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Report of the Steering Committee for the Regional Database FishFrame (SC-RDB)

8-9 January 2014

ICES Headquarters, Denmark

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Executive summary

The Steering Committee for the Regional Database FishFrame (RDB-SC) met 8-9 January 2014 at ICES HQ, Copenhagen Denmark. It was the fifth meeting of the committee. Participants were representatives from the RCM Baltic, RCM North Sea and Eastern Arctic, RCM North Atlantic, ICES as well as observers from the RDB-SC for Large Pelagic Fish (LPF) and Spain. The RDB-SC is responsible for strategic planning, technical governance, operational issues and estimates of costs in the overall governance of the regional database (RDB). The RDB-SC interacts with the Regional Coordination Meetings (RCMs) and Liaison Meeting (LM) on other tasks such as development needs and content governance.

The RCMs worked during their meetings on the basis of the RDB-FishFrame and put forward recommendations via the LM to the RDB-SC. The RDB-SC has also received recommendations from the ICES Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS). The recommendations covered issues such as completeness of data, harmonization of input data and suggestions for revisions of exchange format aiming to improve the data and potential for data analysis. RDB-SC considers important to avoid frequent changes of the exchange format. Preferably should the changes be done at one go. Changes may also be coordinated with other Steering Committees for RDBs as they may utilize the same format. The RDBs thereby suggest the establishment of a supra regional RDB format and tools governance group to steer the revision process in a transparent way. This group should primarily work by correspondence (e.g. WebEx). RDB-SC has so far received recommendations on revisions needed to support a regional approach to data collection and estimation as well as statistically sound sampling for sea-sampling programmes. Less work has been done for shore sampling programs. RDB-SC thereby recommended a workshop "Developing the RDB data format for design based sampling and estimation for on shore sampling". The Workshop on Developing the RDB data format for design based sampling and estimation for on shore sampling (WKRDB) should document a range of onshore sampling protocols, determine the extent to which these sampling protocols can be recorded by the exchange format, suggest modifications and combine these modifications with findings from previous meetings. WKRDB will take place in Aberdeen 27-31 October 2014.

RDB-SC did further revisions of the data policy document with the aim to make access rights and routes clear for data providers, data users and the host. The idea is to split into "pre-approved uses" and "other uses". Pre-approved uses mean that the Member States (MS) give their approval beforehand to a limited number of expert groups, preferably during the RCMs each year. Expert group for which the usage of data could be pre-approved should be the regional coordination groups (detailed data) and ICES expert groups involved in the production of scientific advice to the European Commission and that make use of DCF data (aggregated data). For other use of data available in the RCB, Member States should be contacted for approval before RDB-FishFrame (RDB-FF) data is used. RDB-SC suggests that the Member States should have one month to replay and that failure to reply is considered as a denial.

The RDB-SC is aware that DevStat currently is on a contract with the European Commission exploring different scenarios for future storage and transmission solutions for the Data Compilation Framework (DCF) data. The regional databases are one of the scenarios. RDB-SC finds it important to stress that the RDB concept is much wider than "simple" storage and transmission of data. RDB-SC has thereby compiled a paper on

vision and potentials for the RDB to describe its central role for the future data collection and analysis.

1 Introduction

The Steering Committee for the Regional Database FishFrame (RDB-SC) is responsible for strategic planning, technical governance, operational issues and estimates of costs in the overall governance of the regional database (RDB) (Figure 1). RDB-SC interacts with the Regional Coordination Meetings (RCMs) and Liaison Meeting (LM) on other tasks such as development needs and content governance. The RDB-SC consists of representatives from the RCM Baltic, RCM North Sea and Eastern Arctic, RCM North Atlantic, ICES and the European Commission and meet 1-2 times each year. The meeting was held in Copenhagen 8-9 January 2014 and was the fifth meeting of RDB-SC. Terms of reference, agenda and list of participants are found in Annex 1, 2 and 3.

2 Background

Regional coordination of the data collection underpinning assessment of marine resources and fisheries are primary handled by the five Regional Coordination Meetings (RCMs). These take place every year to review past sampling and to lay down the rules for sampling coordination for the next year in the region. The aim of the meeting is to achieve adequate international sampling coverage, task sharing and cost efficiency.

The work of the RCMs has not been easy, partly because of the complexity of data collection, but also because no central source of data has been available to perform the analysis necessary for optimization of the sampling schemes and quality of the data collected, at a regional level. In every case it has been necessary to request data from each country in the region in order to carry out basic analyses, which are necessary for coordination. This process is error prone and also time consuming both for the national institutes and the actual meetings of the RCM. This is also reflected in several of the recommendations from the RCMs. This situation has led several RCMs to express a strong need for a Regional Database (RDB) as a data source and tool for their work.

A RDB would also facilitate transmission of data to end-users from a national institute perspective, where work power can be saved, as well as from an end-user perspective,q where more transparency on the compilation and quality of the data could be achieved. Potential end-users that will benefit from a RDB are thereby all groups which want to make use of tabulations, analyses and graphic presentation of fishery information across countries within a region.

Following a recommendation from the Liaison Meeting in 2009 the European Commission organized the workshop "Regional scenarios and Roadmap on Regional Database" in 2010 (Anon., 2010). A strong need for a regional database (containing biological and transversal data but also VMS data) was expressed by participants from the Baltic and North Sea regions. For the North Atlantic region the opinions were divided. Participants from some Member States saw the possibility to improve the quality of data and data management through a RDB while other considered the present situation with national databases satisfactory and saw a risk with increased workload. The Workshop held in 2010 recommended the development of a roadmap on a regional level to be addressed by the different RCMs giving each region the ability to act on different scenario options. The RCMs (Baltic, North Atlantic and North Sea & Eastern Arctic) responded in their meetings during 2010.

All the three RCMs considered that a database with "disaggregated" (sampling data in detailed form and transversal data in a low aggregated form) data would fulfil most of the needs of the RCM. Such database would facilitate analyses on a regional scale and it gives Member States a tool to coordinate their programmes. Also, in order to be able to reply to data requests and transfer data routinely to end-users, it would be more cost efficient to use a RDB and it would provide better quality standards compared to the present situation. RCM North Atlantic recognized that not all Member States agree to share their data in such a RDB, but expressed that this should not hamper the establishment of a RDB for the North Atlantic region. In the Baltic region MS had already used a regional "disaggregated" database for several years. This database, FishFrame, was developed for this purpose. The experiences with FishFrame were positive and the RCM Baltic decided in 2009 to keep using FishFrame in future. During the RCM North Sea and Eastern Artic 2010 meeting, FishFrame was adopted as platform also in this region.

