Council Regulation (EC) No 199/2008 of 25 February 2008

concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy

REPORT OF THE MEETING OF THE SUBGROUP OF DCF/PGECON ON STATISTICAL ISSUES AND METHODOLOGIES (SIM)

Edited by Heidi Pokki and Evelina Sabatella

Meeting organized and hosted by:

Ministero delle Politiche Agricole Alimentari e Forestali, Direzione Generale della Pesca Marittima e dell'Acquacoltura

> 12-14 December 2016 Rome, Italy

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Introduction

The meeting on statistical issues and methodologies (SIM subgroup of DCF/PGECON) met in Rome, Italy, from 12 to 14 December 2016.

The meeting was hosted and organized by the Italian Ministry of Agricultural, Food and Forestry Policies, General Directorate for Fisheries and Aquacultures.

The work was conducted by 19 experts from 11MS and from JRC. The list of participants is included in annex 2. Evelina Sabatella and Heidi Pokki chaired the meeting.

The Terms of Reference are presented below and the agenda is included in Annex 1.

Terms of Reference for SIM

The aim of the SIM subgroup is to assist MS in the collection of economic and social data for the fleet, the aquaculture and the processing sectors.

SIM subgroup was established during the 2016 PGECON which also identified the chairpersons. The TORs for the meeting were defined at a later stage during skype meetings among the chairs of PGECON and SIM. TORs were also discussed with DGMARE.

The final TORs for the meeting were the following:

1. Definition of SIM within the PGECON governance and suggestion of ToRs to ensure a more continuous and systematic approach

2. Final amendments on methodological and definitions documents to implement EUMAP work plans in 2017. Additional work in order to set up and evaluate the Quality Assurance Framework

3. Preliminary assessment on the collection of social variables as foreseen in EUMAP

Executive summary

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2. Final amendments on methodological and definitions documents to implement EUMAP work plans in 2017. Additional work in order to set up and evaluate the Quality Assurance Framework

3. Preliminary assessment on the collection of social variables as foreseen in EUMAP

Regarding the first TOR, SIM discussed and provided a scheme (see Figure 1.) for the PGECON and its subgroups to illustrate structure and linkage between separate structural parts, validation of outcomes starting from initiation of needs, detection of issues, development of Tor's, taken measures with relation to it and further rationalization of outcomes through recommendations, approved by PGECON.

TOR 2 included discussions on definitions, methodologies and quality assurance framework. SIM amended the documents produced after 2016 PGECON. The final list of definitions for each variable - to be used as a reference by MS - is reported in annex 4. The final amended tables with proposed methodologies for each variable are reported in annex 5.

The group discussed the value of quota and fishing rights and reasons why this variable should only be collected when fishing rights are tradable. It was agreed that at the moment, this variable should be limited only to tradable fishing rights. Additional research for valuing non-tradable fishing rights would be

valuable and it would be very useful to have a common methodology for valuing the non-tradable fishing rights in the future. In the instance that non-tradable fishing rights are reported, they should be reported separately from the tradable fishing rights. The group concluded that it could be useful to ask what the DGMARE, as the main end-user, would prefer to have under the value of quota and fishing rights. After specification from the end-user the SIM subgroup will evaluate the variable again.

The group also amended the definition of total assets. The definition should be coherent with the definition for aquaculture and fish processing and thus for the fleet it should also be taken from the balance sheet instead of including only the value of physical capital and value of quota and other fishing rights.

The definition of engaged crew was discussed and amended. People working only onshore and paid from vessels should not be excluded if their activity has a direct link with the fishing operations.

Regarding the allocation of vessels in fleet segments, SIM considered that the rules applied so far and explained in EU Decision n. 93/2010 should continue to be applied to ensure consistency among MS and continuity in time series.

SIM suggested that MS should implement, in 2017, on a voluntary basis some analysis and testing on specific issues (derived estimates versus annual data collection, PIM method to estimate investments, impact on profitability indicators according to different methods to estimate capital value). Results should be presented at the 2017 SIM or PGECON meetings.

Regarding the Quality Assurance Framework, SIM discussed table 5B of WP under EUMAP and made some considerations on its evaluation. However, SIM considered that this table should be better used as template for evaluation when MS prepare a methodological report that describes in detail the data collection process. The report should contain the points reported in figure 2.

The methodological report should be a self-standing document describing the methods and procedures used to conduct economic data collections (surveys, results, analysis) and thus also cover quality assurance aspects. It aims to ensure transparency and to promote collaboration between MS data collection institutes and researchers.

The last TOR was briefly discussed. SIM considered that there is an urgent need for a workshop on social variables. SIM suggested how the WS should be structured and the main issues that should be clarified through a preparatory work, if possible, before the WS. SIM stressed the importance of having experts on social issues participating in related meetings as well as the importance of end users' needs with respect to social variables.

TOR 1: Establishment of the SIM subgroup within the new governance structure of PGECON

Edvardas Kazlauskas gave a presentation outlining the new governance structure of PGECON and the establishment of the SIM subgroup.

The rules of procedure of the group of experts on fisheries data collection was presented. These rules allow for the establishment of subgroups to examine specific questions with regard to implementation of DCF and providing scientific advice for the CFP concerning collection and management of social and economic data for the fisheries, aquaculture and fish processing industry. The legal status of PGECON was also considered, which currently is not yet approved by the Commission, although it is already incorporated into the Register of Commission Expert Groups (The primary objectives and possible outcomes of PGECON were also discussed, taking into account tasks for specific subgroups, especially for Subgroup on statistical issues and methodologies (SIM).

The group discussed the difference between subgroups and workshops. The current system of subgroups will have a more continuing approach with an output of specific terms of references to review. In addition, the subgroups can establish methodologies, improve statistical methods, enhance data collection quality assurance and propose best practices for collection and management of the social and

economic data for fisheries. Recommendations from subgroups will be further reviewed and assessed in the PGECON, that will give the final approved recommendation with legal status and which will then be publically available. The group found this continuous working method very useful whenever a single workshop appears insufficient. Nevertheless workshops should be an option for issues which can be handled by a single event.

How to go forward, how the subgroup would be organized in the future?

Conclusion 1. The group discussed and provided a scheme (see Figure 1.) for the PGECON and its subgroups to illustrate structure and linkage between separate structural parts, validation of outcomes starting from initiation of needs, detection of issues and development of ToR's. The scheme should be discussed and approved by next PGECON meeting.

The group agreed on this scheme, but some alternative options were presented, as listed below:

- 1. Should only DG MARE give input to PGECON, or even MS experts?
- 2. Does PGECON have to report to RCMs or directly to LM?

3. Could be useful to consider the option (not the obligation) that PGECON recommendations are reviewed by EWG/STECF

These alternative options could be discussed by the next PGECON meeting that will finally approve the final governance structures.

In addition, SIM stressed the need for a repository of PGECON and it subgroups outputs in the existing DCF website. This could include the list of guidance documents, methodological documents, etc. Recommendations from PGECON should be approved by Liaison Meeting and by ERS and Data Management Expert Group published in CIRCABC as separate documents with Ref. Ares number.

Figure 1. Scheme for the organisation of PGECON and the economic data collection subgroups under the data collection framework.

Governance structure of PGECON and SIM subgroup



TOR 2: Identification of statistical issues and methodology for the collection of economic data for the fleets under the EUMAP

Presentation by each participant/MS of the data collection scheme, data validation procedures and estimation procedures as well as of the major critical issues in collecting fleet economic data

Each participant presented the data collection scheme and data validation and estimation procedures used by their respective Member State. The major critical issues in collecting fleet economic data and a list of issues that arose during the drafting of the Work Plan were also presented by all participants on the basis of detailed questions included in a template previously distributed among participants. The templates and PowerPoint presentations presented by Member States can be found in the Annex.

According to the data collection scheme, most MS use 'combined data collection' which is based on survey data and registry based data. Member states with a limited number of vessels collect transversal data on the basis of logbooks and apply a Census scheme for the collection of most socio-economic data. On the contrary, MS characterized by large fleets as Italy, Portugal and Greece apply a Probability Proportional to Size (PPS) survey for both transversal and socio-economic variables.

The comparison of different MS data collection schemes also highlighted some important issues in the data collection and common methodologies. After presentations of the approaches followed in Portugal and Germany, the group discussed the possibility of collecting data through other sources rather than by questionnaires. For example, there could be some variables such as Energy costs which can be estimated using data from other sources and using the knowledge obtained throughout the years. This will reduce the amount of effort to collect certain data by survey. An example was given from the field of agriculture where the "typical farm approach" is applied (agribenchmark.org). Here production techniques for a specific product are compared between different regions worldwide. Model farms are described to represent a production technique, and their particular cost structure is described using local expert knowledge. These figures are adjusted every few years. Using data already collected by others can reduce the need for questionnaires and decrease the work needed for data collection.

The group also discussed the issues with the social variables. It is still unclear how to categorize these social variables, what type of education level is needed, or which age groups should be collected, etc. More guidance on the main objective for collecting these data should be given in order to have an effective pilot study. Some MS also raised the problem of sensitivity related to this type of information. It was also noted that it might be more conducive to report social data on a regional basis rather than by fleet segments. This all depends on end users' needs which have not been disclosed yet.

The sampling size, probability calculations as well as some definitions related to the financial position, employment and value of unpaid labour for small scale fisheries shall be further discussed at small scale subgroup in order to address several critical issues by various Member States. For example in the definition of employment it should take into account people who work only on shore in activities strictly linked with fishery such as repairing nets or preparing baits.

There are some issues amongst Member States with regard to the application of the PIM method. The group suggested Member States to adjust and/or update the assumptions of the Method according to the fleet and actual (market/legislative, etc.) conditions of its country.

