

ICES WKRDB REPORT 2012

ICES ADVISORY COMMITTEE

ICES CM / ACOM: 64

REF. WGDIM, WGBFAS

Report of the Joint EU / ICES Workshop on the Regional Database (WKRDB)

29 May – 1 June

ICES HQ, Copenhagen, Denmark



ICES

International Council for
the Exploration of the Sea

CIEM

Conseil International pour
l'Exploration de la Mer

International Council for the Exploration of the Sea Conseil International pour l'Exploration de la Mer

H. C. Andersens Boulevard 44–46
DK–1553 Copenhagen V
Denmark
Telephone (+45) 33 38 67 00
Telefax (+45) 33 93 42 15
www.ices.dk
info@ices.dk

Recommended format for purposes of citation:

ICES. 2012. Report of the Workshop on the Regional Database (WKRDB), 29 May – 1 June, ICES HQ, Copenhagen, Denmark. ICES CM/ACOM:64. 20 pp.

For permission to reproduce material from this publication, please apply to the General Secretary.

The document is a report of an Expert Group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council.

© 2012 International Council for the Exploration of the Sea

Contents

1	Introduction	1
2	Terms of reference (ToR).....	2
3	Structure of the WK.....	3
4	WK notes	4
4.1	ToR a. “Clarify the structure and the individual variables in the FishFrame Exchange Format “	4
4.2	4
4.3	ToR b i) “Assuring consistent interpreting of variables”	4
5	Suggested changes in the Exchange Format	5
5.1.1	Data type CS, TR-records	5
5.1.2	Data type CS, HH-records	5
5.1.3	Data type CS, SL-records.....	5
5.1.4	Data type CS, HL-records	6
5.1.5	Data type CS, CA-records	6
5.1.6	Data type CL.....	6
5.1.7	6
5.1.8	Data type CE.....	6
5.2	6
5.3	ToR b <i>ii</i> . Discuss the national ability to comply to the existing Exchange Format and identify shortfalls with that format.....	6
5.4	ToR b <i>iii</i>). “Identify experienced technical obstructions causing failure in the upload of data”	8
5.5	ToR c. “Survey of methodologies used to produce the FishFrame exchange format from national databases, including potential future plans”	8

1 Introduction

The International Regional Database Steering Group (SGRDB) decided on its meeting the 1st of December 2011 to carry out three workshops to support the use of FishFrame as the tool for providing input data to assessment working groups and others. This workshop was the second and the purpose was to work and get experience with the data upload modules in FishFrame. The WK was supposed to be used as a support for the data uploading prior to the RCMs in the autumn. The workshop was open for participants from all regions.

13 colleagues from national institutes attended the workshop, representing the following countries/labs: Denmark, Estonia, Scotland, England, Holland, Belgium and Sweden. In addition, three persons from the ICES secretariat attended the meeting (Appendix a). In addition, Katja Ringdahl, Sweden (chair of the RDB–Steering Committee) attended the last day of the meeting.

Prior to the workshop participants were asked to work with uploading of national data from 2010 and 2011.

Relevant presentations, which demonstrated the structure of the various data types for commercial fisheries and the upload procedure in RDB–FishFrame were given by the chairs and afterwards the participants were able to spend time uploading own national data with support from the chairs and plenary discussion.

2 Terms of reference (ToR)

A **Workshop on introduction to use the Regional database FishFrame** (Co–chairs: Kirsten Birch Håkansson and Henrik Degel), will be established and will take place in ICES headquarter, Copenhagen, Denmark, during 29 May – 1 June 2012 to:

- a) Clarify the structure and the individual variables in the FishFrame Exchange Format.
- b) Discuss the experience gained by the participants during pre–workshop data uploads. This will include:
 - i) Assure consistent interpreting of variables
 - ii) Discuss the national ability to comply to the existing Exchange Format and identify shortfalls with that format
 - iii) Identify experienced technical obstructions causing failure in the upload of data
 - iv) Identify needs for improvement in the documentation to support uploads of data into FishFrame
- c) Survey of methodologies used to produce the FishFrame exchange format from national databases, including potential future plans

3 Structure of the WK

The agreed time table (Appendix. d) scheduled the meeting as follows:

1st day

1. Welcome, introduction and household remarks
2. Going through the ToR and adoption of the time schedule
3. Overview and status of the upload situation for each country
4. Presentation of the RDFishFrame Exchange format structure (ToR a) by Henrik
5. Going through the variables in the Exchange Format (ToR a and bi) by Henrik
6. Working on own data

