

Council Regulation (EC) No. 199/2008 of 25 February 2008  
Commission Regulation (EC) No. 665/2008  
concerning the establishment of a Community framework for the collection, management and  
use of data in the fisheries sector and support for scientific advice regarding the Common  
Fisheries Policy

**ANNUAL REPORT ON THE COLLECTION OF BASIC FISHERIES DATA**

**YEAR 2013**

**FRANCE**

**Version 2 (15 septembre 2014)**

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## I. General framework

The French national programme for the collection of basic fisheries data for the years 2011-2013 was defined under the terms of Council Regulation (EC) 199/2008 of 25 February 2008 establishing a Community framework for the collection and management of the data required for the implementation of the Common Fisheries Policy, and is supported by the implementation of the Commission Regulation (EC) 665/2008 of 14 July 2008 and Commission technical decision 2010/93/UE of 18 December 2009.

Reform of the regulation on data collection (the commonly used acronym for which is DCF, standing for *Data Collection Framework*’ in 2008 led to highly significant changes in programming, the main instances of which are listed below:

- implementation of an information system for the collection of fisheries and aquaculture data at the national level in order to meet the requirements of the regulation in terms of access to databases, securing of the latter and system automation for timely response to data calls,
- use of a ranking system for the determination of the métiers to be sampled,
- integration of amphihaline species and economic data on aquaculture,
- integration of ecosystem indicators to be provided by processing of data collected under relevant DCF modules and which form part of the data collected under this regulation.

The programme carried out by France for the year 2012 thus corresponds to the fourth year of implementation of new Council Regulation (EC) no. 199/2008. The multi-annual National Programme (NP) 2011-2013 was accepted by DG Mare for the three years.

### List of French derogations

Short title of derogation	NP Proposal section	Type of data	Region	Derogation approved or rejected	Year of approval or rejection	Reason / Justification for derogation
Metiers in area I and II	NS-III.C.6	C	NS&EA	Approved	2009	<10% TAC, and industrial vessel doing frozen filets
FPO_MOL_0_0_0 in VIIe	NA-III.C.1.(b)	C	NA	Rejected	2009	
DRB_MOL_0_0_0 in VIIIab	NA-III.C.1.(b)	C	NA	Approved	2011	Target species not in App VII
Recreational fisheries for eel in marine waters	III.D.6	D	NS&EA, NA and MED&BS	Approved by LM	2009	No catches
Recreational fisheries for salmon in marine waters in the North	III.D.6	D	All	Approved	2011	No catches

Short title of derogation	NP Proposal section	Type of data	Region	Derogation approved or rejected	Year of approval or rejection	Reason / Justification for derogation
Atlantic (VIIe and VIII areas)						
Recreational fisheries for cod in the North sea for 2011 & 2013	III.D.6	D	NS&EA	Approved	2011	Catches not given to be significant compared to professional
Stocks of <i>Melanogrammus aeglefinus</i> and <i>Gadus morhua</i> in zones I and II	NS-III.E.5	E	NS&EA	Approved	2009	<10% TAC, and industrial vessel doing frozen filets
Specific effort variables	III.F.2.5	F	All	Pending pilot study	2009	Cost /effectiveness too high
Time level for effort variables	III.F.2.5	F	All	Rejected	2009	
Time level for landings variables	III.F.3.5	F	All	Rejected	2009	



## **II. National data collection organisation**

### **II.A National correspondent and participating institutes**

#### **II.A.1 National Correspondent**

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#### **II.A.2 Partner institutes**

##### **IFREMER**

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IFREMER is a contributor in the four regions in which France conducts fisheries activities, i.e. the North Sea and Eastern Arctic, North Atlantic, Mediterranean and 'Other Regions'.

IFREMER contributes to the collection of data for the modules relating to economic data (execution of activity surveys), the collection of biological data (sampling at markets, at sea, during scientific campaigns), transversal data and ecosystem data (indicators deriving from campaigns, discard indicator, VMS, etc.)

