4th Planning Group on Economic Issues (PGECON)

May 18 - 22, 2015

Arranged by the Thünen-Institute of Sea Fisheries at the

Center for Technology and Society, Technical University of Berlin

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1 EXECUTIVE SUMMARY

The Fourth Planning Group on Economic Issues met in Berlin, from May 18-22, 2015. The terms of reference for the meeting are given in section 2 (p.4). 20 representatives from 15 Member States, two experts from JRC and one representative of DG Mare attended the meeting.

PGECON is an operative meeting with a general aim to compare different approaches and to share different experiences from collection of economic data from fisheries and the aquaculture and fish processing sector in order to increase the quality of the data collected. PGECON aims at providing input to improve MS data collection programmes (e.g. sampling schemes, aggregation procedures). Participation is open to national experts involved in the implementation of the economic modules of the Data Collection Framework (DCF).

Recent developments in the context of DCMAP legislation were presented by a DG Mare representative.

The outcome of two workshops with relation to DCF economic and transversal data was presented and discussed.

Results of the The Hague workshop on the use of activity levels to stratify the results for economic parameters of fisheries were presented and discussed. From the results of the workshop it became clear that the distinction between so called low active vessels and active vessels might increase the quality of the results for some cases, but that are also problems attached to making this distinction:

- There is no natural/obvious boundary value to make the distinction.
- An EU covering theoretical framework for setting a boundary value is not available.
- Implementation of such a distinction is very difficult/undesirable for many (Southern European) countries due to the lack of a comprehensive dataset on fishing activities (esp. logbooks).

It was concluded that a regional approach is needed to make progress on this topic and that another workshop should be held to evaluate possible consequences making the distinction for the Baltic and the North Sea region.

At the Zagreb workshop transversal/effort data, their definitions, their resolution and their codification in biological and economic data calls were addressed. During an exercise performed by representatives of several MS, it was observed that a wide range of values resulted for effort variables across MS and across fields using the same six activity scenarios. The variables in question were days at sea and fishing days. This exercise illustrates the different interpretations with regards to the definition of these variables. Moreover, a mismatch of coding between biological and economic data calls was highlighted.

There is a clear need for harmonisation of both interpretation of definitions and codification. This has also been supported by STECF at the 2015 spring plenary. A follow-up workshop has been suggested during the workshop to apply common approaches to real datasets provided by MS representatives. Ideally the findings

can be implemented by MS for upcoming transversal data calls. However, it has to be borne in mind that the implementation can be time-consuming. It should be scheduled in a way that the considerable extra work is feasible.

PGECON strongly supports the suggested workshop and underlines the workshop recommendation, "*The results must be considered in the DCF reviewing process that is now being undertaken, specifically when tackling effort variables. Data provided according to the JRC data calls are not used for direct management purposes i.e. setting of baselines for kWdays*.".

Moreover, PGECON suggests that a common data format should be defined prior to the follow-up workshop which MS could apply to provide data for the workshop. This would facilitate the development of a common program code (and/or pseudo-code) to enable consistent processing of data from all MS.

PGECON appreciates the exercise of deriving annual report tables IIIB1-3 directly from data submitted for the fleet economics data call. It is suggested to consider extending this approach to aquaculture, fish processing and also transversal variables (IIIF1). Moreover, a link to NP tables should be developed. For that purpose a redesign of NP tables should be considered, addressing the relevance and the need for information that is being requested.

The amended design for future aquaculture data calls was presented and discussed. PGECON regarded the amendments helpful and supports the changes.

The quality checks of DCF data submitted to different stakeholders (mainly EU COM) have been discussed and regarded very helpful. PGECON states that a recurring failure of delivering certain values (basically referring to previous years) should be reconsidered. If MS have failed to collect certain data in the past it is likely that it is not going to be made up in following years.

Methodological issues on data collection and data quality were also considered at PGECON. A modeling approach on estimating fuel costs was presented and discussed. It was regarded as a good example for an estimation based on additional information which is readily accessible. PGECON suggests the preparation of a workshop on harmonising estimation approaches amongst MS during the 2016 event.

Data quality issues were discussed. The discrepancy between requesting data quality indicators and using them was stressed. Analyses based upon economic data are usually undertaken with no regard to data quality. This might lead to wrong conclusions.

PGECON recommends a follow-up on data quality considerations by the Commission/EWG. It should be clarified how quality information as requested under the data collection framework can be used meaningfully in the future. Moreover, the implications of quality properties of provided economic data for the different purposes for which these data are being used (e.g. performance indicators, balance indicators) should be further specified.

As a general observation it was stated at PGECON that numerous activities have been undertaken in the past to tackle issues of various nature, e.g. sampling, modelling and estimation procedures, calculations, interpretation, definitions, etc. While some issues could be solved others seem to have been perpetuated,

getting stuck as recommendation for a study or being forgotten in one of the numerous reports or documents.

In order to collate recommendations on economic data collection (e.g. from RCMs, STECF/SGECA, PGECON) PGECON suggests that a web repository should be established and maintained. The data collection website was mentioned as a possible place to store information about different practices of MSs, to help share the information between the MSs. This might include information such as methodological guidelines of MSs and questionnaires used for collecting the data.

Due to heavy involvement a JRC representative agreed to prepare a compilation of findings and recommendations from previous reports concerning the data collection framework. As a first step a folder has been set up on PGECON ftp. The folder called "DCF Methodology" was created in order to collate all recommendations (RCM, STECF/SGECA, PGECON) and documents in the same storage. MS are invited to share their national methodological reports/rules of implementation and procedures with the other countries involved in the DCF.

This approach will have to be followed-up with regard to effectiveness. It was decided that a review would be gathered for the next PGECON.

Whenever needed, PGECON suggests establishing an economic workgroup which convenes more frequently than a workshop to tackle particular issues, as is common in the biology context. The work on transversal variables would be a good example.

PGECON repeats the need for several studies which have been strongly recommended, some of them for several years:

- Origin and Sources of Raw Material in the European Seafood Industry
- Study to disaggregate economic variables by activity and area
- Handbook on sampling design and estimation methods for fleet economic data collection
- Harmonise quality reporting and propose methodology in the case of non-probability sample survey
- Pilot study on social indicators
- Study to propose methodologies for estimation of intangible assets in EU fisheries

PGECON 2015 suggested three workshops:

- Aquaculture data collection (as recommended in 2014)
- Implementation of thresholds on fishing activity (follow-up on 2014 WS)
- Harmonisation of transversal variables (follow-up on 2015 WS on effort data)

2 TERMS OF REFERENCE FOR PGECON 2015 IN BERLIN

The terms of reference for PGECON 2015 were compiled in cooperation with experts from Member States and with the Commission.

Workshop "Using fishing activity levels in economic data collection" (Den Haag, 2014)

Presentation by Hans van Oostenbrugge

Discussion

Conclusions, recommendations

Workshop "Linking economic and biological effort data" (Zagreb, 2015)

Presentation by Cristina Ribeiro

Discussion

Conclusions, recommendations

New developments on DCF revision (Angel Calvo)

AR exercise (derive fleet economics table from call data)

Experience and challenges at JRC (Cristina Ribeiro)

Experience in MS

Data calls – comments and experience by MS

Description of workshops and studies for the upcoming period (including identification of chairperson, and possible venue and dates) -> Zagreb follow-up exercise

Studies and grants

Introduction

Recommendations for topics and prioritization

Identification of chairperson for PGECON 2016-17

AOB

During the preparation phase of the meeting the estimation of fleet economic variables and considerations concerning data quality were added (chapter 8).

2.1 Participants

The list of participants at PGECON is presented in Annex 2:

3 NEW DEVELOPMENTS ON DCMAP (PRESENTATION BY A DG MARE REPRESENTATIVE)

Within the new CFP, one of the important focus points relies on increasing the quality and coverage of the data in order to improve policy advice (Article 25. of Regulation 1380/2013 of the Parliament and Council). The importance of the economic data of the Data Collection Framework for different purposes was emphasized. This applies in particular to the evaluation of management plans and structural policies

The DCF is now part of the EMFF. The total EMFF 2014-2020 amounts to €6.4 billion of which 11% is directly managed by the European Commission and 89% managed by the Member States. Of this total amount the majority is allocated to the support of a sustainable fishery sector. Furthermore, €520 million is allocated to the Data Collection and €580 million to control and enforcement. Some aspects on the EMFF architecture, such as the ex-ante specific conditionalities in the EMFF are related to the administrative capacity to comply with the data requirements under the DCF. Failures in ex-ante conditionalities, data collection or control (including an action plan and timetable for actions where relevant), can cause suspension in funding of measures under the Operational Programmes. This means that complying with the DCF could have a larger impact than before. More information on these questions is available on the DG MARE website: http://ec.europa.eu/fisheries/cfp/emff/index_en.htm

Currently the Commission is in the final stages of preparing a proposal for the new DCF Regulation. This proposal is to cover the key principles of the Data Collection Framework. However, details concerning what data will be covered is not treated within this proposal as it should be covered in the future EU Multi Annual Programme. The Commission is continuing to work on the content of these Multi Annual Programmes.

Grants implemented under direct management represent a new tool to strengthen regional cooperation financed under the EMFF Direct Management Programme (Regulation EU No 508/2014). Already 2 applications have been signed for in April 2015 with different Member State partners: One in Mediterranean & Black Sea and one in the North Sea and Eastern Atlantic. Expected outcomes of these grants are to improve regional cooperation between Member States related to the DCF in terms of work plans and methodology (bioeconomic data, improved sampling, quality assurance…). There will be a second round for grant applications in the last quarter of 2015 (see published annual work programme for public contracts and grants in DG MARE website). The budget amounts to €1.8 million for 2015 and the following objectives and results were identified (Commission Implementing Decision of 18/12/2014):

- Conduct inter-sessional work between the annual Regional Coordination Meetings or meetings of the Planning Group of Economists;
- further develop regional and EU-wide databases and transmission process for DCF data;
- develop and test an operational framework for establishing and coordinating statistically-sound sampling programmes at a regional or EU scale;

- trial the collection of new variables that may be required under reformed CFP.

Current status, raising issues and questions in the DCMAP context:

- The timing of DCMAP is yet unclear. However, NP submissions should occur in 2016
- The proposal concerning the revised DCF legislation has not yet been adopted by the commissioners.
- What about the future of data collection for the fish processing industry and aquaculture?
    - Aim to avoid duplication and seek synergies between statistical systems. However, for the processing industry the data collection would be complimentary to the Structural Business Statistics data delivered to Eurostat.
    - For aquaculture, a workshop on this issue will follow soon
    - Issue arises concerning the different aims and purposes for data collection

Quality evaluation remains a priority, not only in terms of quantity and indicators. Therefore, EWG should be able to conduct a first check (quantity), followed by looking into the content of the data. It would be very useful to set up a procedure to provide feedback and advice in terms of quality.

PGECON has the same status as RCM/RCG. The question was raised on how to ensure the dissemination of the output and recommendations generated during PGECON.

Another point relates to whether STECF should officially be involved. However, an advantage of attending PGECON without the status of independent expert is that it creates a gateway for free exchange of opinions and experiences, setting up a platform to tackle issues that cannot be addressed elsewhere.

More information on the subject can be found on the DG MARE website:

http://ec.europa.eu/dgs/maritimeaffairs_fisheries/contracts_and_funding/annual_work_programme/index_en.htm.

The related presentation is provided in Annex 3:

4 WORKSHOPS

4.1 Using fishing activity levels in economic data collection (Workshop on thresholds for activity levels), The Hague, 2014

A presentation was given by Hans van Oostenbrugge about the workshop addressing the use of activity thresholds for stratification of fleets. This was recommended by PGECON 2014 and held in The Hague, 13-17 October 2014. The Terms of reference for the workshop were as follows:

- Identify differences in activity levels for fleet segments covering all regions
- Develop consistent methodology to distinguish between: - "commercial" and "non-commercial" fishermen (revenue) - normally active and less active fishermen (effort/revenue)
- Test the effects of application of these two approaches to the fleet segments
- Investigate possible implementation procedures (esp. in cases where no/little auxiliary information is available)
- Develop advice on the issues concerned with the application of different thresholds and ways forward.

It was clearly stated that the objective of this workshop was to facilitate for a distinction in the reporting of the data; NOT to limit the data collection to the vessels with high activity levels.

It was stressed that as the population of vessels for economic data collection is based on all the vessels in the fleet registers, the values of the estimates for impact assessment and economic performance could be improved with the distinction between less active vessels and fully active vessels. The need for the distinction between the two groups persists for several years now and has still not been resolved.

During this workshop case studies were provided and presented from 14 MS and around 28 different fleet segments. The workshop concluded that the distinction between so called low active vessels and active vessels might lead to increased quality of the results for some cases, but that are also problems attached to making this distinction:

- There is no natural/obvious boundary value to make the distinction.
- An EU-covering theoretical framework for setting a boundary value is lacking.
- Implementation of such a distinction is very difficult/undesirable for many (South European) countries due to the lack of a comprehensive dataset on fishing activities (esp. logbooks).

Discussion Points

The group discussed how stratification based on activity level is already applied in some MS in processing of the economic data.

The group discussed the pros and cons of an implementation of such stratification in the national context. For MS with complete and reliable information on activity levels for all vessels the stratification might result in increased quality of the presented results. For other MS the distinction would be difficult and undesirable to implement because data on activity level are not comprehensively available. Moreover, for MS with small populations of vessels, such as Slovenia or Malta, the application of thresholds might not be useful and would represent an additional workload with little/no benefit.

The group concluded that in principle sub-stratification can contribute to the quality of the reported data, but that certain specifics in data availability, national data collections programs and in the fleet characteristics (size of the fleet) may prevent the application of the distinction.

As such, each MS should evaluate if sub-stratification is achievable and useful. When distinguishing between low activity and normally active vessels the total national estimates and fleet segment totals will not change dramatically, although a change in estimation methods might cause small differences.

The group stated that the data produced when applying sub-stratification have at least the same quality and can be used for the same purposes and that the resulting fleet totals should be comparable.

It was suggested that the application of a threshold should be optional. If a MS applies a threshold for reporting, a rationale should be included in the National Program.

The Commission representative explained that a consensus on changes to be implemented in the next DC MAP will have to be reached in different fora (PGECON, STECF, Liaison Meeting). In that regard, an impact analysis is important.

During the discussion, several possible thresholds and their advantages and disadvantages were compared. Possible thresholds that could be derived from DCF variables including, for example, the average total revenue per vessel, and the total revenue (landings combined with average prices). Additionally, the group agreed that monetary measures (such as value of landings), might be more appropriate than the fishing activity measures (such as days at sea), although some problems with implementation could be expected. Furthermore, the group discussed different thresholds, already applied in other systems, which could lead to comparable results (FADN, VAT, etc.) and would represent a more pragmatic approach. The main prerequisite of a system of boundaries would be to result in comparable results over different MS.
A regional overview of MS standpoints was done to get an *ad hoc* idea on the possibility and interest for MS to apply a threshold. Although views were divided, the need for a method of determining the threshold was acknowledged as well as the possibility for a regional approach in the implementation of a threshold. Based on this, it seems that for the Baltic and the North Sea MS there is interest to seek possibilities to implement a distinction in reporting. To take this discussion forward there are, however, some outstanding issues as stated above. Therefore, the group recommended a follow-up workshop to address a common approach and pilots for implementation of boundaries to evaluate consequences for the estimated economic parameters.

The related presentation is provided in Annex 4:

Conclusions/recommendations:

PGECON discussed the results of the workshop on thresholds in The Hague and came to the conclusion that a regional approach should be taken to this issue because of large differences in regional context. In order to take next steps in the application of thresholds a follow up workshop should be held.

The TOR of this workshop are:

1. Provide an overview of the technique to adjust reporting thresholds that could be used to ensure comparability of the resulting economic data from different MS (FADN, VAT, etc.) and define a number of possible thresholds for testing.
2. Address the regional adjustment for Member States.
3. Test the effects of implementation of different levels of thresholds for the aggregated economic data for the Baltic and North Sea region for the data of 2013.
4. Develop a time frame for implementation of further stratification on activity levels and reporting thresholds on a regional basis.

4.2 Transversal variables - linking economic and biological effort data, Zagreb 2015

The workshop on transversal variables was recommended by PGECON in 2014 with the following terms of reference:

- Comparison of economic and biological effort data calls (resolution/level of aggregation); experience from management plan evaluation
- Definition of variables (e.g. days at sea vs. fishing days) – what is really required/used/desirable?
- Opportunities for harmonization (resolution, definition, codification); any conclusions for DCMAP?
- Exploration of optimum timing for the data calls and specific data sets.

Cristina Ribeiro presented results of the workshop in Zagreb. There were good outcomes of the workshop thanks to the presence of a large group of experts with a variety of interests (economic, biological, managerial) from a number of different regions.

The TOR 1-3 were considered dealt with during the meeting. The group also suggested a roadmap for the implementation of standards. This roadmap includes the realisation of one additional workshop with the main goal to further develop the results so these can already serve the calls with implementation set for 2016.

