2nd Planning Group on Economic Issues (PGECON)

13th – 16th May 2013
LEI, Alexanderveld 5
The Hague (The Netherlands)

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1 EXECUTIVE SUMMARY

The second Planning Group on Economic Issues met in The Hague, from 13th to 16st May 2013. The terms of reference for the meeting are given in section 2.1. 26 experts from 13 Member States attended the meeting.

PGECON is an operative meeting with a general aim to compare different approaches and to share different experiences. Participation is open to national experts involved in the implementation of the economic modules of the Data Collection Framework (DCF). PGECON aims to provide useful inputs to improve MS sampling schemes.

A key topic for discussion at this meeting was the review and the finalisation of the glossary of economic definitions. The glossary is an essential tool to improve harmonization of economic data collection among MS. It aims to improve the data collection procedures as clear definitions of variables and a common understanding is the starting point of any survey. EWG 11-18 compiled a preliminary glossary and listed the principles that should be considered in the process of finalising the glossary. On the basis of this background work the glossary has been compiled by JRC together with an external consultant. The final glossary was presented to PGECON 2013 for discussion. PGECON 2013 made a revision of the glossary prepared by JRC. The final revised glossary will be presented at the STECF DC-MAP meeting next June.

The outcome of the workshop on disaggregation of economic data was also discussed at PGECON 2013. A presentation on the outcome of the 2012 workshop in Malta was given. Fleet economic data cannot be collected at higher resolution than defined in the DCF. However, several applications require a spatial or activity-related resolution of fleet economic data which is different to the resolution defined under the DCF. As transversal data are, in most cases, available at the required resolution, the plan was to find correlations between those two groups and use these correlations to estimate the economic data at a lower aggregation level. For this analysis individual vessel data from several member states have been analyzed using different software (SPSS, Excel, R, SAS). However, the analyses performed during the workshop are to be regarded as preliminary and as a work in progress. After two workshops on this issue, which provided a broadened insight into the issue, PCEGON strongly recommends a study on the disaggregation which delivers a comprehensive analysis of different approaches and methods, addressing also the availability of individual data by MS.

PGECON also discussed the possibility of introducing thresholds for sampling by survey. The current regulation requires data covering all fleets. These data are appropriate to evaluate the economic performance of the whole fleet. However bio-economic analysis requires the cost structure of the operating fleet. In cases of non-active/low active vessels the average performance of the fleet is biased to that of the active/commercial fleet. Firstly in most of the cases the cost structure of commercial fleet is different than low active vessels. Secondly in many cases the capital input and consequently costs are increased with low active vessels. Ultimately the average economic performance is biased and useless for bio-economic analysis. Therefore these data cannot be used to make economic evaluation of management measures or the consequences of implementation of new CFP. PGECON realised that in some MS it is evident that inclusion of all vessels would degrade the economic performance of the commercial fleet that the management measures are targeting. However since no data was available to determine, for each MS, whether thresholds would be appropriate and what effect the introduction of thresholds would have on the quality of the data, PGECON concluded that

this issue should be investigated in a workshop. The terms of reference for this workshop are described in section 9.6

PGECON 2013 discussed the usefulness of the CV as a quality indicator and concluded that the CV is a useful indicator but that it should be reported together with achieved sample rate (already available) and the frame population. Preferably all three indicators should be available to the end-user. PGECON 2013 reinforced the suggestion of STECF 13-06 that no target or threshold should be set on the CV indicator. A quick comparison of the CV's submitted to JRC database showed that the quality of the CV's submitted is variable and that not all MS seem to calculate the CV's in the same way. Therefore PGECON 2013 suggests that more attention is given to harmonizing the calculation of the CV. PGECON 2013 suggests that a statistician is invited to the next PGECON to explain how to calculate the coefficients of variation given different sampling strategies and estimation of total values and explore possibilities to lower the CV by changing aggregating methods and, in particular, by including additional information (e.g. exhaustively available transversal data).

The commission presented the main changes discussed for the new program in comparison to the DCF. Thereafter a Compilation of recommendations & conclusions relating to the development of the Data Collection Multiannual Programme (DC-MAP) edited by Jordi Guillen was discussed. Overall there were little, or no, objections to most proposed edits. Discussed below were the points where PGECON did not agree with the recommendations. However, overall it was felt that there was not sufficient time given to discuss these issues in details.

Fleet data

- PGECON felt that short and long term debt would be not useful to collect for the majority of MS. Moreover, the reference given in the presentation ("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") refers to aquaculture (appendix X) or processing industry (appendix XII), but not to fleet
- PGECON felt that the direct subsidies were clearly defined at last year's PGECON and did not need to be reconsidered.
- PGECON felt that before social data are included in the new DC-MAP a pilot study should be conducted to evaluate which data should be collected, which data are available through common sources and which are the applications/end users and requirements. However the commission should ask social scientists to conduct such pilot studies. The group strongly agreed that these social data were not the responsibility of economists.

Aquaculture data

- The inclusion of subsides for investment was seen as a useful addition as this can often have a direct effort on income and production.

- MS also agreed, in principle, that the collection of production data in terms of numbers of individuals, apart from weight and value, was useful in certain examples. However, the group stressed that unit reporting should be clearly defined
- In principle there was no strong objection to the combination of 'repair and maintenance' together with 'other variable costs' but there was concern that these variables may need to be disaggregated again in the future and as such the group believes it would be wise to maintain the current reporting of the two variables.
- In terms of reporting spatial distribution of aquaculture enterprises there was some concern expressed by MS and there needs to be clearer definitions of this possible new variable. Specifically, there is a need to clearly define the level and scale of the reporting. Some MS also believe there are confidentiality issues with reporting exact location of enterprises.

Fish Processing data

- The provision of 'Raw Material' has been discussed at STECF many times. The commission has been requested to run a pilot study on the feasibility of collecting these data and its usefulness. And this pilot study should be run before including this variable in the DC-MAP.
- There were varied viewpoint among MS with regard to the question whether there was a value added to collecting the data compared to the data already collected by Eurostat. No consensus was reached regarding this point.

PGECON finally suggested the Terms of Reference for two other DCF workshops to be held in 2013 (they are already included in the list of eligible meetings for 2013). PGECON recommended the European Commission to launch the studies already requested by previous DCF workshops and STECF meetings and discussed the budget for these studies.

2 INTRODUCTION

2.1 Terms of Reference for PGECON 2013

The specific terms of reference for PGECON were as follows:

1. Reviewing and finalizing/adopting the glossary of economic definition as prepared by EWG11-18 (report STECF 11-19)

2. Discuss the results of the workshop disaggregation of economic data

3. Discuss and propose methodology for establishment of threshold for which sampling by survey or panel is necessary. Propose ways of estimating data for segments below the threshold. Thresholds will be determined by supraregion.

4. Compare price per capacity unit, depreciation rates and other assumptions applied by MS in estimating capital value and capital costs. Include a comparison by supra region. Explore the sources of PCU for the different MS.

5. Assess values of accuracy indicators and discuss precision targets for different fleet segments and different variables Propose a best practice guide

6. Discuss and agree on proposed changes in the DC Map for economic variables fishing fleet

7. Review the work done by the DCF WS on Aquaculture in 2012 and the Evaluation of the DCF and agree on needed changes in the DC MAP (new economic variables or modifying variables to be collected under the DC-MAP on aquaculture (marine and freshwater); segmentation of aquaculture sector, etc.); differences between current DCF obligations and EUROSTAT structural business statistics and whether aquaculture data can be collected solely under EUROSTAT or whether there is added value in maintaining it in the DC-MAP

8. Discuss and agree on collection of economic data for fish processing; differences between current DCF obligations and EUROSTAT structural business statistics; and whether processing data can be collected solely under EUROSTAT or whether there is added value in maintaining it in the DC-MAP.

9. Propose TORs for studies including estimation of budget for already proposed studies (recommendation liaison meeting) and workshops

10. Discuss problems and advantages of the European Data base of economic data (fleet, aquaculture and processing) and propose further development

2.2 Participants

The full list of participants at PGECON is presented in annex 2.

3 REVIEWING AND FINALIZING/ADOPTING THE GLOSSARY OF ECONOMIC DEFINITION AS PREPARED BY EWG11-18 (REPORT STECF 11-19)

STECF in its 37th plenary meeting recommended the compilation of a comprehensive glossary of terms for collected economic data in order to avoid misinterpretations and incorrect use when data are used in specific situations. STECF also recommended that the glossary should have to be established based on the principles stated in Section 9 of the EWG-11-18 report.

The glossary is an essential tool to improve harmonization of economic data collection among MS. It would improve the data collection procedures as clear definitions of variables and a common understanding is the starting point of any survey. Definitions of the economic terms used in the DCF are reported in different reports and sometimes they are not consistent. The compilation of an "official" glossary would therefore constitute a reference and would avoid never ending discussions in expert working groups.

EWG 11-18 compiled a first preliminary glossary and listed the principles that should be considered in the process of finalization of the glossary. EWG 11-18 agreed that definitions from SBS (Structural Business Statistics, EU Reg. 250/2009) were to be considered as the "primary" definitions. If no definition is found in SBS, then definitions from a few other statistical sources can be used, i.e. ESA (European System of Accounts). It is important to use as few sources as possible to be sure that the definitions are consistent. This approach will give the possibility to compare the results among sectors.

In addition, PGECON 2012 considered essential to finalize the Glossary of the economic terms used in the DCF as already proposed by EWG 11-18.

On the basis of this background, the glossary has been compiled by JRC together with an external consultant. The final glossary was presented to PGECON 2013 for discussion.

PGECON 2013 considered that economic data collected for fisheries is derived from general economic variables. The task for the economists in fisheries is to transform the general economic variables for use in the three fish-related sectors (fleet, fish processing and aquaculture) with more specific explanations for the use in these sectors. However it is still important that the general definitions are used to permit comparison with other sectors.

The DCF covers the collection of economic data from the Fishing, Aquaculture and Processing sectors. If possible, the variables should be defined exactly the same for all sectors and only in special cases, with good arguments, should the definitions differ.

To have clear and concise definitions of the economic variables for production, it is important to keep the definitions in an accounting frame. This means that the definitions have to be in accordance with general accepted accounting principles to be consistent for the single production unit and for comparisons between production units in the MS and between MS. It also makes it possible to have consistence with similar variables for other sectors.

Such an accounting frame exists in the Structural Business System (SBS) for statistics for enterprises in Eurostat. A similar accounting frame is used in the FADN system for agriculture in DG Agri. The accounting principles and the definitions of the economic variables are not decided by the experts in FADN or in SBS. They are decided internationally by the accountants associations and are implemented in EU by the directives for accountants. The Fourth Council Directive 78/660/EEC on the annual accounts of certain types of companies is the most recent report. These directives are afterwards implemented in the national laws and in the principles for FADN and SBS.

The UN system for National Accounts (SNA) and the related European National Accounts system (ESA) also use similar accounting frames.

There are some problems with the use of data from accounts. One problem is that, in principle, the account is connected to a legal unit (company, enterprise) and not to the production unit (local unit). This means that the data collector sometimes has to calculate some of the data for the production units using data from the legal unit. Depending of the structure of the sector in the country this problem differs between MS. If the sector mostly consists of small enterprises owned by the user, the company and the production unit normally is the same. If the sector on the other hand mostly consists of large companies, calculations will be needed to split between the different production units belonging to the same legal unit.