##### **IRD**

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IRD contributes to the French National data collection in the tropical Indian and northeast Atlantic regions with regards to tropical tuna fisheries. IRD contributes by gathering data for the collection of fisheries (sampling of landings and transshipments and sea observers) and biological data (sampling at processing factories). The “Observatoire Thonier” in charge of this contribution to DCF is ISO 9001 certified since January the 12<sup>th</sup> of 2009.

## **LEMNA**

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LEMNA contributes through the collection of economic data for the North Sea and Atlantic, the Mediterranean and Other Regions (Réunion, French Guiana, etc.).

LEMNA is also responsible for the management of data collection in aquaculture.

## **FranceAgriMer**

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FranceAgriMer contributes to the collection of data on the processing industries.

## **ONEMA**

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ONEMA contributes through the collection of data on inland waters.

**FNPF**

*Fédération nationale pour la pêche en France et la protection des milieux aquatiques*

National federation for fishing in France and the protection of aquatic habitats

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FNPF works with ONEMA on the collection of data on inland waters.

**MNHN**

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The MNHN is active in the Southern Ocean and South Indian Ocean Fisheries and on taxonomy studies. The MNHN contributes to the collection of biological data from North Atlantic targeted fishery species. The MNHN provides taxonomic expertise and taxonomic reference lists

**II.A.3 National coordination**

National coordination meetings with all people involved in the French NP are held twice a year. The main aim of these meetings is an exchange of experiences during the recent year of NP implementation and planning of data collection in the upcoming year.

A national website to follow up DCF data calls was established in 2010 in accordance with Commission Regulation (EC) 665/2008 Article 8(2):

[https://aces.agriculture.gouv.fr/sip\\_dcf](https://aces.agriculture.gouv.fr/sip_dcf)

1) First national coordination meeting: 13-14 March 2013

The first DCF coordination meeting took place at the FNPF (Paris).

The following issues were discussed:

- Administrative and financial state of play, contracts with partner institutes
- Revision of budget for the 2013 DCF national program
- Presentation of the DCMAP and EMFF
- Minutes of the last international meetings
- Data calls
- Links between DCF and MSFD

2) Second national coordination meeting: 26-27 September 2013

The second national coordination meeting took place at IRD in Sète.

The following issues were discussed:

- Administrative and financial state of play
- Presentation of the DCMAP and EMFF
- Minutes of the last international meetings
- Data calls

## **II.B Regional and International coordination**

France attended the DCF coordination meetings for the North Sea and Eastern Arctic, North Atlantic, Mediterranean and Black Sea regions and Long Distance Fisheries.

### **II.B.1. Attendance at international meetings**

Most of the planned meetings have been attended by French representation in 2013. French experts participated in some other eligible but not planned meetings according their availability. The meeting attendance is listed in table II.B.1. France did not participate in meetings :

- related to the Baltic because there is no French fisheries in this area,
- related to small pelagic surveys and related to species such as horse mackerel or herring because these species are mainly landed abroad and there is no French experts.
- related to NAFO Pandalus fisheries because there is no such French fishery,

DCF surveys are coordinated internationally by ICES planning groups or DCF *ad'hoc* groups for Mediterranean MEDITS and MEDIAS. The survey planning groups, which were relevant to France, were in 2013 attended by representatives from France, including for potential

eligible surveys like Channel Ground Fish Survey-CGFS (WGIBTS) and ORHAGO survey in Bay of Biscay (WGBEAM).

Table II.B.1 does not summarize complete 2013 attendance of France to various other meetings, organized under RFMOs or EU umbrellas. Especially for STECF and its experts working groups (EWG) where French experts contribute as independent ones. Ifremer and IRD experts also participated, supported financially by DPMA, more numerous in DCF eligible ICES WG and ICCAT, IOTC, WECAFC and NAFO Workings Groups.

### **II.B.2. Bilateral agreements and coordination**

France has made agreement on collection of biological sampling of landings, such as the Netherlands (pelagic trawling for small pelagics) and Ireland (demersal trawling). France applied also the multilateral agreement defined by RCM-Med&BS and PGMed on large pelagics sampling in the Mediterranean. Sole age-length keys are also coordinated under RCM-NS&EA umbrella and shared between France, UK and Belgium. These bi- or multilateral coordinations continued in 2013.

