loeschcke, V. (2005) Marine landscapes and population genetic structure of herring (*Clupea harengus L.*) in the Baltic Sea. Molecular Ecology 14, 3219-3234.

Kochzius, M., Nolte, M., Weber, H., Silkenbeumer, N., Rleifsdottir, S., Hreggvidsson,. G. O., et al., (2008) DNA microarrays for identifying fishes. Marine Biotechnology, 10, 207.

Larsen, P.F., Nielsen, E.E., Williams, T.D., et al. (2007) Adaptive differences in gene expression in European flounder (Platichthys flesus). Molecular Ecology 16, 4674-4683.

Martinsohn, J. T. (2011) Deterring Illegal Activities in the Fisheries Sector: genetics, genomics, chemistry and forensics to fight IUU fishing and in support of fish product traceability. JRC Reference Report. ISBN 978-92-79-15905-3.

Olsen, E.M., Heino, M., Lilly, G.R., et al. (2004) Maturation trends indicative of rapid evolution preceded the collapse of northern cod. Nature 428, 932-935.

Reiss, H., Hoarau, G., Dickey-Collas, M., Wolff, W.J. (2009) Genetic population structure of marine fish: mismatch between biological and fisheries management units. Fish Fish. 10, 361-395.

Ruzzante, D.E., Mariani, S., Bekkevold, D., et al. (2006) Biocomplexity in a highly migratory pelagic marine fish, Atlantic herring. Proceedings Of The Royal Society B-Biological Sciences 273, 1459.

STECF (2011) 36th Plenary Meeting Report of the Scientific, Technical and Economic Committee for Fisheries (PLEN-11-01). In: JRC Scientific and Technical Reports. ISBN 978-92-79-20170-7.

Treml, E.A., Halpin, P.N., Urban, D.L., Pratson, L.F. (2008) Modeling population connectivity by ocean currents, a graph-theoretic approach for marine conservation. Landscape Ecology 23, 19-36

Waples RS, Punt AE, Cope JM (2008) Integrating genetic data into management of marine resources: how can we do it better? Fish and Fisheries 9: 423

Waples, R.S., Yokota, M. (2007) Temporal estimates of effective population size in species with overlapping generations. Genetics 175, 219-233

5.6 SG 6 - Data Quality issues and Data poor stocks

5.6.1 Quality indicators

5.6.1.1 General principles

It is evident that advice for management decisions should be based on good quality data. In any case it is essential that the quality of data is known when it is used for analysis by end-users, because management actions based on poor data should be avoided. In the past DCR and present DCF, quality targets have been defined in the form of CV to be obtained for various variables which are estimated through non census sampling.

In practice, problems have been experienced by this approach. The target values, listed in the DCF are questioned because they seem to be arbitrary choices and are not based on any pre-analyses or advice. Also it is unclear how many resources are needed to meet these targets. Post analyses of collected data shows that some of the targets may have been met with the present sampling levels but in many cases this is not the case.

As an alternative to pre-defined quality targets, a minimum sampling effort is proposed. In order to avoid years of confusion waiting for precise guidance on the number of units to sample and sample size, the EWG propose, as a minimum standard, to maintain the sampling effort by region as specified in the current NP proposals 2011-2013. As long as a justification of the required sampling effort, leading to acceptable quality, has not been carried out, for instance by an iterative approach between the possible (national resources) and the expectations (end users), Member States have the obligation to continue monitoring their fisheries in a statistical sound scientific basis, as specified in international agreements such as the code of conduct for responsible fisheries (FAO, 1995).

Data collected under the new DCF programme should be fit for purpose. In order to ensure this, one

needs to identify what those purposes are and how fitness is to be measured. There are many purposes which utilise DCF data some of which may be optimised by different sampling design. One of the challenges for the new DCF will be to identify and resolve the end user requirements which could influence the sampling designs; this will invariably require some trade-offs. It is envisaged that this would be most effectively carried out at RCMs. The RCMs should therefore function as the forum to receive and resolve the tradeoffs between end-user requirements and sampling designs having due regard for minimum data quality conditions which any sampling programme must meet (see text below on candidates for quality indicators).