The production unit in Fishery is the Vessel, in Aquaculture is it the Fish farm and in Processing Industry for fish is it the local unit or the kind-of-activity unit. There is still an issue with the definition of turnover in aquaculture. Not all MS agreed that the turnover of aquaculture companies is equal to the value of production of the sector. The turnover includes sales to other enterprises of the sector, which continue farming and later will send their products for final consumption. Those sales appear in the raw material costs of the latter enterprises. They are not included in the value of production of the sector, which comprises only sales for final consumption in shell fish farming and also, in fish farming, sales for restocking of rivers or possibly for recreational fishing. This should be looked in further. PGECON 2013 considered that to be able to keep time series unchanged it is important that the variables do not change often. Ad-hoc variables can be decided at STECF or PGECON meetings.

PGECON 2013 discussed to whom the glossary should be addressed. There was a general consensus that the glossary should serve data collectors as a guidance for their activity as well as end users as a reference of final estimates.

PGECON 2013 suggested to include the Glossary in the Master Reference Register of DCMAP.

PGECON 2013 made a revision of the glossary prepared by JRC (annex 4). The final revised glossary will be presented at the STECF DC-MAP meeting in next June.

PGECON 2013 suggested to discuss the glossary with SBS experts in Eurostat before publishing it in MRR.

> **Recommendation**:
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> PGECON 2013 suggested to include the Glossary in the Master Reference Register of DCMAP and to discuss the glossary with SBS experts in Eurostat before publishing it in MRR.

4 DISAGGREGATION OF ECONOMIC DATA

A presentation on the outcome of the 2012 workshop in Malta was given. Several applications require a spatial or activity-related resolution of fleet economic data which is different from the resolution as defined under the DCF. As transversal data are in most cases available at the required resolution, the plan was to find correlations between those two groups. For this analysis individual vessel data from several member states have been analyzed using different software (SPSS, Excel, R, SAS).

Some hypotheses on expected correlations were drafted, e.g. crewcost and value of landings, fuel cost/consumption and kWhours, repair/maintenance cost /other variable cost and GTdays. Some close correlations have been found, but some data sets had considerable scattering. The inclusion of further information (métier) lowered the number of observations per alternative and led to irrational results in some cases.

Crew costs and fuel costs incur frequently, and therefore they are more closely correlated to the expected cost drivers (value of landings and kWdays) than other variable costs and, particularly repair and maintenance costs. The analysis of crew costs might be biased if some of the datasets include an owner's compensation and others not. The individual datasets do not indicate whether the skipper is included in crew costs or not.

Fleet economic data cannot be collected at higher resolution than defined in the DCF. Therefore the correlation with transversal data is the only viable way for disaggregation. However, the analyses performed during the workshop are to be regarded as preliminary and as work in progress. After two workshops on this issue which provided a broadened insight into the issue PCEGON strongly recommends a study on the disaggregation which delivers a comprehensive analysis of different approaches and methods, addressing also the availability of individual data which varies by MS.

Recommendation: PCEGON strongly recommends a study on the disaggregation which delivers a comprehensive analysis of different approaches and methods, addressing also the availability of individual data which varies by MS.

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5 METHODOLOGY FOR ESTABLISHMENT OF THRESHOLD FOR WHICH SAMPLING BY SURVEY OR PANEL IS NECESSARY.

The group noted that thresholds may be applied for two purposes:
1. make the data collection procedures more efficient when concentrating the data collection effort on more active fleet segments, and
2. distinguish the commercial fleet from the non-active/low active fleet.

The prevailing recommendation from PGECON 2012 already realised that the economic data for low activity fleet may be based on estimated procedures improving the cost efficiency of the data collection.

PGECON realised that there are two different uses of the data. The current regulation requires that the economic data covers the whole fleet. Therefore the data is useful to describe the economic performance of the whole fleet only distinguishing non-active vessels from the active (effort significantly different from zero). However in several countries the fleet is actually separated according to activity. There are vessels that are commercially active: vessels activity is high enough to be considered commercial enterprises and low activity vessels: those used only for a limited time each year and could not generate income high enough to be considered commercial enterprises.

There are different reasons for low activity in the fleet. In some cases vessels may be used only to maintain the vessel in the register. The ultimate reason behind this is usually administrative: fishing licence, scrapping scheme. In many countries the coastal small scale fishing is highly diverse: the active part fishes the major part of the whole catch while there are lots of fishermen with only a limited activity.

The current regulation requires data covering all fleets. These data are appropriate to evaluate the economic performance of the whole fleet. However bio-economic analysis requires the cost structure of the operating fleet. In case of non-active/low active vessels the average performance of the fleet is biased to that of the active/commercial fleet. Firstly, in most of the cases the cost structure of commercial fleet is different than low active vessels. Secondly, in any cases the capital input and consequently costs are increased with low active vessels. In the end the average economic performance is biased and useless for bio-economic analysis. Therefore this data cannot be used to make economic evaluation of management measures or consequences of implementation of new CFP.

PGECON realised that in some countries it is evident that inclusion of all vessels would degrade the economic performance of the commercial fleet that the management measures are targeted. In some areas the fleet segments are more homogenous in terms of activity and therefore it may not be necessary to split the segments in low and high activity. Therefore PGECON concluded that this issue should be investigated in a workshop. The terms of reference for this workshop are described in section 9.6.

> **Recommendation:** To finally solve the issue of thresholds PGECON suggests to hold a workshop

6 COMPARE PRICE PER CAPACITY UNIT, DEPRECIATION RATES AND OTHER ASSUMPTIONS APPLIED BY MS IN ESTIMATING CAPITAL VALUE AND CAPITAL COSTS.

PGECON agreed that comparing the price per capacity unit, depreciation rates and other assumptions applied in estimating capital value and capital cost would not be possible in the time allocated to this subject at this meeting. Therefore PGECON suggested that this subject should be taken up in a workshop this year. See section 9.5 for the terms of reference for this workshop.

> **Recommendation** PGECON suggested that this subject should be taken up in a workshop this year

7 ASSESS VALUES OF ACCURACY INDICATORS AND DISCUSS PRECISION TARGETS FOR DIFFERENT FLEET SEGMENTS AND DIFFERENT VARIABLES.

PGECON 2013 discussed the usefulness of the CV as a quality indicator and concluded that the CV is a useful indicator but that the CV should be reported together with achieved sample rate (already available) and the frame population. Preferably all three indicators should be available to the end-user.

PGECON 2013 reinforced the suggestion of STECF 13-06 that no target or threshold should be set on the CV indicator.

To have a first impression of the relevance of the current quality indicators a subgroup of PGECON investigated the coefficients of variation provided by the MS for energy costs, income from landings and wage and salary of crew at the fleet segment level for 2011. Figure 1A and B illustrate some of the findings.

On the 1038 data points available, 139 had a missing CV (13%). Of the remaining data, some were much higher than 1 (see Fig. 1A). For some countries it is obvious that the CV was expressed as percentage rather than proportion (e.g. Portugal) but other countries have values

higher than 1 for some fleet segments only. It is unclear if this is due to high CV for some estimates, if this is due to poor calculation of CV (especially for clustered segments) or simply if some are expressed in percentage and some in proportions. Because we could not make assumptions for each case, we removed values higher than 1 for the rest of the analysis.
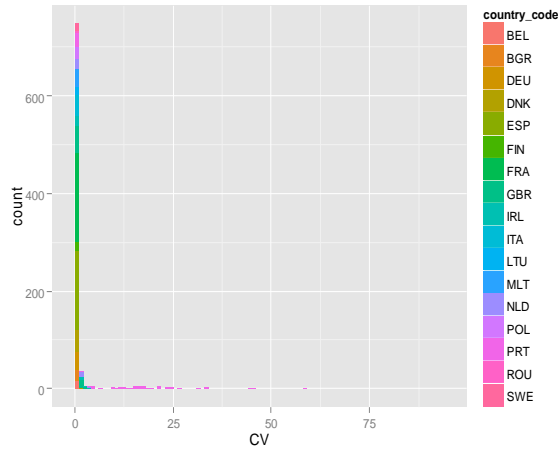
Figure 1A   Figure 1B
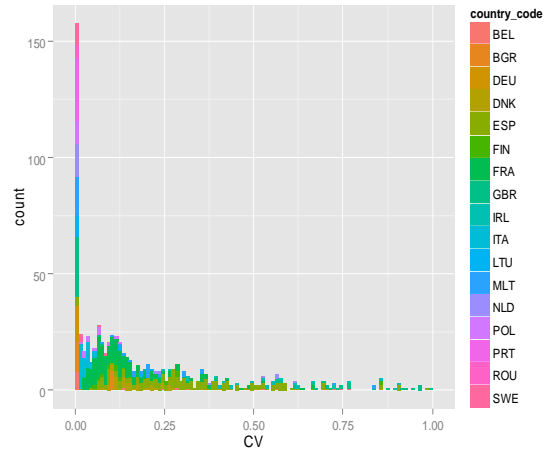
Figure 1a Distribution of CV in 2011 data submitted to JRC (income, wage and salaries and fuel costs only)

Figure 1b CV distribution of CV lower than 1 in 2011 data submitted to JRC (income, wage and salaries and fuel costs only)

When looking at the distribution of the CV lower than 1 (fig. 1B), it appears that there is a large amount of 0 and about 80% of the CVs are lower than 0.3. The zeros are mainly due to full coverage of the population (achieved sample rate = 100%).