In 2010, the RCM Baltic and the RCM North Sea and Eastern Artic recommended an interim steering group to be set up with clear terms of references and mandates in order to start the implementation of a RDB including a Steering Committee (SC). The RCM North Atlantic proposed items to be discussed in such a SC. The 7th Liaison meeting endorsed this recommendation. As a consequence an interim steering group consisting of representatives from the three RCMs, ICES and the Commission was put together. This steering group had a meeting in February 2011 in order to elaborate on a governance model for the RDB but also to suggest road maps on how to proceed towards implementation of a RDB from a content point of view as well as from a technical point of view. The outcome of the interim steering group was adopted by the RCMs which also appointed participants to the RDB Steering Committee (RDB-SC). The first RDB-SC meeting was held in December 2011.

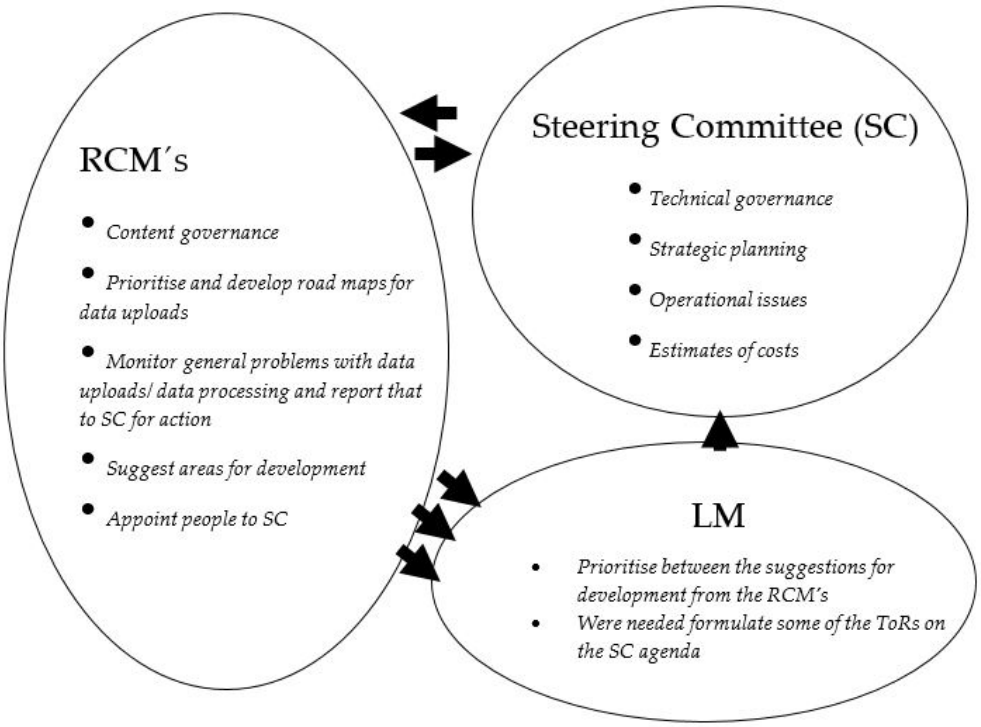

Figure 1. The RDB; tasks for and interactions between The Regional Coordination Meetings, the Liaison Meeting and the RDB Steering Committee.

3 Regional databases outside the ICES area

3.1 RCM Large Pelagics subgroup

Pierre Chavance presented the context of the newly created Large Pelagics RCM subgroup of the RCM Mediterranean and Black Sea. Europe is a major player among tuna fisheries with around 50 *métiers* fishing in Atlantic Ocean, Mediterranean Sea, Indian Ocean and Pacific Ocean using purse-seine, longline and trawlnet. These fisheries are managed by different tuna Regional Fisheries Management Organizations (RFMO) respectively: i)The International Commission for the Conservation of Atlantic Tunas (ICCAT), ii) the Indian Ocean Tuna Commission (IOTC), iii) the Western and Central Pacific Fisheries Commission (WCPFC), and iv) and the Inter-American Tropical Tuna Commission (IATTC). Large Pelagics subgroup recognizes, during its last meeting in 2013, the need for developing their own Regional Database (LP-RDB) with the same general needs of regional coordination as other RCMs.

Different technical solutions have already been tested by IRD (France) regarding i) data exchange format (SDMX, FishFrame) and export tools (RDB format Export tool), ii) storage (Data Exchange Format Database), and iii) analysis and dissemination (MDST web based query interface and R tools like COST). All these open-source tools are based on the Standard Data Exchange Format described in Jansen *et al.*, (2009) which is now used as the RDB standard format.

The LP-RDB perspective is to build in 2014 a prototype that will demonstrate, first, how a national dataset may be exported to the Standard Data Exchange Format, stored into a RDB and analysed by generic tools (R scripts) to make standard reports, compute indicators and conduct specific statistical analysis. Second, the prototype will demonstrate that multiple national datasets may be gathered in a RDB and allow similar analysis but at the regional level. It is expected that this approach will help Large Pelagics subgroup identifying a roadmap for implementing its LP-RDB.

It is underlined that Standard Exchange Format is the preferential option to support LP-RDB development. This requires a good coordination t between the different RDBs in particular for Data Exchange Format, code-list administration and also, for promoting common tools development and use.

3.2 RCM Mediterranean and Black Sea (RCM MED&BS)

Christian Dintheer summarized the state of play of the MED&BS-RDB from the P. Carpentieri's presentation done during the RCM MED&BS 2013.

The 1st Steering Committee Meeting for the Med&BS-RDB was held in Rome, hosted in the General Fisheries Commission for the Mediterranean (GFCM) headquarters, 29-30 November 2012. The Steering Committee (SC) met in response of a recommendation by the 2012 RCM for the Mediterranean and Black Sea (Madrid, July 2012), in order to set up some principles for a Regional Database hosting the data collected under the Data Collection Framework (DCF). The meeting was attended by scientists from 6 Member States (Bulgaria, France, Greece, Italy, Romania, and Spain), by the chairs of MEDITS and MEDIAS surveys at sea, by the representatives of the GFCM, plus two external observers.

The SC discussed first the governance of the RDB, mainly joints and roles between the RCM and the RDB-SC of that region**.** It was also discussed a first proposal for the Med&BS-RDB data confidentiality and data ownership policy that all MS, uploading

their data, must follow. The document provided by the RDB-FF SC was taken as base for the discussion.