The fitness of the sampling under the existing DCF has been measured by achievement of target precision (measured by CV), to this end precision targets have been defined for all variables measured by sampling. However experience has suggested that in some cases target precision levels are not achievable, and there is no scope for flexibility in the system to reallocate resources should it be agreed through feedback from end users that a lower precision level is acceptable. A new DCF could cope with these issues if threshold levels were defined for sampling programmes rather than targets. These threshold levels would need to be consistent with best practice in terms of statistical robustness (dealing with other aspects of robustness such as bias in addition to precision); much work on this is already available from WKPRECISE, WKMERGE and WKPICS and SGPIDS.

A new DCF regulation would therefore contain a provision for a minimum sampling effort rather than precision targets and some provisions to identify the RCMs as the forum where the detail of sampling programmes are organized such that they can satisfice the end user requirements with the operation constraints of the sampling programmes (rather than have this detail spelled out in the regulation, see section 2 for more detail).

5.6.1.2 Candidates for quality indicators

In the process of developing a 'revised DCF', a number of questions need to be addressed. These are:

- What is needed to improve data quality?
- How do we balance precision and bias?
- Do we need targets for quality, and if so, what should they be?

Since the introduction of the DCF, many workshops and study groups have met and made progress with regard to design and optimise sampling programmes in relation to optimise data quality.

Within the present DCF, different methods can be used for collecting the data, whatever the module. EUROSTAT standards for quality reports (Anon, 2009a) summarised sampling process in two types: probability sampling, meaning that each unit of the frame population has a known, non-zero probability of being selected in the sample, and non-probability sampling. STECF (2009) added the census as a third means to collect the information and proposed the type of data collection scheme to be used:

A: Census which attempts to collect data from all members of population

B: Probability Sample survey

C: Non-Probability Sample survey

In terms of quality indicators, WKPRECISE (ICES, 2009b) recalled that the key requirements of optimal schemes to collect biological data and statistics from fisheries are (a) to minimise bias and (b) to maximize precision for a given cost (or to minimize cost to achieve a specified precision.). The sampling design employed in fisheries monitoring programs should be carefully specified and documented, including a detailed description of the sampling frame, the sampling units in each stage, sample sizes at each level, detailed description of stratification of sampling units at each stage, etc. Despite the difficulties in applying pre-defined sampling designs, it should be attempted to use

randomization in the selection of the samples in all DCF sampling modules, where census from the target population is not carried out. The procedures for selecting sampling units should be described and if it is not by probability-based selection the rationale for adopting an alternative procedure should be provided (ICES 2009b).

Summarising the outcomes of the precision workshops (ICES, 2009b and 2010), PGCCDBS (ICES, 2012) proposed that countries move toward statistically-sound, probability-based sampling schemes based on sampling frames and a regional sampling design. These schemes should be fully documented and generate common measures of data quality. Resource allocation to improve sampling effort within specified sampling strata is to be the mechanism by which unbiased sampling is achieved with the desired levels of precision

When reflecting on which indicators should be chosen to assess the quality of estimates, EUROSTAT standards for quality reports (Anon 2009a) provides a list of potential Quality and performance indicators among which STECF (2009) chose to use

- response rates, coverage rates in case of sampling procedure and Representativeness of the sample before and after re-weighting in case of non-probability sampling to cover the bias;
- Coefficient of Variation (CV) in case of probability sampling and Variability of the estimates in case of non-probability sampling to cover the variability.

These indicators have been included in the guidelines for DCF annual report as soon as 2009 (Anon, 2009b). It is to be noted that EUROSTAT standards for quality reports advocate for coefficient of variation (CV), range of CV or confidence intervals as the most appropriate indicators to quantify sampling errors. This is consistent with WKPRECISE (ICES, 2009) which recommended that the precision of estimates of key parameters should be given in terms of standard errors (or relative standard errors). In addition, the number of primary sampling units observed along with estimates of the effective sample size for the associated estimate should be given.