Definitions of variables listed in table 5A of EUMAP

Jörg Berkenhagen gave a presentation of the document: "Definitions of the variables collected under the DCF socioeconomic modules for the fleet, aquaculture and fish processing". The group went through the report of definitions finalized at the PGECON 2016 and firstly checked the consistency with the EU MAP. All the variable names from the definition report were compared against EU MAP and changes agreed after discussion. The majority of the definitions were in line with EU MAP and did not raise controversial opinions among the experts. However, several suggestions to modify definitions were proposed.

A discussion regarding clear, specific definitions for the social variables was postponed to the scheduled meeting of the PGECON WG on data collection of social variables. The workshop is foreseen to gather sufficient expertise capacity including data on end-user needs to provide sufficient output.

The group discussed what is considered as 'investment' and what is included in the repair and maintenance costs. Some MS would need clear explanation and guidance on whether a cost of equipment should be included under repair and maintenance cost or under investments.

Definition of consumption of fixed capital was simplified.

Conclusion 2. The group discussed on the value of quota and fishing rights and why this variable should be collected only when fishing rights are tradable. It was agreed that at the moment, this variable should be limited only to tradable fishing rights. Additional research for valuing non-tradable fishing rights would be valuable and it would be very useful to have a common method for valuing the non-tradable fishing rights in the future. In case reported, non-tradable fishing rights should be reported separately from the tradable fishing rights. The group discussed that it could be useful to ask what the DGMARE as the main end-user would like to have under the value of quota and fishing rights. The variable after specification from end-user will be provided for SIM subgroup for the further consideration.

Conclusion 3. The group discussed the definition of total assets which should include fixed assets (capital value plus fishing rights of the vessel in the fleet case) as well as financial assets.

Regarding this issue, SIM considered that the suggested revision is not in line with the definition proposed by STECF (EWG 15-15). In addition, the application of this new definition will increase the effort in data collection. However, the previous definition (total asset= capital value and value of fishing rights) is unnecessary considering that capital value and value of fishing rights are already in the list of economic variables to be estimated. In addition, SIM considered that if debts comes from balance sheets and refer to the overall fishing activity, the total assets should be derived from balance sheets as well .

Conclusion 4. The definition of engaged crew was discussed and amended. In particular, for the small scale fleet, people working entirely onshore and paid from vessels should not be excluded if their activity has a direct link with the fishing operations.

SIM found these amendments are important as they influence significant part of the employment in small scale fleet in certain MS. The group proposed to discuss this issue more exhaustively in a scheduled workshop regarding data collection for small scale fleet.

Tor for SSF WS:

To overview employment definitions and assess impact of under-coverage of employed part of population, directly related to fishing activities but working on shore. Propose recommendation to modify or complement the current employment definition linking to small scale fleet.

Conclusion 5. The final list of definitions for each variable - to be used as a reference by MS - is reported in annex 4.

Methodologies for the fleet economic variables of EUMAP: clarification of critical issues

Evelina Sabatella presented the document "Methodologies for the socio-economic data described in EU MAP", available at the following address: <u>https://datacollection.jrc.ec.europa.eu/docs-links/socio-eco-var</u>.

The document dealt with methodologies on how to collect variables under the DCF socio-economic modules for the fleet, aquaculture and fish processing. The SIM meeting only discussed the methodologies for the fleet sector.

SIM considered that it is not appropriate to define only one methodology for each variable. In fact, as discussed in the workshop in the DCF WS on statistical issue (Helsinki, 2013) and in the STECF SGECA 2010 and as considered during the last PGECON (Zagreb, 2016), MSs try to choose the best data collection approach available and most suitable for the country specific needs and conditions. The best method to use depends on which sources of data and other information are available at Member State level.

SIM went through each variable and checked if the proposed methodologies are clear and consistent with the requirement of the EUMAP.

SIM made the following comments and amendments:

- Value of unpaid labour: only one methodology is suggested. This is based on other surveyed variables and considers that the starting point should be the estimation of unpaid FTE (number of unpaid workers and working time);
- Value of quota and other fishing rights: 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 (see also discussion under definitions);
- Investments in tangible assets, net: SIM considered that if PIM is used to estimate the value of capital, then also net investments should be derived from the PIM method. However, SIM recognised that this approach should be better analysed and best practices already applied by some MS should be shared (for instance the approach used in Finland).
- Long/short Debt: SIM considered that the variable name should be changed into "debts". SIM suggested the best approach to be used to split the total (company) value of debts in case the company owns more than one vessel and to estimate this variable when balance sheets are not available. This approach is reported in Annex 5 Methodologies for estimation of economic variables for the fleet
- Total assets: taking into consideration the suggestion for changing the definition, SIM amended the methodology to estimate it. SIM also suggested the best approach to be used to split the total (company) value of debts in case the company owns more than one vessel and to estimate this variable when balance sheets are not available.
- FTE national: the methodology considers that if the annual working hours per crew member • exceed the reference level, the FTE equals 1 per crew member. SIM discussed if the upper limit of "1" could be adjusted at national level. However, SIM concluded that the same approach used in the agricultural data collection should be preferred: "One annual work unit is equivalent to one person working full-time on the holding. One person cannot exceed one work unit equivalent, even if his actual working time exceeds the norm for the region and type of holding. A person who does not work the whole year on the holding represents a fraction of an 'annual unit'. The 'annual work unit' of each such person is obtained by dividing his actual annual working time by the normal annual working time of a full-time worker in the region under consideration and on http://ec.europa.eu/eurostat/statisticsthe same type of holding". See also: explained/index.php/Glossary:Annual_work_unit_(AWU)
- Value of physical capital and consumption of fixed capital: SIM considered that in the new EUMAP there is no obligation to apply the PIM method (as it was explicitly requested in EU Decision 93/10). PGECON should provide a precise reference for estimation of these variables.

SIM also noticed that in any case the DGMARE guidelines for calculation of the balance indicators requires to use the PIM method for calculation of capital value and capital costs.

Conclusion 6. The final amended tables with proposed methodologies for each variable is reported in annex 5.

SIM underlined that this table should be used as a reference document by MS but it has to be considered just a reference for best practices. If a MS considers that other approaches are more appropriate, these could be used providing that MS explain the reasons in their Annual Report.

SIM discussed the definition of population for the fleet economic surveys that in the new EUMAP is as follows:

The population shall be all active and inactive vessels registered in the Union Fishing Fleet Register as defined in Commission Regulation (EC) No 26/2004 (2) on 31 December of the reporting year and vessels that do not appear on the Register at that date but have fished at least one day during the reporting year.

This definition is different from the one applied since now in the DCF (*all vessels in the Community Fishing Fleet Register on the 1st of January*). However, participants did not raise any specific methodological issues linked with this change in the definition. The impact in terms of time series could be eventually tested once the data referred to 2017 will be available.

Another important issue to be considered is the classification of vessels into fleet segments according to the "dominance" criteria. The new EUMAP defines the fleet segment as: "group of vessels with the same length class (LOA, length overall) and predominant fishing gear during the year", chapter I, Commission Implementing Decision (EU) 2016/1251 of 12 July 2016.

Conclusion 7. SIM considered that the rules for assigning a vessel to a fleet segment applied so far and explained in EU Decision n. 93/2010 should continue to be applied to ensure consistency among MS and continuity in time series.

The procedure is the following (EU Dec. 93/2010):

The dominance criteria shall be used to allocate each vessel to a segment based on the number of fishing days used with each gear. If a fishing gear is used by more than the sum of all the others (i.e. a vessel spends more than 50 % of its fishing time using that gear), the vessel shall be allocated to that segment. If not, the vessel shall be allocated to the following fleet segment:

- (a) Vessels using Polyvalent active gears' if it only uses active gears;
- (b) Vessels using Polyvalent passive gears' if it only uses passive gears;
- (c) Vessels using active and passive gears'.

The discussion on methodological issues related to the collection of economic variables highlighted the need to develop some analysis and data testing on the following issues:

- 1. Some MS and participants considered that much effort is spent on annual data collection. Most factors determining costs (which are the central items to sample) could be estimated or assessed through different information (e.g. fuel cost based on fuel price and fuel consumption, or on HP and effort). MS could test the use of derived estimates versus complete annual sampling and assess the impacts in terms of data reliability and costs reduction.
- 2. Estimation of investments through the PIM method and comparison with the alternative approach of data derived from survey
- 3. Calculation of value of capital on the basis of alternative methods (PIM, balance sheets, accounting values, etc.) and assessment of the impacts in profitability indicators.

Conclusion 8. These analysis (derived estimates versus annual data collection, PIM method to estimate investments, impact on profitability indicators according to different methods to estimate capital value) should be implemented by MS on a voluntary basis and results should be presented in future SIM or PGECON meetings.

Presentation by JRC on major issues affecting the quality of data submitted for the preparation of the Annual Economic Report

Jordi Guillen presented some issues related to "Data Coverage and Quality in the AER data call". The timing of data call and checks at JRC level were presented. JRC provides an online tool for the status of the data submitted (coverage and checks): <u>https://datacollection.jrc.ec.europa.eu/data-analysis</u>.

The main general issues include:

- Full segments missing (e.g. distant waters)
- Clusters (Clustering is not obligatory; Segments with too many vessels; Segments with very different vessels; Not consistent over time; Important segments)
- Unpaid labour (Necessary to proper estimate/compare, mainly SSF; Lack of common approach)
- Fishing rights (Lack of common approach/definition)
- Income from rights Subsidies, not complete and relevant

JRC also presented possible actions beyond data collection that at the moment are under discussion:

- Providing data for "missing" segments
- What data are confidential for JRC to report?
- Data imputation (at MS level)
- Forecasting (e.g. 2015-2016)
- Allocation of fleet segments to regions
- How vessels are allocated to a fleet segment: main activity (dominance criteria).