In a first step, the SC suggested that only transversal and biological data will be uploaded in the RDB, and that the Med&BS-RDB could be divided in two separate sections: i) common section and ii) private section . The first section could be accessible to all MS, whether the second will be accessible to the MS owner of the data. The first section will gather all information needed by the RCM to perform the ranking system, on the basis of quarterly data provided by MS, when the second will report more detailed data on *métier* variables (length data by *métier* level 6, GSA and quarter) and biological data separately in *métier* (length) and stock variables by stock (sex, maturity, weight, age).

The SC identified the GFCM as the best option to host and to maintain the MED&BS-RDB because GFCM is the body covering regional needs and it has wide experience in maintaining international databases. GFCM had answered positive to evaluate any formal proposal to host the database. Several types of costs related to maintenance (hardware, upgrades, etc.), support to users, management and further development of the database should be investigated and it will be necessary to elaborate the cost estimate in more detail and submit it to the evaluation of the EC and include it in the proposal to be sent to the GFCM. The choice of the development platform should be also performed in coherence with the infrastructure and established development tools that the GFCM is willing to put at disposal, keeping in mind that EC expressed its preference for open source tools.

The RCM Med&BS 2013 agreed on the decision that for the time being the MED&BS-RDB will include biological and transversal data. Next SC meeting should better investigate the format and which data should be incorporated. For the economic data, RCM agreed that they should be included in the Med&BS-RDB. Next SC meeting should evaluate which economic data should be incorporated. Regarding the surveys, as MEDIAS and MEDITS Working groups are developing their own database with specific formats, it was decided only to include a link of these databases under the RDB-Med&BS.

4 The Regional Database in the Regional Coordination Meetings 2013

Member States (MS) participating in the RCM Baltic, RCM NS&EA and RCM NA uploaded data in the RDB-FF as a response of a data call launched by the RCM chairs in April 2013. The data call covered landing, effort and sampling data for 2009-2012. Two MS were not able to upload data but provided data to the RCMs in the required format. Requests by the MS to the ICES secretariat during the uploading process were answered very fast, suggestions were helpful and MS appreciate the support they received.

The accessibility to data resulted in that the RCM meeting time could be used more effectively. It was relatively fast and easy to produce the common RCM outputs such as ranking of fishing activities in the region. The RCMs could instead focus on examine the completeness and quality of the regional data as well as ideas for future regional sampling designs. Access to data initiated creativity in the groups and there are several ideas in the reports on what future regional data collection programmes could look like. It became evident how important the regional database is for the RCM work to be effective. More information on how the RDB was used in the RCMs 2013 is found in the reports of RCM Baltic 2013 and RCM NS&EA 2013 as well as in the report from the Liaison Meeting 2013.

5 Recommendations to the RDB-SC from the Liaison Meeting 2013 and from ICES EGs

The liaison meeting (LM) compiles all the recommendations from the different regional coordination meetings, comments upon them and proposes points of action. Several recommendations from the 2013 RCMs were directed to the RDB-SC in order to improve the data and data analysis within the RCMs. These recommendations covered:

- completeness of data;
- harmonization of input data;
- suggestions for revisions of exchange format.

5.1 Recommendations from Liaison meeting 2013

The recommendations are shown below including action of the SC. It is however important to underline that there currently are no means to fund development of the RDB. The RDB-SC has compiled a proposal for a small-scale study to explore and solve some urgent development needs (Annex 6). The study proposal was put forward to the LM in 2012. The LM gave in 2012 and 2013 the proposal a high priority for funding. The possibilities for the SC to act on the recommendations are in many cases dependant on having the proposed small-scale project is funded.

2. Quality assurance - Managed repository for RDB upload successes and data status reports	
RCMs Baltic, NS&EA, and RCM NA Recommendation	It is recommended that a system for administering and recording upload successes by Member States and a facility to provide a clear reference for data users on how complete the data is, are set up. For this purpose, a repository should be implemented for giving data users direct access to: • Up to date status reports on the contents of the database. These reports need to be live and available for data users so that o data calls can be properly audited o DB content can be properly interpreted • Up to date guidance notes • Up to date reference lists
Justification	Knowing the status of the data are crucial to auditing purposes, for quality control and to determine how the data can be used. It also allows users, within reason, to account for missing data in their estimates or reports. Changes to guidance and reference lists can be communicated to data users with reference to the repository.
Follow-up actions needed	SC-RDB to review possible solutions or develop and incorporate an application to provide end-users with this functionality and a reference repository.
Responsible persons for follow-up actions	SC-RDB
Time frame (Deadline)	Next SC-RDB meeting.
LM comments	This recommendation is a merge of Baltic Rec 2, NSEA Rec 3, and NA Rec 5. LM endorses the recommendation.
RDB-SC comment/follow up/action:	RDB-SC agrees on this recommendation. Action: Compile list of parameters to be included in the status report; number of trips, number of measurements, number of ages, list of species uploaded, missing data, empty cells (Katja to provide initial list). Implement this prior to 2014 RCMs. RDB-SC considers the use of external reference lists as a concern for the RCMs as data user. Testing RDB data against external sources, e.g. EUROSTAT, will not be included at this stage.

6. Design Based Sampling	
RCMs NS&EA, and NA Recommendation	It is recommended that the Workshop on Practical Implementation of Statistical Sound Catch Sampling Programs (WKPICS)/ The Working Group on Commercial Catches (WGCATCH) indicate(s) which data fields and relationships are needed in the exchange format of the RDB to allow regional design based sampling. In addition it is recommended that means of linking effort measures more directly with landed species is needed. Currently the CL and CE can only be linked by métier.
Justification	The design and implementation of design based sampling requires appropriate fields and relationships to be available in the RDB. Specifically there is a need to link species information more directly with measures of effort. Currently the CL and CE can only be linked by *métier*.
Follow-up actions needed	Relevant ToRs for WKPICS/WGCATCH are set out. SC-RDB to ensure that the RDB developments allow design and estimation appropriate to design based sampling.
Responsible persons for follow-up actions	SC-RDB
Time frame (Deadline)	October 2013
LM comments	This recommendation is a merge of NSEA Rec 5 and NA Rec 11. LM endorses the recommendation.
RDB-SC comment/follow up/action:	See section 6.4.1 and Annex 4. The RDB-SC initiates a Workshop to develop the RDB data format for design based sampling and estimation. WKRDB will take place in Aberdeen, November 2014.