WKACCU (ICES, 2008) proposed a comprehensive list of sources of bias in a scorecard which can be used also to report on bias. The WKACCU scorecard is now fully included in the ICES benchmark process and is used as a feedback from the end user to the data collector.

STECF (2009) noted that the precision levels are often not suitable measures to assess the reliability of economic data. On the contrary, STECF proposed that MSs should deliver a broader quality report that would include a detailed description of data and method. This should include qualitative information on data collection procedures in addition to quantitative information.

As regards methodology to optimize sampling schemes to meet multiple objectives, WKMERGE (ICES, 2010) considered as good practice a methodology described in a working document. The approach taken in the WD is to draw percentiles of number of species discards estimates reaching a certain target in relation to the number of trips sampled. An indicator at the métier level for discards could be the percentile value attained for the realized number of sampled trips.

When reflecting on the future DCF, STECF (2006) considered that the calculation of precision levels should be organised at the same level as the sampling programmes. In practice, this meant that precision levels should be calculated:

- At the stock level for stock-specific biological parameters (growth, ALKs, sexual maturity and fecundity).
- At the regional métier level for data that are collected through regionally coordinated sampling programmes (potentially discards and length compositions of the removals).
- At the national métier level for data that are collected through national sampling programmes. This always applies to effort, landings and revenue data (whose collection is a strictly national responsibility), and possibly also to discards and length frequencies of the removals, if these are not collected through regional co-operation.

SGRN 06-03 added that it was clear that a regional approach to achieving target precision levels would require advanced systems of data exchange, data pooling and data quality evaluation. The SGRN 06-03 understood that it would be the Commission intention to promote the establishment of regional or pan-European databases and commonly agreed evaluation tools as a means to move towards such a regional dimension of quality evaluation and assurance[SIC]. It is striking how familiar and accurate these statements may be 6 years later.

5.6.1.3 Observers on board

The DCF obliges MS to make sure that observers have access to sampling sites. Nevertheless, in several MS it has occurred that observers have been refused to board on fishing vessels for several reasons (no space, safety reasons, preventing observation of malpractice). Such refusals may lead to severe bias in estimating parameters estimated from these sources. It is suggested to do something about this if it becomes a big problem. May be it is possible to involve the RACs to solve such problems and/or setting alternative means of collecting the information. Alarm bells need to be ring if it remains a big problem.

5.6.2 'Data poor' stocks

The term "data poor" as is currently used to describe stocks for which there is not a precise population estimate and quantitative forecasts is misleading. It gives the impression that information is deficient, whereas in the majority of cases, there are a lot of data. The narrow criteria used to define what constitutes reliable assessments and forecasts has contributed also to the increased number of "data poor" stocks.. Maybe it would be more correct to label these cases as "advive poor". A more appropriate metric for the scale of the problem faced, would be to count those stocks for which the data available for the foreseeable future would not be sufficient to classify the exploitation or stock status, even according to expert judgement. This would include stocks where the data do not coherently represent the exploitation over time (e.g stocks taken only as a minor by-catch, where cohorts are not consistently represented).

With regard to the continuation of data collection on stocks currently classed as 'data poor', a response from the major end-user is required detailing information needed to provide advice on these stocks. With regard to those stocks remaining classified as "data poor", there may be little point in gathering incoherent data which is of no utility to the end-users, however as a minimum catch statistics and survey data (where available) would still be collected.

5.6.2.1 Overall conclusion

It is not advisable to set a priori quality targets. The main reasons are that it is not clear what the target should be and who should set the target. Also, if target are set, it needs to be evaluated how many resources are needed to achieve the target, which is often impossible or at least very difficult. It is, however, important to know what the quality of the data is when they are used by the end-user. Therefore it is recommended always to evaluate the quality of the data at the end-user level.

The same data, or subsets of the data, may be used by different end-users for various purposes. For instance, data may be used for stock assessment on a high aggregated level but also for very detailed analyses on a low aggregation level using subsets which containing a limited amount of data. This implies that the quality of the data for these end-uses differ and that evaluation of the quality of the data needs to be done at all end-user levels.