In the context of the tropical tuna programme, there is a close cooperation between IRD, IEO and AZTI scientific staffs and this is reflected every year, since 2000, by an official agreement between Spain and France at the involved institute's level (cf Annex 1 of the report). A joint meeting of these agencies is organised once a year, alternatively in France or in Spain. In 2013, this meeting was held in Canary Island (Spain) in April 2013. Such meetings provide an opportunity to address the European tropical purse seine tuna fleet as a whole, to review the main focal points for cooperation to be sustained and/or developed between the institutes, in line with ICCAT and IOTC recommendations, as well as to define and prepare common European actions under the aegis of these two international organisations. Sampling activities are conducted jointly using identical procedures and data processing for both fleets considers all the samples obtained.

All information on these agreements are summarized in the specific file provided with the guidelines for AR 2013 (sheet FR - France).

### **II B.3 Follow-up on regional and international recommendations**

As recommended by the new guidelines 2013, technical 2012 recommendations made by RCM NS&EA, RCM NA, RCM Med&BS and RCM LDF and directly addressed to Member states are listed in the relevant technical modules. Actions taken by France in response are also provided.

So only recommendations which are not dealt with a specific section of the report and which apply to MS must be listed in this section.

**France has taken into consideration these general recommendations and will pay close attention to the reading of the documents presented by the relevant RCM.**

9<sup>th</sup> Liaison meeting Report (September 2012) – RCM NS&EA 2012 general recommendations

<b>Regional Database: Review of the Data Policy Document</b>	
<b>RCM NS&amp;EA and RCM NA 2012</b>	In respect of the development of the RDB and the protection of the data and the ownership of the data, a draft Data Policy

<b>Recommandation</b>	<p>Document has been established. The data policy document is based on the current situation but need to reviewed in all its aspects in order to be satisfactory for all MS. The data policy document is a “flexible” document and must be updated as the needs and the development of the RDB are changing.</p> <p>For example, a new data policy document will be prepared if there are changes to the exchange format (update is needed). The document is available in Annex 5 of of the RCM report or through link:</p> <p><a href="https://groupnet.ices.dk/rcm2012/nsea/.....">https://groupnet.ices.dk/rcm2012/nsea/.....</a></p>
<b>Follow-up actions needed</b>	<p>The National Correspondents (NC) from all MS are requested to read through the document, and sent all remarks and/or suggestions for improvements to the chair of the relevant RCM and to the RDB Steering Group (RDB-SG). Even if the NC has no specific remarks or suggestions, it is recommended to send a notification that the document has been read. Based on the input from the NCs, an updated version will be presented at the next NC Coordination meeting organized by the EC.</p>
<b>Responsible persons for follow-up actions</b>	<p>Chair RCM &amp; RDB-SG, National Correspondents of all MS, EC</p>
<b>Time frame (Deadline)</b>	<p>Before the 15th of November 2012</p>
<b>LM 2012 comment</b>	<p><b>LM agrees with this recommendation and recommends the Commission to forward the request to the NC's. .</b></p>

9th Liaison meeting Report (September 2012) – PGECON general recommendations

<b>Definition variable “direct subsidies”:</b>	
<b>PGECON 2012 Recommendation</b>	<p>“direct subsidies” should include:</p> <p>refunds of fuel duty, subsidies for temporary cessation, socio-economic compensation for fishermen</p> <p>“direct subsidies” should exclude:</p> <p>Fuel tax exemption ,Subsidies for permanent cessation of fishing activities, investment subsidies (fleet modernization)</p>
<b>Follow-up actions needed</b>	<p>Guidelines DCF should be adjusted</p>
<b>Responsible persons for follow-up actions</b>	<p>DG Mare, MS</p>
<b>Time frame (Deadline)</b>	<p>Beginning 2013</p>

<b>LM 2012 comments</b>	<b>No specific comment from LM</b>
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### **III. Module of the evaluation of the fishing sector**