Quality assurance framework

Presentation by participant/MS of procedures and tools used to implement the economic survey and to evaluate quality of data.

During the announcement of the meeting, participants were asked to present tools or procedures already implemented and applied at MS level and that could be considered useful also for other MS.

Italy presented the procedure followed to collect economic primary data from the vessels. It was considered that the collection of economic data is a difficult task as it aims for the collection of sensitive information. Although all the available official sources are used, in some cases, commonly in the case of the small-scale fisheries, part of the target information doesn't fall under obligatory reporting and data are obtained through direct interview to the vessel' owners. In general, part of the data that is collected 'does not exist' – it cannot be observed like catch being offloaded from a vessel, but has to be obtained through direct interviews to the selected sample.

In this kind of sample surveys, the role of the data collector is crucial and the quality of the data is largely reliant on the work done by the people in the field. A specific attention is therefore paid to the data collectors and their selection and training. During the training phase, the variables are accurately explained, also by practical examples and specific rules are set on how to conduct the interviews. The data entry phase is supported by a specific web-based software where the variables are organised in a logical frame and sequence. The first data quality check of the data is carried out through the same software running a selection of specific logical rules.

Discussion on the quality assurance table for the work plan (table 5B) and the Annual report. Suggestions for amendments and improvements

The subgroup reviewed the Work Plan table 5B on quality assurance framework of economic data collection. The subgroup concluded that the table 5B encompasses all elements included in a quality framework for the data collection. However, the table includes even the institutional framework and the questions asked are very general and sometimes seem to go far beyond the level required in the work plan context.

The subgroup also concluded that it is still unclear how the quality of data and the quality assurance framework presented in the Table 5B should be evaluated and by whom. The purpose and intention of Table 5B should be clarified.

More specifically the subgroup commented on the following aspects of the table:

- Institutional environment and timely delivery: these questions also apply partly to the biological data and as such these should be documented for the whole National data collection program.
- Are methodologies consistent at MS, regional and EU level? This evaluation can only be done on a regional/EU level. The question for the MS would be how they ensure consistency with other MS.
- Confidentiality issues are obligatory to be accounted for by all institutions involved. Thus the topic should not be addressed in order to avoid duplication.

Moreover, the answers are very general (Yes, No, NA) and say little about the actual quality of the process. They only describe a status at a certain point in time and do not provide any information on planned activities – as to be expected in a work plan. Instead of that table, an explanatory text would be considerably more conducive. This text should be part of the methodological report to be prepared by the MS as discussed in the paragraph below. Given the existence of such a document, a revised version of table 5B could be used as a checklist for evaluation of the completeness of the methodological report. As the methodological report is going to apply over a longer period, it has to be evaluated in total only once, followed only by evaluation of potential amendments.

Conclusion 9. SIM suggested that each MS should prepare a methodological report that describes in detail the data collection process. The report should address the points reported in figure 2.

Methodological report should be a self-standing document to describe the methods and procedures on which the surveys, results and analyses of economic data collection are based. They aim to ensure transparency and to promote collaboration MS data collection institutes and researchers.

Additionally, the subgroup discussed what kind of structure the methodological report could have and what kind of information needs to be included in the report. However, there was only time for a rough drafting of the structure (see below) of the methodological report, which should be amended and further developed by the PGECON in 2017. During the PGECON 2017 meeting ideally an example of the methodological report would be created.

Figure 2. Draft structure of the methodological report.

- 1. Data sources
- 2. Target population
- 3. Survey planning by survey

-Overall survey design -Sampling design -Estimation design

- 4. Data validation procedures
- 5. Techniques for sample selection and estimation
- 6. Treatment of nonresponse
- 7. Quality assessment of estimates

TOR 3: Identification of critical issues for the collection of social data under the EUMAP

Some MS already collected social variables because of national requirements. In this case, a basic methodology and a standard questionnaire are already available. On the basis of this expertise, SIM drafted questionnaire templates that could be used for the data collection by MS that don't yet have any data collected related to the social variables. Two different types of questionnaires are provided: one for the SSF and another one for the larger fleet. However, as the questionnaire templates were to be regarded as illustrative examples, it was considered to not present them in the report.

The major concerns referred to the international standard definitions for the classes to be used (employment status, age, level of education). SIM reviewed the international standards already used by ILO (<u>http://www.ilo.org</u>) and EUROSTAT. In some case they seem not to be appropriate for the fishery and aquaculture sectors. However, a clear description of the purpose and use of all social variables by end uses is an inevitable prerequisite for suggesting a common format for the DCF.

There is an urgent need for a workshop on social variables, which would give more specific definitions. A WS on social variables will be organized in the UK prior to PGECON 2017.

The TORs for this WS should include:

- Description of data needs (social variables needed for what and by whom)
- Definition of categories and specifications (for example the employment status should comply with international standard or should be adapted to the sector i.e. skipper, owner, crew member, etc.)
- Methodologies (what is the statistical population the vessel or the enterprise? what is the link with the economic data? should social variables be reported by fleet segment or rather with regional context?)

SIM considered that a lot of background documents and expertise are available. But a preparatory work is needed prior of the WS on social variables by social scientists and other experts.

Conclusion 10. SIM considered that there is an urgent need for a workshop on social variables. SIM suggested how the WS should be structured and the main issues that should be clarified if possible before the WS through a preparatory work.

Annex 1 – Agenda







MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON)

Organized and hosted by:

Ministero delle Politiche Agricole Alimentari e Forestali, Direzione Generale della Pesca Marittima e dell'Acquacoltura

12-14 December 2016

Kolbe hotel, Via di S. Teodoro, 48 Rome, Italy

Draft Agenda

Daily timetable Coffee Breaks: 10h45 and 15:45h Lunch Breaks: 13h00-14h30

Monday, 12 December

Morning session: 9,30h - 13h

- Welcome and housekeeping
- Presentation & discussion on ToR and agenda
- TOR 1: Presentation of the new governance structure of PGECON and the establishment of the SIM subgroup
- TOR 2: presentation of the document: "Definitions of the variables collected under the DCF socioeconomic modules for the fleet, aquaculture and fish processing" (<u>https://datacollection.jrc.ec.europa.eu/docs-links/socio-eco-var</u>). Discussion and amendment of the document





Afternoon Session: 14,30h – 18h

- TOR 2: presentation of the document: "Methodologies for the socio-economic data described in EU MAP" (<u>https://datacollection.jrc.ec.europa.eu/docs-links/socio-eco-var</u>). Discussion and amendment of the document
- TOR 2: presentation by each participant/MS of the data collection scheme, data validation procedures and estimation procedures as well as of the major critical issues in collecting fleet economic data as well as the list of issues that arise during drafting of the Work Plan. (Each presentation should follow the format of the common template and will last 10 min).

Tuesday, 13 December

Morning session: 9h – 13h

- TOR 2: presentation by JRC on major issues affecting the quality of data submitted for the preparation of the Annual Economic Report
- TOR 2: final discussion on methodologies; clarification of critical issues (for instance the definition of population according to the EUMAP); development of a common approach and best strategy in specific cases (for instance capital value and cost).
- TOR 2: presentation by participant/MS of procedures and tools used to implement the economic survey and to evaluate quality of data.

Afternoon Session: 14,30 h – 18h

- TOR 2: discussion on the quality assurance table for the work plan (table 5B) and the Annual report. Suggestions for amendments and improvements
- TOR 2: Final recommendations and suggestions for improvements in methodologies and data quality
- TOR 3: preliminary assessment of pilot studies on social variables planned by the Member States. Suggestions for TORs of the dedicated workshop to be organized in 2017

Wednesday, 14 December

Morning session (9h-13h)

- Finalization of TOR1: mandate and specific TORs for PGECON
- Discussion on the results
- Draft Report



COUNTRY	NAME	SURNAME
Italy	Evelina	Sabatella (co-chair)
Finland	Heidi	Pokki (co-chair)
Greece	Irene	Tzouramani
Greece	Angelos	Liontakis
Finland	Jarno	Virtanen
Malta	Marianne	Aquilina
Lituania	Edvardas	Kazlauskas
Italy	Monica	Gambino
Italy	Loretta	Malvarosa
Italy	Dario	Pinello
Italy	Carlo	Paolucci
Latvia	Irina	Davidjuka
Denmark	Andersen	Kim Normark
Germany	Jörg	Berkenhagen
Portugal	Susana	Godinho
Portugal	JOÃO	Ramos Do O
Netherlands	Hans	van Oostenbrugge
European Commission	Jordi	Guillen
Bulgaria	Kolyo	Zhelev
Slovenia	Avdic	Eddie

Annex 2 – List of participants

Annex 3 – Templates to gather some basic information on a standard format about how each Member State implement data collection for economic variables of commercial fleets

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: The Netherland

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	
	large pelagic trawlers; census, active fishing vessels in cutter fishery: panel (survey) and registry based data, small scale fishery: census
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	
	sensus and pps
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	
	fixed panel, survey by mail and by phone
	How do you fix the number of sampling units (cost constraints, CV targets,)?
4	
	Cost constraints
Data validation prosedures	
	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability
5	indicators, like confidence intervals)
	CV calculations, representatively checks with registry data, consistency with registry data

Estimation prosedures	
	What kind of estimation prosedures are used?
6	before we used simple aggregation procedures based on vessel numbers in segments, now working on regression estimates, using cost and activity data per trip
	Do you use any auxiliary information to improve your estimation?
7	
	yes
Major critical issues in economic data collection	
	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?
8	
	low response rates from small scale fisheries
Issues concerning the Work Plan	
	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
9	
	no link in tables with economic data and fleet data
Social variables	
	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
10	
	how do you get these data from representative sample of fishermen?