2nd day

7. Difficulties anticipated during preparation of data (ToR b.ii and b.iii)
8. Working on own data
9. DCF data supply and FishFrame–COST standard exchange format. Celine Rodriguez
10. Working on own data

3rd day

11. Presentation of the upload procedure by Henrik
12. How does each lab extract data from the national data source into the Exchange Format?
13. Can the extraction process be automated? (ToR c)
14. Is the documentation of the Exchange format and the upload procedure sufficient? (ToR biv)

4th day

15. Discussion: Experienced gained. Does the existing Exchange Format include the necessary variables for present and future requires for processed data (ToR b.ii).
16. Following up on unclosed issues
17. Closing of the meeting and coffee

4 WK notes

4.1 ToR a. “Clarify the structure and the individual variables in the FishFrame Exchange Format “

ToR b i) “Assure consistent interpreting of variables”

The chairs went through all commercial fishery exchange formats (commercial landings (CL), commercial effort (CE), commercial sampling (CS)). Each variable was discussed and the definition as stated in the FishFrame Exchange Format description was examined. If the definition gave cause to doubts the interpretation and daily practice were discussed. Suggested changes are listed in a section below.

Generally, it was difficult to separate ToR a and part i, and iv of Tor b from each other in the discussions because it became very obvious to comment on own difficulties experienced and suggestions for improvements during the scrutinizing of the variables.

5 Suggested changes in the Exchange Format

5.1.1 Data type CS, TR-records

VARIABLE NAME	SUGGESTED CHANGE	COMMENTS
Landing country	First hand buyer country	Sometimes the fish is loaded directly on lorries and transported to another country without any opportunity for sampling
Vessel size	Measure units GRT or GT dependent of the length of the vessel	New column indicating unit or new rule: Vessels < 15 m: GRT Vessels >= 15 m: GT
Vessel type	Made optional or made more useful.	Categories should be updated in order to serve a purpose.
Sampling harbour	Additional variable	Sometimes landing and sampling harbour are different. Relevant in connection with the suggested modification of the processing stratification.
Stratification ID	Additional variable	See section below

5.1.2 Data type CS, HH-records

Generally it is an unsolved problem to allocate Area if a trip is worked up as Market with aggregation level "T" but is known to stretch itself over more than one area. An example is English trips where haddock is known to be caught in one area and cod in another area. It was suggested that the Station number (=999 for such trips) could be changed to "999"+suffix indicating a fraction of a trip (and not a haul/set). One HH record for each fraction. E.g. "999a" and "999b" etc. In this way the "total" trip information is not lost. All "999x" (x=1 to n) should sum up to the whole trip.

5.1.3 Data type CS, SL-records

VARIABLE NAME	SUGGESTED CHANGE	COMMENTS
Super species or taxon.	Additional variable	Some species can only be identified to taxon in the field (e.g. monkfish). A taxon level would make it more transparent
Sex	New sex codes for lobster	Elaboration of the existing sex codes.
Sample weight	The raw measure is entered. Additional variable for unit id is suggested. Alternatively, additional variable for indication if value (in g) is measured or estimated.	Not always in weight units. Sometimes in number of boxes or individuals. Weight (in g) is needed for calculation of overall mean weight for converting weight to numbers landed in CL.

5.1.4 Data type CS, HL-records

Nothing

5.1.5 Data type CS, CA-records

VARIABLE NAME	SUGGESTED CHANGE	COMMENTS
Sex*	Changed to not key variable (Sex)	CA refer to HH-records
Weight	Indication of state at weighting (whole -, gutted weight etc.)	Part of the general wish to enter raw and not processed data.

5.1.6 Data type CL

VARIABLE NAME	SUGGESTED CHANGE	COMMENTS
Value	Made mandatory (M)	The value is necessary for calculation of top-90% ranking
Stratification ID	Additional variable	Se section below

5.1.7 Nothing

5.1.8 Data type CE

VARIABLE NAME	SUGGESTED CHANGE	COMMENTS
Statistical rectangle*	Comment to be consistent with CL data.	In CL at present no comment concerning if more than one rect. is covered by a trip. The comment in CE not consistent with what is practiced in CL (the last rect. fished is recorded).
GT-Days	Updated to suggested TR-record update	See Vessel size in TR-record
Days at sea	Made mandatory (M)	The value is necessary for calculation of top-90% ranking
Stratification ID	Additional variable	Se section below

5.2 Nothing

5.3 ToR b // Discuss the national ability to comply to the existing Exchange Format and identify shortfalls with that format

Besides the changes of minor structural implications listed above the issue of processing stratification contra sampling stratification was raised.