#### **III.A General description of the fishing sector**

From the fisheries sector description available in the NP proposal 2011-2013, there is no change reported in 2013 for the following areas :

- Areas I&II
- North Sea (IV) and Eastern Channel (VIId)
- Western Channel (VIIe)
- Irish Sea (VIIa)
- Celtic Sea (VIIfgh)
- West of Ireland (VIIbcjk)
- West of Scotland (VIa)
- Faeroe Islands (Vb)
- Bay of Biscay (VIIIabde)
- Mediterranean Sea (GSA 7 and GSA 8)
- WECAFC area - French Antilles and French Guiana
- NAFO area - Saint-Pierre et Miquelon
- Central East and West Atlantic (tunas fisheries)
- Indian Ocean - La Reunion Island
- Indian Ocean (tunas fisheries)



## **III.B Economic variables**

### **III.B.1 Achievements: Results and deviation from NP proposal**

#### Data Collection

The economic variables on activity of year 2012 were collected in 2013 in accordance with the projected sampling plan.

The segmentation of the fleet has been defined on the basis of the reference population at the end of 2011 and on the activity of vessels in 2012. The reference population per segments has been updated in the table III B1.

For the Atlantic-North Sea-Baltic and Mediterranean supra-regions, the sample of vessels is representative of the whole fleet and covers all segments.

As regards the other regions:

LEMNA and his partners continued collecting data on longliners in the Reunion Island

PWC also continued supplying complete data for the tropical seiner segment.

Ifremer collected data and provided economic variables in French overseas departments (DOM), and more particularly for small scale fleets:

French Guyana: DFN (Drift and/or Fixed Netters)

French Guadeloupe:

- FPO (Vessels using Pots and/or traps)
- DFN (Drift and/or Fixed Netters)
- HOK (Vessels using hooks)
- PGP (Vessels using Polyvalent 'passive' gears only)

#### Clustering of fleet segments

The table III.B.2 shows the fleet segments that have been clustered. There are in total 23 clusters: 14 for the supra-region Atlantic-North Sea, 9 for the Mediterranean Sea and one for other regions. Very small segments in terms of number of vessels have been clustered for confidentiality reasons and for processing results. Those segments have been merged with another segment of similar characteristics (similar category of gears or adjacent length class).

#### Production of indicators

In 2013, DPMA and its partners have carried out important work on statistical analyses of collected data in order to improve the quality of economic indicators.

As regards the calculation of capital variables, the PIM methodology has been performed in order to estimate depreciation costs and depreciated replacement value for 2012. Those data have been transmitted except for some segments for which raw data used to perform PIM methodology were not available (DTS 18-24, DTS 24-40, PS 24-40 in area 37 and HOK 12-18, HOK 18-24 in Other Regions). Moreover, data were not transmitted for vessels over 40 meters because according to the results it seemed that the methodology applied was not relevant for the larger vessels (>40m). The PIM methodology has not been applied yet for years before 2012. Indeed, the values we estimated for depreciation costs with the PIM methodology are higher than those obtained previously. Therefore the method and its use still need to be assessed by experts in order to validate the indicators.

Concerning employment indicators (job and FTE), there are different data sources to estimate them. We have started comparing the different data sources and methods in order to choose one of them and to use it to better estimate employment indicators on the time series.

### **III.B.2 Data quality: Results and deviation from NP proposal**

In 2013 the sampling plan has been improved according to the NP proposal.

In the course of 2012 DPMA and its partners carried out important work on optimization of the sampling plan in order to improve the representativeness of samples and the precision of indicators. This led to the definition of a new method for sampling and selection of vessels for data collection in 2013. We have decided to apply from 2013 onwards a method of probability sampling instead of the previous method of non probability selection of vessels, which proved difficult to calculate accuracy indicators. The size of the sample of vessels per segment is determined in order to meet precision objectives for an indicator representing a correct proxy of the turnover, available for all vessels. Then vessels are selected by systematic random sampling, the fleet having been classified, inside each segment, by size and maritime quartier, which assures a good representativeness of the overall diversity of the French fleet. This method has been applied as foreseen.