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Denmark

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
1	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
	Combination of survey data and registry based data
	What sampling method is used (eg. Ramdom sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	Non-probability sampling
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	A panel which consists of the 100 biggest production units plus a representativ sample of the rest of the population. About 10 per cent of the sample is renewed each year. The 2015 sample include 276 units of the total 544 units in the population and produced 85% of the total revenue in Danish fishery.
	How do you fix the number of sampling units (cost constraints, CV targets,)?
4	Analysis of coverage rate of production by segment
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals) The most important issue in collection of economic data is to verify that the measured figure is consistent with economic
	activity to be measured. We use a harmonized accounting form, where all variables are interlinked to secure the correct

	outcome. Each individual account is thoroughly analyzed and checked. All corrections are done in cooperation with the professional accountants.
Estimation prosedures	
6	What kind of estimation prosedures are used? Individual accounts are simulated for each unit in the population that is not in the sample. The simulations are performed using a BANFF MASSIMPUTATION model in SAS to select one to three "donors" from the sampled accounts in the same simulation group, which are valuated to be best possible replacement for the simulated unit. The donors are found by minimizing a distance function based on registered data. Fixed variables in the distance function are total standard catch value, engine power, crew size, days at sea in Ices III, and days at sea in Ices IV. Variables that are changed for the three distance function calls are overall length of vessel and standard catch value of specific species or groups of species. Some accounts for units in the sample that had extraordinary events during the year may be excluded from the basis for simulation. Registered data on production is used to calibrate the average of the one to three selected matching units, to equal the registered revenue of the simulated unit.
7	Do you use any auxiliary information to improve your estimation? Yes
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group? When we have this very comprehensive data collection on fishery activity and production, why is it still not possible to get data on the number of persons on the vessel for each trip from the logbook? That should be the obvious source to measuring labour input in fisheries.
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection. One big issue is how we should explain the need for information on the fishermen's gender, employment status, and education level. Who wants to know? Why do they need to know? What use of the data should we expect?
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social varibles?

Meth fisher the fi To be 1. Th 2. Th fishin worki Provi	odology to be decided. Possibly a questionnaire distributed b nen that are employers. The obligation to complete the ques- hing firm or aquaculture company. considered: e criteria for data on education level and employment status a e allocation of all data from the questionnaire to a specific ve- g firms operates more than one active vessel in different vess- ng on different vessels during the year. Also some persons n ional suggested draft of Questionnaire on employment by e	y the Danish A stionnaire shou are not yet spec ssel segment w sel segments in aay be working ducation level a	grifish Ager ld be laid on cified in the rill not be str 2015. Those in several fi and nationali	ncy to all Da a the legal pe DCMAP. raightforward e firms may shing firms o ity.	nish fishing erson respon d. We know have employ during the ye	firms and sible for that 16 vees ear.	
	Fishing firm or fisherman						İ
	Number in Central Business Register:						
	Fill in a column for each person working in the fishing firm during 2017 :	Person 1	Person 2	Person 3	Person 4	Person !	 5
	Gender F/M/Unknown						T
	Age (July 1st 2017)						
	Age (July 1st 2017) Nationality DNK/EU/EEA/other						\vdash
	Age (July 1st 2017) Nationality DNK/EU/EEA/other Education level ?/?						
	Age (July 1st 2017) Nationality DNK/EU/EEA/other Education level ?/? Paid /unpaid						
	Age (July 1st 2017) Nationality DNK/EU/EEA/other Education level ?/? Paid /unpaid Number of hours worked						

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Germany

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
1	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else? We use CR data and perform sampling surveys on all remaining data.
2	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)? We use random sampling for vessels >12m and PPS (based on previous year's revenue) for vessels <12m. For larger vessels (>40m, some >24m) census is applied
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	We use the FADN on fisheries plus mailed questionnaires.
4	How do you fix the number of sampling units (cost constraints, CV targets,)? We rank them by relevance (the more they catch, the higher the sampling rate). Bigger vessels are sampled by census, for vessels between about 12 and 40m we set a coverage target of about 1/3 of the population. For smaller vessels, which are of minor relevance, we sample 20% (i.e. on average every 5. year sampling) and get response rates of about 25%. As additional information from the CR is available comprehensively, samples can be raised in a reasonable manner. Increasing the sampling rate ends up in a tradeoff as the response rates decrease.
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	FADN data are rather reliable as they are provided by accountants (=based on tax declarations). However, there are check routines on plausibility. Questionnaire data are checked for outliers. Some variables (e.g. repair) are more fluctuating than others (crew costs)
Estimation prosedures	
6	What kind of estimation procedures are used? Raising with use of additional information (vessel size, effort, weight/value of landings), depending on the variable (see our NP/NWP)
7	Do you use any auxiliary information to improve your estimation? Yes (see above)
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group? I think there is too much effort spent on annual data collection. Most factors determining costs (which are the central items to sample) could be estimated or assessed through different information (e.g. fuel cost based on fuel price and fuel consumption, or on HP and effort). The value added through comprehensive annual sampling might be limited. It would be great if this aspect could be further considered and discussed.
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection. Questions in the text boxes were misleading. It was in some cases unclear where to put relevant information in the text boxes. Some relevant information was no longer requested (e.g. population sizes, clustering scheme) The data quality table 5b appeared far too big, it is hard to fill in a conducive manner, several entries are of little relevance in our context. As always there are difficulties when it comes to codification. Examples sometimes deviate from the guidelines.
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?

There are some official statistics available from the employment agency. Others might be available through the "Employer's
Liability Insurance Association".
We will contact the typical fishermen's education authorities and also professional organisations.
However, this will most likely not provide data by fleet segment. It should be clarified in advance at which resolution level the
end users really need the data. Maybe a regional approach is more appropriate for policy measures than a fleet segment
approach.
It would be very helpful to discuss these aspects, but also to get inspiration from other MS to see which other sources are
promising.

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Finland

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	
	Combination of survey data and registry based data.
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	Non-probability sampling. Register based statistics: Fisheries statistics data combined with structural business and financial statement statistics data from Statistics Finland. Account survey uses exhaustive survey to the sample frame.
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	We collect economic data from coastal fishermen with an account survey by mail and we use structural business and financial statement statistics from Statistics Finland.
	How do you fix the number of sampling units (cost constraints, CV targets,)?
	Account survey for Coastal fishermen (vessels under 10 m) was targeted to all fishermen having value of catch above 5000 euros:
4	For trawler segments register-based survey covers all fishermen having value of catch above around 11000 euros. Account survey for trawlers is sent to all active big trawlers: the response rate is around 55%.
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	Primary sources of financial statements data in Statistics Finland are direct inquiries and business taxation material supplemented by Business Register data. Data is based on corporate balance sheet and profit and loss account data. Statistics Finland checks for the validity of the data. Luke compares landings statistics against the turnover data from Statistics Finland and from account survey. Ratio between turnover and value of landings per company is used to spot abnormalities. Due to the under-coverage in the structural business and financial statement statistics (compared to target population) the segment totals are estimated with regression estimation and additional cost structure analysis. Coefficients of variation and coverage rates are calculated for each variable and for each vessel segment. Regression estimation results are analyzed to check they are statistically valid.
Estimation prosedures	
	What kind of estimation procedures are used?
6	Cost and earnings estimates are done by design-based and model assisted regression and ratio estimation. First, the turnover and total income per segment are estimated with regression using the total value of catches as explanatory variable. Then total costs are estimated (with regression) at segment level from the turnover. The cost variables are estimated as ratio estimates from the total costs.
	Do you use any auxiliary information to improve your estimation?
7	Landings statistics are used as regressor to estimate the turnover. Also costal fisheries are stratified according to fishing methods for estimation of cost and earnings.
Major critical issues in economic data collection	
	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?
8	Unpaid labour, energy consumption, social variables, total hours worked per year, segmentation in the aquaculture.
Issues concerning the Work Plan	
	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
9	Excel file was not working correctly, it included some macros which were not working. We would have needed more guidance (structure) for the methodological report. Table 5B was not optimal.
Social variables	
	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
10	Finland will carry out a pilot study to test collection of social data of fleet, aquaculture and fish processing sector as required by the multi- annual Union programme using data from official statistics from Statistics Finland. Statistics Finland collects comprehensive data on employees basic features (sex, age etc.), family, living area, employment status, employer, nationality, and education in for the official employment statistics of Finland. When this information is combined with the financial statements data from statistics Finland, the employees can be connected to the enterprises and their economic data.