In the present version of FishFrame (5.0) the raising structure follows the stratification in the EU Data Collection Frame (DCF) (*Commission Regulation (665/2008) and Commission Decision (2010/93/EC) adopting a multi annual Community programme pursuant to Council Regulation (EC) No 199/2008 establishing a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy*). In the DCF the basic stratum is the métier, often accompanied with an area and period stratification; normally Division or Sub-

division and quarter. This means that year, country, métier, Division/Sub-division, month/quarter, species, catch Category, landing category and possibly size sorting and sex defines the raising (and extrapolation) strata. FishFrame has built-in 9 fixed raising stratification options based on this basic stratification.

A pre-assumption for a correct processing of the data is that the processing stratification is in agreement with the sampling stratification. A consequence of this assumption is that each sample shall be selected randomly within each stratum. If this assumption is violated because data are collected according to a different stratification the derived estimates based on raised data will be biased.

Only few countries (if any) do in all details fulfil this assumption because logistic or sampling strategic reasons define the sampling stratification otherwise than defined by the DCF. The deviation from the DCF stratification consists normally in adding additional strata to the sampling scheme. This is the case in both market and sea sampling where the primary sampling stratification often is the harbour and then the vessel. The structure in RDB-FishFrame gives at the moment no possibility to reflect such sampling stratification correctly and will therefore add some bias to the raised figures. The consequences of the bias in terms of magnitude of the estimates can be discussed but from a theoretical statistical point of view the method is incorrect.

If the raising stratification is to be changed in order to be statistical correct then a very flexible solution is needed in order to be able to accommodate the various sampling stratifications carried out in practice by the data submitters. The issue was discussed at the workshop and a generic but very simple system to solve the problem was suggested. The practiced sampling stratification should be indicated as a code in one variable. The code should include sufficient information to define the sampling stratification which exceeds year, country, Division/Sub-division, month/quarter, species, catch Category, landing category and possibly size sorting. The sampling stratification ID variable should be included in commercial landing statistics (CL), commercial effort (CE) and commercial sampling data (CS) in order to link the data types correctly together for raising. The additional stratum will not affect the CS data (except for the extra variable) as CS data are disaggregated data but will mean that the CL and CE data will be split into the additional stratification. The common stratification variable will then be used to link CS data and CL or CE data and used as the processing stratification instead of métier.

The métier is still valid as raising stratification and still included in the exchange format which will be unchanged except for the extra variable. The métier concept is still important as the management of the fishery only can be done based on technical regulations applied on certain grouping of the fishing effort. If métier is not part of the sampling stratification and therefore not part of the processing stratification, métier can be implemented as a post-stratification in the FishFrame output module.

The suggested generic stratification principle will make it possible to set up algorithms and calculate the precision estimate in all cases independent of the sampling stratification and will not suffer from the existing problems in the COST program of missing precision algorithms for certain samplings schemes.

5.4 ToR b *iii*). “Identify experienced technical obstructions causing failure in the upload of data”

The concept of a national database is very different from country to country. Even that most countries have well-structured and rather well-functioning databases, which contains fisheries data, some countries have very un-complete solutions where only part of the data are in a regular database while other data are hold in ad-hoc solutions including Access databases and EXCEL spread sheets. No technical obstructions preventing that data were extracted and adopted to RDB-FishFrame Exchange Format were identified by the participants. It seems that the table structure in all national databases is compatible with the structure in the RDB-FishFrame Exchange Format.

A general situation in several countries is that the biological institutes do not have responsibility for the official landings and effort statistics. Typically, the responsibility lays in a directory or ministry and not all institutes have unlimited access to the official statistics. In some cases the institutes have little influence on how and when the statistics are available.

5.5 ToR c. “Survey of methodologies used to produce the FishFrame exchange format from national databases, including potential future plans”

It was not possible to get a complete overview of the situation. Some countries already have more or less automatic extraction of data, some have “semi-automatic extraction which requires individual attention while some have fully “manually extraction” where the adaption of the data to the Exchange Format is done manually typically in EXCEL spread Sheets. Generally, the participants were not the central persons for development of future software for extraction and did not possess the authority to make decisions concerning the issue.