7. Regional database	
RCM Baltic 2013 Recommendation 4	RCM Baltic strongly recommends that funding is found to ensure further development and improvement of the RDB "FishFrame".
Justification	For the improvement and moving toward a regional data collection programmes a regional database is a fundamental tool for the RCMs. In addition when reporting to data calls and the Annual Reports a RDB is important. Furthermore, the demands from the users to a regional database is under constant change as the users discover new possibilities in the use of the data as they get more familiar with the use of the database and because the data collection, fish stock management and modelling environment changes and new data types and processing facilities become important.
Follow-up actions needed	DG MARE
Responsible persons for follow-up actions	DG MARE
Time frame (Deadline)	Funding should be made available as soon as possible
LM comments	The LM endorses the recommendation.
RDB-SC comment/follow up/action:	Over the last years, RDB has proven to be a powerful and crucial tool for several Regional Coordination Meetings. Funding is essential to develop RDBs as the central tool for regional sampling design and coordination as well as to provide a tool for auditing and reporting purposes. Without regional databases, statistically sound sampling design at a regional level will not be possible in an efficient manner, if not impossible at all.

8. Quality assurance - RDB additional fields and managing data gaps	
RCM NS & EA 2013 Recommendation 2	The RCM recommends that a policy on how missing data values for MS are accounted for in the database and this decision communicated to RDB users.
Justification	Proper consideration needs to be given to how to account for empty data values. Missing data could devalue summary information and if estimates are derived how they are derived could change over time. An example is provided in the RCM report where landing information for a MS does not have both value and weights for some of their records. If these data are uploaded then the sum of the landings would not equate to the sum of the value (€). This could also occur in relation to missing fishing effort.
Follow-up actions needed	SC-RDB to consider the affect of missing data values and to provide clear guidance on how MS should manage these data.
Responsible persons for follow-up actions	SC-RDB
Time frame (Deadline)	Next SC-RDB meeting
LM comments	The LM endorses the recommendation.
RDB-SC comment/follow up/action:	Missing data and empty cells are different issues, in the first case, data are available but not uploaded. Empty cells will not be filled at all. Missing data and empty cells can be reported in the new status reports, e.g. based on percentage coverage within CL and CE records. Need to explore and implement this prior to RCM and ask RCMs for feedback. In general, MS should not estimate e.g. value based on average value, just to fill the gaps. It is up to the data processor to take missing fields into account and decide on the procedure to estimate the missing values. Also, the exchange format should have a uniform code for missing data. To be considered in the revision of the exchange format

9. Quality assurance - RDB additional fields and managing data gaps	
RCM NS & EA 2013 Recommendation 4	RCM recommends an additional field in the core tables to identify the administration that has collected and or uploaded the data.
Justification	Currently the country of landings or flag country is the only reference to the source of the data. But with bilateral agreements and most MS now sampling foreign vessels within their sampling schemes it is not always clear which country collected the data. This is crucial to auditing purposes, for quality control and to limit the opportunities for replication of data. This field is also required to allow data to be raised according to national sampling schemes.
Follow-up actions needed	SC-RDB to insert a field to identify the source or origins of the uploaded data.
Responsible persons for follow-up actions	SC-RDB
Time frame (Deadline)	Next SC-RDB meeting
LM comments	The LM endorses the recommendation.
RDB-SC comment/follow up/action:	Having all data in the RDB is crucial to the regional approach. This also implies that sampling countries have to be able to upload all the data collected under their responsibility. Currently, data collected from foreign vessels can't be upload by the sampling country. However, based on bilateral agreements and DCF regulations, MS are responsible for providing these data for analysis and auditing. Action: ICES DC will explore the option of including sampling country (next to flag country and landing country) into the database and to facilitate the upload of foreign data.

10. Quality assurance - Managed repository for RDB upload successes and data status reports	
RCM NS & EA 2013 Recommendation 6	RCM recommends that MS document their interpretation of trips, samples and sampling events and describe what the TripID and SampleID represent in there uploaded data.
Justification	The key identifiers for the biological data refer to trips and samples in most instances, for example on a discard trip each event is quite distinct but ashore where sampling might only focus on components or categories of a landing then this can lead to a different interpretation and achievements are therefore not directly comparable. Sampling events, trips and samples are crucial to auditing and monitoring sampling design and key to significant quality indicators.
Follow-up actions needed	MS to provide a summary document of their interpretation of these key fields in the upload data formats. RCG to collate these documents for storing in the RDB repository (see earlier recommendation).
Responsible persons for follow-up actions	MS, SC-RDB
Time frame (Deadline)	Next SC-RDB meeting
LM comments	The LM endorses the recommendation.
RDB-SC comment/follow up/action:	RDB-SC expects MS to deliver the descriptions to the RCMs. As a follow-up RDB-SC will facilitate storage of these descriptions in a dedicated SharePoint.

5.2 Recommendations from ICES EGs

Improvement on the RDB-FishFrame	
SGPIDS 2013 Recommendation	The Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS) recommends that a number of additional fields (see section 4.4) will need to be added to the RDB data exchange format if raw, as opposed to derived, data are to be recorded in the database and if sample weights are to be correctly calculated from the data collected during on-board sampling
Justification	Related with section 3 of SGPIDS 2013 report
Follow-up actions needed	
Responsible persons for follow-up actions	RDB-SC; ICES Data Centre
Time frame (Deadline)	
Recommendation ID	2013_222
RDB-SC comment/follow up/action:	In general, to facilitate the various regional databases currently being developed, we might need a governance model for the exchange format. See section 6.1. (suggestion to establish supra-regional subgroup, participants from all RDB groups currently around (representing RCMs as only legal body) and the hosts, also covering e.g. COST format as COST uses old format, including decision-making procedures and criteria when and how to add fields. Action: ICES DC to describe process and workflow and to set up dedicated SharePoint. The additional fields can be added to the current format without jeopardizing the current structure as the fields do not replace or interfere with current fields. RDB-SC agrees that the fields are essential to future data analysis and to facilitate the design statistical sound sampling scheme. However, these suggestions are only a part of a bigger picture. RDB-SC decides to collect all suggestions for additions to the exchange format. Action: Compile overview table of requests to identify gaps and overlaps in these requests and to be able to evaluate the impact of the proposed changes prior to implementation. (Katja Ringdahl and Alastair Pout to initiate). As a general remark; From an assessment point of view, InterCatch should reflect the changes to cover new sampling strategies and to cater for its impact on e.g. raising procedures. RDB-SC decided to explore the impact and needs of statistically sound sampling designs in a dedicated RDB workshop in 2014. Action: Set up a Workshop (6.4.1 and Annex 4)

6 Develop a strategy including a workplan for a roadmap on development of RDB-FishFrame (RDB-FF), taking requirements from a design based approach to sampling and raising into account

The RDB-SC identified during their 4th meeting (2012) a short and long-term strategy for the development of the RDB-FF. During the 5th meeting the RDB-SC continued to work in accordance with the strategy.