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Ireland

TEMPLATE FOR TOR 2 & TOR 3

Data collection scheme and sampling	
1	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
	Economic data collection is conducted as a sample survey. There are two levels of survey. One is circulated to all active vessels over 10m http://www.bim.ie/media/bim/content/downloads/DCF-Survey-2016-Section2.pdf and another form is sent to all vessels under 10m that apply for grant aid http://www.bim.ie/media/bim/content/downloads/Under10m-EconomicSurvey-2016.pdf. We also collect transversal and economic data from a sentinel fleet (0-12m) to collect data on effort in the SSF fishery, these number between 80-90 vessels per year.
	What sampling method is used (eg. Ramdom sampling, Probability Proportional to Size (PPS), non-probability
2	Given that we don't have control over who responds to the survey (unless they are applying for grant aid) we deem the sampling method to be non-probability sampling
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	Surveys are sent by post to all active vessels for the reference year. We also allow for vessels to give us their accountants contact details who we can then contact directly each year. The sentinel fleet uses a fixed panel which can change slightly from year to year. The panel is spatially distributed by fishing type so we can get the best coverage.
4	How do you fix the number of sampling units (cost constraints, CV targets,)?
	Sampling units is determined by analyzing the previous year's data. Sampling rates are calculated by fishing segment and variable based on the mean and deviation for a finite population. CV is calculated. If a particular segment is below the required sample rate we try to engage vessels in these segments to participate in the survey
Data validation procedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	Data checks are built into our electronic survey forms to reduce errors. All data is entered into these and the resulting xml data imported into Excel where summary statistic checks (CI, StDev, Normal Distribution Curves etc.) are conducted to identify outliers or strange data before it is exported to a database.
Estimation prosedures	
	What kind of estimation prosedures are used?
6	Recognizing the implications and influences imposed by the voluntary nature of the annual survey on the probability sample survey design, the Horvitz-Thompson estimator has been given as the raising technique. However, this is not actually used. In reality sample data has been raised to population level, by segments, based on vessel numbers in the case of employment and kW in the case of all economic variables. Imputation of non-responses and non-response adjustments will be selected randomly from the same fleet segment or substituted units will match the characteristics defined by the fleet segment category. We are currently re-evaluating our estimation procedures. Raised values should be associated with a measure of uncertainty that comes from uncertainty at the sampling level and the method of raising. We will explore how to propagate uncertainty at the sampling level into the the raised values.
7	Do you use any auxiliary information to improve your estimation?
	For missing values we will explore formal methods of multiple imputation that incorporate the hierachical structure (e.g., some segments more similar than others).
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?
	We would like clarification that we are collecting and using the correct information to calculate capital value. For many of the vessels in the Irish fleet we have no idea of when they were bought and for how much making capital value calculations difficult.
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
	The social variables definitions were unclear in places 'Employment by Employment Status', that would seem to a replication of employment by national, FTE and unpaid. Additionally there are no metrics for age or education level. See commetns below.
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Italy

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	Combination of survey data and registry based data: a sample survey is implemented to estimate most socio-economic variables (e.g. income, costs, employment); census for Subsidies, number of fishing enterprises, socio economic information of vessels operating outside the Mediterranean waters.
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	A Probability Proportional to Size (PPS) survey for most socio-economic variable and a non-probability sample survey only for financial position
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	
	Survey through a data collection software
4	How do you fix the number of sampling units (cost constraints, CV targets,)?
	The sample size and its allocation among strata are carried out by using a Multivariate Allocation of Units in Sampling Surveys, which allows to minimize the sample size according to maximum accepted sampling errors of target estimates for each stratum.
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	The control process of sampling data consists of the following steps: identification of outliers on absolute values; identification of outliers on mean values; evaluation of the costs structure; comparison with benchmark data. The identified outliers and missing data are corrected or estimated by re-interviewing the data collector or through one of the following statistical methods: • Mean of the group: the value is estimated as an arithmetic mean of the values collected on the same variable for a group of similar vessels; • Regression: the value is estimated by a linear regression on days at sea for a group of similar vessels; • Hot deck: the value is estimated by a random selection among the values collected on the same variable for a group of similar vessels.
Estimation prosedures	
6	What kind of estimation procedures are used? The final set of primary data resulting from corrections and imputation of non-response is expanded to the universe for the estimation of the final data at fleet level through expansion (or raising) factors. The expansion is carried out on the following macro variables (obtained as aggregation of the elementary cost items in the questionnaire): wages and salaries of crew, energy costs, repair and maintenance costs, variable costs, non-variable costs. Expansion factors are calculated through the Horvitz - Thompson estimator, while the formula of Sen-Yates-Grundy is used to estimate the sampling errors.
7	Do you use any auxiliary information to improve your estimation? a) Cross check with transversal data b) Cross check with VMS c) Cross check with Balance sheet data
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group? New definition of population :according to paragraph 5 of COM_Impl-Decision_2016-1251 EU MAP),the population shall be all active and inactive vessels registered in the Union Fishing Fleet Register as defined in Commission Regulation (EC) No 26/2004 (2) on 31 December of the reporting year and vessels that do not appear on the Register at that date but have fished at least one day during the reporting year.
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection. Rendundancy of some questions in Table 5B:eE.g. if data and methodologies are stored in a database previous questions in Table 5B could be not relevant (e.g. Are protocols to enforce confidentiality documented?/Are methodological documents publicly available?)
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?

The methodology will be based on a mixed-method approach to collect primary information that includes interviews through focus
groups with key local informants in the community and fishing/aquaculture/processing sector together with secondary data at the
national and local levels used to provide additional demographic data and to evaluate trends in employment profile.
The sampling will be implemented through the questionnaires and it will include representatives from different segments and
various employee-types within the segment in order to ensure that the people with sufficient knowledge of the subject area will be
involved.

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: GREECE

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	
	Combination of survey data and registry based data
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	
	Random Sampling
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	Survey data: Interviews face to face questionnaires with fishermen. Ichthyologists responsible for data collection receive specific education, and there is close cooperation with the responsible team of the economic data analysis.
	How do you fix the number of sampling units (cost constraints, CV targets,)?
4	Set specific levels for: i) Margin of error (e) and ii) confidence level (1-α), by utilizing previous year's information (auxiliary variables)
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (e.g. calculation and evaluation of reliability indicators, like confidence intervals)
	Quality check is performed for every fleet segment using several indicators, like: a) days at sea, b) fuel consumption per day at sea, c) number of employees per vessel, d) volume of landings e) average price per kilo and f) ratio of each cost category (e.g. variable costs, fuel costs, wages and salaries, fixed costs etc.) to the revenues of the vessels
Estimation prosedures	

6	What kind of estimation procedures are used?
	Most variables are obtained directly through the survey. Exceptions refer to: a) value of unpaid labor that is estimated using average remuneration per paid FTE, b) Consumption of fixed capital and value of physical capital are estimated using PIM and c) FTE is estimated according to the study "Calculation of labour including full-time equivalent (FTE) in fisheries"(FISH/2005/14, 'LEI WAGENINGENUR'. For all variables estimated through a probability sample survey, the Horvitz-Thompson estimator is used to estimate total values.
	Do you use any auxiliary information to improve your estimation?
7	
	We take into account market prices of a) vessels, b) fuel, c) and landings
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group? a) No official records on inactive vessels which raises several issues (e.g. target and frame population), b) data collection of minor significant fleet segments, c) time lag among transversal and economic data collection, d) significant delays on the implementation of the data collection scheme that creates gaps in transversal variables (landings are usually gathered for less than a year, while costs are annual)
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
	Quality assurance table, no clear guidance on social data collection scheme and some columns in Table 2A and 3A were not quite clear
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
	Social variables will be collected through sample survey, from the same vessels that the economic variables will be collected. Specification on the variables to be collected are needed (e.g. age and education groups).

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: BULGARIA

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
1	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else? The type of data collection scheme that we are using is Census. By virtue of the changes in our legislation (Fisheries and Aquaculture Act), every owner of a vessel, which is operating under Bulgarian flag, or his representative is required at the beginning of each year (before March 31) to submit economical information for the previous year.
2	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)? The sampling method, that we are using is to collect questionnaires for all the vessels.
3	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews? We are getting the data by questionnaire. Every year the Executive Director of EAFA affirms the content and the type of questionnaire. The questionnaires are completed manually by the owner of the vessel in the presence of an employee (it can be someone from the administration or an inspector) of the agency who is trained for this and is aware of the meaning of economic indicators. If necessary, the employee explains some of the variables. The filling of the questionnaire is completed after the vessel's owner and the employee of EAFA put their signatures and the questionnaire is entered in the record-keeping system of the Agency.
4	How do you fix the number of sampling units (cost constraints, CV targets,)? Because of our legislation, the number of sampling units depends from the number of registered active vessels. All vessels must submit questionnaire.
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	The first the quality checks of the questionnaire is made by the employee of EAFA who receives the questionnaire. The second check is done by the person who submit the data from the questionnaire in the module for economic variables in the central database of EAFA. If at this stage of the processing of the questionnaire we detect any inconsistency or value that is not logical, based on parameters of the vessel, number of employees, fishing techniques or days at sea, an employee of the agency contacts the owner of the vessel and if he not provide a logical explanation, he is obliged to come and edit the value.
Estimation prosedures	
	What kind of estimation procedures are used?
6	Estimation procedures were made only for the previous years, in which we have missing information. Since now we are collecting questionnaires from all vessels, no estimation is needed, because they are required to submit all the data. If for some reason after 31 st of March some of the owners of the vessels had not reported data for the previous year, an employee of the agency connects with him and remind him of his obligation.
	Do you use any auxiliary information to improve your estimation?
7	No.
Major critical issues in economic data collection	
	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?
8	For Bulgaria, the main critical issue remain the calculation of capital value and capital costs. We are not able to use the template which is provide on the website of DCF, because we do not have data about the GRT and we are not able to apply PIM methodology.
8 Issues concerning the Work Plan	For Bulgaria, the main critical issue remain the calculation of capital value and capital costs. We are not able to use the template which is provide on the website of DCF, because we do not have data about the GRT and we are not able to apply PIM methodology.
8 Issues concerning the Work Plan	For Bulgaria, the main critical issue remain the calculation of capital value and capital costs. We are not able to use the template which is provide on the website of DCF, because we do not have data about the GRT and we are not able to apply PIM methodology. List the issues that arose during drafting the Work Plan concerning economic and social data collection.
8 Issues concerning the Work Plan 9	For Bulgaria, the main critical issue remain the calculation of capital value and capital costs. We are not able to use the template which is provide on the website of DCF, because we do not have data about the GRT and we are not able to apply PIM methodology. List the issues that arose during drafting the Work Plan concerning economic and social data collection. During the drafting of the Work Plan, there were no major issues concerning economic and social data collection.
8 Issues concerning the Work Plan 9 Social variables	For Bulgaria, the main critical issue remain the calculation of capital value and capital costs. We are not able to use the template which is provide on the website of DCF, because we do not have data about the GRT and we are not able to apply PIM methodology. List the issues that arose during drafting the Work Plan concerning economic and social data collection. During the drafting of the Work Plan, there were no major issues concerning economic and social data collection.
8 Issues concerning the Work Plan 9 Social variables	For Bulgaria, the main critical issue remain the calculation of capital value and capital costs. We are not able to use the template which is provide on the website of DCF, because we do not have data about the GRT and we are not able to apply PIM methodology. List the issues that arose during drafting the Work Plan concerning economic and social data collection. During the drafting of the Work Plan, there were no major issues concerning economic and social data collection. How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Lithuania