The participants were asked to provide a small piece of text which describes the national situation concerning the national database and if any structural problems were faced during extraction of data into the RDB-FishFrame Exchange Format. Text was available from Belgium, England, Estonia, Spain (AZTI) and Sweden. The text is in appendix d.

Appendices

Appendix a (List of participants)

NAME	ADDRESS	PHONE/FAX	EMAIL
Henrik Degel	DTU Aqua Charlottenlund Slot Jægersborg Alle 1 2920 Charlottenlund Denmark	Phone +45 33963386	hd@aqua.dtu.dk
Ian Holmes	CEFAS Lowestoft Pakefield Raod NR 33 0HT Suffolk, UK	Phone + 44 1502 56 22 44	ian.holmes@cefaf.co.uk
Jens Ulleweit (by correspondance only)	JHVTI Palmaille 9 22767 Hamburg Germany	Phone +49 40 3890 5217	jens.ulleweit@vti.bund.de
Kay Panten (by correspondance only)	JHVTI Palmaille 9 22767 Hamburg Germany	Phone +49 4038 905 108	kay.panten@vti.bund.de
Kirsten Birch Håkansson	DTU Aqua Charlottenlund Slot Jægersborg Alle 1 2920 Charlottenlund Denmark	Phone	kih@aqua.dtu.dk
Lisa Readdy	CEFAS Lowestoft Pakefield Raod NR 33 0HT Suffolk, UK	Phone	lisa.readdy@cefaf.co.uk
Olga Goni (by correspondance only)	JHVTI Palmaille 9 22767 Hamburg Germany	Phone +49 4038 905 108	olga.goni@vti.bund.de
Peter Robinson	CEFAS Lowestoft Pakefield Raod NR 33 0HT Suffolk, UK	Phone	Peter.robinson@cefaf.co.uk
Sieto Verver	IMARES Netherlands	Phone: +31 317 4890045	sieto.verver@wur.nl
Sofia Carlshamre	SLU, Lysekil Sweden	Phone: +46 52318772	sofia.carlshamre@slu.se
Sofie Nimmegeers	ILVO Ankerstraat 1 8400 Oostende Belgium	+32 59569806	sofie.nimmegeers@ilvo.vlaanderen
Sofie Vandemaele	ILVO Ankerstraat 1 8400 Oostende	Phone: +32 59 569883	sofie.vandemaele@ilvo.vlaanderen.be

	Belgium		
Twan Leijzer	IMARES Netherlands	Phone:	twan.leijzer@wur.nl
Alastair Pout	Victoria Quay 1st floor EH6 6QQ Edinburgh, UK	+44 1224 876544	A.Pout@MARLAB.AC.UK
Lucia Zarauz	AZTI Txatxarramendi ugartea z/g Sukarrieta (Bizkaia)	Phone: + 34 94 60 29 400	lzarauz@azti.es
Estanis Mugerza	AZTI Txatxarramendi ugartea z/g Sukarrieta (Bizkaia)	Phone: 34 94 6029446	emugerza@azti.es
Ain Lankov	Estonian Marine Institute Lootsi 2A 80012 Parnu Estonia	Phone:	ain.lankov@ut.ee
Celine Rodriguez	IRD France		celine.rodriguez@ird.fr

Appendix b (Terms of Reference)

A **Workshop on introduction to use the Regional database FishFrame** (Co–chairs: Kirsten Birch Håkansson and Henrik Degel), will be established and will take place in ICES headquarter, Copenhagen, Denmark, during 29 May – 1 June 2012 to:

- a) Clarify the structure and the individual variables in the FishFrame Exchange Format.
- b) Discuss the experience gained by the participants during pre–workshop data upload. This will include:
 - i) Assure consistent interpreting of variables
 - ii) Discuss the national ability to comply to the existing Exchange Format and identify shortfalls with that format
 - iii) Identify experienced technical obstructions causing failure in the upload of data
 - iv) Identify needs for improvement in the documentation to support uploads of data into FishFrame
- c) Survey of methodologies used to produce the FishFrame exchange format from national databases, including potential future plans

Comments:

The workshop will be use as support for the Members States to upload data from the EU 2012 data call (ref.xx). Participants need to convert data (sampling, effort and landings) into FishFrame format prior to the meeting. There will be time during the workshop to work with uploads of national data. Participants are however advised, in order to get the most out from the meeting, have tried to upload data into FishFrame prior to the workshop.