As an alternative to the quality targets by stock, it is proposed to introduce minimum sampling levels (thresholds at a central level). The advantage is that these can be matched to available resources. If it

appears that this would lead to unacceptable quality, there should be provisions to adjust the minimum sampling level. This may be done in iterative process with the end-user leading to a compromise (reference to text from subgroup 2). In order to give time to carry out analysis on sampling optimality at the regional level, EWG recommended for the period 2014-2020 to maintain the sampling intensities as set up in Member States NP proposals for the period 2011-2013.

Another approach coming to the conclusion for not defining a priori quality targets is, that sampling schemes are directed to fisheries and not to stocks. This implies that obtained quality of the data also depends other factors such as the abundance and distribution of the species. Quality estimates for rare species would have a lower quality than abundant species. Also quality estimates of species with a scattered distribution would be lower.

Together with the National Programme, it is important that MS provide the a protocol which describes how the proposed sampling programme is designed. This allows for an evaluation whether it is designed respecting guidelines for good practice sampling avoiding bias. In the Annual Report deviation to the protocol should be described to allow the identification of possible bias. Appropriate indicators can be chosen from the list detailed in the section above.

5.6.2.2 References

Anon, 2009a. EUROSTAT Methodologies and Working Papers. ESS Standard for Quality Reports. January 2009. ISBN 978-92-79-07854-5. 28 pp.

Anon, 2009b. Guidelines for the submission of Technical Report on the National Data Collection Programmes under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2008/949/EC. Version 2009. 55 pp.

FAO. 1995. Code of Conduct for Responsible Fisheries. Rome, FAO. 1995. 41 p.

ICES, 2008. Report of the Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment (WKACCU). ICES CM 2008\ACOM:32. 27–30 October 2008, Bergen, Norway. 41 pp.

ICES, 2009. Report of the Workshop on methods to evaluate and estimate the precision of fisheries data used for assessment (WKPRECISE). ICES CM 2009/ACOM:40. 8-11 September 2009, Copenhagen, Denmark. 43 pp.

ICES, 2010. Report of the Workshop on methods for merging metiers for fishery based sampling (WKMERGE). ICES CM 2010/ACOM:40. 19-22 January 2010. Copenhagen, Denmark. 100 pp.

ICES, 2012. Draft report of the Planning Group on Commercial Catches, Discards and Biological Sampling (PGCCDBS). Roma, Italy.

STECF, 2006. Commission Staff Working paper. Scientific, Technical and Economic Committee for Fisheries (STECF). STECF Sub-group on Research Needs (SGRN): Revision of the Biological Data Requirements under the Data Collection Regulation (meeting coded SGRN 06-03).Brussels, 27 November - 1 December 2006. 101 pp.

STECF., 2007. Commission Staff Working Paper. Scientific, Technical and Economic Committee for Fisheries (STECF). Quality aspects of the collection of economic data - methods of calculation of the indicators and sampling strategies. SGECA-09-02. 11-14 May 2009, Barcelona, Spain. 62 pp.

6 ICES VIEW - END USER COMMENTS ON THE FUTURE EU MULTI ANNUAL PROGRAMME FOR DATA COLLECTION 2014-2020 (DRAFT 2012-03-07)

The comments from ICES as an end-user of data on the review of the Data Collection Framework are provided in two parts:

1) A document describing general issues which have been identified as important in a revision of the DCF (this document);
2) A detailed document commenting on technical matters regarding the specifications of the future DCF (a technical annex to this document to be provided during the second half of 2012).