Figure 2 shows the relation between the achieved sample rate and the CV. There is no clear relationship between the achieved sample rate and the coefficient of variation.
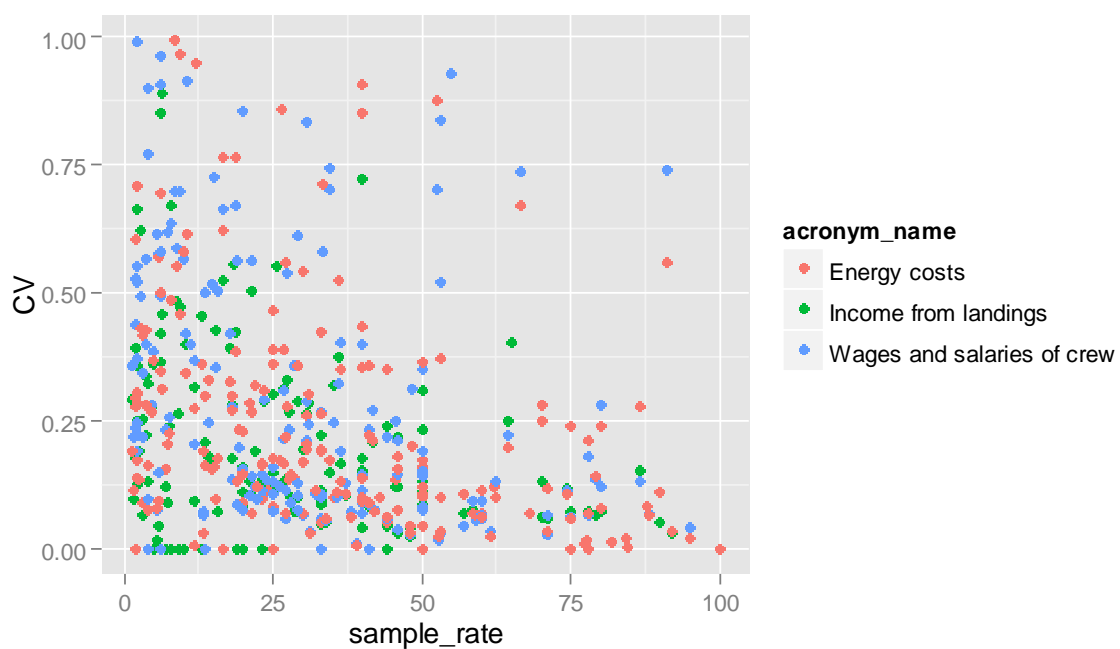
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When looking at the country level (all fleets and the three variables together – Fig. 3), it appears that some countries have lower CVs than others. Having more information about the calculation of CVs would allow us to compare those values and evaluate the quality of data for the different countries.
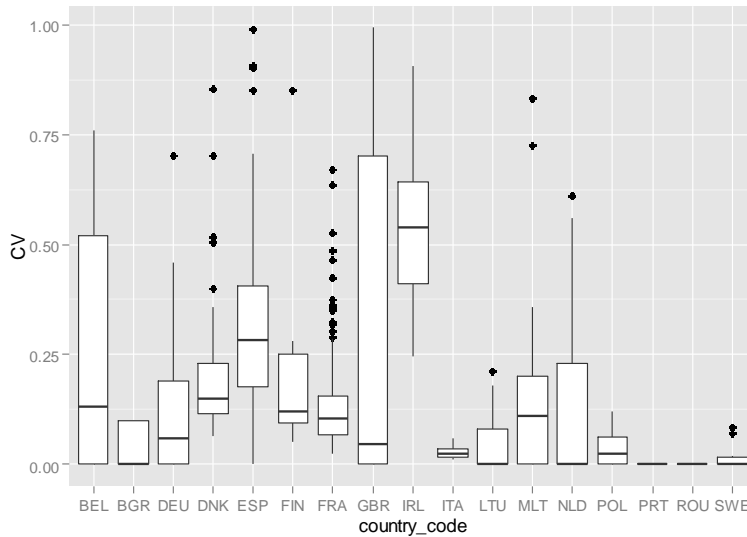
Figure 3 Boxplot of CV per country
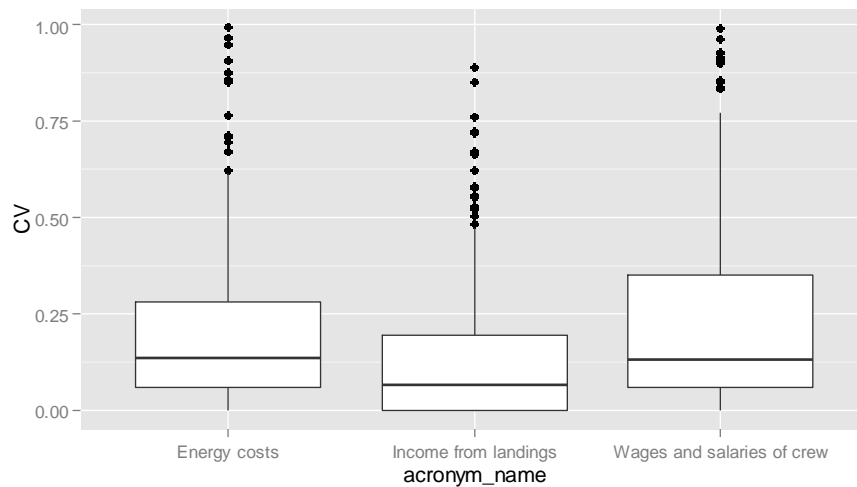
Figure 4 CV per variable

Among the three variables investigated the CVs of income tend to be lower the CVs of energy costs or wage and salaries (Fig. 4). This is probably due to the fact that in Northern countries, income is calculated based on log-books, covering all trips for the larger vessels. The CVs per country per variable tend to confirm this although there are also missing values (e.g. no CV for income for Italy, Fig. 5).
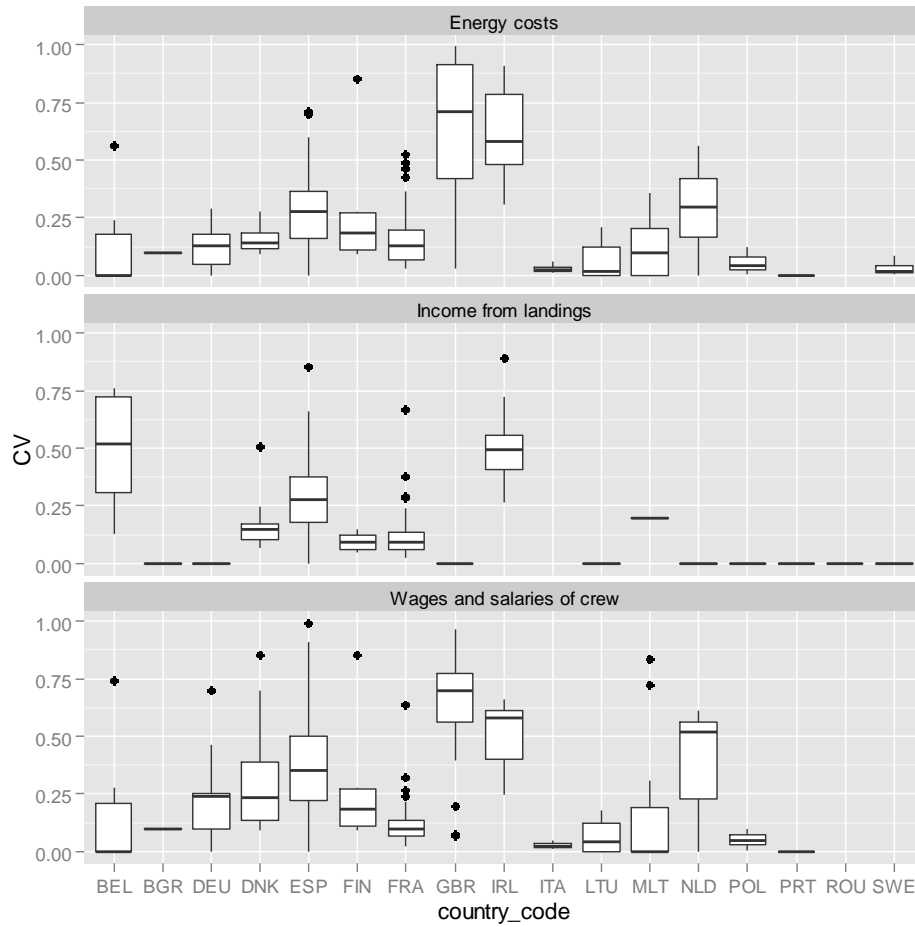
Figure 5 boxplot of CV per country per variable

CVs per gear and vessel size (Fig. 6 and 7) show differences but we didn't identify specific trends.
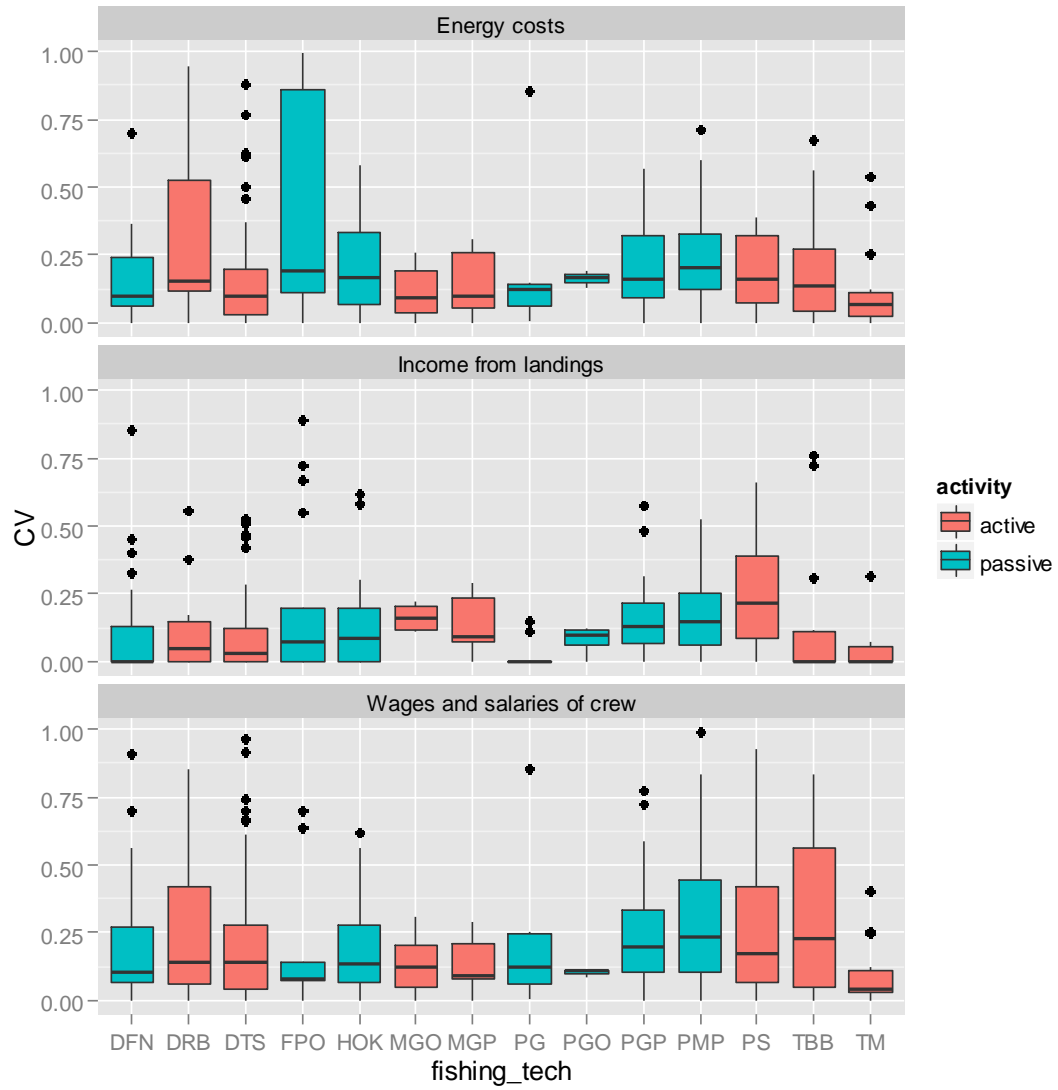
Figure 6 boxplot CV per gear and variable. Active gears and passive gears are identified by different colours.
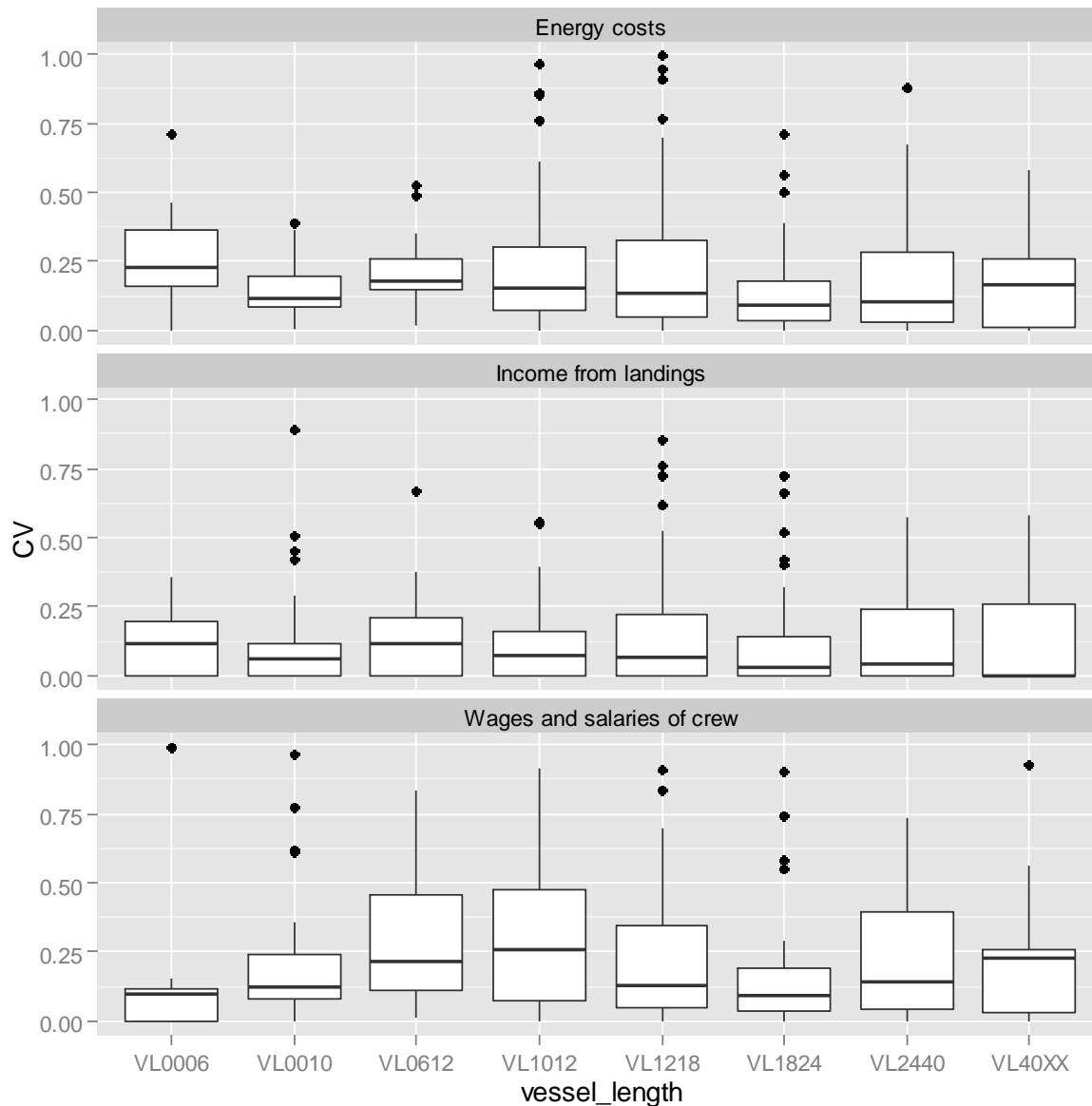
Figure 7 Boxplot of CVs per vessel length category and variable