The last TOR (timing) was considered to have been already addressed during a previous STECF EWG meeting (EWG1417), and therefore the workshop did not feel the need to focus again on this particular issue.

Additionally the conclusions from the STECF plenary on the results of the workshop were presented to PGECON. The STECF plenary concluded to fully support the workshop proposal and work should be carried out so that its recommendations can be implemented for 2016 data calls with the view of enhancing data coherence and consistency amongst MS. There was also recognition of the growing need for a 'quality assurance reference framework'. All of this is in service of a coherent EU dataset that can be relied upon by end users.

Follow-up therefore relates to setting up the workshop as set out in the roadmap and agreeing for the respective TOR. The proposal for a second workshop looks to again securing a wide range of experts including Economists, Biologists and data managers and is set to take place in autumn 2015 in Cyprus.

Discussion Points

A number of experts complimented the workshop and its achievements in producing concrete results. The general idea of harmonisation and reduction of the number of data calls was received favourably along with the desire for a common approach to allow comparison at a European level. It was noted that this was very relevant for the Economic report as a number of indicators were based on effort and with the current discrepancies comparison would be difficult.

Log Books – The group expressed a desire for more robust logbook information with a couple of Member State wanting details on crew. From experience it was related that improvements and changes to logbooks were very difficult to implement in the related Control Regulation. There was a strong feeling that solutions and improvements should be sought afterwards within the DCF framework rather than relying on assistance through different legislation.

It was highlighted that a conclusion at the most recent STECF meeting was the need for the colleagues in DGMARE to work more closely together to ensure major consistency across dossiers. In particular, the need for closer collaboration between fisheries control and DCF was mentioned.

In the context of consistency the issue of altering predominant gear was raised. Some vessels use different gear types throughout the year, e.g. two with an amount of close to 50% of the total effort. Over the years small changes might result in the vessel being assigned to one gear segment in one year and a second gear segment in the following year ("swing vessels"). This can introduce inconsistencies in time series, especially when the number of vessels in the related segments is low.

Publishing Tables – It was questioned whether the results of the previous workshop highlighting different approaches to calculating effort would be published. It was stated that they may be published for the purpose of reference but should be considered more as work performed in order to improve the future data call rather than advice to the specific MS. It might be advisable to not provide MS names within the table in the future.

Preparation for Follow-up Workshop

Benefit of practical scenarios – The approach of using practical scenarios was supported by the group. However, it was recognised that for determining effort variables more than just the six scenarios tackled in the workshop might have to be covered. A key point was to acknowledge the differences between approaches in Northern and Southern Europe. It was put forward that the workshop could provide momentum to look at all the definitions relating to effort and to see if all MS are following the same approach. The workshop allows to branch out further, not just looking at the fact MS are using different approaches but why are these approaches being taken.

Desire for programming code and difficulties relating to this task – In advance of the workshop there was a suggestion that some kind of programming code would be advantageous. It was acknowledged that the timescale was quite tight. A JRC representative noted that it may be possible to generate codes for one or two of the scenarios previously used in the report. Alternatively, there was a proposal that understanding the reasoning would be helpful to data managers. It was proposed that an outcome of the workshop could be a decision tree designed for use by data managers reflecting the different scenarios.

Passive Gears – The group recognised and noted the issue relating to Passive Gears raised in the previous workshop. In particular the differing interests from the economic and the biological perspective were stressed as something that should be taken into account when defining the effort metrics. For biologists gear size and soaking time will be most relevant, whereas economists are more interested in the steaming time of the vessel. It was also recognised that some MS do not collect relevant data for an investigation of these differences. How to assess the effort for passive gears should be an issue to be discussed upon during the workshop.

Concern with ability to comply – A number of different MS raised potential issues with the practicalities of both a November workshop and implementing the advice given at the workshop as early as 2016. The variety of different scenarios in some MS might cause greater difficulties in extracting the relevant data from databases and updating the procedures of the data calculation. On the other hand, the overall workload would be considerably reduced when one effort data call p.a. would serve all needs. It was noted that programmers would be vital to the execution of any guidelines. It was suggested that some programmers could be invited to the workshop or could form a sub-group. However, it was generally felt that this additional layer of work could slow down the progress of the workshop. It was clear that any guidelines resulting from the workshop that could be implemented in 2016 would need to be classified as best practice as not all MS would be able to comply immediately.

Time series – It needed to be clarified if effort information following an amended definition would be required for previous years. JRC representatives confirmed it would be required back to 2008 as part of the DCF. MS suggested that a pragmatic trial using the most recent year's data could be a suitable approach for 2016. It was noted that much of the work involved would be frontloaded to the first year of acting on any guidelines. A good outcome of the workshop would be

a proposed timeline with the eventual result of a time series with updated effort data for all year.

Political Issues – It was suggested there could be a political angle to consider when producing these guidelines. As effort data goes into management plans it was asked how a MS could justify or explain a previous overestimation. Representatives of the Commission stated the purpose of the DCF is to provide the very best possible data and that political issues cannot factor into our decision making. Even taking that into account it was acknowledged that, at least initially, not going back to previous years could result in a sudden decrease or increase in data effort which could be questioned by policy makers. This was an issue also tackled in the Workshop report from which the following recommendation was drafted: "The results must be considered in the DCF reviewing process that is now being undertaken, specifically when tackling effort variables. Data provided according to the JRC data calls are not used for direct management purposes i.e. setting of baselines for kW-days."

Desired Outcomes for follow-up Workshop

PGECON further backed the STECF conclusion in supporting the existence of this workshop and its main purpose of making recommendations relating to harmonisation for the 2016 data call. The purpose of the workshop is to provide the clarity that is not currently there. In addition to that:

- It was proposed that an outcome of the workshop could be a decision tree designed for use by data managers reflecting the different scenarios.
- If possible, the topic of effort data for passive gears should be addressed during the workshop.
- It will need to be made clear any guidelines resulting from the workshop that could be implemented in 2016 would need to be classified as best practice as not all MS would be able to comply immediately.
- A good outcome of the workshop would be a proposed timeline with the eventual result of a time series containing updated effort data.
- Whilst not influencing the work, political issues (esp. effort ceilings in management plans) should be kept in mind during the workshop.

Further Work

Participants from Germany, UK, Croatia and the JRC agreed to try to elaborate a template for effort raw data (basically derived from logbooks) to uniformly provide variables and their formats in advance of the workshop. This template could be a common basis for applying effort determination codes.

Terms of Reference for a second workshop (draft)

The results of the workshop have convinced the group of the need for further work to address the shortcomings identified, namely the implementation of the

standard definitions for effort estimation, agreeing new codes and fine tuning the results after first trial implementation with real data.

Conclusions/recommendations:

In line with the follow up recommendation stated in Zagreb during the workshop, PGECON recommends a second workshop on harmonisation of transversal variables as follow-up of the 2015 Zagreb event. The following topics should be addressed:

1. Assess the results of the new effort estimates following the trial implementation of the standards on a MS level. This work requests some work to be done in advance by the MS so the results can be analyses and discussed during the workshop.

2. Assess to what extent the scenarios identified represent the range of situations MS will find in their own data and in case different standard fishing trips are identified, devise the effort standards measures for the situations missing.

3. Prepare the documentation deemed necessary, to be stored on a publicly accessible repository (e.g. DCF website), that would serve as support for the estimation processes.

4. Decide on the most appropriate metrics for fishing effort for passive gears for vessels not required to complete logbooks and for those required to complete logbook. This work should be done considering the relevance and feasibility for both the data providers and end-users.

5. Identify together with Member States any particular issue that still need to be clarified ahead of the 2016 data calls.

Chair: Cristina Castro Ribeiro
Venue: Cyprus
Timing, duration: 5 days, autumn 2015

The related presentation is provided in Annex 5:

5 AR EXERCISE (DERIVE FLEET ECONOMICS TABLE FROM CALL DATA) – EXPERIENCE AND CHALLENGES AT JRC (CRISTINA RIBEIRO)

Cristina Ribeiro (JRC) presented the results of the Annual Reporting exercise on the preparation of the Standard Tables III_B1 to III_B3 based on the data requested in the 2015 economic data call.

The group was informed that this was a process primarily triggered by the EWG1417, afterwards endorsed by the STECF plenary which was then put into place by JRC at the moment of the data call. The main purpose of the process is simplification as well as to reduce burden from MS to report interrelated data.

For that, in the 2015 Fleet Economic Data Call four additional variables in relation to AR preparation were requested, as Frame Population, Survey Name, Response Rate and Data source in Capacity template. The submission of these variables was set as non-mandatory.

In a nutshell the results from the AR exercise are as follows:

- 14 MS have submitted enough data to prepare the AR Standard tables;

- With the additional data requested, Tables III_B_2 and III_B_3 were fully reproduced. Table III_B_1 could not be derived completely due to lack of some information, such as planned sample number, planned sample rate, type of data collection scheme, achieved sample number and achieved sample rate.

Discussion Points

During the meeting the MS were asked to provide feedback on this process whether it was useful and if it represents an added value for the preparation of their AR.

The initiative was very welcomed by the group and its usefulness for the current year and for the future was also acknowledged. The group agreed that this process was a useful tool for AR in terms of reduced burden for reporting as well as it facilitates the AR evaluation procedure.

The group raised a question concerning the importance of quality data (metadata) in the data call such as the response rate, CV which is apparently not used in AER or elsewhere.

The possibility to adjust the capacity template of the data call for compiling IIIB1 Standard Table was also discussed.

Some of the figures are provided in the related National Programmes (planned sample number, planned sample rate, see also EWG 1417 report). As a step forward AR and NP might be linked anyway in the future.

The overall relevance of IIIB1 was discussed. One major difference between IIIB1 and IIIB3 is that IIIB3 refers to single variables whereas IIIB1 is meant to describe the characteristics of the surveys through which the individual variables are achieved.

The possible application for this purpose was assessed taking into account different scenarios as for instance the cases when MS have different sampling strategies for different fleet segments and variables. PGECON discussed the application of Frame population and Target population which MS have found not to be enough clear yet. In the guidelines the frame population is defined as "the set of population units which can be actually accessed and the survey data then refer to this population." (in contrast to target population: "Total population nos.' should be those of the official fleet register on the 1st of January"). In almost all cases both are identical. MS which find differences between those two populations provided descriptions of the cases which did not seem entirely convincing to all participants (e.g. dead fishermen, fishermen with too low income, fishermen who cannot be contacted for other reasons).

Moreover, in some cases the distinction between target and frame population has been interpreted as distinction between the fleet at a fixed date (e.g. Jan 1) and the cumulative fleet, covering all vessels that have been in the fleet register at some point in time during the reference year.

It was therefore proposed to clarify during the next Guidelines revision process in which cases the frame population can be different from the target population in the context of fleet economic data collection. Some clarification on how to refer to the cumulative versus fixed date population would also be desirable. Moreover it was suggested to check whether the information on survey level as provided in IIIB1 has been used.

As a matter of foreseeing the exercise for the future, two main conclusions arose:

1. Though ST_III_B1 cannot be completely derived from the current data call structure, no short term changes should be done to ST_III_B1 template thus far. JRC would be asked to consider how to request missing data for the preparation of ST_III_B1 in the future data calls. However, it was also regarded advisable to clarify if the quality information on fleet segment+variable level as provided in IIIB3 might be sufficient for end users of the AR.

2. The group noticed that some variables should not be included in the ST III_B_3, such as capital costs (the list of variables is identified in the AR Guidelines) therefore should be removed for next year's web based ST_III_B3 which is automatically generated by JRC from data call data.

The group highly recommended that the same approach should also be used for generating AR Standard Tables for aquaculture and fish processing industry.

The group recommended checking possibilities to generate transversal variables in ST_III_F1 from data call data.

Conclusions/recommendations:

PGECON recommends continuing the approach of generating AR tables from information submitted through data calls.

In this context the following aspects should be addressed by the Commission/EWGs:

It should be considered to apply the same approach in the fields of aquaculture and fish processing.

It should also be considered to check possibilities to generate transversal variables in III.F.1 from data call data.

It should be considered if data which are yet missing when generating AR tables from call data can be included in future data calls.

In this context, also a link to NP data should be generated in the future.

The relevance of the information provided in table III.B.1 should be further scrutinized.

The understanding of the concept on target vs. frame population should be further clarified. In particular it should be investigated if there is a practical use in making this distinction or if relevant information (e.g. capacity at a certain point in time vs. capacity throughout the year) could be collected in a different way.

The presentation related to the AR exercise is provided in Annex 5:

6 CHANGES TO THE AQUACULTURE DATA CALL (ARINA MOTOVA, JRC)

CHANGES TO THE AQUACULTURE DATA CALL

JRC proposed to change the horizontal templates used for the aquaculture data call as the current template is not clear in terms of quality indicators and does not allow providing quality data by segment. The proposal would incorporate quality information alongside segment data. It was noted that the existing template had been confusing and led to Member States often providing quality information for national totals only. The proposed change was in line with the aim to adopt a common approach for all data calls. This was in part an acknowledgement of the need to standardise data calls to better facilitate implementation of an EU database under DCMAP and a desire to introduce targets for data quality in future.

There were no objections to the proposed changes. However, the group noted that there was a clear need to demonstrate how the quality information collected was being used and suggested that utility might be evaluated across all data calls. The group also considered that reworking of quality information for earlier years (2008-2012) could impose a significant additional work burden on some data providers and it was therefore agreed that there should be no requirement to apply the change retrospectively.

A further change foreseen is a move from a data call approach for data provision to a 'deadline' approach whereby MSs were at liberty to upload their submission to JRC systems earlier if desired. There had been little appetite in the group (either within MSs or the JRC) to bring the aquaculture submission deadline forward to align with those for other calls.

It was agreed that the views of PGECON should be addressed by the aquaculture workshop to be held in Gdynia in June 2015.

Key points of PGECON discussions

- Support of proposed changes in future data calls
- Need to ensure use of quality information requested (e.g. AR tables, quality analyses)
- Move from data calls to more flexible 'deadline' approach to data submission (the upload might be opened earlier for MS willing to use possibility to fill in standard tables for the AR)
- Recommendations to be included to the June Gdynia aquaculture workshop.

The presentation related to the changes to the Aquaculture data call is provided in Annex 7:

Conclusions/recommendations:

PGECON supports changes suggested for the layout of future data calls on aquaculture so that quality information could be provided by segment.

Moreover, in the context of aquaculture and fish processing data collection PGECON expresses the desire for a demonstration on how quality information as provided in data calls has been used.

PGECON supports the concept of moving from a data call approach to a deadline approach.

7 QUALITY CHECKS ON ECONOMICS DATA CALLS (ARINA MOTOVA, JRC)

Arina Motova (JRC) gave an overview of the four levels of quality checks being applied to MSs data including: syntactic checks; exploratory data analysis; 'tableau' checks and finally through STECF expert working groups when reports were prepared.

- Syntactic checks, using the 'DV tool' were applied on data submission and looked for errors in codification; duplication of records; consistency between data columns (e.g. whether units were compatible with corresponding variables) and consistency checks between worksheets (and especially the capacity data).

- The exploratory data analyses were performed using R and provided a pre-processing check and provided a higher level check of data coverage, identifying data gaps and inconsistencies in time series and checking that data summed to national totals.

- Tableau provided a graphical overview of processed data and was available to the STECF EWGs. Again this looked at coverage and consistency across time series and supplied a representation of timing of data uploads by providers.

- STECF EWG 15-10 employed both tools provided by JRC (the exploratory analyses and Tableau).

JRC highlighted the most common errors found as being: missing variables for historical data-sets; problems with missing weight or value per species; zero values provided instead of missing values and clustering. The group was reminded that data suppliers had to be aware of the need to correctly identify whether uploaded data were to overwrite existing records or otherwise appended to them.

The JRC acknowledged that the checks so far implemented had been predominantly for the economic data call and that there was considerable scope to refine these and introduce further checks. It was noted that resources to do this were limited but suggestions were welcome. Increasing stabilisation of the data provisions offered the prospect of being able to divert more effort to quality checks in future.

There was general agreement that the exploratory analyses provided to MSs had been useful to supplement MSs own quality checks. However, it was noted that on occasions issues that had been explained in previous years were flagged. This had the potential to cause problems with Commission compliance assessments and which might result in financial sanctions being applied. The group encouraged the Commission to sort out data call issues and continuous repetition of the failures in historical data sets.

It was noted that there was some confusion due to the fact that in the data check segments and clusters were marked in the opposite way compared to the data call (cluster in data call = with asterisk, in quality check = without asterisk). This should be harmonised in the future.

On data revisions, it was suggested that these might usefully be highlighted within quality reports in red. The need for clarity on what figures were considered 'final' was highlighted as being important for compilation of AER national chapters.

Experts, involved in the STECF EWG 15-03 expressed the need to have links between Excel and Word, when preparing national chapters. Data updates should result in automatic updates of figures and tables in the text document, thus replacing the current manual "copy&paste".

Key points of PGECON discussions

- MSs welcome quality reports prepared by JRC.
- More care to be taken in interpretation of the results, particularly when there are compliance implications.
- Need for clarity on when figures provided in the JRC database can be considered final
- Clusters to be labelled only for those segments which are actually clustered.