6.1 Short-term strategy – achievements by the ICES Secretariat

The short-term strategy is to support all counties in importing data into the RDB-FF, so the RCMs can use the RDB-FF as the main source for gaining information of the national sampling and fisheries ongoing. This means the problems some countries have regarding mandatory fields for which there is no national data, should be solved. To make information/data in the RDB-FF available for the RCMs, it is needed to make some standard reports, which allow the RCM to use the information in the RDB-FF. All of the goals below are subject to the very limited budget. The ICES Secretariat have during 2013 carried out work in accordance with the short-term strategy to support the MS and the RCMs. This work include:

- Support national data submitters (format and issues have been solved);
- Focus on solving show stoppers identified at the WKRDB 3 2012;
- WKRDB 1 2013 together with DTU-Aqua;
- Made it possible to upload sampling type Vendor;
- Implemented a secure connection;
- Data extracts to RCMs;
- Steering Committee RDB work;
- Correcting conversion algorithm, changed data types etc.

6.2 Short-term strategy – increase awareness of DCF data through inventory

In order to increase the awareness of data collected through the DCF and thereby potentially the use of these data the RDB-SC want to set up a public available (RDB website) inventory of data in the RDB-FF. The inventory should only include meta data such as available number of sampled trips, fish etc. This would not compromise the MS ownership of the actual data but increase the awareness among other users of the existing DCF data.

6.3 Short-term strategy – increase the understanding of visions and potentials of the RDB-FF

DevStat is currently on a contract with the Commission exploring different scenarios for future storage and transmission solutions for DCF data. The regional databases are one of the scenarios. The RDB-SC finds it important to stress that the RDB concept is much wider than "simple" storage and transmission of data. Most users working with fisheries data uses different estimations that origins from the collected data. The design based approach, regional data collection programs, quality assurance protocols needs to cover the estimation part as well. This seems though not fully understood outside

the RCM and ICES worlds. The RDB-SC thereby decided to compile a "vision" paper to describe the visions and potentials of the RDB-FF. This paper is found in Annex 7.

6.4 Long-term strategy – revision of the exchange format

The long-term strategy is to develop the RDB-FF towards a design based approach (including design based estimation) and integrated regional data collection programmes. The RDB-SC identified in its last meeting that this, among other things, will require a revision of the exchange format and input from expert groups on fields essential to future estimation processes.

Revision of the exchange format is though a part of the short-term strategy as well as some fields need to be added to support the RCM work. This is also reflected in the recommendations from the RCMs/LM (section 5).

Revisions of the exchange format may not be as simple as it seems. New fields may alter the structure of the database as well as algorithms and they may require new uploads of data from the Member States. The RDB-SC as well as the LM thereby considers it important to avoid frequent changes of the exchange format. Preferably should changes be done at "one go".

It is thereby important that sufficient effort is put into the revision process of the exchange format. The aim is to utilize the time until funds are made available, to have a well underpinned suggestion for a revised format.

6.4.1 Worksop on Developing the RDB data format for design based sampling and estimation for on shore sampling

It is of high importance that changes in the exchange format needed to support the design based approach are identified by the expert groups so it can be implemented in the RDB when funding are made available. ICES SGPIDS have concluded on changes in the exchange format needed to support design based approach to sea-sampling programs (see section 5.3). The same need to be done for harbour/market/vendor sampling programs.

RDB-SC thereby suggests that this will be the topic of the next RDB workshop. The workshop should document a range of onshore sampling protocols, determine the extent to which these sampling protocols can be recorded by the exchange format, suggest modifications and combine these modifications with findings from previous meetings. The workshop will be chaired by Alastair Pout and Liz Clarke and will take place in October 2014. Suggested ToRs are found in Annex 4.

6.4.2 Establishment of a supra regional RDB format and tools governance group

The establishment of RDB Large Pelagic Fish and RDB MED&BS do further imply that coordination is needed between the different RDBs to, where possible, keep the exchange format and tools/algorithms for data processing harmonized in order to avoid duplication of work.

To achieve this, the RDB-SC suggests the establishment of a supra regional RDB "Format and tools' governance group". This group should consist of representatives from the hosts, RCMs as well as the Commission (for information), primarily be working

through WebEx and have the task to in a transparent way deal with suggestions for exchange format changes as well as tools associated with the RDBs. A suggestion for a possible workflow for exchange format requests is presented in Annex 5.

6.5 Long-term strategy – streamlining interface with InterCatch

In future the RDB will work together with InterCatch, which is the standard tool for stock coordinators to raise and prepare data to the stock assessment expert groups. The aim is to let the detailed data imported into the RDB be raised by the national data submitter. Then transfer the data automatically to InterCatch where they will be raised on an international regional level by the stock coordinator. Since ICES Data Centre has both systems it will be easy to streamline the integration of these two central systems.

The study proposal (Annex 6) on development needs have been amended from the proposal available last year. Change made aim to support a streamlined process.

7 Update the data policy document dealing with access rights, data confidentiality and data ownership issues

The RDB Steering Committee developed and adopted a Data Policy Document in 2012. The goal of this document is to define how the data uploaded into the RDB-FishFrame are stored and used in agreement between the data submitters, data users and the RDB host (ICES). During 2013 became it apparent that the document needed to be revised as it currently is unclear if and how expert groups can get access to data through FishFrame. This may cause problems for the host who need to deal with data requests from different expert groups as well as for the MS which will get a lot of requests as all data deliveries currently need to be approved by each MS. The present document does further not give the RCMs access to detailed data.

The RDB-SC suggests, to reduce the burden for the MS and for the host, that usage of data in RDB-FF is split into "pre-approved uses" and "other uses". Pre-approved uses mean that the MS give their approval beforehand, preferably during the RCMs (were national correspondents are present) each year. Expert group for which the usage of data could be pre-approved should be the regional coordination groups (detailed data) and ICES expert groups involved in scientific advice to the Commission and its partners (aggregated data). The ICES secretariat should each year provide the RCMs with a list of relevant ICES groups which then could be finally agreed. For other users MS should be contacted for approval before RDB-FF data are used. The RDB-SC suggests that MS should have one month to replay and that failure to reply is considered as a failure. Failures should be reported to the European Commission.

A subgroup consisting of Els Torreele, Neil Holdsworth, Jörgen Dalskov, Christian Dintheer, Jose Rodriguez and Katja Ringdahl was established to intersessionally revise the data policy document. The final document from the RDB-SC should then be adopted by the National Correspondents (NC). This could be done either by correspondence, during an NC meeting or during the RCMs.