Based on the analysis above there still seems to be a lot of ambiguity in how member states calculate the CV indicator. Therefore PGECON 2013 suggests that more attention is given to harmonizing the calculation of the CV. PGECON 2013 suggests that a statistician is invited to the next PGECON to

- Explain how to calculate the coefficients of variation given different sampling strategies and estimation of total values and
- Explore possibilities to lower the CV by changing aggregating methods and, in particular, by including additional information (e.g. exhaustively available transversal data).

To facilitate the calculation of the CV before next PGECON, a simple example of how to calculate the CV was developed. This example is provided in annex 3.

It is also important that an inventory of the quality checks currently used by Member States is made for next PGECON. PGECON 2013 also suggested that the next AER should contain a graph in the data quality paragraph of each MS to explore the quality of data for each member state and provide the end-user of the data with necessary information about the quality of the data presented in AER. **Recommendation**: PGECON recommended that more attention is given to harmonizing the calculation of the CV by inviting a statistician to PGECON 2014 to explain the calculation of CV's for different sampling methods.

Moreover, PGECON recommends including a display of the CV by MS in the AER.

8 DISCUSS AND AGREE ON PROPOSED CHANGES IN THE DC MAP FOR ECONOMIC VARIABLES FISHING FLEET, AQUACULTURE AND FISH-PROCESSING

In December 2011, the Commission published a proposal for a European Maritime and Fisheries Fund (EMFF), the financial pillar of the future EU data collection programme, which will provide the financial basis for national programmes implementing the DC MAP 2014- 2020. Data collection program will be part of this financial structure. This will provide a longer period of financial coverage (7 years) and a more stable structure. Two presentations were given by the DGMARE to update the group on the progress of the new DC MAP.

The first of the presentation entitles The *Future of Data Collection: Differences DCF-DCMAP* highlighted the main differences and commonalities between DCF and the DCMAP.

The legal basis for the new DCMAP will stem from Article 37 of the CFP reform proposal which will replace the existing DCF legislation. CFP negotiations are still on-going: all options are still open. The details on data collection obligations are to be laid down in the new EU Multi-Annual Programme (EU-DCMAP) replacing provisions currently in Council Regulation 199/2008 by Delegated Act or Implementing Act.

A substantial change from the DCF is in the financing of the programme. The financial basis for the new EU-DCMAP is the new European Maritime and Fisheries Fund proposal (EMFF). Resources allocated (358-51/Yr) increased (Art 11 EMFF), but is minimum (not maximum) with co-financing of 65% but responsibility accounting and verification lies with the MS. The responsibility is taken away from the commission, there is some auditing done by the commission but the majority of the auditing is on the onus of the MS.

The key provisions from the DCF (Council Reg. No 199/2008) will be maintained: There will be provisions on a multi-annual sampling programme, at-sea monitoring of commercial and recreational fisheries, a scheme for research surveys and a scheme for management and use of data, provisions on coordination and cooperation (expanded), and provisions on data storage, use and transfer (strengthened). Specifically the main provisions are;

1. Evaluation of the fishing sector:

(a) economic variables;

(b) biological variables; (metier-related variables and stock-related variables)

(c) transversal variables;

(d) research surveys at sea.

2. Economic situation of the aquaculture and processing industry sectors:

(a) economic data for the aquaculture sector;

(b) economic data for the processing industry.

3. Effects of the fishing sector on the marine ecosystem
4. Management and use of the data covered by the data collection framework.

The commission presented the main improvements of the new program in comparison to the DCF as follows;

- A seven years predictable framework for Data Collection for the period 2014-2020,

- Improving the flexibility and simplification of the legal framework,

- Enhancing financial stability/responsibility for the MS,

- Integration and harmonization with other EU legislation,

- Improving quality and scope of economic data,

- Improving quality and availability of data for ecosystem based management,

- Strengthened regional cooperation and involvement of end-users and regional coordination groups, and

- Involvement of LLC (freshwater aquaculture & fisheries)

The commission wants the end users to get more involved in the data collection. They want data users to feedback into the data collection. These end users are very variable and they could be the commission evaluation the effects of the structural funding, the report on the fishing fleet, it could be advice by ICES regarding stock. They need to be involved from the beginning.

The commission are encountering problems with timing and launching of the new DC MAP therefore they are continuing with the old system for another year. Need NP in place for next year and accepting them on parallel operational for the new DCMAP. However, the funding for these will be under the new EMFF but the old legislation will apply. If it is not in place there will be no money and MS will have to spend first with reimbursements to follow.

There is room for choices within the MS. This will mean that at a national level MS will need to negotiate the division of the funding. There must still be quality of data which is the responsibility of the MS.

The commission also presented some questions for reflection on the future DC MAP. The majority of these recommendations were taken from the publication *Compilation of recommendations & conclusions relating to the development of the Data Collection Multiannual Programme (DC-MAP)* edited by Jordi Guillen. Institut de Ciències del Mar, CSIC. The purpose of this presentation was to refresh the group on areas that are proposed in the new DC MAP. Overall there were little, or no, objections to these proposed edits unless otherwise stated in the following text. However, there was not sufficient time given to discuss these issues in details.

- Concentration indicators at national level

Concentration indicators to be provided at national level (STECF-12-01, page 23):

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.

- Total GT and total kW

*Use of total GT and total kW instead of average GT and average kW (STECF-12-01, page 23).
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.*

- Short and long term debts

Classify debts in short and long term (STECF-12-07, page 23)

- PGECON felt that this would be not useful to collect for the majority of MS. Before
  considering to add this specification it should be clearly defined what analysis require
  this specification. Moreover, the reference given in the presentation ("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") refers to aquaculture (appendix X) or processing
  industry (appendix XII), but not to fleet.

- Subsidies definition

Subsidies definition needs to be improved (STECF-12-07, page 23):

*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.*

This view was not agreed by the group. This variable was defined at the PGECON 2012.
PGECON 2012 compared the methodologies used by the Member States for the calculation of
"direct subsidies". The aim of this comparative exercise was to attempt to define a standard
methodology to calculate direct subsidies. The summary of these findings were as follows;

> *On the basis of DCF definitions and OECD classification, the group agreed that
> the following components should be included:*
>
> - *refunds of fuel duty*
>
> - *subsidies for temporary cessation*
>
> - *Socio-economic compensation for fishermen (example: funds given to the
>   company to compensate the crew for the loss of income.)*

These components have to be included because they directly increase the income of fishermen.

Socioeconomic compensations include both payments for natural disaster or funds given to the company to compensate the crew for the loss of income. The same approach should be applied for the aquaculture sector, where subsidies are used to compensate for natural disasters or other types of damages. It has been noted that at present the de minimis regulation (EC Reg. 875/2007) allows a maximum support of 30,000 Euro per firm for each three-year period during 2007-2013.

The group concluded that the following items should be excluded from direct subsidies,

- *Fuel tax exemption*

- *Subsidies for permanent cessation of fishing activities*

- *Investment subsidies (fleet modernization)*

In the classification of subsidies fuel tax exemption has to be distinguished from refunds of fuel duty. Only the latter s should be considered a direct payment as it directly increases the income of fishermen. On the contrary fuel tax exemption represents a cost reducing subsidy which doesn't affect the income.

For the same reason subsidies for permanent cessation of fishing activities and investment subsidies have to be excluded from direct subsidies because they are part of investments/disinvestment . In particular, the inclusion of subsidies for permanent cessation in the income could overestimate the economic performance of those fleets which have become inactive during the year. However, even if excluded by the category of Direct Investments, subsidies for permanent cessation or for investment may represent an important source of payments, that could be properly collected and aggregated at segment level.

The group agreed that it is up to the commission to decide if permanent cessation subsides should be included as a separate variable. However permanent cessation subsidies should not be included in income.