The presentation related to the quality checks on the fleet economics data call is provided in Annex 8:

Conclusions/recommendations:

PGECON appreciates the data quality check routine as developed and applied by JRC. It has proven to be very helpful to supplement MS own data checks, regardless of the fact that some issues marked as errors could be justified by MS.

Some concern has been stated with respect to issues that are highlighted recurrently and that have been justified in previous years already.

There should be some mechanism to indicate that figures provided in the JRC database can be considered final.

8 METHODOLOGICAL ISSUES CONCERNING DATA COLLECTION AND DATA QUALITY CONSIDERATIONS (INCL. PRESENTATIONS BY CARLOS MOURA)

The session was started with a presentation by Carlos Moura on the use of modelling on the estimation of fleet economic variables with emphasis on fuel consumption as an example. The approach makes use of more or less comprehensively available auxiliary information (e.g. engine power) to be combined with survey data. The method presented was regarded as plausible.

The method presented gives a clear indication for the opportunity of harmonising the approach across MS. Methodological harmonisation is one of the common terms of reference of PGECON. However, it was felt like working with real data would require more preparation and also time available for that kind of task.

The presentation is provided in Annex 9:

After that there was a quick recap on an earlier presentation on CVs and the implications of data quality, and a computing example of population and sample means and standard deviations. The presentation was originally given at the 2011 DCF workshop on statistics in Lisbon.

The presentation is provided in Annex 10:

The presentations have been taken as initiation of a more general view on progress within the DCF environment. The presentation on modelling economic variables is in line with several approaches which have been discussed for instance in the context of data disaggregation. A broad range of approaches is being applied in various fields (e.g. AER, management plan evaluation). Thus far no standardised approach could be established. A similar situation can be observed in the field of data quality. As stated in a previous chapter, quality information on DCF data (e.g. sample rate, CV) has been scrupulously described and defined over the years. However, it has not been taken into consideration in any way (e.g. AER, balance report), according to the best knowledge of the participants. In contrast, a broad range of conclusions has been drawn from economic data (trends, profitability etc.) without accounting for data quality.

In the past, numerous means of activities have been undertaken to tackle issues of various nature, e.g. sampling, modelling and estimation procedures, calculations, interpretation, definitions, etc. While some issues could be solved others seem to have perpetuated. The observed typical work flow after detecting open issues is

> *"workshop –> study recommendation –> short term contract –> (sometimes) expert meeting".*

The process as often ended already with the recommendations from workshops. Unsolved problems are recurring during the analysis of data collected, thus slowing down the entire process of improvement.

Without having a perfect solution PGECON wants to call attention on those observations.

One possible way forward might be establishing work groups (like in RCG context) that address a certain issue over a longer period. Such a group could elaborate solutions during subsequent meetings with some preparatory time in between. A good example of the need for some work environment of that kind are the two workshops recommended during PGECON 2015: Both are follow-ups of another workshop and could be regarded as short-term working group with only two (or maybe more) meetings.

It was pointed out, that some work has already taken place to resolve issues concerning statistical questions, e.g. the 2011 presentation on CVs. There have been many occasions where some methodological issues have been tackled. It was seen as important to review the work already done and gather it in one place. Thereafter it would perhaps be easier to see what has been resolved and where there is still work needed. It was decided that a review would be gathered for the next PGECON.

As JRC is heavily involved in the economic data collection Arina Motova agreed to prepare a compilation of findings and recommendations from previous reports concerning the data collection framework.

The data collection website was mentioned as a possible place to store information about different practices of MSs, to help share the information between the MSs. Methodological guidelines of MSs as well as questionnaires used for collecting the data or other relevant documents would be made available.

Meanwhile a folder has been set up on PGECON ftp. The folder called DCF Methodology was created in order to collate all recommendations (RCM, STECF (SGECA), PGECON) and documents in the same storage. MS are invited to share their national methodological reports/rules of implementation/implementing low/procedures with the other countries involved in the DCF. The documents could be stored in native languages. The group agreed that this initiative could help to share the knowledge between countries on the methodological approaches and together with the compilation of the recommendations could be a good starting point for the preparation of a Methodological Hand Book.

Conclusions/recommendations:

PGECON welcomed the input of the Portuguese modelling approach for the estimation of fuel consumption. Applying this kind of approach in a suitable environment (e.g. workshop with some preparatory work) could be a fruitful way of harmonising data collection methods amongst MS.

PGECON suggests the preparation of a workshop on harmonising estimation approaches amongst MS during the 2016 PGECON. Participants of PGECON should consider prior to the meeting which national approach might be applicable for such an exercise and which prerequisites apply.

PGECON recommends a follow-up on data quality considerations by the Commission/EWG. It should be clarified how quality information as requested under the data collection framework can be used meaningfully in the future. Moreover, the implications of the quality of economic data (provided as

quality indicators) for the different purposes for which these data are being used (e.g. performance indicators, balance indicators) should be further specified.

Whenever needed, PGECON suggests establishing an economic workgroup which convenes more frequently than a workshop to tackle particular issues, as is common in the biological context. The work on transversal variables would be a good example.

PGECON suggests that a web repository for collating all recommendations on economic data collection (e.g. from RCMs, STECF/SGECA, PGECON) should be established and maintained.

9 PROPOSAL OF STUDIES AND WORKSHOPS (INCLUDING IDENTIFICATION OF CHAIRPERSON, AND POSSIBLE VENUE AND DATES)

Workshops

As follow-up on the 2014 event on the stratification of fleet segments by activity levels a second workshop has been recommended to apply the approach on a regional basis. A quick poll had indicated that for the Baltic and the North Sea the approach should be feasible. Thus it is intended to run an analysis based on real data and to compare the results.

Follow-up Workshop on Implementation thresholds for activity levels

A) Provide an overview of the technique to adjust reporting thresholds that could be used to ensure comparability of the resulting economic data from different MS (FADN, PPP, etc.) and define a number of possible thresholds for testing.

B) Address the regional adjustment for Member States.

C) Test the effects of implementation of different levels of thresholds for the aggregated economic data for the Baltic and North Sea region for the data of 2013.

D) Develop a time frame for implementation of further stratification on activity levels and reporting thresholds on a regional basis

Chair: Hans van Oostenbrugge
Venue: Den Haag
Timing, duration: tbd

In line with the follow up recommendation stated in Zagreb during the workshop, PGECON recommends a second workshop on harmonisation of transversal variables as follow-up of the 2015 Zagreb event.

Follow-up Workshop on harmonisation of transversal variables

A) Assess the results of the new effort estimates following the trial implementation of the standards on a MS level. This work requests some work to be done in advance by the MS so the results can be analyses and discussed during the workshop.

B) Assess to what extent the scenarios identified represent the range of situations MS will find in their own data and in case different standard fishing trips are identified, devise the effort standards measures for the situations missing.

C) Prepare the documentation deemed necessary, to be stored on a publicly accessible repository (e.g DCF website), that would serve as support for the estimation processes.

D) Decide on the most appropriate metrics for fishing effort for passive gears for vessels not required to complete logbooks and for those required to complete logbook. This work should be done considering the relevance and feasibility for both the data providers and end-users.

E) Identify together with Member States any particular issue that still need to be clarified ahead of the 2016 data calls.

Chair: Cristina Castro Ribeiro
Venue: Cyprus
Timing, duration: 5 days, autumn 2015

Some open questions still exist on the data collection on aquaculture. In 2014 PGECON concluded that the issues can be tackled best by a workshop where principles applied in different MS can be compiled, compared and evaluated. The WS was planned for 2014 in Gdynia. However, due to administrative reasons it was postponed to June 2015. The ToRs were proposed by PGECON in 2014 and further elaborated by DG MARE and EUROSTAT during the preparation.

PGECON proposed to include further technical discussions on change of the aquaculture data call as part of ToRs for the WS in Gdynia.

The following setup was developed:

Conclusions/recommendations:

Workshop on Aquaculture data collection

A) Requirements of the data call and quality checks – major issues faced and possible improvements.

B) Definition of primary activity and how it is applied by MSs

C) Defining the criteria for the allocation of enterprises to the particular aquaculture segments in cases when few different techniques are used and/or different fish species are produced.

D) Harmonisation of conversion indexes used for estimation of weight of sales of hatcheries and nurseries production from the number of fry for each species and their age rate.

E) Evaluation of possibility to collect data for Eurostat and DCF through the same data collection system and questionnaire allowing for the gradual alignment of the Eurostat and DCF data collection systems

F) Evaluation of STECF-15-01 suggestion that DCF data collection should be confined to commercial production and/or appropriate thresholds should be implemented as it is proposed in fisheries. Group should also consider that there is a need to have information on the production of new species, as there is special support for this kind of activities in the EFF and EMFF, which needs data for assessment

G) Expected amendment and extension of Aquaculture Data Collection in the future DCMAP

Chair: Barbara Pieńkowska
Venue: Gdynia
Timing, duration: June 15-19, 2015

Studies and grants

PGECON came to realise again that a considerable number of studies that have been recommended through the years have piled up without having been addressed in any way. This jeopardises the usefulness of DCF economic figures that are to be collected under the DCF (DCMAP) with substantial effort.

PGECON did not repeat the exercise of listing the outstanding studies thus referring to the 2014 report. Moreover PGECON did not feel in the position of prioritising the recommended studies as the priority depends on the perspective of end users.

- The raw material study is a prerequisite to elaborate a possible link between fleet data and fish processing data. Without that link the data collected on fish processing are pretty much a standalone dataset with no connection to EU fisheries.
- The disaggregation study is inevitable to harmonise procedures for assigning economic data to "fishing units" which are different from fleet segments (e.g. for LTMP evaluation and numerous other applications).
- The "handbook" and the "non-probability" studies are quite small in volume and add value to the quality information as provided together with (economic) data.
- The social indicator study is crucial for a meaningful and cost-efficient implementation of social variables in future DCMAP requirements. Not knowing which kinds of data are already available through other sources might result in costly effort for parallel collection of data with little or no value added.
- The intangible assets study is crucial for a more meaningful approach on estimating hidden assets (e.g. implicit quota) and separating them from vessel prices, thus estimating capital costs and depreciation more correctly.

Participants' attention was raised to the fact that some of the topics might suitably be addressed through a grant as financing vehicle. It has been left up to participants to consider forming a consortium to apply for a grant.

For details see
http://ec.europa.eu/dgs/maritimeaffairs_fisheries/contracts_and_funding/annual_work_programme/index_en.htm

10 PGECON 2016: DATE AND VENUE AND APPOINTMENT OF THE CHAIR PERSON

The 2016 PGECON is scheduled to take place in Croatia (Zagreb/Split) and will be chaired by Ivana Vukov. It has been regarded a useful approach to have the responsibility alternated between the different geographical areas.

It was stated that the timing of the 2016 event should adjust for the typical deadlines and work peaks occurring in the DCF economics context (e.g. data calls, AER, AR, balance report).

The Terms of Reference for this meeting will be prepared by the chair, by experts from MS and by the European Commission taking into account the conclusions of the 2015 PGECON, the 2015 RCMs and the 2015 Liaison meeting.

Annex 1: DCF PGECON 2015 in Berlin - Agenda

Venue: Technical University of Berlin, Center for Technology and Society, Hardenbergstr. 16-18
Monday, May 18, 14:00 - Friday, May 22, 13:00

Monday 14:00

Welcome, housekeeping, introduction round, general PGECON TORs

Follow-up on PGECON 2014 recommendations: LM 2014 comments (Jörg Berkenhagen, SF, Hamburg), implementation by COM (Angel Calvo, DG Mare)

New developments on DCMAP (Angel Calvo)

Tuesday 9:00

Workshop "Using fishing activity levels in economic data collection" (The Hague, 2014)

Presentation by Hans van Oostenbrugge (LEI, The Hague)

Discussion

Conclusions, recommendations

- *11:45 Leave for Reichstag Dome visit*

Tuesday 14:30

Workshop "Transversal variables, Linking economic and biological effort data" (Zagreb, January 2015)

Presentation by Cristina Ribeiro (JRC, Ispra)

Discussion

Conclusions, recommendations

Wednesday 9:00

Cont. "Workshop on transversal variables": conclusions, recommendations

Wednesday 14:00

AR exercise (derive fleet economics table from call data)

Experience and challenges at JRC (Cristina Ribeiro)

Experience in MS

Recommendations

Thursday 9:00

Quality checks on the fleet economic data call (Arina Motova. JRC, Ispra)

Changes in the aquaculture (data call) for the future (Arina Motova)

Discussion and conclusions

Thursday 14:00

Use of modelling on the estimation of fleet economic variables (Carlos Moura, DGRM, Lisbon)

Discussion, conclusions

Description of workshops and studies for the upcoming period (including identification of chairperson, and possible venue and dates): (e.g. Zagreb follow-up; The Hague recommendation)

Identification of chairperson for PGECON 2016-17

Friday 9:00

Report draft

AOB

Annex 2: PGECON 2013 List of Participants

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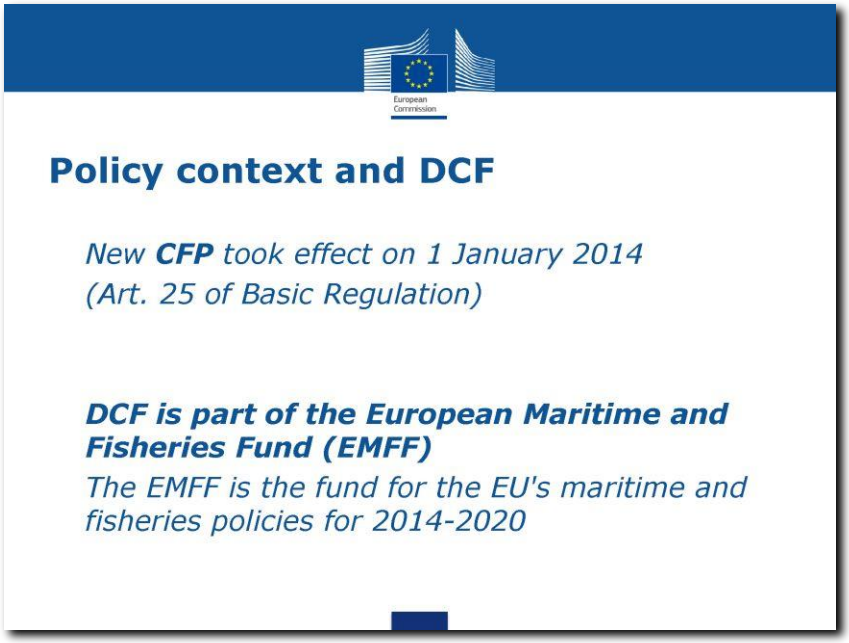
Annex 3: Presentation on Recent developments in the DCF



*The detail of which data are covered, shall not be covered by the new DCF regulation but shall be included in a future **EU Multiannual Programme**.*

Grants for strengthening regional cooperation

DG MARE

Grants for strengthening regional cooperation

Financing:

- Grants are financed under the EMFF Direct management programme (Article 86(2)f of EMFF)

1st Call (2014 budget):

- 1st Call for Proposals for two Grants for 0,8 M€ was launched on 28/10/2014 – deadline 15/01/2015
- Two applications received that passed all evaluation criteria and quality thresholds

Grants for strengthening regional cooperation

Applications:

- **Mediterranean and Black Sea (14 partners from 9 MS)**
- **North Sea and Eastern Arctic (12 partners from 9 MS + ICES)**

Timing:

- Signature of the grant agreements and start of work in April 2015 – 12 months duration

Grants for strengthening regional cooperation

Outcomes: The two grants will enable these regions:

- To develop regional work plans
- To develop regional sampling plans on a few shared stocks
- Agree on joint methodologies to be followed for DC
- Agree on a joint quality assurance scheme
- To establish regional plans to collect data on by-catch of some protected and endangered species

Grants for strengthening regional cooperation

Link to revised DCF Regulation:

- MS will already start preparing for some of changes regarding strengthened regional cooperation that may come out of the revision of the DCF Regulation

Grants for strengthening regional cooperation

Future developments (2015 budget):

- 1,8 M€ for the financing of more grants is already included in the 2015 WP

Timing:

- 2nd Call for proposals foreseen by the end of 2015

Work programme for 2015 and the financing for the implementation of the European Maritime and Fisheries Fund

http://ec.europa.eu/dgs/maritimeaffairs_fisheries/contracts_and_funding/annual_work_programme/2015/c_2014_9794_en.pdf

Annex 4: Presentation on The Hague WS

Using fishing activity levels in economic data collection

"A Dutch beauty"

October 2014,Hans van Oostenbrugge

LEI WAGENINGEN UR

Rationale meeting

- Aim of economic data collection:
  - Statistical data on economic performance
  - Basic data for impact assessment
- Population for economic data collection is fleet register
- Hugh variation in activity level among vessels
- Consequences for the value of resulting estimates for the two aims
- Long lasting debate about inactive and less active fishermen
- Inactive vessels, solved
- Less active vessels... Still to be solved??