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	Census
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	
3	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
	Data is obtained Through Lithuanian Agricultural and Food Product Market Information System (LAFPMIS) Interactive Data Input System (IDES). If it is not possible for enterprises to input data through IDIS, data is gathered through e-mail, registered mail.
4	How do you fix the number of sampling units (cost constraints, CV targets,)?
	The number of sampling units are all active and inactive vessels registered in the Union Fishing Fleet Register on 31 December of the reporting year and vessels that do not appear on the Register at that date but have fished at least one day during the reporting year.
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	 Data collection processes complies the ISO 9001 requirements for data quality and ISO 27001 requirements for data security. For raw data quality assurance, LAFPMIS Interactive Data Input System contains: logical verification and data validation at different data processing stages (data entry; data checks; validation by enterprise); easy accessibility of methodologies and instructions how to fill out questionnaires; update and storage of exhaustive administrative data. In addition, raw data, intermediate results and statistical outputs are: regularly assessed by the expertise of personnel, by checking inconsistencies, completeness, and timeliness; detected errors are registered in non-compliance register (NR); based on NR and other data about enterprises by personnel, quality ranks are given to companies to weed out most risky companies; Based on NR, audition unit of AIRBC periodically visit fishing companies and perform raw data quality and accuracy audition. For quality measurements, response rate (separately at respondent/vessel and reported item levels) and coverage rate (taking into account value of landings) are calculated.
Estimation prosedures	
6	What kind of estimation procedures are used? -For imputed value of unpaid labour - the number of unpaid family members involved in production, or number of their working hours (if provided) will be multiplied by average annual wage calculated for "paid labour" at particular segment level. -Value of physical capital and consumption of fixed capital will be estimated using Perpetual Inventory Method (PIM); -In the case, when response rate is less than 100% of population, the missing variables are estimated from the sample, taking into the consideration the value of landings which has census on all active fleet (IFDIS) of missing vessel and data from sample.
	Do you use any auxiliary information to improve your estimation?
7	social data is compared and accordingly amended with information collected by State Social Insurance Fund (SSIF) on social data
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group? Failures to meet deadlines and problems with data completeness in small scale fleet.
Issues concerning the Work Plan	
	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
9	
Social variables	

	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
	-Social variables (data on employments by education level and employment by nationality) will be collected every three years on a
	pilot study B41 in conjuncture with annual economic fleet data collection of respective year, requested in statistical questionnaires
	(code DR-1);
10	-Each pilot study is expected to be launched at the June of each three years starting in 2018 (2018 06) and results should be available
	after six months from starting date.
	-Pilot study will be census based;
	-Social data will be collected and be available at each fleet segment level and for all fishing areas.

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Latvia

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
1	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
	The data collection scheme for Latvian fishing fleet is "Census". Despite on the fact that economic data collection is based on survey, participation of the responders is obligatory according to the Latvian legislation.
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	The data are collected for all members of population.
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	Primary economic information is received annually from owners of fishing firms. The economic variables are collected by Central Statistical Bureau of Latvia (CSB) by state statistical form/questionnaire "1-Fisheries" where economic information is aggregated by fleet segments. The collected economic information is based on the annual balance sheet.
4	How do you fix the number of sampling units (cost constraints, CV targets,)?
	The economic data collection is implemented for all fishing companies involved in commercial fishery. The population for the collected variables is represented by number of vessels included in the Fleet Register for each fleet segment at the 31st of December of the sample year.
Data validation procedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	When the information for some vessels is missing the average values for each variable is multiplied on the total number of vessels population in the segment. The results comparison is applied. The collected data is compared with the data received for the previous data collection period. The delivered prices data (from sale noted and questionnaires) are analysed and the most reliable prices used in the calculation of average price per species and value of landing. The Days at sea collected by questionnaire form "1-Fishery" is used for data cross checks with the data received from logbooks.
Estimation procedures	
	What kind of estimation procedures are used?
6	 The following quality indicators are calculated for the data collection type "Census": Accuracy indicator for type of error Bias: o Coverage rate o Response rate o Achievement sample rate Accuracy indicator for type of error Variability (only in cases when Response rate is less than 70%): o Coefficient of Variation
	Do you use any auxiliary information to improve your estimation?
7	In cases when some values for the collected data are unreliable the consultations by phone are performed.
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group? NR
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
	NR
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?

The pilot study is going to be conducted in Latvia in order to evaluate feasibility of the social data collection for the variables:
- employment by gender,
- employment by age,
- employment by education level,
- nationality,
- employment by employment status.
During Workshop it would be useful to agree on the definitions for each group of variables and frequency for the collected
social data, as well as the criteria for the comparison of the data between MS.
(Example: Employment by age - age categories:
o 21 and under
o 22-36
o 37-51
o 52-65
o 66 and over
Employment by education level - education levels:
o Less than secondary education
o Secondary education
o College or professional course
o Bachelor or 4 year degree
o Master degree
o Doctor degree
o Other (to include the answer)
Nationality:
o EU citizen
o Non EU citizen
o Other (to include the answer)
Employment by employment status:
o Full time employment
o Part time employment
o Student
o Retired
o Other (to include the answer)
etc.)

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: MALTA

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	
	Data is collected on census basis.
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	
	Not applicable since data is collected on census basis
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	All data is collected through direct interviews with the fishermen except for: capital cost and capital value which is calculated using the PIM method; fishing enterprises which is obtained from the fleet register; direct subsidies which is obtained from direct sources.
	How do you fix the number of sampling units (cost constraints, CV targets,)?
4	
	Not applicable since data is collected on census basis
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)

	First check: Certain types of errors are corrected during the interview/data collection. Each survey is then analysed individually whilst inputted in the system. Correction of errors are also completed at this stage. Second check: We run R-script to check any outliers and highlighted inconsistencies within the data. We analyse every highlighted data and correct accordingly. Additionally, collecting data on a census basis improves the precision of the population data. In order to ensure consistency, the same type of data collection methods is used year on year to collect data on the respective economic variables.
Estimation prosedures	
6	What kind of estimation procedures are used? Given that the amount of non-response rate is relatively small- 2% of the total fleet (16 vessels), where possible, we estimate the data for each vessel, individually, rather than aggregate the data to the total population. We take into account the following to complete the estimations: a) the characteristics of the vessel (Length, GT, Kw Power etc), b) the landings and sales of the vessel, c) efforts during the year, d) last years' surveys of the vessel. There are some variables which are not estimated because they are obtained from direct sources such as income from leasing the fishing right of quota, direct subsidies, capital cost and capital value. All estimations are documented.
7	Do you use any auxiliary information to improve your estimation? Yes, certain data is obtained from different sources in order to check the data quality and improve it where necessary. We try to obtain as much data as possible through direct sources and also through the survey in order to check the quality of the data. Example: we obtain the fuel cost €/litre and the wage rate of the industry through direct sources to compare it with the data collected through direct interviews. Also, for the estimation of the Price per capacity unit: the fishermen who bought/build the vessels during the respective year are asked to give the value of the price/ cost to build the vessel in order to compare it with the data obtained from our research.
Major critical issues in economic data collection	
8	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?

	The PIM method is not applicable to small scale fisheries given that coastal fisheries have a low fishing activity and the little profit that they do is all taken by the depreciation calculated under the PIM method. The PIM method is somewhat overestimated given that it assumes that the vessel owner renew the hull, its engine and the electronics every x years, which in reality they don't, especially the hull and the engine. Moreover the PIM method is applicable only to the latest / young vessels and not to old vessels since the latter does not have a value. Given that the majority of the Maltese fishing fleet falls under small scale fisheries, the little profit that the Maltese fishermen gain during the year is all lost when the depreciation (using the PIM method) is taken into account. Malta suggested a study to re-review the capital cost calculation for the DCF. This was also suggested during PGECON.
Issues concerning the Work Plan	
	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
9	
	No issues.
Social variables	
	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
10	
	Social variables will be collected as from 2017 Annual Economic Survey and Aquaculture survey (reference year 2016). Data will be collected by direct interviews on a census basis. No issues in this regard.

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Poland

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	
	Census with cross checking by registry based data.
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	There is no sampling in census scheme. Anyway not all entities provide a filled in statistical forms. Accuracy of data is measured by the percentage of the overall population
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	
	Through statistical form sent each year to entities involved in catches
	How do you fix the number of sampling units (cost constraints, CV targets,)?
4	
	Census. Fleet from the EU fishing fleet register and Polish Fishery Monitoring System.
Data validation prosedures	
	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)
5	
	Data provided in statistical form are cross checked with registered data and if it is possible (if enabled) with official statistics. Representativeness analysis in place.
Estimation prosedures	

	What kind of estimation procedures are used?
6	No estimations. It is a census. Only unpaid labour value is estimated. Upraising procedure based on averages (vessel/tonnes or day)
	Do you use any auxiliary information to improve your estimation?
7	
	Census. Only unpaid labour value is estimated.
Major critical issues in economic data collection	
	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?
8	Lack of responses from the full population. In case of fleet estimations are made as mean value multiplication in segments/clusters
Issues concerning the Work Plan	
	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
9	
	Lack of documentation. It will be available in 2017.
Social variables	
	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
10	
	Most of it (except for nationality) is already collected through statistical forms.