At the stage of data processing, the method for processing on non-responses and extrapolation of results has been improved, following recommendations made by the French National Statistical Institute (INSEE) on best practices on statistical processing of sample surveys.

In 2013, as explained above, the calculation of capital variables for 2012 has been implemented with the PIM methodology but there are still methodological difficulties and questions about the quality of estimates. That is why the method still needs to be refined. DPMA and its partners are going to carry on with this work in 2014.

### **III.B.3 Follow-up of Regional and international recommendations**

Referring to recommendations of PGECON 2013:

- France is very much interested in progress in methods for disaggregation of economic data, as we receive a number of requests for indicators on sub-regions or subpopulations, some of them to be used by STECF groups (ex: management plans in the Bay of Biscay, for which a specific data call including economic indicators was sent by the Commission). Therefore France strongly supports the PGECON's proposal for a study on this issue;
- Establishment of thresholds: there were two French participants in the workshop on statistical issues and thresholds organized in Helsinki in December 2013. The proposed handbook on best practices on sampling design and estimation methods will certainly be a very useful tool to help improve our methods.

#### **III.B.4 Actions to avoid shortfalls**

In 2013 DPMA and its partners continued working in order to improve the methodology for producing the indicators, according to the recommendations made in the working groups preparing the annual economic reports.

As mentioned above, common work will continue in 2014, especially on the following issues:

- Improvement of the coherence of estimation of employment, especially FTE;
- Improvement of the method of calculation of capital costs and capital value variables and of the quality of indicators;
- Stabilising clusters and improving the consistency of time series of economic indicators.

### III.C Metier-related variables

#### General considerations applicable to the North Sea & Eastern Arctic, North Atlantic and Mediterranean Sea regions

The codifications and conventions used for reporting are those provided by the 5th Liaison Meeting (Anonymous, 2009) and reviewed by the 6<sup>th</sup> Liaison meeting (Anonymous, 2010). The metiers to be sampled were selected using the ranking system described by Commission Decision EC/93/2010, section III B.B.1.3.(1)(b).

The sampling strategies for estimation of catch and discard volumes, plus their size and age structures for the metiers identified in Table III.C.1, are detailed in Table III.C.3. Table III.C.2 provides a comprehensive overview of the groupings and divisions applied to the metiers from 2011 to 2013.

As from 2009, France continued on the path of high sampling effort in the collection of information based on observation at sea in order to fulfil its DCF. Sampling protocols for the collection of information on board fishing vessels are available online<sup>1</sup>.

All efforts made previously to improve data acquisition and quality, manage data flows to enhance data validation and archiving, and to make the information available for a range of uses were continued in 2011, 2012 and 2013. In particular, a new tool (Allegro) for populating the information together with quality control rules and archiving in the Ifremer database Harmonie, was made available from mid-2010 for on-board observers. In 2011, Allegro software was completed with data validation and reporting functionalities. Early 2012, historical data from at-sea observations (2003 – 2011) were transferred in the central database Harmonie. The on-shore version of Allegro was made available in November 2012 and the historical data series of shore sampling moved to Harmonie at the same moment.

The increase in the volume of observations required a tool for monitoring the sampling plan in order to compare in real time what has been planned with what has been completed and to provide a warning if there is a serious shortfall or to allow adjustments to be made. As from 2011, the Web application WAO (Web Applicatif Observation) was fully operational for both observation at sea and observation on shore. This software allows the sampling plan to be followed in detail all year long, and was the object of major updates in 2011, including access rights for the industry, and new information for the sampling dashboard. A web connexion access has been given to all personnel contributing to observations for both on board professional vessels (Obsmer) and under auctions (ObsVentes). The software was presented to STECF in November 2011.

One of the side effect of the implementation of this software is that the frame codes for sampling have changed from those proposed in tables III.C.3 and III.C.4, moreover taking account of the WKPICS recommendations of sound sampling schemes. France wishes to propose a new set of tables III.C.3 and III.C.4 which would ease the production of statistics and metadata automatically from the central database.