LEI WAGENINGEN UR

Basic Principles

- Threshold is not used as filter, but for reporting (and data collection if possible)
- Reporting will continue for low activity and normal activity vessels
- Low active ne Small scale
- All MS are already free to stratify in whatever way that seems reasonable to them in addition to EU legislation

LEI WAGENINGEN UR

TOR

1. Identify differences in activity levels for fleet segments covering all regions
2. Develop consistent methodology to distinguish between:
    1. - "Commercial" and "non-commercial" fishermen (revenue)
    2. Normally active and less active fishermen (effort/revenue)
3. Test the effects of application of these two approaches to the fleet segments
4. Investigate possible implementation procedures (esp. in cases where no/little auxiliary information is available)
5. Develop advice on the issues concerned with the application of different thresholds and ways forward.

LEI WAGENINGEN UR

Process (1)

- Homework: analysis of case studies
- Monday –Wednesday: presentation of case studies (14, DK, EL, FR, FI, GE, GR, IR, IT, ML, NL, PO, UK, SL)
    - Distribution of activity levels
    - Relationship among activity level indicators and between activity levels and cost items
    - Identification of logical threshold levels
    - Analyses of the consequences of stratification for: group size, CV of estimations and Average costs of active vessels

LEI WAGENINGEN UR

Process (2)

- Wednesday - Friday
    - Subgroup discussion on:
        - Theoretical issues for applicability of thresholds
        - Practical issues for applicability of thresholds
- Presentation of results to plenary
- Discussion on conclusions and steps forward.

LEI WAGENINGEN UR

Conclusions (1)

- The population of vessels in the EU vessel register covers all commercial fishing vessels.
- Considerable differences can be seen between different vessels in terms of economic importance, social importance and behavior to management changes, resulting from differences in local context.
- In order to take into account these differences in the data collection a distinction between low active vessel and high active vessels could be useful.
- Distinction should be made between thresholds for data collection and for reporting (reporting threshold)
- MS are free to apply sub-stratification in their data collection program. A sub-stratification based on activity level may help to increase the quality of the estimates and/or the cost effectiveness of the data collection program.

LEI WAGENINGEN UR

Conclusions (2)

- The application of a reporting threshold will lead to more transparency of the importance (economic and social) of low active and high active vessels in specific cases.
- The threshold should distinguish between vessels which are operated by "economic agents" and vessels which are not a relevant source of income and are not predominantly operated for profit maximisation.
- The distinction between low active vessels and high active vessels mainly applies to small scale fisheries. In large scale fisheries (>12 meters) a threshold may only identify vessels with abnormally low activity levels.

LEI WAGENINGEN UR

Conclusions (3)

- It should be evaluated at national level whether the implementation of a reporting threshold leads to better quality and representative estimates. In MS with high regional differences in standards of living, application of overall national thresholds for reporting might not be useful.
- There is not one solution to the most optimal application of thresholds to all Member States/fisheries, but the applicability of a threshold depends on the management context and the type of fishery.
- Using a set of fixed thresholds, based on economic indicators used to describe the income of the firm (e.g. FADN, average total revenue per vessel) may provide a pragmatic solution to come to a consistent set of thresholds.

LEI WAGENINGEN UR

Follow up

- A short-term contract should provide an analysis of potential indicators for the next PGEcon meeting including examples of the application, based on which PGEcon can decide on the indicator to be used. This discussion in PGEcon will be based on an application of the proposed indicator and resulting threshold to a selection of cases (using the excel sheets) as was done before the workshop on stratification.
- In case a reporting threshold is used, the rationale for using a threshold should be clearly described in the National program and in the description of the results.
- In order to facilitate the use of reporting thresholds JRC should facilitate the reporting of economic data for the two different groups.

LEI WAGENINGEN UR

For discussion

- Inventory of MS desire to the use of a reporting threshold
- Position of Commission with regards to implementation of thresholds
- Possibilities for a regional approach to implementation of a threshold
- Process to decide the basis of the threshold

LEI WAGENINGEN UR

Follow up

- Proposed planning
  - May 2015 PGECON:
    - Discuss results and next steps
  - July/nov 2015 STECF plenary
    - Presentation results
    - Discussion consequences AER
    - Discussion consequences JRC
  - Autumn 2015RCMs:
    - Discuss methodology in regions??
  - Discussion with commision on implementation

LEI WAGENINGEN UR

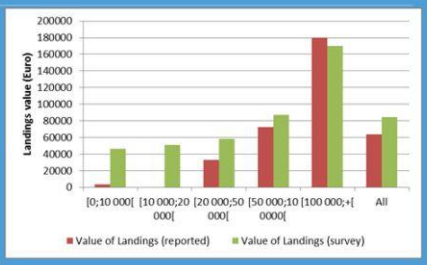
Thanks for your attention

Questions?

LEI WAGENINGEN UR

French paper (*Mathieu Merzéréaud, 2014*)

- Effects of implementing a filter threshold
- Bias in reported info
- Survey only partial
- Basing filter threshold on reported info will cause bias in outcomes
- Same holds in case the threshold is not used as filter but for reporting two groups.



LEI WAGENINGEN UR

Annex 5: Presentation Transversal variables workshop

WORKSHOP ON TRANSVERSAL VARIABLES (Linking economic and biological effort data (call) design)

Zabreb, Croatia. 19 – 23 January 2015

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OUTLINE

- A GLIMPSE ON THE WORKSHOP
  - The results in a nutshell
  - Lessons learned
  - The way forward
- WHERE ARE WE NOW
  - The conclusions from STECF
- FOLLOW UP
  - A second workshop
  - Possible SPIN-OFFS from the WK

The ToRs:

A) Comparison of **economic** and **biological effort data calls** (resolution/level of aggregation); experience from management plan evaluation;

B) Definition of **variables** (e.g. days at sea vs. fishing days) – what is really required/used/desirable?

C) Opportunities for **harmonization** (resolution, definition, codification); any **conclusions for DCMAP**?

D) Exploration of optimum timing for the data calls and specific data sets.

ATTENDANCE:

Participants: 18 MS, 25 experts, 3 JRC experts and DG MARE Focal Point

Regions coverage: North Sea; Baltic Sea; North Western waters; South Western waters and Mediterranean.

Expertises: Fisheries Economists; Biologists Effort Reg./Man plans; Modelers and Data managers.

DATA (CALLS) WE'VE WORKED WITH?

- **Fleet Economic Data Call** (Economic and effort and landings)
- **Effort Regimes Data Call** (Effort and landings)
- **Mediterranean and Black Sea Data Call** (Effort and landings)

HOW did we approach the ToRs?

1. **What's needed vs what do we have**: What dataset would be needed to support such analysis. Can we produce such Dataset from the data calls in place?

2. **Compare metrics across data calls**. Are the metrics the same in each data call, Landings and fishing effort do have the same meaning?

3. **Compare dimensions across data calls**. Are the dimensions what we expect them to be? And, are they based on the same definition And spatio/temporal resolution?

1. What's needed vs what do we have.

Fleet segment x Métier level:

Capacity variables	Transversal variables	Economic variables
Number of vessels	Effort days at sea, hours at sea, fishing days…	Energy costs
	Landings Weight and value	Other variable costs

Metier = gear*species assemblages*area

1. What's needed vs WHAT WE HAVE

Economic data call **Effort data call**

Capacity variables	Economic variables	Transversal variables	ECO Transversal variables	Effort Transversal variables	Effort Transversal variables
Number of vessels	Energy costs	Effort: days at sea, hours at sea, fishing days	Effort: fishing days	Effort: days at sea, fishing days…	Effort: days at sea, fishing days…
	Other variable costs	Landings	Landings weight and value	Landings weight	Landings weight

Fleet segment data **Gear data** **Fishery data**

1. What's needed vs what we have

CONCLUSION

Several ways to get effort variables at fleet segment*metier level:

1. **to make the link between economic data call (effort by fleet segment*gear) and effort data call (effort by gear and métier (DCF level 5 "target assemblage")) thanks to "gear" as a common field between both data calls.**
2. **Add the Fleet segment dimension to the effort data call or else to add the metier level to the economic data call;**
3. **One unique data call!!!**

2. Compare metrics across data calls.

CASE STUDY: North Sea cod management plan from Annex IIA. Year 2012.

Effort data call	Economic data call
3AN	27.3.a
3AS	27.3.a
4	27.4.a
	27.4.b
	27.4.c
7D	27.7.d

Compare **Landings** between data sets:

Case study: North Sea; COD management plan; Species= **COD**
TOTAL **Landings** - **All Gears**

	MS1	MS2	**MS3**	MS4	**MS5**	MS6
Effort	908.3	2,493.0	972.2	11,804.9	1,717.0	1,022.0
Economic	774.7	2,462.4	1,313.9	12,173.3	1,530.6	953.3
Ratio	1.17	1.01	**0.74**	0.97	**1.12**	1.07

Compare **Landings** between data sets:

OTTER OTB, OTT, PTB

	MS1	MS2	MS3	MS4	MS5	MS6
Effort	58.3	755.5	654.1	9,879.3	320.0	669.1
Economic	50.9	733.6	847.7	10,267.5	211.9	675.3
Ratio	1.14	1.03	**0.77**	0.96	**1.51**	0.99

DEM_SEINE SDN, SPR, SSC, SB

	MS1	MS2	MS3	MS4	MS5	MS6
Effort	21.5	1,443.6	36.9	1,335.6	609.5	70.8
Economic	24.0	1,455.4	27.4	1,335.3	619.0	71.3
Ratio	0.89	0.99	**1.35**	1.00	**0.98**	0.99

Compare landings across data calls.

CONCLUSION

Incoherencies/Inconsistencies on the allocation of landings to a specific gear between data calls and between MS.

Compare landings across data calls.

WHY?

- DCF criteria of allocating to the main/first gear of the day/fishing trip? Some MS.
- Fleet segment criteria (dominance criteria) wrongly applied to gear data. Other MS.
- Logbook estimates allow a tolerance margin, if these estimates are used to reply to a data call the totals may be different to when final landings totals are used.

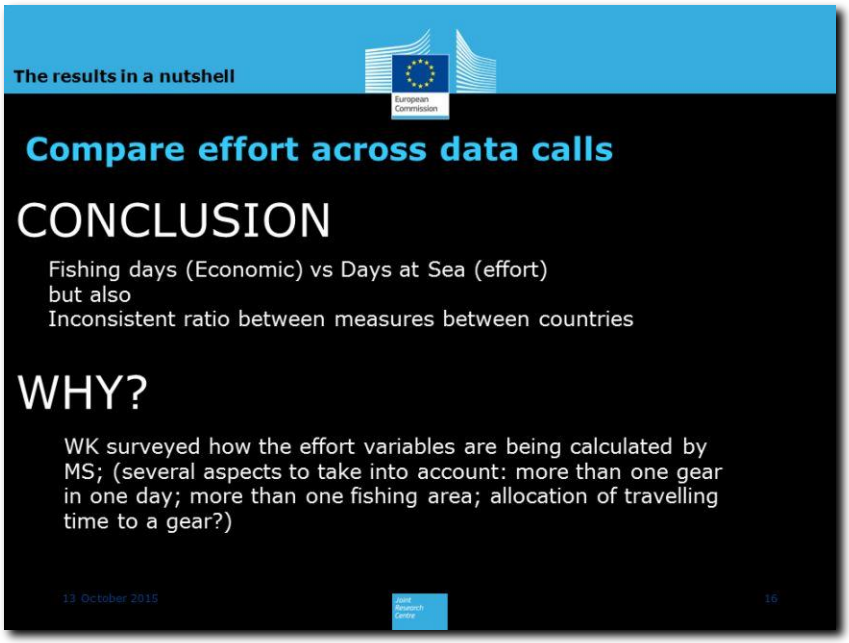
Compare effort across data calls

~ constant

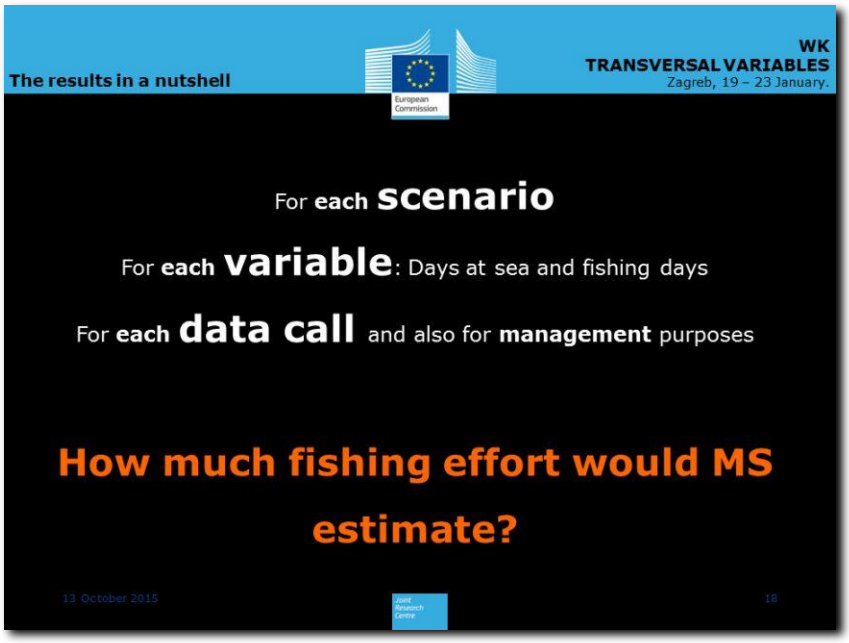
Year	Effort Kw sea days(million)	Economic Kw fishing days (million)	Ratio
2008	142.14	113.97	1.25
2009	144.57	114.15	1.27
2010	140.43	108.68	1.29
2011	127.67	97.22	1.31
2012	125.10	93.53	1.34

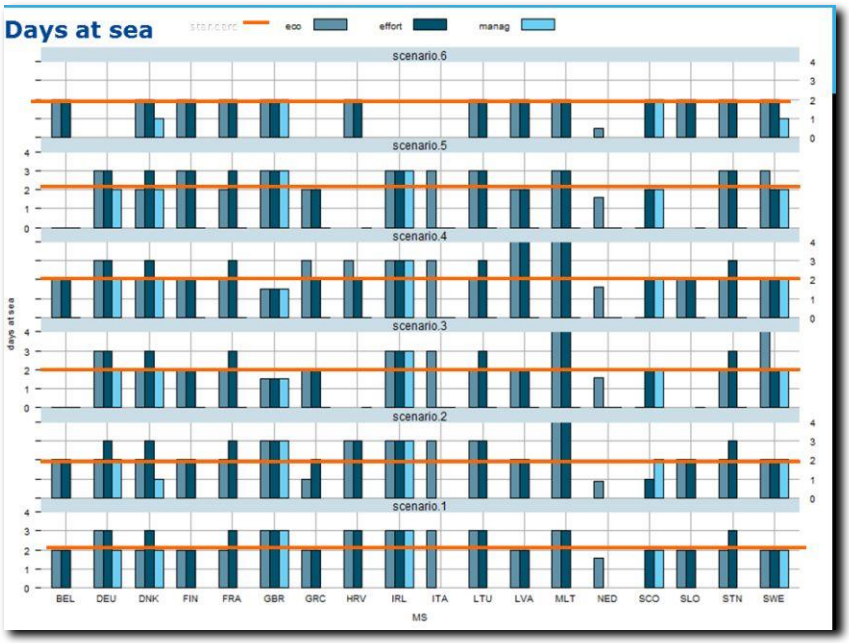
2012 data

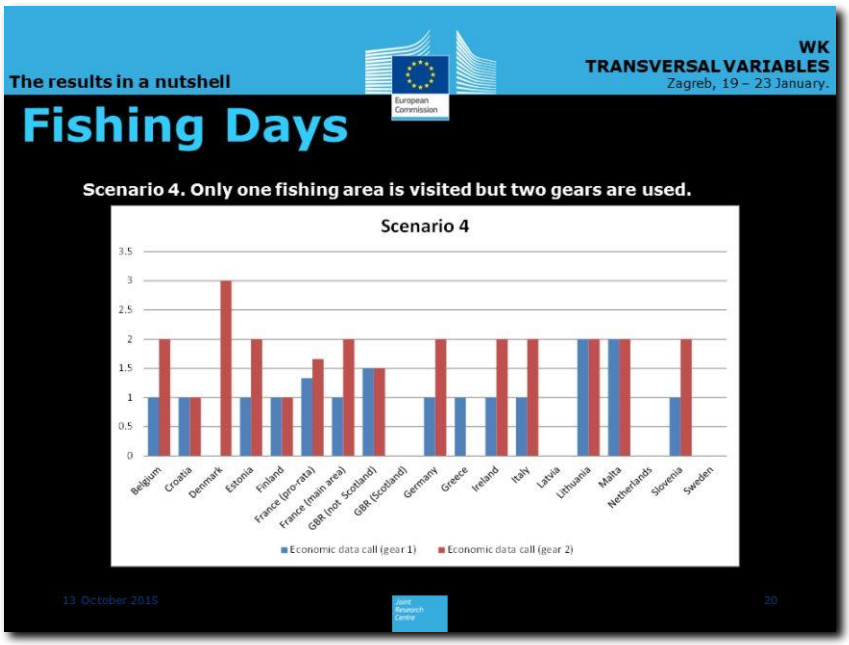
Country	Effort Kw sea days (million)	Economic Kw fishing days (million)	Ratio
MS1	8.59	5.82	1.48
MS2	11.07	9.12	1.21
MS3	26.08	18.64	1.40
MS4	47.17	39.00	1.21
MS5	0.61	0.11	5.48
MS6	41.19	31.00	1.33
MS7	NA	0.48	NA
MS8	7.42	9.80	0.78