The present DCF has been a positive step by ensuring better access to data for end users, including data from control, monitoring and surveillance, data on the impact of fisheries on the ecosystem, and it allowed the creation of up to date, permanent data bases by removing the time limit for withholding data. However, ICES has identified four general issues in the present DCF which should be addressed in the revised DCF:

1. Sampling should be on a coordinated regional basis rather than on a national basis, including:
    a. Designing data collection from the outset to most efficiently cover the fisheries activities and fisheries ecosystem impacts on a marine ecoregion scale.
    b. Further development and maintenance of regional data bases holding the DCF data to give end users effective access to the data while applying the access rules of the DCF.
2. Further integration of data regarding both the fisheries impacts on marine ecosystems and on data needed for an ecosystem approach to marine management. This includes:
    a. Integration of all data needed to assess the ecosystem impacts of fisheries including data on by-catches of all biota, impacts on food webs, biodiversity and population genetics and on habitats.
    b. Integration with data collection for an ecosystem approach beyond fisheries such as needed for implementation of the Marine Strategy Framework Directive and the Habitats Directive.
    c. This should specifically be reflected in a move towards surveys and monitoring which integrate the data needs regarding fisheries and the environment, including the sampling programmes for discards.
3. Improve end user access to data as needed for assessments and to respond to policy needs. This means specifically that data must be available with high spatial resolution, which may imply on single vessel /single haul basis. Presently the exception clause in Art 20(4) of Regulation (EC) No 199/2008 is used by those responding to requests for data to prevent access to detailed data in Art 18 of the same Regulation and, in practice, detailed data are not available. This undermines the ability to provide scientific advice on ecosystem impacts (DCF indicator 5, 6, 7 of Annex XIII of Commission Decision 2010/93) and on spatial regulation of fisheries activities as for instance implied in the habitats directive.
4. The data collection programmes should be flexible so that new data types can be included such as genetic and other data to validate stock identity while time series are maintained.

7 GLOSSARY OF ABBREVIATIONS

ALK	Age Length Key
CFP	Common Fishery Policy
COST	Common Open Source Tool; EU project for developing statistical precision tools
CV	Coefficient of Variation
DCF	Data Collection Framework
DCR	Data Collection Regulation
EUROSTAT	Statistical office of the European Union
EWG	STECF Expert Working Group
IBTS	International Bottom Trawl Survey
FAO	Food and Agriculture Organisation
GT	Gross Tonnage
ICES	International Council for the Exploration of the Sea
JRC	Joint Research Center
kW	Kilowatt
LM	Liaison Meeting
MAP	Multi Annual Plan
MS	Member State
MSFD	Marine Strategy Framework Directive
MSY	Maximum Sustainable Yield
NAFO	Northwest Atlantic Fisheries Organization
NP	National Programme
NUTS	Nomenclature des unités territoriales statistiques
PGCCDBS	ICES Planning Group on Commercial Catch, Discards and Biological Sampling
PGECON	Planning Group on Economic Issues
PIM	Perpetual Inventory Method
PRODCOM	Production Statistics Database
RAC	Regional Advisory Council
RCM	Regional Coordination Meeting
RFMO	Regional Fisheries Management Organization
SGPIDS	ICES Study Group on Practical Implementation of Discard Sampling plans
SGRN	STECF Study Group on Research Needs
SNPs	Single Nucleotide Polymorphism
STECF	Scientific Technical and Economic Committee for Fisheries
WD	Working Document
WGAGFM	ICES Working Group on the Application of Genetics in Fisheries and Mariculture
WK	Workshop
WKACCU	ICES Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment
WKMERGE	ICES Workshop on Methods for Merging Fleet Metiers for Fishery based Sampling
WKPICS	ICES Workshop on Practical Implementation of Statistical Sound Catch Sampling Programmes
WKPRECISE	ICES Workshop on Methods to evaluate and estimate the precision of fisheries data for assessment

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9 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
http://stecf.jrc.ec.europa.eu/web/stecf/ewg01

List of background documents:

1. EWG-12-01 – Doc 1 - Declarations of invited and JRC experts.

European Commission

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Abstract

The Expert Working Group meeting of the Scientific, Technical and Economic Committee for Fisheries EWG 12-01 was held from 12 – 16 March in Barza d'Ispra, Italy, to evaluate options proposed by DG MARE on the new EU Multi-annual programme for data collection (MAP) 2014-2020. The report was reviewed by the STECF during its 39th plenary held from 16 to 20 April 2012 in Brussels (Belgium).

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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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