- Social Data

Social Data not to be collected every year (STECF-12-01, page 23):

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. Social indicators are relevant (STECF 10-06, page 20-21):

With the adoption of Regulation (EC) No 2371/2002, the social dimension has become an integral part of the Common Fisheries Policy. The Lisbon strategy has reinforced the social dimension of fisheries and requires the identification of social objectives that are suited to the field of fisheries.

STECF notes that the social indicators mentioned in the context of the CFP reform (employment, dependency, social sustainability, attractiveness and safety) are all relevant to consider in relation to evaluation and/or assessment of management strategies. STECF also notes that these social indicators are in line with a range of the general principles mentioned in the treaty establishing the European Union or in the CFP basic regulation or as specific principles expressed in the Code of Conduct published by the FAO.

A range of possible social indicators was proposed in the final report SGECA-SGRST-06-05.

Several PGECON participants considered some potential problems with this new social data collection. In particular the group strongly agreed that these social data were not the responsibility of economists. It was felt that a pilot study should be conducted, preferably by social scientist, to evaluate which data should be collected, which data are available through common sources and which are the applications/end users and requirements. The majority of participant did agree that such a data collection would not need to be conducted annually.

- Valuation of capital and Depreciation Calculation

Valuation of capital (STECF 11-19, page 5-6):

In relation to the valuation of capital, STECF concludes that clarifications and specifications of concepts and terms given by EWG 11-18 should be taken into account in the revision of the DCF STECF considers that it would be useful to identify issues that become apparent after comparing

results of estimating fleet capital value using the PIM method in a number of MS. The EWG has proposed that this is among the ToR of a new Planning Group on Economic Issues that could operate under the DCF.

Depreciation calculation

Depreciation should be calculated using the degressive depreciation scheme based on capital values estimated using replacement values (STECF 11-19, page 6): depreciation should be calculated using the degressive depreciation scheme based on capital values estimated using replacement values (as opposed to capital values estimated using historical values) as explained in section 5.1 of the EWG-11-18 report

The group agreed with these points. PGECON 2012 has made significant progress in the harmonizing of valuation of capital and depreciation calculation. At the 2012 meeting the main conclusions of the workshop on capital value and other variables (Workshop on calculating capital value using PIM and definition of DCF variables, 13th - 17th June 2011) was presented. This meeting clarified some fundamental concepts related to the PIM methodology and illustrated its practical implementation through the excel spread sheet, developed within EC study No. FISH/2005/03. A comparison of the average prices per capacity unit and corresponding assumptions was carried out using a template earlier submitted to the participants.

It was decided by the group that given the busy timetable TOR 4, which aimed to compare price per capacity unit, depreciation rates and other assumptions applied by MS in estimating capital value and capital costs and explore the sources of PCU for the different MS should be postponed. Instead, it was agreed that this would form the basis of a separate workshop that would endeavor to answer these questions and also demonstrate to MS how these calculations should be prepared. There are two workshops budgeted for this year so the evaluation of capital and depreciation can be assigned to one of these. Terms of reference for this workshop were discussed under TOR 9.

- AQUACULTURE

Segmentation by technique might be reviewed in order to harmonize them with the EUROSTAT's collection and needs of end users (WSAQUA 2012, pages 4-5): It was concluded/recommended, that the fish species list should remain the same as in the current DCF, however techniques

might be reviewed in order to harmonize them with the EUROSTAT's collection and needs of end users EWG 12-13 comments on the revision of the list of economic variables to be collected under DCF as:

a) include "livestock in weight and value of stocks"- stock at the end of the period - in order to know the stock variations; b) include subsidies for investments, considering they are very important for aquaculture enterprises and also their importance to track and evaluate the EFF - currently it is only asked for direct subsidies;

c) consider to collect production data in terms of number of individuals, apart from currently reporting their weight and value. This makes sense for some segments, especially hatcheries and nurseries, since weight can change significantly in a short period.

Current variables remain relevant and changes have not been yet justified (WSAQUA 2012, page 6).STECF aquaculture EWG, enumerated several variables that could be collected (STECF-13-03, page 230):

Combine "repair and maintenance" together with "other variable cost" in one variable;

Consider to report the sales (production) number of individuals (apart from currently reporting their weight and value). This makes sense for some segments, especially hatcheries and nurseries), since weight can change significantly in a short period.

Another issue that was raised is the possibility to have in the future DCF, an overview every 3 years of the spatial distribution of the sector. This shall be done by using existing data on the fisheries, processing and aquaculture sector. The spatial distribution/concentration of enterprises in the sector, if possible including employment and turnover, if accessible, may be reported on a 3-year period on a regional level, which still has to be defined.

In general there were no objections to these recommendations. The inclusion of subsides for investment was seen as a useful addition as this can often have a direct effort on income and production. MS also agreed in principle that the collection of production data in terms of numbers of individuals, apart from weight and value, was useful in certain examples. However, the group stressed that unit reporting should be clearly defined for each segment to avoid discrepancies between MS and that production data by individuals should only be required for those segments where this reporting structure is feasible. In principle there was no strong objection to the combination of 'repair and maintenance' together with 'other variable costs' but there was concern that these variables may need to be disaggregated again in the future and as such the group believes it would be wise to maintain the current reporting of the two variables. In terms of reporting spatial distribution of aquaculture enterprises there was some concern expressed by MS and there needs to be clearer definitions of this

possible new variable. Specifically, there is a need to clearly define the level and scale of the reporting. Some MS also believe there are confidentiality issues with reporting exact location of enterprises.

- Freshwater aquaculture collection

(WSAQUA 2012, page 4):

It was noted that collection of data for freshwater aquaculture was not obligatory at the moment, however some MS were already collecting the full set of economic indicators for freshwater species (Denmark, Sweden, Finland, Portugal, Ireland and Italy), while others might face problems collecting this data where the sector comprised numerous small enterprises.

In general MS were fine with this statement and MS that receive EMFF funding. However it was proposed that there would need to be a threshold in the reporting of this variable to exclude small operations. In MS such as France, with many small enterprises there may be a high cost associated with this data collection and as such any data collection should be well justified.

- FISH PROCCESSING:

Value added compared to Structural Business Statistics?

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.

Raw material.

Enterprises should be segmented by number of FTEs instead of the number of employees (STECF 10-07, page 25): In the data collection program, it is suggested that the segmentation of the fish processing industry should be according to the number of persons employed (SBS 16 11 0) in each enterprise (SGECA 08-01 Lisbon). Using the number of persons employed is not the common methodology used by the statistical offices in Europe, including Eurostat.

The provision of 'Raw Material' has been discussed at STECF many times. The commission have been requested to run a pilot study on the feasibility of collecting these data and its usefulness.

There were varied viewpoint among MS with regard to the question whether there was a value added to collecting the data compared to the data already collected by Eurostat. Some feel that there is added value to this data collection while others felt that Euro Stat is also collecting these data. However the segmentation of Eurostat is slightly different. There was a concern that the coverage of the Euro Stat data was not as good and the segmentation was different so that is why we have more detailed data in DCF. We don't need to have a detailed cost structure for processing. In some countries the coverage of these data is really bad. There are many companies that are not included and others that are not altogether processing.

There was no objection to Enterprises being segmented by number of FTEs instead of the number of employees.

PGECON expressed some concerns that TOR 6/7/8 were not sufficiently addressed but that there was no more time to go deeper into these terms of reference. Therefore it was decided that PGECON 2013 participants to provide comments for the next DC-MAP meeting by email to Irina who is attending the DCMAP meeting (second week in June). These comments will be presented there.

9 PROPOSE TORS FOR STUDIES INCLUDING ESTIMATION OF BUDGET FOR ALREADY PROPOSED STUDIES (RECOMMENDATION LIAISON MEETING) AND WORKSHOPS

PGECON recommended the European Commission to launch the following studies already requested by previous DCF workshops and STECF meetings:

- Study to propose methodologies for estimation of intangible assets in EU fisheries.
- Study to disaggregate economic variables at metier and/or geographical areas
- Study to Standardize Quality Reporting and Propose Methods in the case of Non-Probability Sample Survey (NPSS).
- Feasibility study on the collection of raw materials in the fish processing sector

PGECON recommends that STECF further looks into the prices content of the ToR's proposed in this chapter.

9.1 Study to propose methodologies for estimation of intangible assets in EU fisheries.

Background

Implementation of the CFP in the various MS has led to an introduction of various types of rights (licenses, ITQs, etc.). Some of these rights are freely tradable; others can be only transferred together with the vessel to which they are attached. Still other rights are officially not transferable, but in reality they too can be transferred. In many countries the value of these intangible assets approaches or even exceeds the value of the tangible assets and it plays an important role in operational decision of fishing companies.

In the near future, it has also to be considered that the proposed Basic Regulation for reform of the Common Fishery Policy (COM(2011),425) introduces a system of transferable fishing concessions that should constitute a major driver for fleet capacity adjustment.

However, until now, capital valuation in fisheries focused primarily on the vessel and its equipment. Methodology for estimation of the capital value developed within the EC study No. FISH/2005/03 allows estimating the value of tangible assets. In case intangibles are part of the asset value, the suggested method requires to separate them from the tangibles so that the determined value per capacity unit refers exclusively to physical assets.

However, attaching value to the intangible assets faces several conceptual as well as practical problems:
- Ideally the value of assets should include all assets of the company including the intangible assets, especially the value of fishing rights. And tangible assets should be separated from intangibles. However there should be common methodology to separate and value these assets.
- When intangibles are freely tradable, observation of their prices in the market is often difficult because the number of transactions is small and they are not recorded.
- When the intangibles are attached to vessel, direct observation of the price is impossible. The value has to be estimated.
- In many cases, the fishing companies have not yet acquired any intangibles, but simply hold the rights which they have received free of charge from the government, when they were introduced. In that case it is not clear if these rights should be valued as an asset, increasing substantially the total asset value of the company, or not.

For all the above considerations, evaluation of intangible assets is a difficult exercise. The EC study No. FISH/2005/03 proposed to apply the approach established by FADN, i.e. tradable intangibles should be valued at current market price (or a multi year average), independently of the question whether they have or have not been acquired or whether they are or are not linked to specific tangible (e.g. vessel). However, price information on intangibles is scarce and estimations of their value when linked to tangibles are far from simple. Further research in valuation of intangible will be essential, as their value probably exceeds the value of tangible assets in many fisheries. In addition, estimation of intangible assets is required by the DCF and common methodologies should be defined.

Terms of References of the study
- ensure a coverage as large as possible so to address all the possible type of fishing rights present at EU level.
- define a methodology for estimation of the value of different types of rights (license, quota, transferable and non-transferable, etc…)
- define a methodology to separate the intangible part of capital (quota, license, etc…) from the overall capital value when this value is not directly observable;
- investigate factors determining changes in values of intangible assets.

Duration of the study: 10 months

Phase 1: Identify different types of fishing rights and identify the available data in relation to fishing rights

Phase 2: Define methodologies, collect data and apply appropriate methodology in each member state

Budget: 275k

9.2 Study to disaggregate economic variables by activity and area

Background

There have been two workshops on the disaggregation of economic data. The 1st DCF workshop on "allocation of economic data on disaggregated level was held in Hamburg (4th- 8th, July 2011) and discussed a general approach of disaggregation of variable cost data by using correlated data which are available at higher resolution. One major task during the WS was to compare different correlations between variable cost data at annual resolution and transversal variables (effort, landings) which are available at higher resolution, also taking in to account capacity data. A 2nd DCF workshop was held in Malta (2012) where correlation of economic data with transversal data was explored. as a way for disaggregation of economic data. As transversal data are in most cases available at the required resolution, the plan was to find correlations between those two groups. For this analysis individual vessel data from several member states have been analysed using different software (SPSS, Excel, R, SAS).