WAO also authorises the quantification and qualification of the refusals. The four categories of refusals are (i) administrative constraints, (ii) temporary refusal, (iii) permanent refusal and

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<sup>1</sup>

[http://www.ifremer.fr/sih/affichagePageStatique.do?page=collecte\\_donnees/observations\\_mer/documentation/documentation\\_obsmer.htm](http://www.ifremer.fr/sih/affichagePageStatique.do?page=collecte_donnees/observations_mer/documentation/documentation_obsmer.htm)

(iv) other. A first analysis of this information shows that permanent refusal is very weak (<2%) and that sampling in the North Sea region and Mediterranean is mainly hampered by administrative constraints, whereas in the Atlantic, it is more by temporary refusal (boycott). The overall refusal rate is 32%. There is also a less known cancellation rate for weather conditions or change of gears/area which tops at 40%. At the end there is a need to initiate 10 contacts in order to succeed in sampling 3 trips.

Two training sessions for observers at sea have been conducted (not under DCF funding), one in April and the other in October. The training is composed of two modules:

- One dedicated to the objectives and sampling protocols;
- One dedicated to the fish identification.

On shore, France has continued the 2009 modified sampling protocols in order to carry out concurrent sampling. Due to the difficulty of following scrupulously the plan for sampling at sea, it was judged that there were risks in putting in place a fully complementary sampling programme between observations at sea and on shore. A number of the métiers considered important for certain species/stocks were thus sampled both at sea and on shore. The use of COST tools in dedicated workshops (discard estimation, length/age structure estimation) allowed a choice to be made between the two data sources or even in some cases to combine them.

The combination of concurrent sampling on shore and at sea generated a large quantity of measurement data for numerous species/stocks (cf. Tables III.C.5 and III.C.6). The use of COST tools when raising data allowed both data sources to be exploited when that was possible or necessary for the preparation of the 2012 and 2013 working groups.

At a stock level, the window 90%-150% used for evaluating under and over sampling may lead to inconsistencies. Stocks are sampled, and the realization will depend on their availability and their abundance at the moment of sampling. Eventually, the assessment Working group may be requiring more precision or stating that a country is not doing enough, which would be a real case of undersampling. Oversampling is not a problem for any user, and may falsely be seen as mis-balancing the sampling effort between stocks, thus creating undersampling. The reality is that the figures are the addition of measurements made on-board on the retained part and on-shore which adds up on the difficulty for a close monitoring of the implementation, but not prevent it. The sampling plan which is the basis for the DCF contract is about a number of trips to sample per sampling frame (III.C.4), thus in each of the sections over sampling under sampling and shortfalls will be based on this statistics.

Since 2012 for on-board sampling and 2013 for on-shore sampling, France is using a new software (WAO)

### *Special consideration on Chondrichthyans (sharks, rays and chimaeras)*

#### **Concerning the table III.C.4-Métier sampling strategy**

Six new lines have been added to this table in accordance with the NP proposal. Those lines allow the division of the national fish market places between Region, Geographical localisation (harbours) and Time stratification. In this manner, there are three lines for the monthly sampling of the North Atlantic region and three other lines for the annually sampling of fish markets divided by region (North Sea and Eastern Arctic, North Atlantic, Mediterranean Sea GSA07). Sampling for chondrichthyans is not divided by gear type or métier, but by auctions, commercial labeling and categories, this is the reason why the fields

fishing activities (table III.C.4), gear, target assemblage and métier (table III.C.3) are undefined.

**Concerning the table III.C.6- Achieved Length sampling of catches, landings and discards by metier and species**

The achieved length sampling on landings has been divided through regions. In total: eight species have been length sampled on 1445 individuals in the North Sea and Eastern Arctic region; 27 species on 15527 individuals in the North Atlantic region and four species on 252 individuals in Mediterranean Sea GSA07 region.