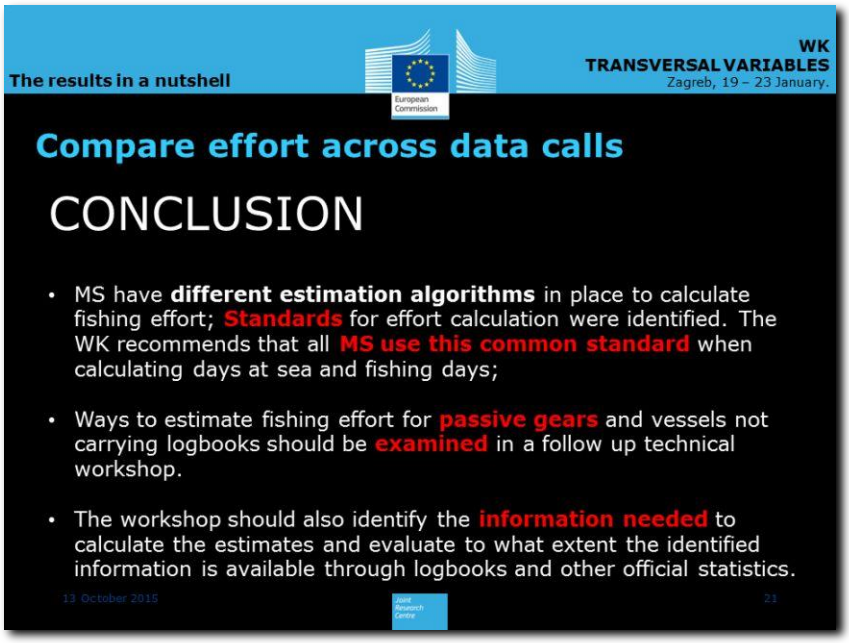

The results in a nutshell
Compare effort across data calls
CONCLUSION
Fishing days (Economic) vs Days at Sea (effort)
but also
Inconsistent ratio between measures between countries
WHY?
WK surveyed how the effort variables are being calculated by MS; (several aspects to take into account: more than one gear in one day; more than one fishing area; allocation of travelling time to a gear?)
13 October 2015
16


The results in a nutshell
WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.
Fishing Trip Scenarios
Scenario 1. Only one gear is used and fishing only occurs in one area.
Scenario 2. Only one gear is used and fishing only occurs in one area. However, the return to port occurs on the same day as the departure from port.
(...)
Scenario 6. A fishing trip takes place on two different calendar days to perform fishing operations using a passive gear which is left in the water between fishing trips.
13 October 2015
17


The results in a nutshell
WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.
For each scenario
For each variable: Days at sea and fishing days
For each data call and also for management purposes
How much fishing effort would MS estimate?
13 October 2015
18


Days at sea
eco
effort
manag
scenario.6
scenario.5
scenario.4
scenario.3
scenario.2
scenario.1
days at sea
BEL DEU DNK FIN FRA GBR GRC HRV IRL ITA LTU LVA MLT NED SCO SLO STN SWE
MS


The results in a nutshell
WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.
European Commission
Fishing Days
Scenario 4. Only one fishing area is visited but two gears are used.
Scenario 4
Belgium
Croatia
Denmark
Estonia
Finland
France (pro-rata)
France (main area)
GBR (not Scotland)
GBR (Scotland)
Germany
Greece
Ireland
Italy
Latvia
Lithuania
Malta
Netherlands
Slovenia
Sweden
Economic data call (gear 1)
Economic data call (gear 2)
13 October 2015
20


The results in a nutshell
WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.
European Commission
Compare effort across data calls
CONCLUSION
MS have different estimation algorithms in place to calculate fishing effort; Standards for effort calculation were identified. The WK recommends that all MS use this common standard when calculating days at sea and fishing days;
Ways to estimate fishing effort for passive gears and vessels not carrying logbooks should be examined in a follow up technical workshop.
The workshop should also identify the information needed to calculate the estimates and evaluate to what extent the identified information is available through logbooks and other official statistics.
13 October 2015
21

3. Compare dimensions across data calls

- How do the **codes** in each data call **relate one to another**.
- Possible to have **common encoding lists** to three data calls;
- Same **acronyms**?
- **Disaggregation** levels.

	Economic	Effort	Proposal	Caveats
Country	ISO 3	JRC/MS with more than one	**Master Data Register (ISO3)**	FRA, PRT and UK data by region. Still needed?
Gear	DCF	JRC/management plans	**Master Data Register (the same as DCF)**	MDR dropped some gears used in DCF.
Vessel Length Classes	DCF	Management plans?	**DCF length classes (?)**	15 meters cutoff point Really needed?
Fishing areas	FAO/ICES	JRC	**FAO/ICES**	EEZ id in CECAF areas
Mesh size range	-	JRC	**Adapt to technical measures classes**	Check the feasibility of the man plans
Species	FAO 3alfa	Sub-group FAO 3alfa	**FAO 3alfa**	Stocks definition?
Fishery	-	Open to MS interpretation	**DCF Metiers**	...

The results in a nutshell

WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.

Compare dimensions across data call

CONCLUSION

- There is **room for harmonisation across data calls**. Unique encoding tables should be adopted across data calls. This would easy MS workload, the data calls management and foster data interoperability.
- The **caveats** should be **thoroughly analysed** to identify a **way forward** without compromising the data call and the time series;

e.g Enlarge the scope of the effort data call? so to include all fishing vessel and species from MS (use the same approach as Mediterranean and Black Sea). Or at least ensure the same approach by all MS.

CONCLUSION

The ToRs:

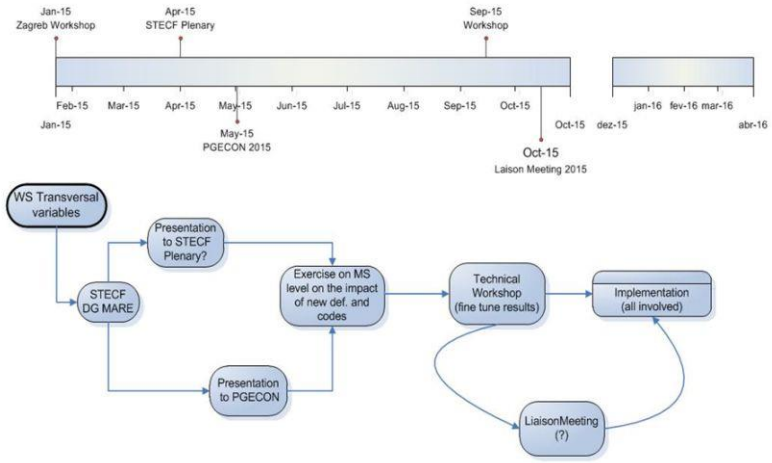
A) Comparison of **economic** and **biological effort data calls** . √

B) Definition of **variables** (e.g. days at sea vs. fishing days) – what is really required/used/desirable? √

C) Opportunities for **harmonization** (resolution, definition, codification); any **conclusions for DCMAP**? √

D) Exploration of optimum timing for the data calls and specific data sets. Already dealt by STECF EWG1417.

Roadmap for the Implementation of DCF variable standards: Definitions, Calculation Methods and Codes

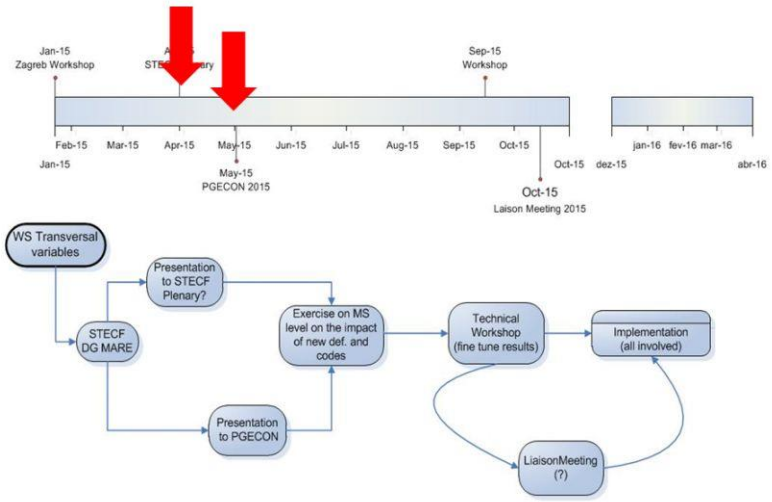


LESSONS LEARNED

- Several inconsistencies across MS approaches. The effort as it's being calculated has a questionable level of comparability.
- Clear need for further work to streamline the data calls; DGMARE/STECF data calls.
- Clear gap on the coordination/guidance of the MS' data provision.
- Need for DCF standards: methods, codes, acronyms, publicly available at DCF website.

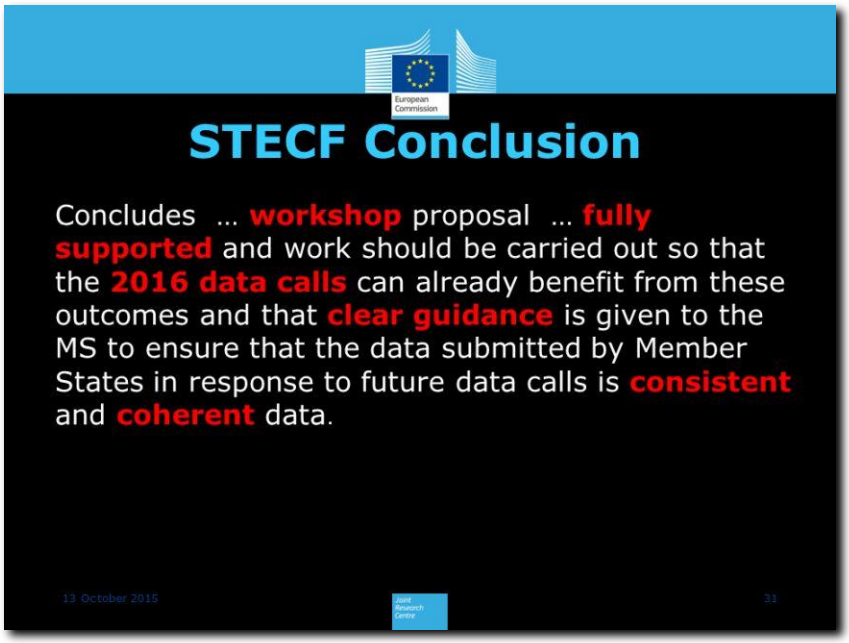
WHERE ARE WE NOW?

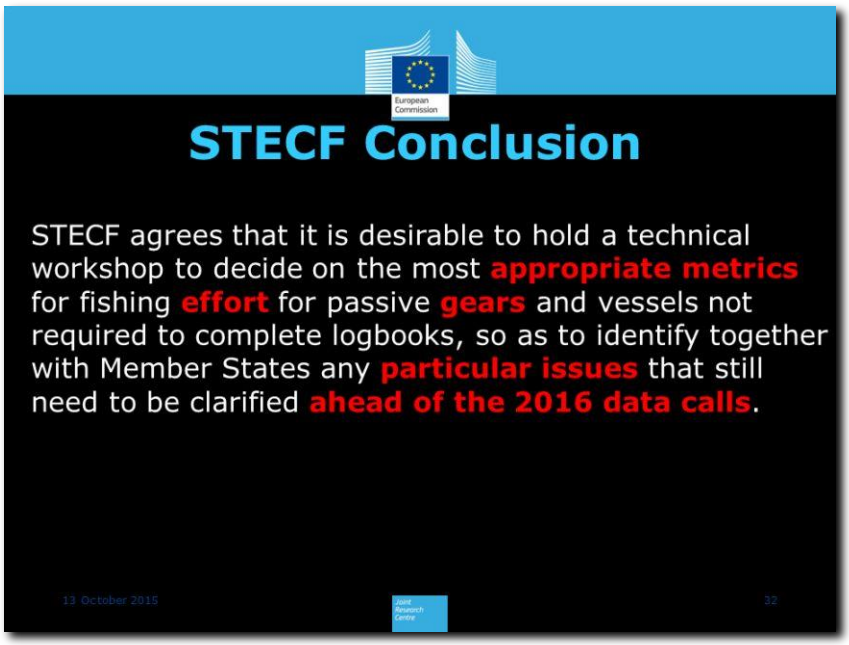
Roadmap for the Implementation of DCF variable standards: Definitions, Calculation Methods and Codes

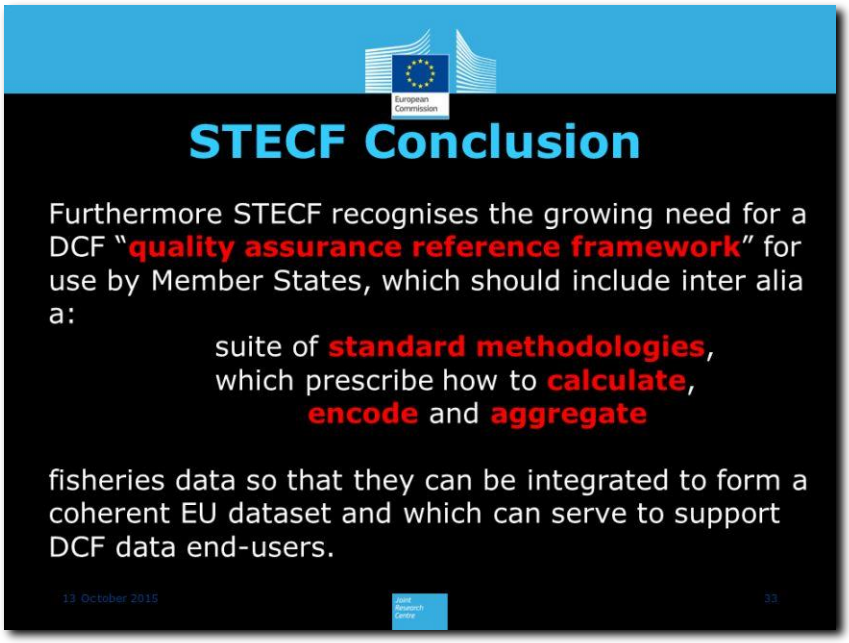


Request to the STECF

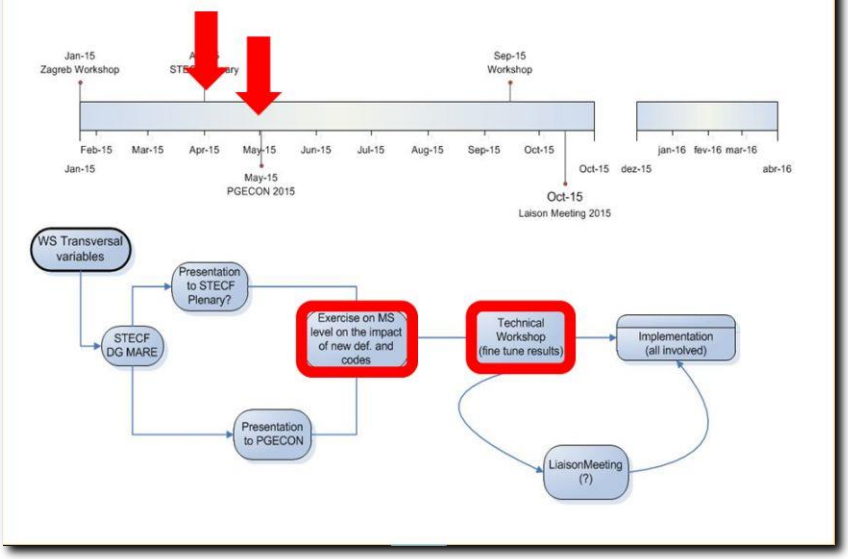
Review the report of the DCF workshop, **evaluate** the findings and make any appropriate **comments and recommendations** i.e. in relation to the formulation of **future data calls** issued by the Commission in support to STECF and possible implications for maintenance and further **developments** of the associated **databases**.


STECF Conclusion
Concludes … workshop proposal … fully supported and work should be carried out so that the 2016 data calls can already benefit from these outcomes and that clear guidance is given to the MS to ensure that the data submitted by Member States in response to future data calls is consistent and coherent data.
13 October 2015
31


STECF Conclusion
STECF agrees that it is desirable to hold a technical workshop to decide on the most appropriate metrics for fishing effort for passive gears and vessels not required to complete logbooks, so as to identify together with Member States any particular issues that still need to be clarified ahead of the 2016 data calls.
13 October 2015
32


STECF Conclusion
Furthermore STECF recognises the growing need for a DCF "quality assurance reference framework" for use by Member States, which should include inter alia a:
suite of standard methodologies, which prescribe how to calculate, encode and aggregate
fisheries data so that they can be integrated to form a coherent EU dataset and which can serve to support DCF data end-users.
13 October 2015
33

Roadmap for the Implementation of DCF variable standards: Definitions, Calculation Methods and Codes



WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.