After two workshops on this issue which provided a broadened insight into the issue PCEGON strongly recommends a study on the disaggregation which delivers a comprehensive analysis of different approaches and methods, addressing also the availability of individual data which varies by MS.

Terms of References of the study

• Determination of cost structures within disaggregated units (e.g. metiers): Thus far, cost structures of operations of the same vessel in different fisheries (e.g. metiers) are regarded constant. This is not necessarily realistic, particularly when both passive and active gear operations are compared. The study should provide a method to break down cost structures with respect to the fishing activity performed. The method should as much as possible operate with data that are already available.

• Procedures to derive proper correlations of variable cost data with transversal and capacity data

to be applied for specific disaggregation tasks (having specific requirements of spatial, temporal or activity-related resolution): The outcome of this point should be a tool, requiring only standard software, which allows for modelling correlations, including an indication of the reliability of the result. The end user should then be able to calculate correlations using data which is by default available (e.g. through the DCF or the logbook regulation). The end user should also be able to assess the robustness of the estimated correlation. The method should be applicable to all DCF segments, allowing the end user to disaggregate variable cost data.

• Validation procedure: A method should be provided to enable MS to validate the results of the disaggregation procedure. Specifically for the purpose of validation more disaggregated input might be required, e.g. daily cost data.

Duration of the study: 12 months

Budget: 300k

9.3 Harmonise quality reporting and propose methodology in the case of non-probability sample survey

Background

The DCF, in the section concerning the economic data of the fleet, requires MS to include in their annual report information on the quality (accuracy and precision) of estimates. In case of non-probability sampling, the European Statistical System (ESS) suggests assuming probability sampling even in the case of non-probability sampling in order to be able to use the CV, but the value of this measure is questionable. Other methods to get some indication of the precision of the estimate include e.g. non-parametric tests and regression modelling, but, even in these cases, it is not clear which outputs could be used in the quality report to give information on the quality of the estimates.

Another common problem affecting the quality of economic data concerns the non-response that is likely to introduce a bias and increases the sampling error. Assessment of the impact of non-response is important in all the different types of data collection (probability sampling, non-probability sampling and census).

Considering that non-probability sampling and low response rates are rather common in the collection of economic data of the fleets, and also considering that there is very little published information on these questions, a study has been recommended by SGECA 09-02. The results of this study should be then taken into account by MS when presenting quality indicators in the 2011 technical report on activities performed in 2010.

Terms of References of the study
- Investigate examples of the assessment of the quality of non-probability sampling strategies applied in other sectors which could be adapted to fisheries
- Propose a suitable methodology for the estimation of economic variables in case of nonprobability sampling
- Propose indicators for the assessment of the quality of estimates of economic variables in the case of non-probability sampling
- Propose a common format for the presentation of these methodologies in the NP and in the TR in order to harmonise quality reporting
- Propose methods to evaluate the impact of non-response in case of non-probability sampling and also in case of probability sampling and census with low response rates
- Perform a comparative impact on data quality of different sampling strategies (e.g. is sampling preferable to census with low response rate? When a response rate should be considered too low with respect to the reliability of final estimates?).

Duration of the study: 4 months

Budget: 40k

9.4 Feasibility study on the collection of raw materials in the fish processing sector

Terms of References of the study
- Investigate the volume and value of raw materials are used in the fish processing industry in each MS and investigate their source and origin. Raw materials should include fish and other aquatic species.

- Investigate the type of processed material used in the fish processing industry in each MS
- Investigate the price of raw materials used in the processing sector of each MS
- Investigate percentage of income account from processing and from other activities (selling)
- Estimate the feasibility of linking the raw material use in the fish processing industry to the fishing sector or aquaculture sector by MS
- Estimate the cost of permanent data collection of raw materials used in the fish processing industry

Durations of the study: 18 months

Budget: 1000k

9.5 Workshop 1 Capital evaluation and value of fishing rights

Terms of Reference
- Investigate regionalization of price per capacity unit, depreciation rates and other assumptions applied by MS in estimating capital value and capital cost
- Explore the current sources of PCU for different MS
- Explore possibilities of harmonization of sources used to calculate PCU
- Determine the definition of replacement/current value of capital and the annual depreciation of the fleet for the glossary
- Investigate how the value of fishing rights is determined in the MS
- Investigate which fishing rights are used in the MS
- Explore generalization of the value of fishing right calculations

5 days

Chair: Anton Paulrud

Location: Sweden

Timing: September/October

9.6 Workshop 2 Income related stratification of fleet segments

Terms of Reference
- Investigate what kind of thresholds are used by the MS already
- Compare how the income is distributed over the fleet within a MS
- Investigate how the use of a threshold would affect the performance and cost structure of a fleet segment with the specific target of removing bias from the fleet segment data
- Decide how the stratified fleet segments should be reported

3 working days

Chair: Jarno Virtanen

Location: Helsinki or Croatia(?)

Timing: November

10 NEXT YEAR PGECON: DATE AND VENUE AND APPOINTMENT OF THE CHAIR PERSON

The next year PGECON will be organized by vTI in Germany (Hamburg/Berlin) and will be chaired by Jörg Berkenhagen. Next year's PGECON will be held in March/April 2014.

The Terms of Reference for this meeting will be prepared by the chair and by the European Commission taking into account the conclusions of the 2013 PGECON, the 20123 RCMs and the 2013 liaison meeting.

11 EUROPEAN DATA BASE OF ECONOMIC DATA

JRC quickly presented the state of the database and web-based dissemination tool. Data in the database and through the dissemination tool are made available at the same time as the AER report is made available. Together with the AER, excel files of all the data used in the report are made available. Previous PGECON, there were discussions on whether MS could upload data as soon as they have it available or do they need to wait for the data call first. Discussions on this are still on-going.

A problem encountered by JRC was that some member states submit information on number of vessels in the segment as a total, but do not make a distinction on the number of active or inactive vessels in that segment. The European Commission would like to make distinctions between different fleet clusters, but are dependent on what MS are doing. Therefore to control data submitted, the Commission is thinking of establishing a checking/control system by using the capacity data that is initially submitted.

PGECON 2013 agreed that an extra check implemented by JRC during the data submission based on submitted capacity data would be a good idea.

ANNEX 1: AGENDA OF THE 2013 PGECON

Monday 13th of May 2013 (start 14:00 – finish 18:00)

14:00   Introduction and Welcome
           Comments of the Commission
           Meeting Logistics and Information
           Addressing our Terms of Reference – Adoption of the Agenda
           Format and Content of Meeting Report
           Appointment of Rapporteurs
14:30   Presentation of the work done on the Glossary economic definitions (EWG11-18)
           Determine which definitions are still lacking
           Split group into subgroups to tackle part of the definitions still needed.
16:00   Coffee break
16:30   Continue work in subgroups
17:30   Report back to plenary to discuss gaps
17:45   Summing up Day 1
           Are we addressing our TOR's ?
           Outstanding Issues from Day 1
           Plan for Day 2
           Report Status
18:00 End Day 1

Tuesday 14th of May (start 9:30 – finish 18:00)

9:30   Review of where we are - Proposed Work for Day 2
9:45   Addressing ToR2
- Presentation workshop results
- Discuss whether this methodology can be used more extensively

11:00   Coffee break
           11:30   Addressing Tor3: Last PGECON a recommendation was to discuss per supra region whether it would be useful to implement certain thresholds above which data needs to be collected by survey/panel. Below the threshold MS would be allowed to estimate data instead of collecting it by survey/panel. We will discuss by supraregion whether this threshold is desirable, how the threshold is defined and how the data for the segments below the threshold should be estimated.
- Split the group in subgroups by supra region
- Discuss and agree on thresholds for sampling by survey
- Discuss ways of estimating data for segments below the threshold.

12:30   Report back to plenary
13:00   Lunch
14:30   Addressing ToR4 and ToR5
- Split the group into 2 subgroups price per capacity unit (ToR4) and precision levels (ToR5)

16:00   Coffee break
16:30   Continue workgroup
17:15   Report back to plenary
17.45   Summing up Day 2
           Are we addressing our TOR's ?
           Outstanding Issues from Day 3
           Plan for Day 3
           Report Status

18:00   Close Day 2

Wednesday 15th of May (start 9:30 – finish 18:00)
9:30   Review of where we are - Proposed Work for Day 3
9:45   Presentation of the proposed changes so far in DCMAP
10:30   Discuss outstanding issues DCMAP fisheries, aquaculture and fishprocessing
- Divide into 3 subgroups: fisheries, aquaculture and fishprocessing
- Each subgroup discuss the outstanding issues and identifies necessary changes
11.30   Coffee break
12:00   Continue subgroups
13:00   Lunch
14:30   Report finding subgroups in plenary
15:15   Discuss and agree necessary changes fisheries
16:00   Coffee break
16:30   Discuss and agree necessary changes aquaculture
17:00   Discuss and agree necessary changes fish processing
17.45   Summing up Day 3
        Are we addressing our TOR's ?
        Outstanding Issues from Day 3
        Plan for Day 4
        Report Status

18.00   Close Day 3

Thursday (start 9:30 – finish 14:00)
9:30   Review of where we are - Proposed Work for Day 4
9:45   Presentation economic database
10:15   Presentation issues raised during the preparation of AER
10:30   Discuss issues and propose future developments database
11:00   Discuss need for workshops plus ToR
11:30   Coffee break
12:00   Discuss recommendations needed studies including estimation of costs
12:30   Reports from Rapporteurs
- Discussion
- Key outputs from 2nd PGECON
- Our Recommendations
- Discussions on Outstanding Issues
- Completion of Report – Task Allocation and Timelines
- Closing Comments of Commission
- Have we addressed our TOR's?
- Summing Up
14:00   End of Meeting

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ANNEX 3 EXAMPLE CALCULATION CV

As an illustration of how the CV needs to be calculated we have the following (made up data). We have 7 vessels with in a sample. The total population is 26. The mean of the income is 45924 and the standard variation 23038.

	income (euro)
Vessel1	36574
Vessel2	50933
Vessel3	78992
Vessel4	40702
Vessel5	67776
Vessel6	38167
Vessel7	8324
population size	26
sample size	7
mean	45924
Standard deviation (s)	23038

We can calculate the CV for the mean or for the segment total.