8 RDB Workshops 2013

During 2013 only one RDB workshop was held. The workshop was on data uploads to support MS to upload data into RDB-FF prior to the RCM data call. The training workshop had the same ToRs as the workshop in 2012 and was chaired by Henrik Degel, DTU-Aqua (Denmark) and Henrik Kjelms Nielsen, ICES secretariat.

9 AOB- Issues raised by Portugal during the 2013 data upload

Portugal has submitted a document to the ICES Secretariat and the RDB-SC on issues discovered during the uploading process in 2013. The RDB- SC found the document very solid and the issues are most likely relevant to other MS as well. The RDB-SC started to go through the document in order to answer Portugal. The work was however not finalized due to shortage of time.

10 Terms of References for the next RDB-SC 2014

6th Meeting of the Steering Committee of the Regional Database FishFrame

The **Steering Committee for the Regional Database FishFrame (SC-RDB**), chaired by Katja Ringdahl (Sweden) will meet 25–26 November 2014 in Copenhagen (ICES HQ), Denmark, to:

a) Respond to recommendations put forward to the SC-RDB by the Liaison Meeting and expert groups.
b) Summarize how the RDB has been used in the regional coordination meetings;
c) Respond to recommendations from the supra-RDB technical group dealing with governance of exchange formats and tools;
d) Review the data policy document, dealing with access rights, data confidentiality and data ownership issues, and update if necessary;
e) Develop a strategy under the revised DCF and new EMFF regulation, including a workplan for a roadmap on development of RDB-FishFrame, taking requirements from a design based approach to sampling and raising into account;
f) Agree on ToRs for the SC-RDB 2015 meeting.

11 References

Anon. 2010a. Report of the 7th Liaison Meeting between the Chairs of the RCM's, the chair of ICES PGCCDBS, the chair of PGMED, the ICES representative, the Chair of SGRN and the European Commission, Ostend, Belgium, 2-3 Jun 2010

Anon. 2010b. Regional scenarios and roadmap on Regional Database, Brussels, Belgium, 22-23 Feb 2010

Anon. 2010c. Report of the Regional Coordination Meeting for Baltic Sea (RCM Baltic) 2010, Vilnius, Lithuania, 10-14 May 2010

Anon. 2010d. Report of the Regional Coordination Meeting for the North Sea and East Arctic (RCM NS&EA) 2010, Charlottenlund, Denmark, 17-21 May 2010

Anon. 2010e. Report of the Regional Coordination Meeting for North Atlantic (RCM NA) 2010, Ostend, Belgium, 19-21 Apr and 31 May-2 Jun 2010

Anon. 2013a. Report of the 10th Liaison Meeting between the Chairs of the RCM's, the chair of ICES PGCCDBS, the chair of PGMED, the ICES representative, the Chair of SGRN and the European Commission, Brussels, Belgium, 8-9 Oct 2013

Anon. 2013b. Report of the Regional Coordination Meeting for Baltic Sea (RCM Baltic) 2013, Tallin, Estonia, 26-30 Aug 2013

Anon. 2013c. Report of the Regional Coordination Meeting for the North Sea and East Arctic (RCM NS&EA) 2013, Vigo, Spain, 9-13 Sept 2013

ICES 2013d. Report of the Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS). 24-28 June 2013, Lysekil, Sweden. ICES 2013 /ACOM:56

Jansen, T. (Ed). 2009. Definition of Standard Data Exchange Format for Sampling, Landings, and Effort Data from Commercial Fisheries ICES Cooperative Research Report No. 296 . 43pp.

Annex 1: ToRs, Steering Committee for the Regional Database FishFrame

2013/2/ACOM39 The **Steering Committee for the Regional Database FishFrame (SC-RDB**), chaired by Katja Ringdahl (Sweden) will meet 8–9 January 2014 in Copenhagen (ICES HQ), Denmark, to:

g) Respond to recommendations put forward to the SC-RDB by the Liaison Meeting and summarize how FishFrame has been used in the regional coordination meetings;
h) Update the data policy document dealing with access rights, data confidentiality and data ownership issues;
i) Develop a strategy including a workplan for a roadmap on development of RDB-FishFrame, taking requirements from a design based approach to sampling and raising into account;
j) Agree on ToRs for the SC-RDB 2014/2015 meeting.

Annex 2: RDB-SC, Agenda

STEERING COMMITTEE FOR THE REGIONAL DATABASE

COPENHAGEN 8-9 JANUARY 2014

AGENDA

8 January

9:00 Opening the meeting,

9:30 Presentations

Henrik – work done by ICES

Katja - report back from the DevStat focus meeting

Pierre – status of the LPF RDB

Christian- status of the RDB Med

10:00 ToR a) *Respond to recommendations put forward to the SC-RDB by the Liaison Meeting and summarize how FishFrame has been used in the regional coordination meetings.*

Cristina has compiled the recommendations, we start from this summary. What is achievable? We also need to look at proposals for reports needed by the RCMs as well (see RCM Baltic 2013 and recommendations 2012). How do we move forward?

12:30 Lunch Break

13:30 Tor c) *Develop a strategy including a workplan for a roadmap on development of RDB-FishFrame, taking requirements from a design based approach to sampling and raising into account;*

What do we need to move forward? We may need to be specific on what guidance we need. I also think we need to have a discussion on our vision for the regional database. Henrik to shortly inform about the new suggested WPs in the study proposal.

15:30 ToR b) *Update the data policy document dealing with access rights, data confidentiality and data ownership issues*;

What has happened since our last meeting? We particularly need to discuss and clarify access rights and how we respond to data requests

18:00 End of the day

9 January

9:00 *AOB- ICES have received a data request from WKLIFE* (regarding data for test of a new stock assessment method). The SCRDB need to accept or reject this request, and according to the Data Policy have clear directions on similar data requests

10:00 *AOB- Discuss the Consultation document (in particular section 2.3 (data quality) and 2.4 (data availability)) on the revised DCF.* What do we think of the document and what role can the RDB play? Who is going to the stakeholder meeting in Brussels, 16 January 2014?

12:00 Tor d) *Agree on ToRs for the SC-RDB 2014/2015 meeting*

When shall we have next meeting?