Follow up

Two main milestones to be planned:

1. Some **preparatory work** would be paramount to ensure good results from the Workshop. How can this be addressed?

2. Prepare Workshoop: ToR's? Called by whom? ...

WK
TRANSVERSAL VARIABLES
Zagreb, 19 – 23 January.

Follow up

A Second workshop
Goals:

1. Fine-tune results from Zagreb (effort estimation, codes and disag. levels) ;
2. Foster coherence for the 2016 data calls;
3. Measure effort for passive gears. What data available; how to measure?

Follow up

A Second workshop – A proposal

When: 21 to 25 September @JRC ISPRA

Attendance: the broader range of skills possible. Economists, Biologists, data managers.(experienced experts)

Spin-offs from WK?

- High flutuation on the gear composition across fleet segments across years;

- Is the fleet segment criteria still verifiable?

- Supra-region allocation. Do MS have comparables approaches?

- Data on gear level. Different criteria?

Spin-offs from WK?

Methodological issues:

Calibration of the criteria to allocate vessels to a supra-region;
Clusters and monitoring the application of dominance criteria (is the stability of the fleet segments across years being ensured?)

PGECON – Role on this. Annual Planning?

Annex 6: Presentation on AR exercise

AR EXERCISE
(derive fleet economics table from call data) – experience and challenges at JRC

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AR EXERCISE
(derive fleet economics table from call data)

- What exercise?
- Why this exercise?
- How was implemented?
- Which Results?
- … A way forward
- Inputs from MS

What exercise?

Annual Report EXERCISE

Purpose:

Derive the AR Standard Tables III_B_1, III_B_2 and III_B_3 from the data submitted to the 2015 Fleet Economic Data Call.

AR Standard Tables: 2015 templates and guidelines.

Why this exercise

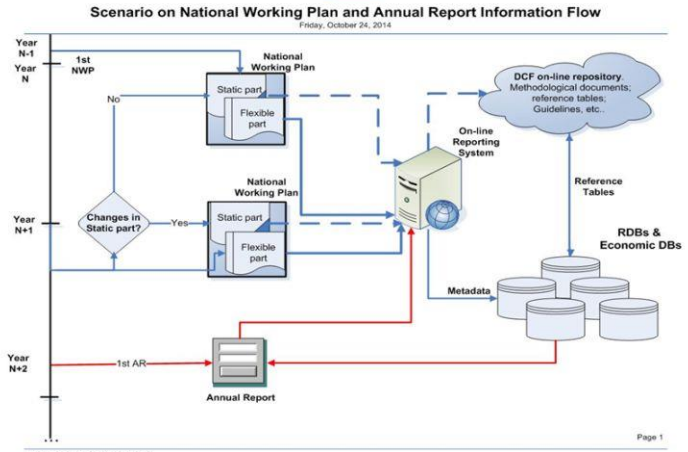
STECF EWG 14-17 was requested amongst others to:

Help developing a template for **National Work plans for data collection** in view of a future Commission Decision.

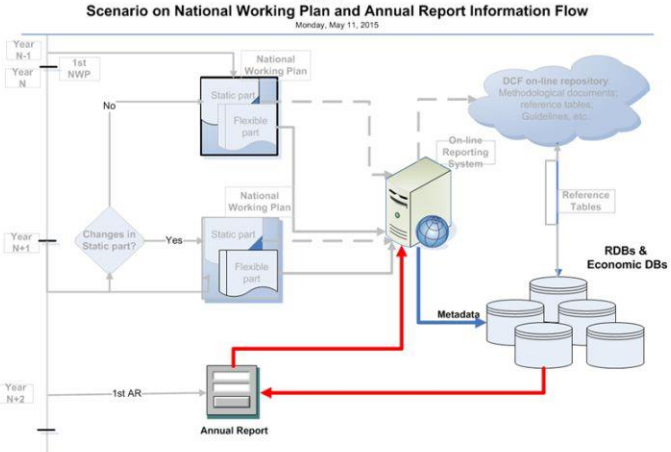
...

The focus of the exercise should be on **simplification**.

Additionally:
The use of existing (and future) databases for fisheries information and intended/conducted sampling is a strong new element suggested for compilation of National Work Plans and Annual Reports. ...



STECF EWG 1417



STECF EWG 1417

Why this exercise?

Based on this change of paradigm the EWG 1417 has considered that as feasibility exercise the JRC database for the Fleet Economic data could be used as first approach to test how effectively AR standard tables could be derived from these data.

(1): STECF PLEN-15-01

Why this exercise?

Conclusion of the STECF

STECF endorses the proposal of EWG 14-17 to test the feasibility of using the Fleet Economics Data Call for filling Annual Report tables and suggests that this test be implemented in the next Fleet economic Data call to be launched in January 2015. Taking into account that the participation of MS is proposed to be voluntary, STECF considers that the necessary information for MS to decide if they participate in this test or not should be given in the official letter sent to DCF national correspondents when announcing the data call.

(1): STECF PLEN-15-01

How was implemented

Fleet Economic Data Call

Purpose: to support scientific advice in EU fisheries.

Data use in STECF (1):

- Evaluation of Management plans;
- Balance between capacity and fishing opportunities;
- Ad-hoc contracts;
- Landing Obligations;
- STECF plenary Meeting reports;
- **Annual economic Report.**

(1): STECF PLEN-15-01

How was implemented

Fleet Economic Data Call

The 2015 Data Call:

4 additional variables were requested:

Capacity Template - Frame Population and Survey Name in the, Economic variables at FS level - Response Rate and Data Source

The submission was set as NON-Mandatory.

(1): STECF PLEN-15-01

What results?

Summary:

- Tables were made available to MS on the data collection website:

  http://datacollection.jrc.ec.europa.eu/ar-tables

- Every MS got the tables ready for download, even if they haven't participated in the exercise. Thus allowing all MS to have an idea on the output they would get in case the additional data had been submitted.

What results?

Summary:

- 14 MS have submitted enought data to prepare the AR Standard tables;
- Tables III_B_2 and III_B_1: Information provided is enought => for MS adherering the exercise the tables were fully reproduced.
- Table III_B_1: Some variables are missing =>Tables not fully reproducible.

Missing information:

Planned sample no.	Planned sample rate	Type of data collection scheme	Achieved Sample no.	Achieved Sample rate	Achieved Sample no. / Planned sampled no.

... A way forward

Do MS find this process useful and that it represents an added value for the collation of their AR?

Is the COMMISSION willing to keep this process in place?

What's STECF advise on this regard (EWG1510 ToR)?

If so,
let's identify
how to **fullfill**
the **information** that is
lacking by now

... A way forward

Rethink the metadata collected trought the template capacity !

The templates:

1. Capacity Tot – Summary of total fleet

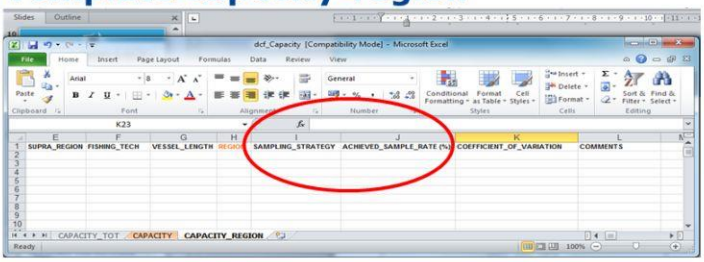
2. Capacity – Description of the Fishing Fleet population:
by Supra Region, Fleet segment

As on the 1st January of the Ref. Year – **Target Population**
Population units which can be actually accessed - **Frame population** -

3. Capacity Region - Fishing Fleet population split by Region (?).

... A way forward

Template capacity-region



Template Capacity

Template Capacity – add fields for next year's data call:.

FIELDS IN THE TEMPLATE	ST III_B_1
ACRONYM	totves
VALUE	Target population no.
UNIT	-
YEAR	Reference year
SUPRA_REGION	Supra region
FISHING_TECH	Fishing Technique
VESSEL_LENGTH	Length class
CLUSTER_NAME	-
COMMENTS	Comments
FRAME_POPULATION	Frame population no.
SURVEY_NAME	National name of the survey
SAMPLING_STRATEGY	Type of data collection scheme
ACHIEVED_SAMPLE_RATE	Achieved Sample rate
ACHIEVED_SAMPLED_N	Achieved Sample no.
-	Achieved Sample no. / Planned sampled no.
-	Planned sample no.
-	Planned sample rate

What benefits with this change?

1. ST III_B_1 . Would be fully reproducible

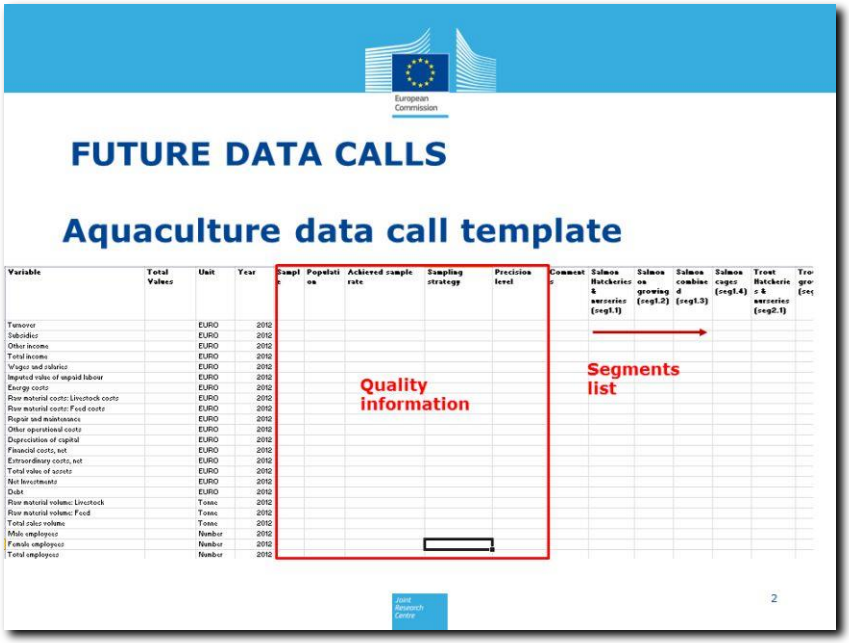
2. One step ahead on the good practice on reporting the results of a survey research. Given would be possible to make the metadata available and therefore allow the end-user to best interpret results of analysis. (Sampling intensities/coverage rates, etc.)

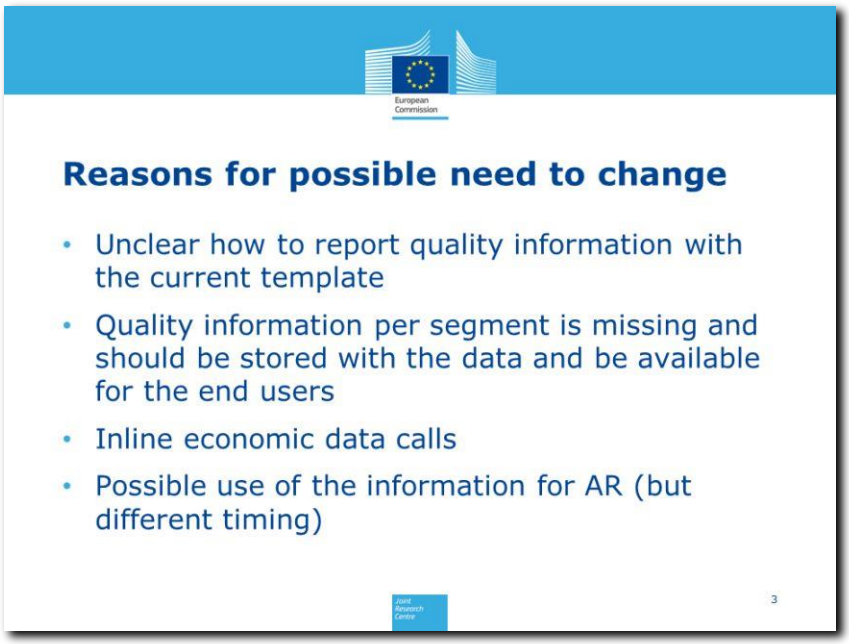
...

References:

- Scientific, Technical and Economic Committee for Fisheries (STECF) – 48th Plenary Meeting Report (PLEN-15-01). 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXXX, 75 pp.

Annex 7: Presentation on aquaculture data call





Annex 8: Presentation on quality checks

Quality checks

Arina Motova

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Current situation

3 data calls

Fishing, aquaculture, fish processing

3 level of data quality checks in JRC:

1. **Syntactic checks (uploading process, DV tool)**
2. **R exploratory data analysis**
3. **Tableau (currently available for fleet)**

4. STECF EWG quality checks during preparation of the report.

Syntactic checks, DV tool

The Excel file is available on the uploading page

- **Codification check**
- **Duplication check**
- **Inter Column check**
- **Inter Worksheets**

R exploratory data analysis

R script, importing data from the data base, pre-processing and analysing data

Main structural parts:

- **Coverage** (Fleet segments/Clusters/Indicators)
- **Template/variable group** (comparison between national totals and sum per segment / basic plots per variable (fishing technique) / averages (per vessel or average prices) /variations (between consequent years) / tables with significant variations (totals and averages per vessel)

Tableau

Processed data is taken from the DB directly, refreshed automatically each morning (when the uploading facility is opened).

Main structural parts:

- **Uploading overview**
- **Timeliness**
- **Coverage** (national/fs level)
- **Quality** (clustering/zeros/trends/cross checks (DB checks for abnormalities in the data))
- **Data** (national totals/fleet level)
- **Charts** (structure/economics/landings)

STECF EWG checks

R checks + Tableau + NC analysis

Exchange between experts…

Preliminary results after EWG

BGR	to be considered the exclusion, at least from the trend analysis
CYP	to be considered the exclusion, at least from the trend analysis
DEU	ok, incomplete MS fleet coverage due to confidentiality
DNK	Minor issues
ESP	Waiting for re-upload
EST	Minor issues
GRC	To be excluded from trend, minor additional issues
HRV	Minor issues
IRL	ok, minor issues – re-upload expected (missing data to be imputed)
ITA	Minor issues
MLT	Waiting for re-upload
POL	Minor issues
PRT	Waiting for re-upload