MEETING ON STATISTICAL ISSUES AND METHODOLOGIES (SIM SUBGROUP OF DCF/PGECON) 12-14 December 2016 MS: Slovenia

TEMPLATE FOR TOR 2 & TOR 3

General aim of the template:

Data collection scheme and sampling	
	Is your data collection scheme census, sample survey or combination of survey data and registry based data? Or something else?
1	
	census - variables were collected for all vessels, also for vessels under 10 meters census is used.
	What sampling method is used (eg. Random sampling, Probability Proportional to Size (PPS), non-probability sampling)?
2	
	How do you get the data? Do you use a fixed panel, survey by mail, by phone, interviews?
3	The socio-economic data on the fishing sector were collected mostly from accounting records – AJPES, from log book - data base InfoRib, through questionnaires and sales notes.
	How do you fix the number of sampling units (cost constraints, CV targets,)?
4	All units in the fishing fleet register - The economic variables were collected for all vessels, also for those under the ten meters length
Data validation prosedures	
5	Please, provide an inventory of the quality checks you perform on your sampling data (eg. calculation and evaluation of reliability indicators, like confidence intervals)
Estimation prosedures	

6	What kind of estimation procedures are used?
	In the case of a census with non-responses, Slovenia estimate variables using the method of extrapolation. Extrapolation is based on the assumption that trends in the observations will continue outside the range for which data are known.
	Do you use any auxiliary information to improve your estimation?
7	
	no
Major critical issues in economic data collection	
	Which are the critical issues in the economic data collection? Where would you need more guidance from the group?
8	
	none
Issues concerning the Work Plan	
9	List the issues that arose during drafting the Work Plan concerning economic and social data collection.
	More detailed guidelines - especially for Table 5B
Social variables	
10	How are you planning to collect the social variables? What kind of guidance from the group would you need on social variables?
	First Pilot study will be implemented. As a collection scheme census will be used. Guidance; segmentation for social variables, eg. Age groups, education levels etc.

Variable	Specification
Gross value of landings	Value of landings sold during the year.
Income from leasing out quota or other fishing rights	Totals invoiced during the reference period for to leasing out quota or other fishing rights assigned to the related vessel and supplied to third parties
Other income	Totals invoiced during the reference period, corresponding to vessel activities other than fishing supplied to third parties. Insurance payment for damage/loss of gear/vessel should be included.
Personnel costs	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. People working only on shore should be excluded. People working only on shore should be included only if their work is directly related to fishing activity.
Value of unpaid labour	Imputed value of unpaid labour. Unpaid labour = Work that produces goods or services but is unremunerated. (OECD Glossary of statistical terms) People working only on shore should be excluded. People working only on shore should be included only if their work is directly related to fishing activity.
Energy costs	Purchases of all energy products during the reference period should be included in this variable only if they are purchased to be used as fuel. Energy products purchased as a raw material or for resale without transformation should be excluded. Energy costs should be supplied as net costs, i.e. reduced by tax refunds
Repair and maintenance costs	The regular maintenance and repair of fixed assets used in production (items not treated as gross capital formation). Should refer only to vessel incl. equipment
Variable costs	All purchased inputs (goods and services) related to fishing effort and/or catch/landings excluding energy costs, personnel costs, repair and maintenance costs. Should be called "other variable costs" to clarify distinction from energy, repair andmaintainance, wages
Non-variable costs	Includes purchased inputs not related to THE LEVEL OF effort and/or catch/landings (including leased equipment).
Lease/rental payments for quota or other fishing rights	Total purchases of "Lease/rental payments for quota or other fishing rights"

Annex 4 – Definition document (revisions by SIM are highlighted in red)

Operating subsidies	 Direct payments which general government or the institutions of the European Union make to resident producers. (ESA D.3). Refers to direct payments/transfers related to the vessel activity, except for: Fuel tax refunds Subsidies for permanent cessation of fishing activities Investment subsidies (fleet modernization)
Subsidies on investments	Direct payments which general government or the institutions of the European Union make to resident producers to finance all or part of the costs of their acquiring assets related to the vessel.
Consumption of fixed capital	Decline in value of vessel and equipment, as a result of normal wear and tear and obsolescence. The estimate of decline in value includes a provision for losses of fixed assets as a result of accidental damage which can be insured against.
Value of physical capital	Depreciated replacement value of the vessel including onboard equipment with a useful lifetime of more than one year.
Value of quota and other fishing rights	The current value of the right to exploit fishing grounds over more than one year. To be collected only when fishing rights are tradable and thus data on the value of fishing rights are available.
Investments in tangible assets, net	Gross investment in vessel and onboard equipment minus sales of (vessel and) onboard equipment.
Long/short Debt	Amount of money borrowed to be used to finance ongoing vessel activities including value of quota and other fishing rights. Excludes finance obtained for land-based business activities.
Total assets	Sum of "Value of physical capital" and "value of quota and other fishing rights" "Balance sheet total", fixed assets and financial assets
Engaged crew	Total number of persons who have worked onboard the vessel, irrespective of the total number of hours. People working only onshore and paid from vessels should not be excluded if their activity has a direct link with the fishing operations.
Unpaid labour	Number of engaged crew that have not received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind.
FTE National	The number of crew converted into full time equivalent jobs (FTE).
Total hours worked per year	The aggregate number of hours worked by the engaged crew during the reference period.
Number of vessels	Number of vessels in the EU Fishing Fleet Register on December 31st plus the number of vessels which have been involved in any fishing activity during the year and have left the Fleet Register prior to year-end.
Mean LOA of vessels	Average vessel length
Total vessel's tonnage	Sum of the tonnage of the vessels
Total vessel's power	Sum of the power of the main engines of the vessels
Mean age of vessels	Average vessel age

Days at sea	To be aligned with the definition of the respective transversal variable.
Energy consumption	Volume of vessel fuel consumed.
Number of fishing enterprises/units	Number of fishing enterprises/units in ownership of the respective number of vessels. This refers to the fleet as a whole, not to fleet segments.
Value of landings per species	Value of landings per specie To be aligned with the definition of the respective transversal variable.
Average price per species	Gross value of landings per kilogram live weight To be aligned with the definition of the respective transversal variables.

Annex 5 – Methodologies for estimation of economic variables for the fleet (revisions by SIM are highlighted in red)

Variable	Methodology
	1. Obtained directly from survey
Gross value of	
landings	2. Derived from administrative sources of other surveyed variables.
	1. Obtained directly from survey.
Income from leasing out quota	2. Derived from other surveyed variables.
or other fishing rights	In case the trade (lease) information in terms of fishing rights is available from the official sources this information together with the average lease price might be used to calculate the variable. The average lease price would be collected through the survey.
Other income	1. Obtained directly from survey.
	1. Obtained directly from survey
	2. Derived from other surveyed variables.
	In several fisheries crew members are remunerated through crew share systems, rather than fixed salaries. In this case, personnel costs can be calculated as % of revenues, or as % of revenues- costs.
Personnel costs	To correctly apply this method, it is necessary to define, for each fleet segment:
	what is the approach used to calculate the share: as percentage on total revenues or as percentage of revenues – costs
	what are the costs actually included to calculate the share
	what is the percentage that goes to the crew
	Derived from other surveyed variables.
Value of unpaid labour	The estimation of the imputed value of unpaid labour represented one of the issue discussed during the Workshop on calculating capital value using PIM and definition of DCF variables that was held in Napoli, Italy, from 13th to 17th June 2011. The discussion held during that workshop focused on the definition and methodology of estimation of the unpaid labour both for the fleet and for the processing sector.
	Taking into account difficulties encountered by MS in estimating this variable (recognized by SGECA 10-03 and STECF EWG 11-03), a specific ToR of the workshop was to reply to the need of having clear definitions and best practices for MS. The group agreed that the variable "imputed value of unpaid labour" should include the labour costs of all persons delivering unpaid labour. and, in general, in estimating labour costs people working only on shore should be excluded.
	On the basis of the results of this workshop and comparing different experiences by MSs (as reported in NPs and ARs), it is suggested that value of unpaid labour can be estimated through the following methodology:
	FTE method (WS, Naples, 2009), that includes the following steps:
	estimation of paid and unpaid FTE;
	definition of an average remuneration per paid FTE (e.g. average wage by fleet segment/company, national average wage, minimum national wage, etc);
	remuneration per paid FTE).
	B. SIZE method (Italian AR, UK AR); this one has to be preferred when no
	For vessels over 10m (12 m in the Med) imputed value of labour is zero
	because we assume all vessels pay the skipper / owner via the crew share system, or with a fixed wage.