New chair

13:00 End of meeting

Annex 3: RDB-SC, 5th meeting, list of Participants

Name	Organization	E-mail
Neil Holdsworth	ICES secretariat	NeilH@ices.dk
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Norbert Billet	RDB LPF	Norbert.billet@ird.fr
Henrik Degel	RCM Baltic	hd@aqua.dtu.dk
Katja Ringdahl (chair)	RCM Baltic	katja.ringdahl@slu.se
Sieto Verver	RCM NS & EA	sieto.verver@wur.nl
Els Torreele	RCM NS & EA	els.torreele@ilvo.vlaanderen.be
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Henrik Kjelms Nielsen	ICES secretariat	henrikkn@ices.dk
Cristina Mogado	ICES secretariat	cristina@ices.dk
Jose Rodriguez	Observer, Spain	jose.rodriguez@st.ieo.es

Annex 4: WKRDB 5 Suggested Terms of Reference

WKRDB 5 Worksop on Developing the RDB data format for design based sampling and estimation for on shore sampling.

A workshop to trial and develop the RDB data format for design based sampling and estimation primarily for on shore sampling will be established; Alastair Pout (Scotland) Liz Clarke (Scotland) will meet in Aberdeen 27-31 October 2014 to:

a) Document a range of case studies of the onshore sampling protocols used to collect data on a variety of fish and shellfish sample in a variety of situations on shore, e.g. landing port, markets, and processors. Identifying the primary sampling units and all stages in the hierarchical cluster sampling involved.
b) Determine the extent, to which these current sampling protocols can be effectively recorded on the RDB data exchange format (csData tables). Where necessary suggest modifications,
c) Generate sample weight for the PSU using sampling probabilities as recorded from the sampling data recorded in the data exchange format.
d) Following design based sampling principles (i.e. based on sampling frames of ports, markets or processors), consider the extent to which population estimates for a variety of domains can be effectively derived from the sample data and post stratification weights using the available landing and effort data in CL and CE format. Suggest modifications accordingly and combine with suggestions from previous meetings.

Annex 5: RDB Format revision process

Stage 1: request

TO BE FILLED BY REQUESTOR			
Recommendation	Business Justification	Requestor	Request Date
Description of what is needed	Description and specific reference to directives/committees recommendations that are demanding change	Group/Committee etc.	When requested

Stage 2: receive and notify (ICES)

The request is checked by the RDB hosts, any clarifications made with the requestor and then posted to the SharePoint site 'RCM format and tools governance'. Where after the request will be notified to the members of the SharePoint site.

Stage 3: assessment by 'format and tools' governance group

The members of the group should then fill out the table, as far as is possible and determine what the next action should be.

TO BE FILLED BY 'FORMAT' GROUP						
Type of Change	Category	Impact on format	Impact on data model	Next action	Cost implication	Date of decision
New variable/Change to variable/change in variable setting/other	SSS; VMS; Etc. (this will help grouping similar themes)	i.e. minor; addition to row x i.e. major; split 2 existing variables	i.e. minor; does not affect raising calc major; needs a reprogramming	(options) Testing of format; recommend for rolled-up minor update; recommend for major revision; n reject with reasons; return to requester for discussion	This will highlight where changes can be accommodated within the maintenance budget, or whether additional funding would be needed to implement (split by RDB's)	

Stage 4: follow-up; dependent on action in stage 3

a) If minor impact, recommended – agree on schedule for a minor update release to be grouped with other minor updates (version 1.x) and communicated to RDB-SC and requestor

b) If major impact, recommended – agreement on costs will need to be made and discussed at SCRDB, RCM's (version X)
c) If testing agreed – ICES will draft a test format and testers agreed with the requestor
d) If rejected; first communicated to RDB-SC for agreement, then communicated to requester with a justification
e) If modification of request needed, contact requester for negotiation

The tables in stage 2 and 3 will be used as the basis for documenting the changes to the format and made available as the 'version revisions' when a new major/minor version is released.

Membership

Suggested to have:

- host(s) of RDBs (ICES, to be decided for pelagic and GFCM for Mediterranean/Black Sea)
- representatives of RCM's
- European Commission for information

Work should primarily be done by correspondence, WebEx

Timing of responses to requests

To be decided, depending on complexity… Annual report on requests and responses to requests (to LM)

Documentation

Documents on a new SharePoint (RCM SharePoint)

Reference material etc.

Annex 6: Study Proposal on Development Needs

Title: "Exploration and Development of new facilities in RDB-Fish-Frame 5.0"

Background:

The demands from the users to a regional Database is under constant change; in the first hand, because the users discover new possibilities in the use of the data as they get more familiar with the use of the database and secondly because the data collection, fish stock management and modelling environment changes and new data types and processing facilities become important. The first one mostly requires design of new output reports to tabulate new combination of the existing variables, while the second one quite often requires adding of new variables and processing functionality. A central point is the design based approach in data collection, and eventually regional data collection programs, which is foreseen in the future Data Collection Multi Annual Programme DC-MAP. Furthermore, RDB-FF has now been introduced to additional regions. This has given rise to additional requests how data should be centrally processed due to new sampling stratifications practised in the member states included compared to the existing. It is essential that a database reflects on new demands and not act as a straightjacket preventing new progressive initiatives. A constant development is therefore very important in order to keep the momentum.

The development will be outsourced to the extent that external expertise is necessary in order to follow the time schedule.

Indicative budget: 450 000 €

Development

The main fields for development in 2013-14 are identified by the RDB-Steering Committee and presented in no specific order of priority:

1. Development of additional tools for analysis and data tabulating to support regional coordination. (20% of total budget)

   Outputs: Technical report, programming development

   Development of output reports which provide:

- Overview of data status by region; data coverage;
- Support the planning of future regional based sampling schemes;
- Overview of potential areas for task sharing between member states.

2. Testing of trial stocks from different expert groups for national raising, by borrowing age–length keys from own and/or other countries and correct functionality accordingly.

- All data submitters for the selected stocks raise data in the RDB
- Output compared and corrections made where needed

3. Stream line the interfacing with InterCatch

- Develop functionalities which when data have been raised to a certain level automatically will move data to InterCatch

4. Explore options and cost implications of implementing of external tools (i.e. COST) in the RDB-FishFrame (35% of total budget).

   Outputs: Technical report, Technical Workshop(s), programming development

   Such analysis should include the following elements:

- An inventory to collate and examine the tools present but also tools missing;
- What level of documentation/quality controls would be required of a tool to be accepted into the RDB?
- What exports should the RDB provide to other formats/tools?
- What changes need to be made to the COST format/coding to comply with the RDB?
- Is COST sufficiently documented (methods, quality controls etc.)?
- Which level of integrating should the RDB.-FishFrame provide to COST (just export to COST or an interface that allows users to manipulate RDB data using COST tools/functions)?
- Proof of concept of programmatic interface to RDB-FishFrame

5. Requirements and automatisation of Data calls procedures. (20% of total Budget)

   Outputs: Technical report, programming development

- What is formally required from the regional database to reply to data calls?
- What data calls can we respond to at present/future? (The present functionalities and documentations in the regional database need to be compared with most common data calls)
- Alignment with FLUX developments

6. Development of more flexible structure to handle correct processing of design based sampling schemes to address regional differences in approach (25% of total budget).