Common issues

Missing variables for historical data sets

Missing value or weight per specie/segment

Effort variables

Zeros

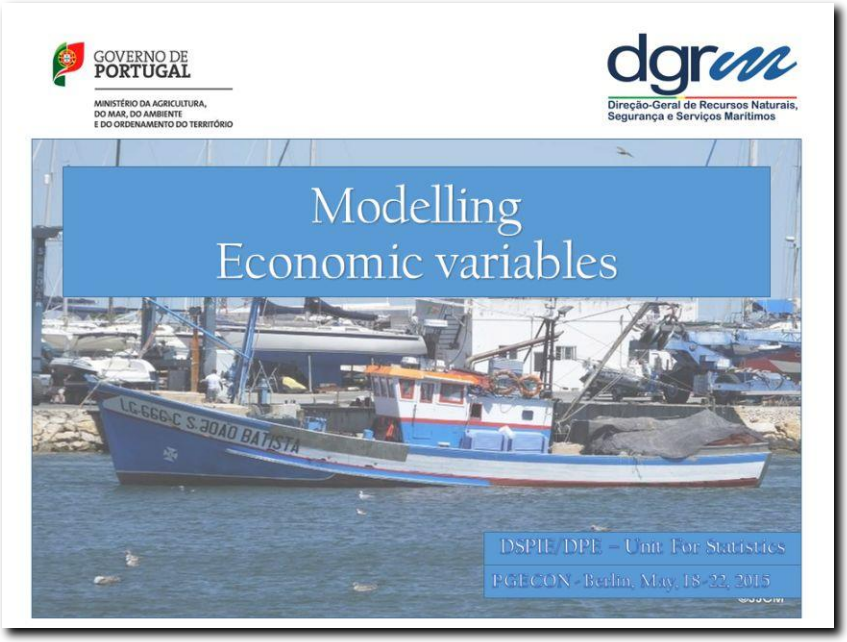
Clustering

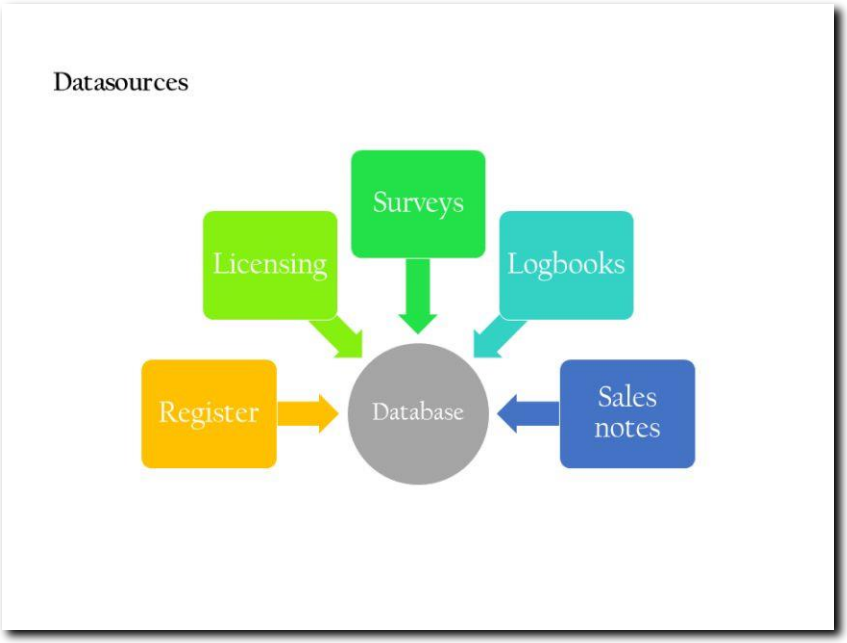
Clustering

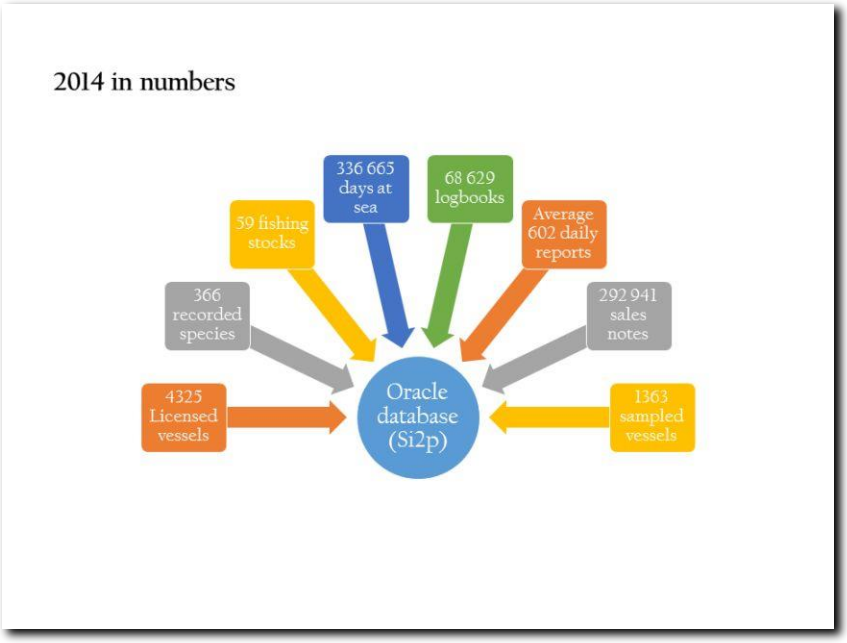
- **For sampling purposes**
- - should be defined in NP and AR

- **For reporting purposes**
  - summing up for reporting
  - is there a need to cluster always? Increases variability of the time series…

Annex 9: Presentation on modelling of economic variables







Old methodology

Based on sampling survey	Administrative data used only for quality control	Variable estimation by fleet segment
High impact of missing values	Bias between estimations and reality	Low flexibility on data use
Non response rate as a source of bias	Waste of valuable information	Individual characteristics of the vessel ignored

New methodology

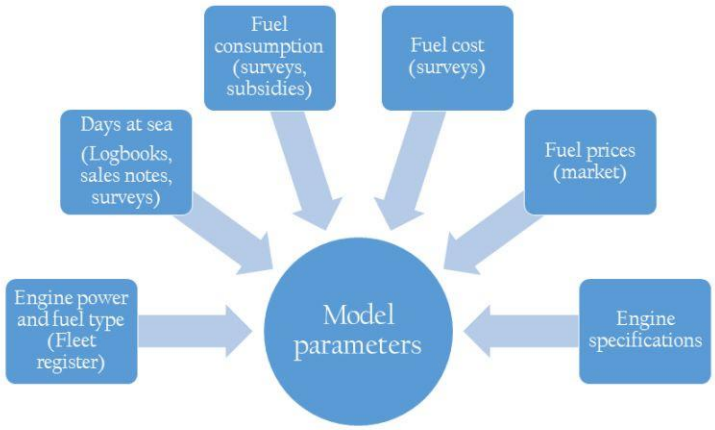
Based on modelling	Combined use of administrative and sample data	Variable estimation by vessel
Detection of outliers and errors	Use of all the available information	High level of flexibility
Mitigated impact of non response	Improved consistency	

1 - Fuel consumption (litres)

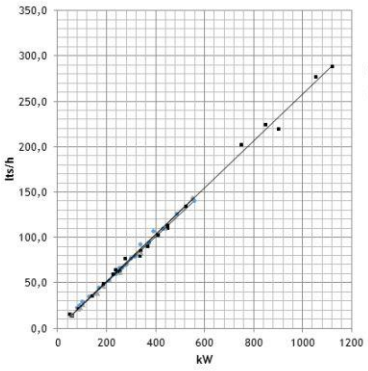
$$F_c = K_c \cdot K_h \cdot D_s \cdot P$$

F_c - Fuel consumption
K_c - Engine consumption [litres/kw/hour]
K_h - Number of hours operating at maximum power
D_S - Days at sea
P – Power engine [Kw]

Sources for the estimation of the parameters



K_c – Engine consumption



Cons. Cat = 0,258 x kW

Cons. J.Deere = 0,257 x kW

Cons. Scania = 0,251 x kW

J. Deere
Caterpillar
Scania
Linear (J. Deere)
Linear (Caterpillar)
Linear (Scania)

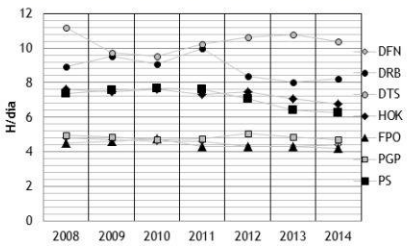
Diesel – 0.26
Gasoline – 0.5

K_h – Number of hours at maximum power

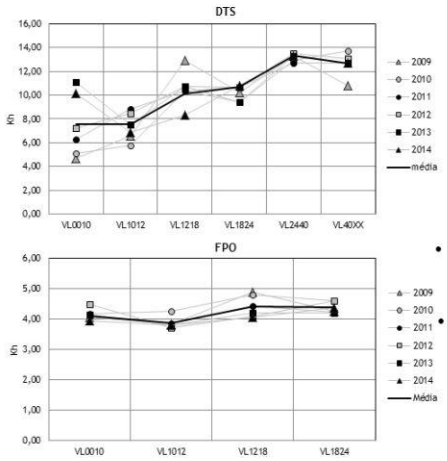
$$K_h = F_c/K_c/D_s/P$$

	2008	2009	2010	2011	2012	2013	2014
DFN	4,79	4,73	4,60	4,62	4,32	4,32	4,43
DRB	8,94	9,53	9,06	9,96	8,35	8,02	8,20
DTS	11,17	9,74	9,54	10,25	10,62	10,80	10,36
HOK	7,60	7,47	7,62	7,32	7,47	7,06	6,77
FPO	4,51	4,61	4,77	4,31	4,30	4,32	4,19
PS	7,36	7,58	7,69	7,60	7,08	6,41	6,28
PGP	4,95	4,86	4,72	4,77	5,05	4,85	4,69

- K_h doesn't change significantely between years
- K_h is dependant on the gear type



K_h – Number of hours at maximum power



- K_h is dependant on the vessel lenght
- For some cases, great variability over the years suggests possible problems with the source of information.

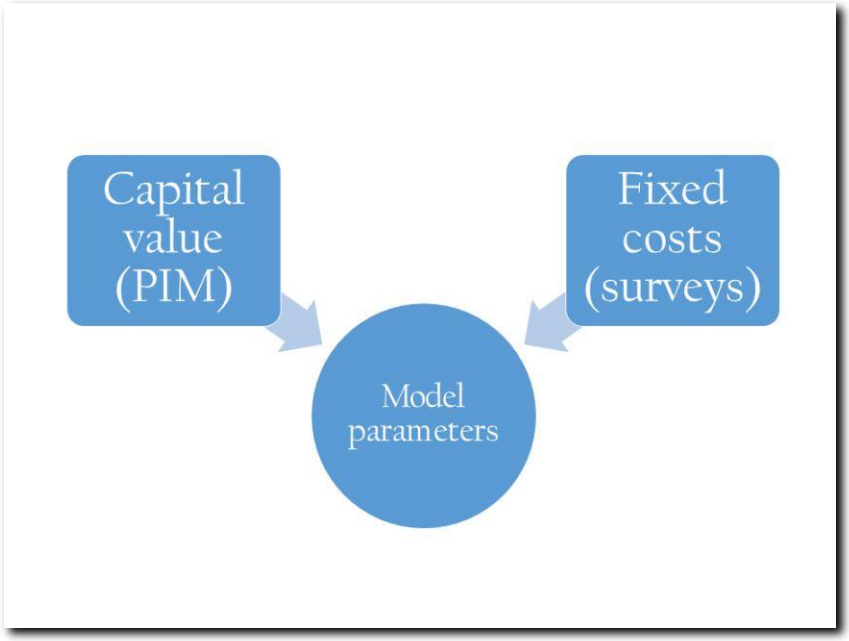
Fuel consumption and costs estimation

VESSEL	YEAR	GEAR	VESSEL_LENGHT	P	Ds	Kh	Kc	Fc=Kc.Kh.Ds.P	Price eur/l	Costs
B	2008	DFN	VL1218	110	145	4,58	0,26	18993	0,816	15498,5
I	2008	DRB	VL1012	66,93	112	11,4	0,26	22219	0,816	18130,39
H	2008	DTS	VL1218	110	157	10,08	0,26	45261	0,816	36933,15
J	2008	FPO	VL1218	97,09	93	4,42	0,26	10377	0,816	8467,266
G	2008	FPO	VL1218	165	73	4,42	0,26	13842	0,816	11295,17
D	2008	HOK	VL1012	51,48	66	5,6	0,26	4947	0,816	4036,77
L	2008	HOK	VL1012	77,96	137	5,6	0,26	15551	0,816	12689,48
C	2008	HOK	VL1218	102,97	176	4,98	0,26	23465	0,816	19147,68
E	2008	PS	VL1218	73,55	98	4,96	0,26	9295	0,816	7584,971
A	2008	PS	VL1218	143,42	64	4,96	0,26	11837	0,816	9659,06
F	2008	PS	VL1218	172,84	77	4,96	0,26	17163	0,816	14004,9
K	2008	PS	VL1824	268,45	115	7,48	0,26	60039	0,816	48992,13

2 – Fixed costs

Premises

- Fixed costs are not dependent on the vessel activity but are dependent on the vessel itself
- Capital value is easily available for all the vessels and is comparable between them.
- Average estimations of fleet segment doesn't take into account the specifics of the vessel, specially if the variability of sample data is high

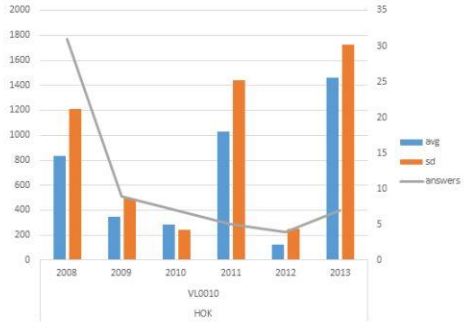


2 – Fixed costs -

- High variability in the same year

- High variability on the time series

Need to clean the data

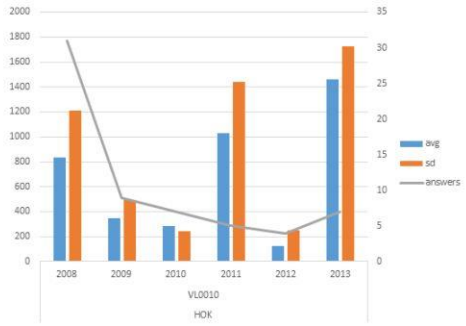


Fixed costs – survey data analysis

- High variability in the same year

- High variability on the time series

Need to clean the data



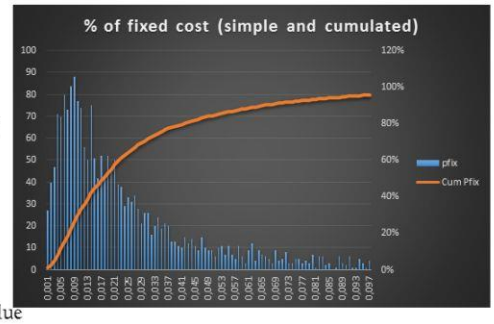
Fixed costs – survey data vs capital value

- Nice distibution of percentages

- More than 90% of the answers are less than 6% of the total capital value

- Potencial for outlier detection

- Potencial use of capital value as an auxiliary variable



Fixed costs – outlier detection and thresholds

- Cut-off value (threshold)

- Average estimation of percentage by fleet segment

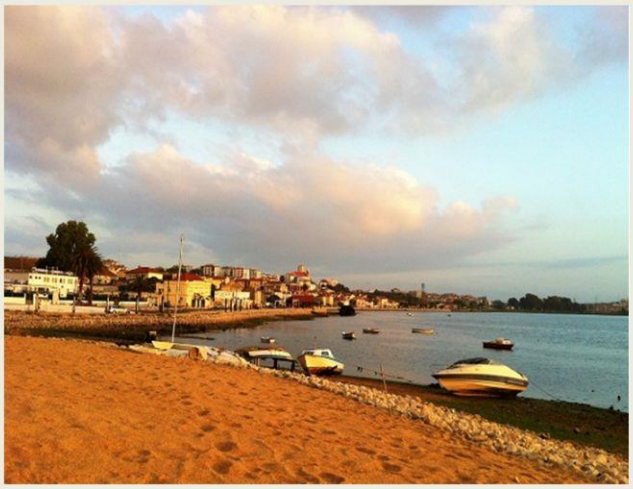
No threshold	2008	2009	2010	2011	2012	2013	Average
DFN	2,5%	1,7%	2,8%	2,2%	1,6%	1,5%	2,1%
VL0010	2,5%	1,2%	3,3%	0,9%	0,5%	2,4%	2,2%
VL1012	3,3%	2,1%	1,7%	1,8%	2,8%	0,8%	2,1%
VL1218	2,4%	1,6%	3,1%	2,4%	1,9%	1,4%	2,1%
VL1824	1,5%	2,3%	2,0%	3,9%	1,3%	1,2%	2,0%

Threshold	2008	2009	2010	2011	2012	2013	Average
DFN	2,1%	1,3%	1,8%	1,7%	1,6%	1,2%	1,6%
VL0010	2,0%	1,2%	1,3%	0,9%	0,5%	0,8%	1,6%
VL1012	2,2%	1,6%	1,7%	1,8%	2,8%	0,8%	1,8%
VL1218	2,4%	1,2%	2,0%	1,8%	1,9%	1,4%	1,7%
VL1824	1,5%	1,5%	2,0%	2,7%	1,3%	1,2%	1,6%

Fixed costs – estimation procedure

Fishing vessel	Year	Capital Value	%capital	Estimated Fixed cost
A	2 008	16 512	2,0%	330
B	2 008	19 092	2,0%	382
A	2 011	27 365	1,7%	465
D	2 008	31 648	1,5%	485
E	2 008	16 684	1,5%	256
F	2 013	103 767	1,2%	1 245
G	2 009	29 830	1,3%	388

Annex 10: Presentation on statistical issues



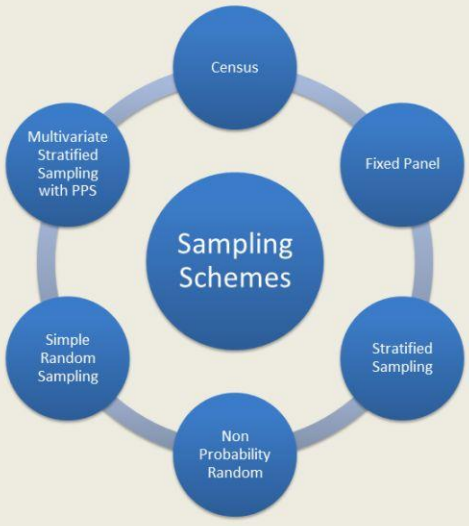
Lisbon – 26 – 30 September 2011

WORKSHOP on Statistical Issues

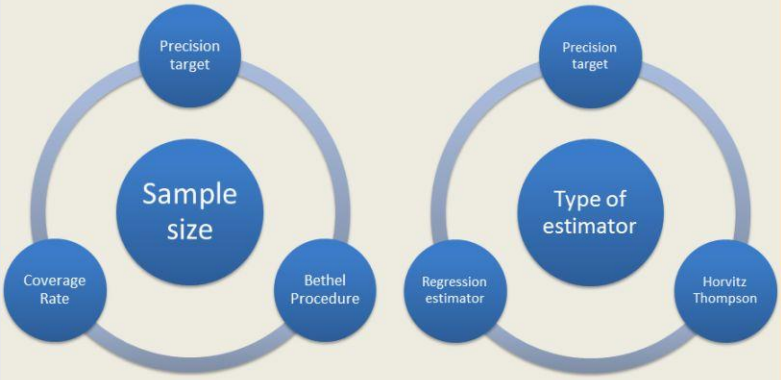
TOR

1. Present national methods to define sample size, accuracy indicators and estimate results.
2. Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data.
3. Evaluate methods, advantages and disadvantages of collecting data using non-probability sampling surveys. Consider the results of the proposed Study to Standardize Quality Reporting and Propose Methods in the case of Non-Probability Sample Survey.
4. Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-response.
5. Prepare Guidelines to MS for best practices in statistical analysis and on how to define and select the appropriate sample sizes to be proposed in National Programmes.