To calculate the CV(mean estimator) we follow the following equation:

$$CV(mean\ estimator) = \frac{\sqrt{s^2 * \left(\frac{1}{n} - \frac{1}{N}\right)}}{mean} = \frac{\sqrt{23038^2 * \left(\frac{1}{7} - \frac{1}{26}\right)}}{45924} = 0.19$$

To calculate the CV(Total estimator) we follow the following equations

$$total = mean * N = 45924 * 26 = 1194029$$

$$CV(total\ estimator) = \frac{\sqrt{s^2 * \left(\frac{1}{n} - \frac{1}{N}\right) * N^2}}{total} = \frac{\sqrt{23038^2 * \left(\frac{1}{7} - \frac{1}{26}\right) * 26^2}}{1194029} = 0.19$$

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
Income	**Income (variable group definition)**	**Fleet+ Aqua+ F.Proc.**	**SBS.** According to Article 24 of the Fourth Council Directive income contains the following items: 1. Net turnover. 2. _Increase in stocks of finished goods and in work in progress._ 3. Work performed by the undertaking for its own purposes and capitalised. 4. Other operating income. 5. Income from participating interests, with a separate indication of that derived from affiliated undertakings. 6. Income from other investments and loans forming part of the fixed assets, with a separate indication of that derived from affiliated undertakings. 7. Other interest receivable and similar income, with a separate indication of that derived from affiliated undertakings. 8. Profit or loss on ordinary activities after taxation. 9. Extraordinary income. 10. Profit or loss for the financial year.	European Union, Fourth Council Directive 78/660/EEC of 25 July 1978 based on Article 54 (3) (g) of the Treaty on the annual accounts of certain types of companies (Official Journal of the European Communities No L 222, 14/08/1978, p. 11)
	Gross value of landings	Fleet	**_Revenues (or total revenue)_** refer to the value of output sold, that is the number of units times the price per unit. Average revenue is revenue per unit, that is total revenue divided by	Glossary of Industrial Organisation Economics and Competition Law,

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
S.			the amount of output sold. Average revenue is therefore equal to price per unit. Marginal revenue is the increment in total revenue resulting from the sale of an additional unit. The term "revenue" is often used interchangeably with "sales" and "turnover".	compiled by R. S. Khemani and D. M. Shapiro, commissioned by the Directorate for Financial, Fiscal and Enterprise Affairs, OECD, 1993.
	Turnover	F.Proc.	***Turnover*** comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover. It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Reduction in prices, rebates and discounts as well as the value of returned packing must be deducted. Income classified as other operating income, financial income and extra-ordinary income in company accounts according to	SBS (12 11 0)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			the 4th Accounting Directive and revenue from the use by others of enterprise assets yielding interest, royalties and dividends and other income according to IAS/IFRS is excluded from turnover. Operating subsidies received from public authorities or the institutions of the European Union are also excluded.	
	Turnover → Value of production	Aqua	'value of production' means the value of output from aquaculture at first sale, including production from hatcheries and nurseries offered for sale.	EC Reg. 762/2008
	Direct subsidies (FL), Subsidies (AQ+FP) → Operating subsidies	Fleet+ Aqua+ F.Proc.	**_Subsidies_** are current unrequited payments which general government or the Institutions of the European Union make to resident producers, with the objective of influencing their levels of production, their prices or the remuneration of the factors of production.

Other non-market producers can receive other subsidies on production only if those payments depend on general regulations applicable to market and non-market producers as well. By convention, subsidies on products are not recorded on other non-market output.

Subsidies are classified into:

a) subsidies on products (Subsidies on products are subsidies payable per unit of a good or service produced or imported. The subsidy may be a specific amount of money per unit of quantity of a good or service, or it may be calculated ad | ESA 1995 (D.3) Subsidies |

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			valorem as a specified percentage of the price per unit. A subsidy may also be calculated as the difference between a specified target price and the market price actually paid by a buyer. A subsidy on a product usually becomes payable when the good is produced, sold or imported. By convention, subsidies on products can only pertain to market output or to output for own final use.): (1) import subsidies; (2) other subsidies on products (Other subsidies on products include: a) subsidies on products used domestically: these consist of subsidies payable to resident producers in respect of their production which is used or consumed within the economic territory; b) losses of government trading organisations whose function is to buy the products of resident producers and then sell them at lower prices to residents or non-residents, when they are incurred as a matter of deliberate government economic or social policy; c) subsidies to public corporations and quasi-corporations to compensate for persistent losses which they incur on their productive activities as a result of charging prices which are lower than their average costs of production as a matter of deliberate government or European economic and social policy; d) direct subsidies on exports payable directly to resident producers when the goods leave the economic territory or the services are provided to non-residents – except repayments at the customs frontier of taxes on products previously paid and waiving of the taxes that would be due if the goods were to be sold or used inside the economic territory.).	

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			b) other subsidies on production (Other subsidies on production consist of subsidies except subsidies on products which resident producer units may receive as a consequence of engaging in production. For their other non-market output, other non-market producers can receive other subsidies on production only if those payments from general government depend on general regulations applicable to market and non-market producers as well.). **_Investment subsidies are excluded._**	
	Income from leasing out quota or other fishing rights	Fleet	Income arising from leasing out quota, or permit to use certain fishing area/gear or similar right to harvest fish.	Not defined elsewhere in EUROSTAT. STECF EWG 11-18, Salerno.
	Other income	Fleet	Other income from the vessel activity, not shown under other headings.	
		Aqua+ F.Proc.	Other income, not shown under other headings.	SBS (32 46 0)
			Costs Costs refer to the value in alternative uses of the factors of production used by a firm (labour costs, materials costs, capital costs). Costs may be **fixed or variable**. Total costs refer to the sum of fixed and variable costs.	OECD glossary
Personnel costs	**Personnel costs (variable group definition)** → Labour	Fleet+ Aqua+ F.Proc.	**_Labour cost_** is the cost incurred by the employer in the employment of labour.	

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
→ Labour costs	costs			
	Wages and salaries of crew (Fleet), Wages and salaries (Aqua+ F.Proc.) → personnel costs	Fleet+ Aqua+ F.Proc.	***Personnel costs*** are defined as the total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees as well as home workers) in return for work done by the latter during the reference period. Personnel costs also include taxes and employees' social security contributions retained by the unit as well as the employer's compulsory and voluntary social contributions. Personnel costs are made up of: - wages and salaries - employers' social security costs All remuneration paid during the reference period is included, regardless of whether it is paid on the basis of working time, output or piecework, and whether it is paid regularly or not. Included are all gratuities, workplace and performance bonuses, ex gratia payments, thirteenth month pay (and similar fixed bonuses), payments made to employees in consideration of dismissal, lodging, transport, cost of living and family allowances, commissions, attendance fees, overtime, night work etc. as well as taxes, social security contributions and other amounts owed by the employees and retained at source by the employers. Also included are the social security costs for the employer. These include employer's social security contributions to schemes for retirement pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases,	SBS 13 31 0 SBS 13 32 0 SBS 13 33 0

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			family allowances as well as other schemes. These costs are included regardless of whether they are statutory, collectively agreed, contractual or voluntary in nature. Payments for agency workers are not included in personnel costs.	
	Imputed value of unpaid labour	Fleet+ Aqua+ F.Proc.	***Imputed value of unpaid labour:*** possible definition of SGECA 10-04 ("Unpaid workers normally refers to persons who live with the proprietor of the unit and work regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to those persons who are not included on the payroll of another unit as their principal occupation. Thus, imputed value of unpaid labour estimates the value of the salaries that these unpaid workers would receive if their work was remunerated") and discussion of EWG 11-18 (the imputed value of unpaid labour is the value of the labour provided by people delivering unpaid labour and working not on a regular basis")	STECF SGECA 10-04 STECF EWG 11-18, Salerno.
Energy costs	Energy costs	Fleet+ Aqua+ F.Proc.	**Proposed definition:** Fleet: Purchases of all energy products during the reference period. Excluding lubrication oil. Energy products purchased as a raw material or for resale without transformation should be excluded. Aqua+F.Proc.: Purchases of all energy products during the reference period should be included in this variable only if they are purchased to be used. Energy products purchased as a raw material or for resale without transformation should be excluded. The figure should be given in value only.	SBS 20 11 0

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
Raw material costs	Livestock costs	Aqua	**Livestock costs.** Purchase of livestock that are kept for the products they provide year after year, includes purchase of breeding stocks.	New
	Feed costs	Aqua	**Animal feedingstuffs** covers all bought-in domestic and imported feedingstuffs, whether processed or not, including those obtained direct from other farmers. Crop products used in animal feed produced and used in the same reference period on the same holding are also recorded and entered in a sub-heading of the "animal feedingstuffs" heading as intra-unit consumption. They are also recorded in output.	Eurostat, "Manual on the economic accounts for agriculture and forestry EAA/EA 97 (Rev. 1.1)", Luxembourg, 2000
Repair and maintenance	Repair and maintenance	Fleet+ Aqua	**Maintenance and repairs (of vessels/aquaculture facilities)** Ordinary maintenance and repairs of assets are activities that owners or users of fixed assets are obliged to undertake periodically in order to be able to utilise assets over their expected service lives (they are current costs that cannot be avoided if the fixed assets are to continue to be used). Purchases, which are changing the asset or its performance are considered as investment. Maintenance and repairs do not change the asset or its performance, but simply maintain it in good working order or restore it to its previous condition in the event of a breakdown (note the contrast between this item and "major renovations or enlargements").	SNA 6.161.
Other operational	Variable costs	Fleet	Includes all purchased inputs (goods and services) related to fishing effort and/or catch/landing and not accounted in any	STECF EWG 11-18

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
costs			other costs items.	
	Non-variable costs	Fleet	Non-variable costs - Includes purchased inputs not directly related to effort and/or catch/landing (including leased equipment), excluded from other costs items.	STECF EWG 11-18
	Lease/rental payments for quota or other fishing rights	Fleet	**Costs of ownership transfer** All the costs associated with acquiring and disposing of assets may be described as costs of ownership transfer. The costs of ownership transfer consist of the following kinds of items: - All professional charges or commissions incurred by both units acquiring or disposing of an asset such as fees paid to lawyers and commissions paid to estate agents and auctioneers; - All taxes payable by the unit acquiring the rights on the transfer of ownership of the fights; - Any tax payable on the disposal of fights.	Based on: Eurostat, IMF, OECD, United Nations (Statistics Division), WB, "System of National Accounts 2008", United Nations, New York, 2009

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
	Other operational costs → other production costs	Aqua+ F.Proc.	Other costs of production, which are not covered by any other headings.	New
Capital costs	Annual depreciation	Fleet	**Capital costs :** following the OECD Manual 2009 they are the cost of using capital in production: hence they include both depreciation and the real costs of financing or a required real return to capital (value of the vessel). In the System of National Accounts, capital costs are measured as consumption of fixed capital only, leaving out the other main element, financing costs. Reasons for this are of a practical nature (which interest rate should be chosen?) but there are also conceptual arguments such as the reluctance to see GDP rise when interest rates for government debt increase. DCF requires the estimation of depreciation costs based on the PIM method (geometric scheme) should be applied.	STECF EWG 11-18 (further clarification needed)
	Depreciation of capital	Aqua+ F.Proc.	**Consumption of fixed capital** (K.1) represents the amount of fixed assets used up, during the period under consideration, as a result of normal wear and tear and foreseeable obsolescence, including a provision for losses of fixed assets as a result of accidental damage which can be insured against. Consumption of fixed capital must be calculated for all fixed	ESA (6.02 to 6.05)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			assets (except animals), including both tangible fixed assets and intangible fixed assets such as mineral exploration costs and software, major improvements to non-produced assets and costs of ownership transfers	
			associated with non-produced assets.	
			Consumption of fixed capital (which should be distinguished from the depreciation allowed for tax purposes or the depreciation shown in business accounts) should be estimated on the basis of the stock of fixed assets and the probable average economic life of the different categories of those goods. For the calculation of the stock of fixed assets, the perpetual inventory method (PIM) is recommended whenever direct information on the stock of fixed assets is missing.	
			The stock of fixed assets should be valued at the purchasers' prices of the current period.	
			Losses of fixed assets occurring as a result of accidental damage which can be insured against are taken into account in calculating the average service life of the goods in question. For the economy as a whole the actual normal accidental damage within a given accounting period may be expected to be equal, or close, to the average. However, for individual units and groupings of units actual normal and average accidental damage may differ. In this case, for sectors, any difference is recorded as other changes in volume of fixed assets.	
			Consumption of fixed capital is calculated according to the 'straight line' method, by which the value of a fixed asset is written off at a constant rate over the whole lifetime of the	