Priority	Therefore this activity is considered to have a very high priority. The workshop will be use as support for the Members States to process data from the data call to be launched by the RCMs chairs in 2012.
Scientific justification	Fill in
Resource requirements	It is desirable that data of of the Data Call from RCMs chairs is upload in advance to the Regional Database.
Participants	Data processors and “first time users” of FishFrame in North Sea and Atlantic regions. The WK open for participants from other regions and non EU countries as well.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	There are no obvious direct linkages with the advisory committees.
Linkages to other committees or groups	There is a very close working relationship with WGNSSK, WGCS, WGHMM, WGWIDE, WGDDEEP, WGEF, WGHANSAand PGCCDBS.
Linkages to other organizations	The work of this group is closely aligned with the Steering Committee of the Regional Database, and the RCM– NSandEA and RCM–NA.

Appendix c (Time table)

Time shedule of WKRDB II 2012

Tuesday, 29nd May

09:00	
10:00	Welcome, introduction and household remarks
10:30	Going through the ToR and adoption of the time schedule
11:00	Coffee break
11:30	Overview and status of the upload situation for each country
12:00	Presentation of the RD_FishFrame Exchange format structure (ToR a) by Henrik
12:30	Going through the variables in the Exchang Format (ToR a and bi) by Henrik.
13:00	Lunch break
13:30	
14:00	
14:30	
15:00	Working on own data
15:30	Coffee break
16:00	Working on own data
16:30	
16:45	Status of work on own data today and closing

Time shedule of WKRDB II 2012

Wednesday, 30th of May

09:00	Good morning
09:30	Difficulties anticipated during preparation of data (ToR bii and biii)
10:00	
10:30	
11:00	Coffee break
11:30	Working on own data
12:00	
12:30	DCF data supply & FishFrame-COST standardexchange format. Celine Rodriguez
13:00	Lunch break
13:30	
14:00	Working on own data
14:30	
15:00	Coffee break
15:30	Working on own data
16:00	
16:30	Status of work on own data today
17:00	Closing

Time shedule of WKRDB II 2012	
Thursday, 31 st of May	
09:00	Good morning!
09:30	Presentation of the upload procedure by Henrik
10:00	Working on own data
10:30	
11:00	Coffee break
11:30	How does each lab extract data from the national data source into the Exchange Format?
12:00	
12:30	Can the extraction process be automized? (ToR c)
13:00	Lunch break
13:30	
14:00	Working on own data
14:30	
15:00	Coffee break
15:30	Working on own data
16:00	Is the documentation of the Exchange format and the upload procedure suficient? (ToR biv)
16:30	Status of work on own data today
17:00	Closing

Time shedule of WKRDB II 2012	
Friday, 1 st of June	
09:00	Good morning!
09:30	Discussion: Exprienced gained. Does the existing Exchange Format include the necessary variables for present and future requeries for processed data (ToR b ii).
10:00	
10:30	
11:00	Coffee break
11:30	Following up on unclosed issues
12:00	
12:30	
13:00	Closing of the meeting and coffee

Appendix d (Texts about national databases and extraction of RDB-FishFrame Exchange format)

Belgium.

The Belgian statistical data (effort and landings) is provided to us by the Sea Fisheries Department and is stored in an ACCESS database ("BELSAMP") in our institute. We are able to extract the CE and CL data in the right format using consecutive queries.

The commercial sea sampling data are stored in another ACCESS database ("DISCARD"). Because we were familiar with the COST format, we managed to extract the different levels (TR, HH, SL, HL and CA) of the CS format as separate csv files quite easily. Problems arose from the fact that the different levels are supposed to be in a specific order. During the WKRDB2, a C++ script was developed to convert the separate csv files to one csv file with the required CS format. Although this procedure works well, we would like to go for an automatic procedure in the near future.

The individual age/length information from the commercial market sampling is stored in the same ACCESS database ("DISCARD") and therefore the upload in FishFrame is expected to be feasible. The length frequency data on the other hand is only available in excel sheets and therefore creating the CS format might not be obvious.

England

Most market length and biological samples are entered and stored on the Cefas Biological Sampling database – a Microsoft sql server database. This database structure was developed before the need to collect DCF concurrent samples and grouped species samples and therefore many samples have to be entered and stored on MS access databases instead. All at-sea samples collected are stored on yet another Cefas sql server database called 'Observer'. All catch and effort information will be extracted for the whole UK by UK(Scotland) and uploaded by the component countries.