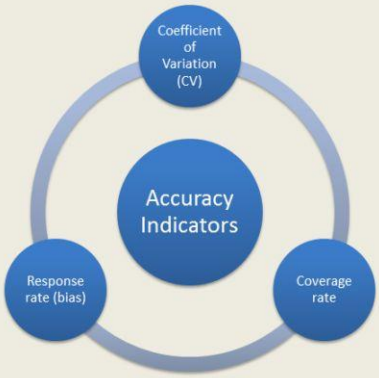
TOR 1 – Presentation on National Methods



TOR 1 – Presentation on National Methods



TOR 1 – Presentation on National Methods

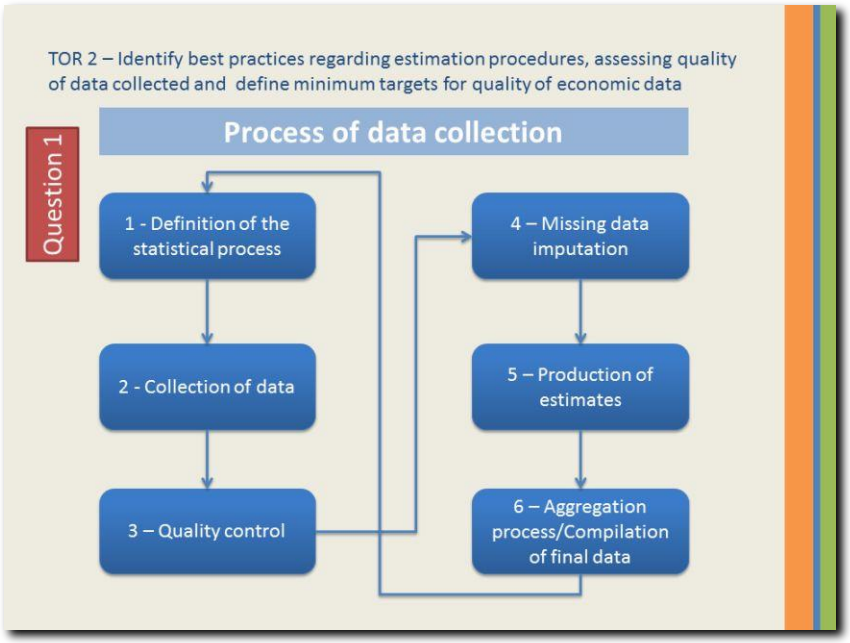


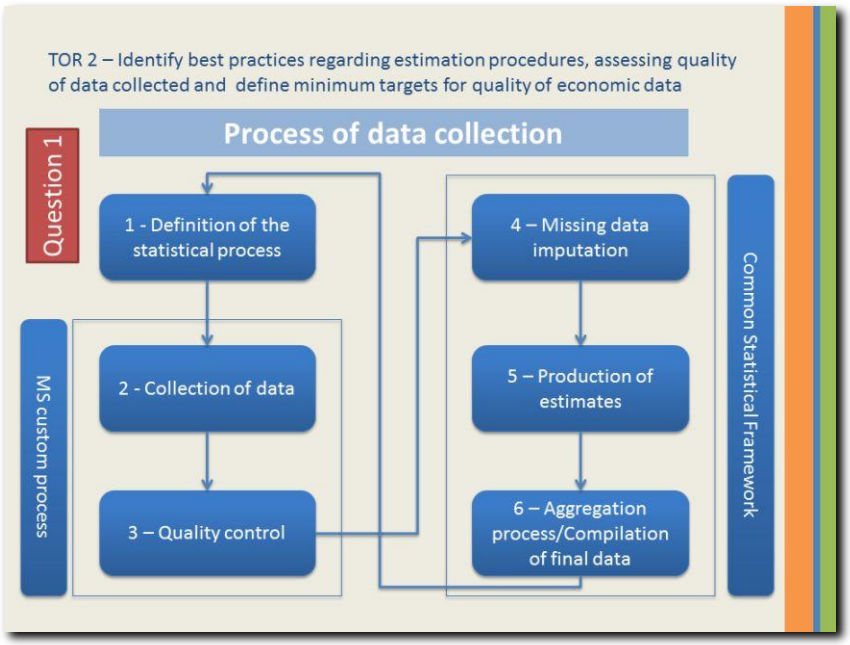
TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

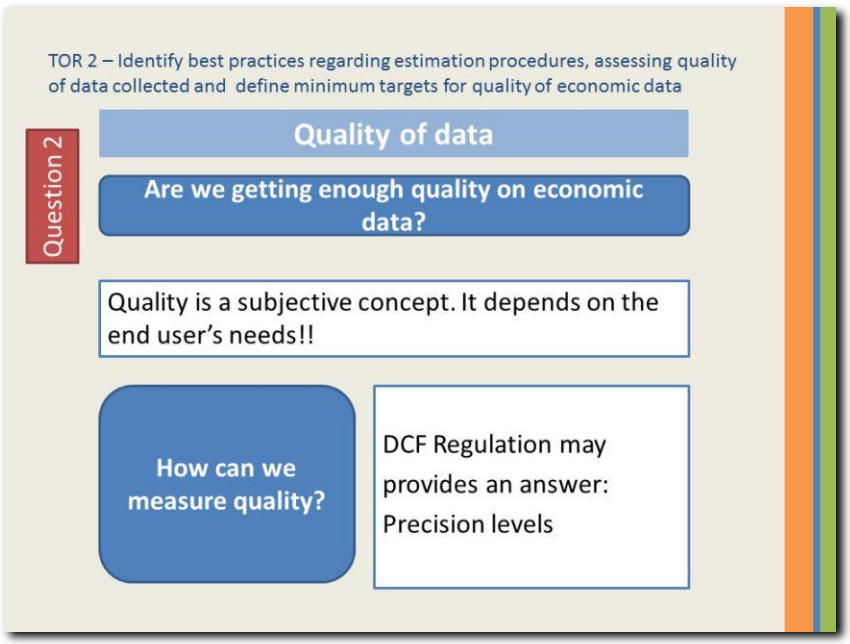
Questions that need answer:

1 – Is data comparable between MS?

2 – Is the quality of data sufficient for the DCF purposes?


TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data
Question 1
Process of data collection
1 - Definition of the statistical process
2 - Collection of data
3 – Quality control
4 – Missing data imputation
5 – Production of estimates
6 – Aggregation process/Compilation of final data


TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data
Question 1
Process of data collection
1 - Definition of the statistical process
2 - Collection of data
3 – Quality control
4 – Missing data imputation
5 – Production of estimates
6 – Aggregation process/Compilation of final data
MS custom process
Common Statistical Framework


TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data
Question 2
Quality of data
Are we getting enough quality on economic data?
Quality is a subjective concept. It depends on the end user's needs!!
How can we measure quality?
DCF Regulation may provides an answer: Precision levels

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

Question 2

DCF regulation 2010/93/UE

PRECISION LEVELS AND SAMPLING INTENSITIES

- *Where quantitative targets can be defined, they may be specified either directly by sample sizes or sampling rates, or by the definition of the levels of precision and of confidence to be achieved.*
- *Where reference is made to a sample size or to a sampling rate in a population defined in statistical terms, the sampling strategies shall be at least as efficient as Simple Random Sampling. Such sampling strategies shall be described within the corresponding National Programs.*
- *Where reference is made to precision/confidence level the following distinction shall apply:*
  - *(a) Level 1: level making it possible to estimate a parameter either with a precision of plus or minus 40 % for a 95 % confidence level or a coefficient of variation (CV) of 20 % used as an approximation;*
  - *(b) Level 2: level making it possible to estimate a parameter either with a precision of plus or minus 25 % for a 95 % confidence level or a coefficient of variation (CV) of 12,5 % used as an approximation;*
  - *(c) Level 3: level making it possible to estimate a parameter either with a precision of plus or minus 5 % for a 95 % confidence level or a coefficient of variation (CV) of 2,5 % used as an approximation.*

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

Question 2

So what is the big question we should ask?

What is the impact of quality in economic data?

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

Simple example: **In a certain stratum a total income of 20 000 000 eur was estimated.**

What does this means?

The importance of this value (and it's interpretation) depends on the precision associated with it

With a precision level 3 (maximum CV of 2.5%) it means that the maximum error will be error = 980 000 eur
Which means…
We have a 95% chance that the real total income is between 19 million eur and 21 million eur

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

With a precision level 2 (maximum CV of 12.5%) it means that the maximum error will be error = 4 900 000 eur
Which means…
We have a 95% chance that the real total income is between 15 million eur and 25 million eur

With a precision level 1 (maximum CV of 20%) it means that the maximum error will be error = 7 840 000 eur
Which means…
We have a 95% chance that the real total income is between 12 million eur and 28 million eur

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

Summary

Total Income estimated: 20 000 000 eur

Precision level 3: Real value is somewhere between 19 and 21 million eur

Precision level 2: Real value is somewhere between 15 and 25 million eur

Precision level 1: Real value is somewhere between 12 and 28 million eur

Conclusion: Quality of data is important and cannot be ignored

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

How to improve quality?

Quality has a cost

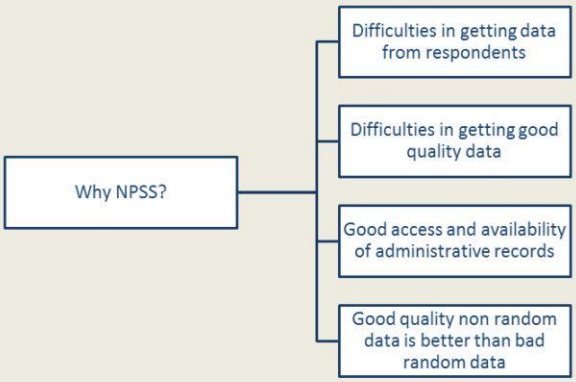
Is there a balance between quality and cost?

How much quality do we need?

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

TOR 2 – Identify best practices regarding estimation procedures, assessing quality of data collected and define minimum targets for quality of economic data

TOR 3 – Evaluate methods, advantages and disadvantages of collecting data using non-probability sampling surveys



TOR 3 – Evaluate methods, advantages and disadvantages of collecting data using non-probability sampling surveys

	PSS	NPSS
Advantages	• Less prone to bias • Allows estimation of magnitude of sampling error, from which you can determine the statistical significance of changes/differences in indicators	• More flexible • Less costly • Less time-consuming • Judgmentally representative samples may be preferred when small numbers of elements are to be chosen • Higher response rates
Disadvantages	• Requires that you have a list of all sample elements • More time-consuming • More costly • No advantage when small numbers of elements are to be chosen • Lower response rates	• Greater risk of bias • May not be possible to generalize to program target population • Subjectivity can make it difficult to measure changes in indicators over time • No way to assess precision or reliability of data

TOR 3 – Evaluate methods, advantages and disadvantages of collecting data using non-probability sampling surveys

Main Conclusions

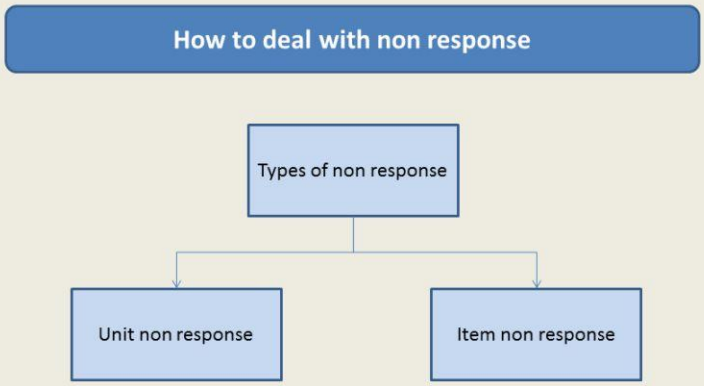
- Under certain circumstances a NPSS can be provide results with enough quality for the DCF Regulation
- MS are using NPSS because they couldn't achieve good quality with PSS, namely low response rate and bad quality responses
- NPSS can only describe the units for which data is collected. It cannot be used to make estimations to the total population. Some extra analysis of the non respondents are recommended in order to assess bias.
- Additional information on units (like national registers, tax data,...) is needed in order to implement quality control
- MS should explain, in their NP, why they use NPSS

TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.

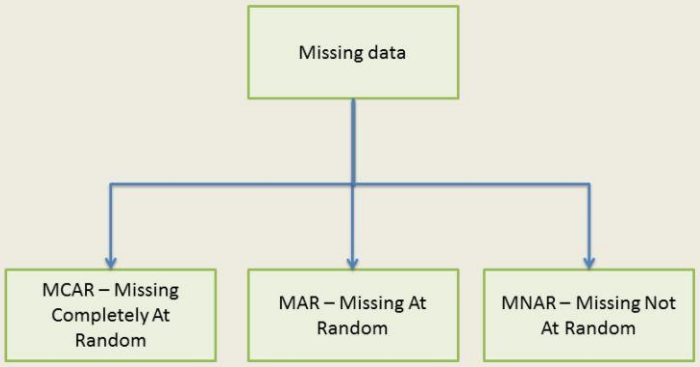
Why do we have high non response rates?

- Problems with frame population definition
- Problems with construction of the questionnaire
- The way the questionnaire is sent (eg. Post mail, interviewers,...)
- Outdated contact database
- Requested information too difficult to be made available
- Personal interest/concerns of respondents (e.g. afraid of IRS)
- Disinterest of respondents
- Exhaustion of respondents (many competing surveys

TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.



TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.



TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.

MCAR - Missing Completely At Random

- Missing cases are no different than non-missing cases, in terms of the analysis being performed
- Missing data is not dependent of any other variable, observed or not
- Thus, these cases can be thought of as randomly missing from the data and the only real penalty in failing to account for missing data is loss of power
- Problem is to conclude that missing data is MCAR

TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.

MAR – Missing At Random

- Missing data depends on known values and thus is described fully by variables observed in the data set
- Accounting for the values which "cause" the missing data will produce unbiased results in an analysis.

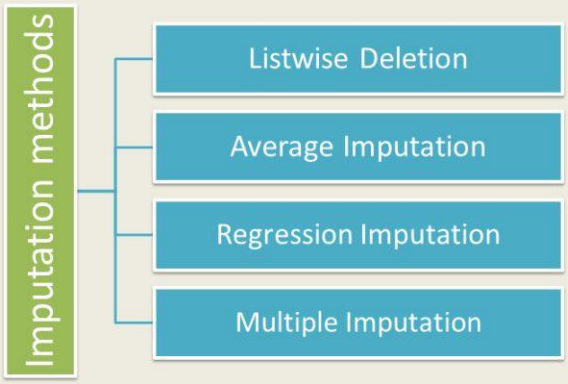
TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.

MNAR – Missing Not At Random

- Missing data depends on variables not observed in the data set
- This case will produce bias on the final estimates
- This can be changed to MAR if there are some additional information that can be used.

TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.

It is possible to overcome (to a certain limit) non response.
Keyword: Imputation



TOR 4 – Address Non-Response issues, including how Non Response can influence quality. Propose methods to deal with high level of non-responses.

TOR 5 – Prepare Guidelines to MS for best practices in statistical analysis and on how to define and select the appropriate sample sizes to be proposed in National Programmes.

- Clearly define the frame population
- Sample – Should we decide sample size based on precision targets?
- Low response rate – what are the reasons and how to minimize it
- Collaboration from the sector (eg. Producers organizations) might lead to better response rates
- Feedbacks to the sector about the results of the studies might also improve response rates
- Improvements on questionnaires can also improve response rates. Eg make questions simple to understand to the respondents
- Diversify the means of answer, by providing multiple ways for answering the questionnaire, like mail, internet, interviews and to use different techniques with different subgroups of the population

TOR 5 – Prepare Guidelines to MS for best practices in statistical analysis and on how to define and select the appropriate sample sizes to be proposed in National Programmes.

- NPSS are alternative methods when MS can't have good quality with PSS
- MS should use auxiliary data to improve estimates
- Use of multiple sources, include administrative data
- Models at least as efficient as regression models should be use to calculate estimates
- Quality of data is important but it can be a larger concept than the statistical quality
- MS should write some comments about qualitative aspects of their data quality in their AR
- Panel data with a partial rotation allows for time series analysis by the MS.
- Enforce the idea of confidentiality of responses