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			good.	
			However, depending on the pattern of decline in the efficiency of a fixed asset the calculation of consumption of fixed capital according to the geometric depreciation method may be required.	
Financial costs, net	Financial costs, net	Aqua + F.Proc.	**Financial expenditures-Financial income**	
	Financial income	Aqua+ F.Proc.	Financial income consists of income deriving from equities, interests and similar income received. Income deriving from equities are incomes received from other corporate enterprises of which the unit holds the total or part of its capital. These incomes correspond to dividends and other incomes distributed by the corporate enterprises to the owners of their capital. Interests and similar income received are interests relating to short or long term bank deposits, income from loans and bonds, interests on agreed loans and debts of current account debtors, trade credits, etc. Financial income may also include accruals and deferred income from suppliers and currency gains (profits on exchange markets).	National accounts, EUROSTAT

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
	Financial expenditure	Aqua+ F.Proc.	Financial expenditure consists of interests paid and similar charges. The interests paid correspond to the remuneration in respect of certain financial assets (deposits, bills, bonds and credits) characterised by the payment at predetermined dates of a fixed percentage of the nominal value of the asset. They comprise mainly of interest on debenture loans (and other types of loans), trade credit and credit of current account creditors, etc. Financial expenditure may also include accrued income agreed with clients and currency losses (losses on exchange markets).	National accounts, EUROSTAT
Extraordinary costs	**Extraordinary costs, net**	Aqua+ F.Proc.	**<u>Extraordinary profit or loss</u>** Some information in Article 22 and following of Council Directive 78/660/EEC. IAS/IFRS do not permit presenting the extraordinary results separately on the accounts of enterprises. For countries where IAS/IFRS is applied to the individual accounts of insurance enterprises, this variable is not to be transmitted anymore.	SBS 32 49 0
	Extraordinary income	Aqua+ F.Proc.	Extraordinary income comprises in the following items: - Items that do not belong to the company's ordinary activities and arise extraordinarily and - Sales or termination of assets.	National accounts, EUROSTAT
Capital value	Capital value		Capital is generally considered as a wealth component (sum of assets belonging to enterprises, government and households). Capital corresponds in economics to a factor of production.	Eurostat (RAMON Database)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
	Value of physical Capital: depreciated replacement value	Fleet	Economic assets are entities functioning as a store of value over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them or using them over a period of time. PIM methodology is applied in fisheries data collection, whenever the direct information is unavailable.	Should be further clarified during the WS on capital value
	Value of quota and other fishing rights	Fleet	Value of transferable quota and other fishing rights.	New
	Total value of assets (Aqua+ F.Proc.)	Fleet+Aqua+ F.Proc.	The assets recorded in the balance sheets are economic assets. Economic assets are entities functioning as a store of value over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them or using them over a period of time. The economic benefits consist of primary incomes (operating surplus by using, property income by letting others use) derived from the use of the asset and the value, including possible holding gains/losses, that could be realised by disposing of the asset or terminating it. An overview of the classification and coverage of economic assets is given in the Table 7.1. The detailed definition of each asset category is set out in the Annex 7.1 to this chapter. Excluded from the asset boundary are: a) human capital;	ESA (7.09 to 7.24)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			b) natural assets that are not economic assets (e.g. air, river water);	
			c) contingent assets, which are not financial assets (see paragraph 7.22.).	
			Three categories of assets are distinguished:	
			NON-FINANCIAL PRODUCED ASSETS (AN.1) Definition: Produced assets (AN.1) are non-financial assets that have come into existence as outputs from production processes.	
			NON-FINANCIAL NON-PRODUCED ASSETS (AN.2) Definition: Non-produced assets (AN.2) are economic assets that come into existence other than through processes of production. They consist of tangible assets and intangible assets.	
			FINANCIAL ASSETS AND LIABILITIES (AF.) Definition: Financial assets (AF.) are economic assets, comprising means of payment, financial claims and economic assets which are close to financial claims in nature.	
Investments	**Investments**	Fleet+ Aqua+ F.Proc.	Investment is expenditure by a unit for the acquisition of goods, services or information expected to develop the activities of a unit for more than one reference period, to the direct or indirect benefit of that unit.	Eurostat
	Investments in physical capital→ Net investment	Fleet	See definition below (Net investment).	SBS (15 11 0) Add to the Annex SBS (15 21 0)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
	Net investments	Aqua+ F.Proc.	**Gross fixed capital formation.** consists of resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realised by the productive activity of producer or institutional units. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly, or continuously, in processes of production for more than one year.	ESA (3.102 to 3.111)
			Purchase and Sale of assets during the year	
			Gross investment in tangible goods	
			Investment during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties or produced or own use (i.e. capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. The threshold for the useful life of a good that can be capitalised may be increased according to company accounting practices where these practices require, a greater expected useful life than the one-year threshold indicated above.	SBS (15 11 0)
			All investments are valued prior to (i.e. gross of) value adjustments, and before the deduction of income from disposals. Purchased goods are valued at purchase price, i.e. transport and installation charges, fees, taxes and other costs of ownership transfer are included. Own produced tangible goods are valued at production cost. Goods acquired through	

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			restructuring (such as mergers, take-overs, break-ups, split-off) are excluded. Purchases of small tools which are not capitalised are included under current expenditure.	
			Also included are all additions, alterations, improvements and renovations which prolong the service life or increase the productive capacity of capital goods.	
			Current maintenance costs are excluded as is the value and current expenditure on capital goods used under rental and lease contracts. Investment in intangible and financial assets are excluded.	
			Concerning the recording of investments where the invoicing, delivery, payment and first use of the good may take place in different reference periods, the following method is proposed as an objective: Investments are recorded when the ownership is transferred to the unit that intends to use them. Capitalised production is recorded when produced. Concerning the recording of investments made in identifiable stages, each part-investment should be recorded in the reference period in which they are made.	
			In practice this may not be possible and company accounting conventions may mean that the following approximations to this method need to be used:	
			(i) investments are recorded in the reference period in which they are delivered,	
			(ii) investments are recorded in the reference period in which they enter into the production process,	
			(iii) investments are recorded in the reference period in which	

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			they are invoiced,	
			(iv) investments are recorded in the reference period in which they are paid for.	
			Sales of tangible investment goods	
			Sales of tangible goods includes the value of existing tangible capital goods, sold to third parties. Sales of tangible capital goods are valued at the price actually received (excluding VAT), and not at book value, after deducting any costs of ownership transfer incurred by the seller. Value adjustments and disposals other than by sale are excluded.	SBS (15 21 0)
Debt	Debt → **Liability**	Aqua+ F.Proc.	_Liability._ A liability is established when one unit (the debtor) is obliged, under specific circumstances, to provide a payment or series of payments to another unit (the creditor). The most common circumstance in which a liability is established is a legally binding contract that specifies the terms and conditions of the payment(s) to be made and payment according to the contract is unconditional.	SNA 2008, § 3.5, 3.33 and 11.5

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
Financial position	Debt/asset ratio → **Debt → Liability**	Fleet	See "Debt" above.	None
Employment	Employment	Fleet+ Aqua+ F.Proc.	Employment covers all persons – both employees and self-employed – engaged in some productive activity that falls within the production boundary of the system.	ESA (11.11)
	Engaged crew	Fleet	Number of jobs onboard, equal to the average number of persons working for and paid by vessel owner. This includes temporary crew as well as rotation crew. It should include unpaid family members.	SBS (16 11 0) SBS (16 12 0) SBS (16 13 0)
	Number of persons employed	Aqua+ F.Proc.	The number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (e.g. sick leave, paid leave or special leave), and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the payroll, as well as seasonal workers, apprentices and home workers on the payroll. The number of persons employed excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the enquiry unit on behalf of other enterprises, as well as those on compulsory military service.	SBS (16 11 0) SBS (16 12 0) SBS (16 13 0)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			Unpaid family workers refer to persons who live with the proprietor of the unit and work regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to those persons who are not included on the payroll of another unit as their principal occupation.	
	FTE National	Fleet+ Aqua+ F.Proc.	***The number of employees converted into full time equivalents (FTE).*** Figures for the number of persons working less than the standard working time of a full-year full-time worker, should be converted into full time equivalents, with regard to the working time of a full-time full-year employee in the unit. It is the total hours worked divided by the average annual number of hours worked in full-time jobs within the economic territory. Since the length of a full-time job has changed through time and differs between industries, methods which establish the average proportion and average hours of less than full-time jobs in each job group have to be used. A normal full-time week must first be estimated in each job group. If possible, a job group can be defined, inside an industry, according to sex and (or) kind of work of people. Hours contractually agreed upon can constitute for employee jobs, the appropriate criteria for determining those figures. Full-time equivalent is calculated separately in each job group, then summed. Included in this category are people working less than a standard working day, less than the standard number of	SBS (16 14 0)

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			working days in the week, or less than the standard number of weeks/months in the year. The conversion should be carried out on the basis of the number of hours, days, weeks or months worked. ***Full-time equivalent employment***, which equals the number of full-time equivalent jobs, is defined as total hours worked divided by the average annual number of hours worked in full-time jobs within the economic territory.	ESA (11.32)
	FTE Harmonised	Fleet	Full-time equivalent 2000 hours per FTE using the same methodology as FTE National.	
Number of enterprises	Number of fishing enterprises(units)/ Number of enterprises → **Number of enterprises**	Fleet+ Aqua+ F.Proc.	A count of the number of enterprises registered to the population concerned in the fleet/business register corrected for errors, in particular frame errors. Inactive units are excluded. This statistic should include all units active during at least a part of the reference period.	SBS (11 11 0)
Raw material Volume	Livestock **(tonnes/Number)**	Aqua	**Livestock** refers to all fish and aquatic species kept or reared in captivity mainly for aqua cultural purposes.	New
	Fish Feed	Aqua	**Fish feed:** quantities of product used for fish and other aquatic species feed and/or for the manufacture of foodstuffs for aquaculture production.	New
Volume of Sales	Volume of Sales → Volume of production	Aqua	Volume of production means the output from aquaculture at	Reg. 762/2008

Variable group	Indicator DCF → DC MAP	Sectors	Definition	Reference
			first sale, including production from hatcheries and nurseries offered for sale.	
	Energy consumption (litres)	Fleet	Volume of purchased energy products during the reference period. Energy products purchased as a raw material or for resale without transformation should be excluded.	