We are writing Microsoft SQL scripts to extract the data in the required FishFrame format. We have made good progress with this, but have yet to carry out the finalized extractions. One issue still to resolve is the 'merging' of the component record types and this may or may not be straight-forward.

In order to extract these data in the required format we have faced a number of issues with our data and the format. The main problem has been for trips where multiple grounds have been fished and samples allocated to >1 of these grounds. This leads us to be unable to link the species records to the appropriate HH record (region/rectangle). In order to overcome this, we had to create upload data files where the samples are loaded on as trips. This leads to many more TR records being loaded.

The second major issue we have had is in relation to Anglerfish length sample data. Basically our data comes from markets where the anglerfish are landed as a grouped species with a single landed weight. Our samplers take measurements from this catch

and identify the sub-species for each fished measured ending up with 2 length compositions from the same box(es) of fish but with a single total landed weight and sample weight. In our national database, these are handled by treating the two sub-species as a different sex (we use L and W) with the species code being the generic one (ANF). This is far from perfect and we are moving away from this with our new database build.

Our difficulties in getting these data into FishFrame have been our inability to convert our sub-species (sex) codes of L and W into a species code in the HL record (the specific scientific name) as this would then be inconsistent with the species code in the SL record..... We have had to leave the HL/SL species codes as the generic anglerfish code (ANF) and set the sex to blank. In addition we have had to combine the two length compositions for the sub-species to ensure we don't have multiple records for the same length interval. In doing this we have essentially 'lost' the species disaggregated data. This is far from perfect once again. In order to overcome this, an additional field in the SL and CA records of 'sub-species'.

This issue will also be a problem for other 'grouped' species landings such as skates/rays, gurnards and squid all of which we are now sampling.

In the HH/CA records, we were unable to use the date of the 'first haul' for our commercial market samples as this information is not held with the sample data. We used the date of landing in place of this.

In order to get our data to 'fit' with the FishFrame format and fit in with the field codes available to us, we have had to put much effort into re-coding many of our own codes. The FishFrame data exchange format document was very helpful, but users could still do with some additional assistance in terms of mandatory/optional fields and the available codes for each field.

This workshop was of great use in terms of the expertise on hand to help and in hearing the issues and problems faced by our colleagues in other fisheries institutes.

Estonia

Estonian sampling strategy and national database descriptions

The commercial sampling of DCF species (mostly herring, sprat, cod, flounder) sampling is performed on monthly basis by ICES sub-divisions and métiers, adopted by Baltic RCM. Sampling strategy is random sampling.

For local species (e.g. pike) where analytical assessment has not been used and can probably not be used in future, Estonia follows the stock situation using test-fishing data (CPUE, age/length distribution) for advice.

The Database of biological parameters has been partly incorporated into the Estonian Fisheries Information system (up to 2008 FishFrame 3.2. format) and also is available

in Excel format in the Estonian Marine Institute. The landing and effort information is collected by the Ministry of Agriculture.

Estonian Ministry of the Environment is responsible for regulating the questions concerning the protection of marine nature and environment, as well as for solving the tasks concerning the use of marine resources. The Fish Resources Department, manages and co-ordinates research, assessment, exploitation, reproduction and protection of fish resources.

Spain (AZTI)

Situation of regional database in AZTI (Basque country)

AZTI has responsibility on sampling catches landed in Basque Country ports. All our market samples (length and biological) and at-sea samples are entered and stored on AZTI's Fisheries Database, and we have to coordinate with the Spanish National Correspondent (SGM) and IEO to decide how our sampling data will be uploaded in the RDB.

Work has been done to adapt AZTI's database to the COST format; however, further work is needed to change it to FishFrame format. First we have to solve several problems related with commercial categories homogenization, allocation of trips to divisions, definition of lookup tables, and key variables which are not unique in CS files. Secondly, we have to rearrange CS files in the FishFrame format.

Sweden

Swedish sampling data are stored in an Oracle database at the Institute of Marine Research and CS data are extracted in the FishFrame format.

The landings and effort tables are compiled with R scripts from logbook data, which is provided by the Swedish Agency for Marine and Water Management (former Swedish Board of Fisheries). The logbook is on haul level and each haul is assigned to a métier on level 4, 5, 6 and National before the tables are compiled. Days at sea are calculated for each trip from departure/arrival time. If a trip covers more than one métier or area, days at sea for the trip are usually allocated to the métier/area where most of the catch is taken. However, in the very few cases where a trip covers more than one sampling stratum (National métier) days at sea for the whole trip are at present allocated to both strata.