   Outputs: Technical report, Technical meetings/workshops covering all regions

- What changes need to be made in the Exchange Formats in order to comply with design based sampling schemes?
- Which additional processing functionality need to be developed in order to comply with design based sampling schemes?

7. Development of procedures to ensure confidentiality on individual vessel level for CL, CE and on value.

Annex 7: Visions and potential for the RDB-Fishframe

Regional Database

Visions

The RDB provide end-users with robust, harmonized datasets and estimates. Estimates are produced in a transparent way and quality is known.

The RDB support integrated regional data collection programs based on statistically sound designs.

The RDB continues to develop in accordance with end-user needs.

The RDB increases the awareness of data collected under DCF/DC-MAP and the overall usage of the data

Background

The objectives for the revised DCF include a more end-users oriented data collection, improved data quality, improved availability of data and a stronger emphasis on regionalization of the data collection process. Coordination of data collection on the regional scale is primarily handled by the Regional Coordination Meeting (RCMs). These RCMs were the ones that expressed a strong need for a regional database and consider the RDB a prerequisite for efficient work. The RCM work has improved significantly in recent years after introduction of the RDB-FishFrame (e.g. RCM NS&EA, 2013). The RCMs has expressed their position, vision and mission for the future DC-MAP/revised DCF in the Oostende declaration (RCM Ns&EA, 2013).

"End-users will receive relevant, high quality data collected through an efficient regional basis.
Data collectors will use statistically sound sampling schemes and operate under the guidance of

Regional Coordination Groups, in which end-user priorities are agreed and the coordination of data collection takes place to meet those priorities."

RDBs are of central importance in the Oostende declaration. They are not only a repository of data but also a tool for the production of estimates, analysis and evaluation of quality.

The RDB and improved data quality.

It is important to realize that the vast majority of end-users use estimates that are produced on the basis of data collected under the DCF not the data itself (or simply aggregated). Such estimates could for example be catch-at-age of discards from a given stock and fishery. To produce this catch-at-age the data provider need to combine information from sampling (*métier* related variables), age reading (biological variables) and data on the overall landings/effort for the given *métier* (transversal variables). Quality standards as well as the ability to evaluate quality needs to cover all the different data types. An important point is tough that the quality assurance framework needs to cover the estimation process as well and that a key-point is transparency. The movement towards a more thoroughly regional approach will add complexity as some data (e.g. transversal) needed to produce an estimate will be collected at the national level while other types (samples of trips, landings and fish) may be collected at a regional level. Recent work in ICES WKPICS has focused on how we can move away from an

ad-hoc based data collection/estimation process to a more statistically robust one. This work will continue in ICES WGCATCH.

The implications for the RDB-FishFrame:

- Data should be raised (estimates produced) within or in conjunction with the RDB to assure transparency.
- The production of estimates should be built on robust statistical principles.
- Close cooperation with methodological groups such as WGCATCH is needed to develop processes, tools and exchange format to meet quality standards and to let these standards evolve
- Close cooperation with other RDBs to make sure that development of exchange format and tools are harmonized is needed

The RDB and strengthen regionalization of data collection.

Regional coordination of data collection for fisheries dependent data has so far primarily been focused on regional compilations on fishing activities (métiers), landings and sampling within a region. Bilateral agreements on sampling are further established between the flag country and the landing country if landings take place in foreign countries.

The overall understanding of the geographical complexity of landings as well as were fish is accessible for sampling has greatly increased since the RCMs started to populate the RDB with data (see annex 1). This complexity, the aim to move towards a more statistically robust way to collect data as well as cost-efficiently will most likely lead to cross-national sampling programmes, were MS share tasks and sampling obligations.

The implications for the RDB-FishFrame

- The RDB need to cater for cross-national sampling programmes implying that it can´t be assumed that it is the MS that carry out all the sampling needed to produce the estimates.
- Close cooperation with groups (RCMs) dealing with coordination of data collection as well methodological groups such as WGCATCH is needed to develop processes, tools and exchange format to meet requirements from data providers on regional task sharing without hampering the implementation statistically robust methods for estimation.

The RDB and improved data availability.

The RDB-FishFrame is currently storing fishery dependent data originating from sampling (biological data and data that currently is called métier related data) and transversal data on landings, effort and value. Having all regional data the data in the database largely increase the possibility for different end-users to get an overview on the amount of existing data and if data meeting their needs is present or not. Such overviews are currently not available anywhere and will probably in itself increase the awareness and use of DCF data. Having all regional data in one database (detailed data as well as estimates) has further great potential to harmonize and simplify the process of submitting data to end-users. However, data are owned by the MS and data availability is governed by legislations. The issue of improved availability can thereby only be facilitated by RDBs.

The implications for the RDB-FishFrame

- An open inventory on available data would have the possibility to increase the awareness and use of DCF data. MS would have to choice to make data available or not (in accordance with legislation).
- The RDB have great potential to simplify and harmonize data submissions to end-users. Processes, including interactions with MS, for data submissions from the RDB need to be established.

The RDB and end-user oriented data collection.

To get end-users more involved in the strategic planning of data collection is a needed for the overall development the scientific process in the advisory work but also for cost-effectiveness in the data collection. To get the end-users more involved in what type of data to be collected as well as quality considerations is a crucial feedback to the data collectors. One of the challenges today is to build the bridges between the data collection community/end-user communities. This is done in different ways for example through data compilation workshops prior to benchmark assessments of stocks. The RDB could serve as such a bridge by

i. giving end-users an overview on data that is collected, and thereby the possibility to respond if needed data are missing or if data are collected that is not used
ii. supplying transparent evaluations of quality associated with the estimates the end-user needs, and thereby the possibility to assess the quality of data and respond to the data collection community if the quality is not satisfactory
iii. easy access to harmonized datasets / estimates (given that this is acceptable for the MS that owns the data)

The implications for the RDB-FishFrame:

- The RDB should be a central source of information (estimates, different types of aggregated and detailed data, meta data) for end-users working on the basis of DCF data.
- The RDB need to be developed in close cooperation with end-users.

Overall conclusion

The RDB concept is much broader than storage of DCF data. It is, or has the possibility to be, an integrated system bringing data collectors, providers and end-users together by supporting transparent collection, processing, quality evaluation and submission of data on the regional scale. The development of the RDB need to continue in close cooperation with RCMs, methodological expert groups and end-users.