	 For vessels between 8m and 10m (6m and 12 m in the Med) we assume that the top 25% (by revenues) of vessels pay skippers a crew share as part of the expenses of the business and that the lower 75% (by revenues) of vessels do not, but rather pay "owner's drawings" from the profits. Therefore, for the lower 75% of vessels in this size category, there is a positive imputed value of labour. Considering that many smaller vessels operate on a part-time basis, it is not appropriate to assume an average full time wage for all owner skippers of these vessels. Instead, each MS should estimate the market value of a skipper's full-time labour at national level (MKS, market value skipper). For vessels with profit less than or equal to MKS, we assume that 100% of profit is the imputed value of unpaid labour. If profit is over MKS, we assume it as the imputed value of labour. The remainder of the profits can be considered as return on investment or return on management skill. For vessels less than 8m (6m in the Med), we assume that skipper's wages are not included in fishing expenses as part of the crew share, but in every case, are taken from the profits. Therefore, each vessel in this segment must have an imputed value of labour. For vessels with profit less than or equal to 00% of profit is the imputed value of unpaid labour. If profit is over MKS as the imputed value of labour. Therefore, each vessel in this segment must have an imputed value of labour. For vessels with profit less than or equal to 00% of profit is the imputed value of unpaid labour. If profit is segment must have an imputed value of labour. For vessels with profit less than or equal to MKS, we assume that 100% of profit is the imputed value of unpaid labour. If profit is over MKS as the imputed value of labour.
	1. Obtained directly from survey
Energy costs	2. Derived from other surveyed variables. Fuel cost could be calculated by multiplying the fuel consumption by the average fuel price, if fuel consumption is available
Repair and maintenance costs	Obtained directly from survey
Variable costs	Obtained directly from survey
Non-variable costs	Obtained directly from survey
	1. Obtained directly from survey
Lease/rental payments for quota or other fishing rights	2. Derived from other surveyed variables. In case the trade (lease) information in terms of fishing rights is available from the official sources this information together with the average lease price might be used to calculate the variable. The average lease price would be collected through the survey.
Operating subsidies	 1. Obtained from administrative sources (e.g. paying Agency, Local authority). The compilation of data on subsidies is based on the official lists provided by national and regional administrations. These lists should be further elaborate to consider only payments that can be classified as operating subsidies (see definition). Each payment has to associated with one vessel. This link allows to report operating subsidies in fleet segments.
	2. Obtained directly from survey
	 Obtained from administrative sources (e.g. paying Agency, Local authority). Investment subsidies refer to permanent cessation or to fleet modernization. They should not be included in income (PGECON 2013).

Subsidies on investments	The compilation of data on subsidies is based on the official lists provided by national and regional administrations. These lists should be further elaborate to consider only payments that can be classified as subsidies on investments (see definition). Each payment has to be associated with one vessel. This link allows to report operating subsidies in fleet segments. In case of subsidies for permanent cessation of fishing activities of those fleets which have become inactive during the year, it has to be decided if they can be classified in the segment of inactive vessel. 2. Obtained directly from survey
	1. Obtained directly from survey
Consumption of fixed capital	2. Derived from other surveyed variables. Consumption of fixed capital (Depreciation) represents the reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage (EC study No. FISH/2005/03). According to DCF legislation (2010/93/EU) depreciation should be calculated using the degressive depreciation scheme based on capital values estimated using replacement values (STECF 11-19, page 6) and included in the template model developed by EC study No. FISH/2005/03. The general assumptions proposed in the template model applies a degressive depreciation function and it assumes that engine is renovated every 10 years, electronics every 5 years, other equipment every 7 years and hull never. The share of each asset item in the total vessel price is 60% for hull, 20% for the engine and 10% for both electronics and other equipment. The rentals expected in future periods are discounting using a discount rate, which is the interest rate on long terms bond. However, as for the estimation of the Capital value based on the PIM method, the assumptions made in the template model represent only a general scheme that should be calibrated to the national situations. For the same reason the DCF Working Group Evaluation of data collection connected to Fishing Rights and Capital Costs (18 - 22 November, 2013, Gothenburg) suggested to use alternative approaches if accounting data (e.g. market value, book values) are available and can be easily derived by balance sheets.
	1. Obtained directly from survey
Value of physical capital	 2. Derived from other surveyed variables. The application of the Perpetual Inventory Method (PIM) performed through a template model developed by EC study No. FISH/2005/03 proposes to determine the aggregate value of the physical capital in the current year by aggregation of active fleets by age or vintage classes. Once the value of the capital goods in a given benchmark year has been determined, the capital value of each subsequent year is calculated by adding investments of that year (gross capital formation), revaluing the existing stock and subtracting value of capital goods taken out of operation (Depreciation). As the aggregation is based on current prices, this method gives an estimate of the depreciation replacement capital value. However, the calculation of capital stock according to PIM is based on several assumptions, which are also closely linked to several variables such as investment, depreciation, capital cost, opportunity cost. The required input parameters and major assumptions are: Depreciation rates Share of capital components (hull, engine, electronics, other equipment) in total value Life time of each asset Price per unit The determination of the PCU has probably the highest impact on the results. For this reason, in order to make results more harmonized in the Workshop on calculating capital value using PIM and definition of DCF variables (Naples, 2011) it was suggested a hierarchical order of preference for possible prices/values of a ship: Price of new constructed vessels;
	2. 2nd hand prices or insurance values of the current year;

	3. Book value;
	4. Scrapping value;
	5. Other values (e.g. specific surveys to ask for an estimate of the current value of a vessel with certain characteristics in case previous indicators cannot be observed).
	The assumptions made in the study No. FISH/2005/03 represent in fact only a general scheme in order to provide a calculation tool. This general scheme should be changed and calibrated according to the specific needs of each country and to other empirical information, for example collected from Company accounts, Statistical surveys, Expert advice, European System of Integrated Economic Accounts (ESA). Taking into account that the input parameters of the PIM method are difficult to be determined and could vary over time, the DCF Working Group on Evaluation of data collection connected to Fishing Rights and Capital Costs (18 - 22 November, 2013, Gothenburg) recommended to make use of alternative methods for the estimation of capital value of vessels when accounting data are available. However, STECF 10-09 also considered that the use of book value in order to estimate capital value and capital costs will limit the use of data to a fiscal accounting analysis more than to an economic valuation.
	1. Obtained directly from survey
	2. Derived from other surveyed variables.
	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
	separating them from the tangibles so that the determined value per capacity unit refers exclusively to physical assets. 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).
Value of quota	However, attaching value to the intangible assets faces several conceptual as well as practical problems:
and other fishing	- Ideally the value of assets should include all assets of the company including the intangible assets,
rights	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.
	Even when intangibles are freely tradable, observation of their prices in the market might be
	difficult because the number of transactions is small and the value might not be 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.
	Results of the WS on valuation of fishing rights should be used for this purpose.
	1 Obtained directly from survey
Investments in	. Obtained directly from survey
tangible assets,	2 Estimated from DIM models
net	2. Estimated from PIM method
Long/short Debt	Obtained directly from survey.
,	

	 Balance sheets are considered the most reliable source of data for debts (MSs that derived the value of debts from questionnaires experienced a very poor quality of responses). To split the total (company) value of long/short term debts in case the company owns more than one vessel, the capital value of each vessel estimated trough the PIM could be used to "weight" the share on the total value. On the other hand, to estimate this variable when balance sheets are not available, the methodology is: To estimate the financial position as ratio total debt/total value of assets To use the value of capital (deriving from the PIM) as a proxy for total value of assets (it is, indeed, important to bear in mind that the PIM value refers only to physical capital). To derive the value of long/short term debts (sum) multiplying the financial position ratio (estimated in 1) by the value of assets (estimated in 2).
	Obtained directly from survey.
Total assets	Balance sheets are considered the most reliable source of data for total assets (MSs that derived the value of debts from questionnaires experienced a very poor quality of responses). To split the total (company) value of assets in case the company owns more than one vessel, the capital value of each vessel estimated trough the PIM could be used to "weight" the share on the total value. To estimate this variable when balance sheets are not available, the value of capital estimated through the PIM could be considered as a proxy for total assets
Engaged crew	Obtained directly from survey
	1. Obtained directly from survey
Unpaid labour	2. Derived from other surveyed variables
	Derived from other surveyed variables
FTE National	FTE definition: unit expressing the number of employees into full-time workers (usually defined in the national law). Appendix VI of the current regulation refers, in note 17 and 18 to the study "Calculation of labour including full-time equivalent (FTE) in fisheries"(FISH/2005/14, 'LEI WAGENINGENUR Coordinator, 2006), financed by EU in order to harmonise the definition and the estimation of employment variables under the data collection system. According to that study the estimation of the FTE should be done by using a threshold representing the total number of hours worked, on a standard and yearly basis, by a full-time worker in the fishery sector. Actually the study was based on the estimation of the engaged crew and of the FTE at métier level in order to trace the reality of labour input in fishing as closely as possible. This approach was mainly based on the fact that:
	at the time of the study there were discussion, inside the STECF, about the possibilities to collect, under the revised DCR, economic data at métiers level;
	 "different fisheries may be characterised by different labour intensities and consequently by different levels of labour productivity. This is an important aspect of economic analysis; using métiers in general improves the analytical understanding of the operation of the various fleets".
	Actually the concept of metier has been not introduced in the collection of economic data but the general approach on the definition of FTE, in particular on the definition of the yearly threshold (time- based approach), has been largely applied under the DCF. According to the study, a person working more than the threshold (holding one or more jobs) is still counted as one FTE only. A person working less than the threshold represents a certain percentage of a FTE. FTE national should be calculated using a threshold defined according to the features of the fishery sector in each MSs. If the annual working hours per crew member exceed the reference level, the FTE equals 1 per crew member.

	□ if annual working hours>national threshold FTE national =1
	If not, the FTE equals the ratio between the hours worked and the reference level.
	□ if annual working hours <national fte="" national="</td" threshold=""></national>
	annual working hours national threshold
	In segments where this assumption (the annual working hours per crew member exceed the reference level, the FTE equals 1 per crew member) is not valid an additional adjustment of the calculation may be required, if it can be expected that the result will be significantly affected (Study No FISH/2005/14)
	1. Obtained directly from survey
Total hours worked per year	2. Derived from other surveyed variables
worked per year	Calculated based on effort, number of vessels and average crew number.
Number of fishing enterprises/units	Obtained directly from Fleet Register
Fuel consumption	1. Obtained directly from survey.
	2. Obtained from administrative sources (e.g. in case tax exemptions are used in the country).
	3. Derived from other surveyed variables.
	Regression models could be used by some MS (regression models using 'engine power', 'days at sea' and 'coefficient of fuel consumption by engine power')