**Concerning the table III.E.3- Sampling intensity for stock-based variables**

Due to the different species’ presentation at landings (entire, wings, eviscerate, skinned), the sampling intensity for stock-based variables are different depending on species, regions and fish markets. Three types of variables are listed in this table from the data: Sex-ratio at length for 15 species (all three regions), maturity at length on male for 17 species (all three regions) and Weight at length on male and female for three species (North Atlantic).

**North Sea (IIIa, IV and VIId) & Eastern Arctic (I and II)**

**NS- III.C.1 Achievements: results and deviation from NP proposal**

Sampling on shore:

Sampling at market followed the concurrent sampling procedure, with the exception of Boulogne-Sur-Mer where the market access conditions do not permit a time-intensive procedure of this kind. In Boulogne, sampling was therefore carried out by commercial category. The on-shore shortcomings were overcome by a substantial at-sea sampling for trawlers and gillnetters. No samples were taken from lines and pots.

Sea sampling:

Application of the “concurrent sampling” protocol involves sampling the discarded and retained fractions of the catch when a fishing operation has been selected for analysis. All G1, G2 and G3 species are included in this sampling. In total, 167 trips were sampled at sea for 107 planned, corresponding to 56% more than the initial target.

The overall sampling achievement for the area is given below:

	<b>Planned</b>	<b>Achieved</b>	<b>% achieved</b>
<b>At-Sea</b>	107	167	156%
<b>On-shore</b>	86	56	65%
<b>Total</b>	193	223	115%

**NS- III.C.2 Data quality: Results and deviation from NP proposal**

It was possible to estimate precision levels for all species at a dedicated workshop using COST tools (Table III\_C\_5). The CV for the length structure tends to plateau at 0.15-0.2 when more than 2-3000 individuals are measured. Under 1000 individuals measured, the CV are high and not even representative of the actual variance. Volume of discards estimates is

still done on a very limited number of stocks and the CV are usually high, although not reported here.

France is using a global approach to optimise its sampling schemes and reach the best precision for the maximum number of species. This approach detailed in the Annex II of France NP proposal 2011-2013 and approved by ICES WKMERGE (2010, annex VI) is currently implemented after local expert comments before each sampling year. The *a posteriori* result is a range of CVs most of them reaching or approaching the desired precision (12.5% for landings and 40% for discards). As a consequence, not reaching the desired precision for ALL stocks must not be seen as a non-conformity or a deviation from the plan.

With on-board sampling reaching 167 trips instead of 107 (realization = 156%), there is less incentive to sample on-shore since France makes use of both sources of information for estimating the parameters used in assessment models. All sources combined, France sampled 15% more than planned, to the benefits of the end users. The real case of undersampling is *Pecten maximus*, but sampling will resume in 2014 since WGSCAL has been created in 2013 and will need data

### NS- III.C.3 Follow-up of regional and international recommendations

RCM 2012 recommendation	Action taken
Where it was identified that bilateral agreement is required, according to the rules agreed upon at the RCM NS&EA 2011 and endorsed by the LM8 and STECF 11-19, MS are requested to establish or update a bilateral agreement on sampling of landings abroad	Done where needed. All bilateral agreements are annexed to the National Programme.

### NS- III.C.4 Actions to remedy shortfalls

The software WAO-OBSVENTES was developed for real-time monitoring of shore sampling, emulating what exists for at-sea sampling. The tool was available for the 2011 sampling programme. The French sampling is largely based now on at-sea sampling more than on-shore sampling and this will continue as it is proved to be much more effective to collect information at sea. The RCM NS&EA in 2010 has called for on-shore sampling of metiers not sampled at-sea, and this is what is programmed in the years 2011 to 2013. The situation in Port-en-Bessin has improved in 2013 even though on-shore sampling remained under sampled.

An operational coordinator for on-shore sampling has been named at Ifremer and started early September, It is expected a closer follow-up of the sampling plan.

### North Atlantic (ICES areas V-XIV and NAFO)

#### NA- III.C.1 Achievements: results and deviation from NP proposal

Shore sampling:

Sampling at market followed the concurrent sampling procedure in virtually all markets. Samples dedicated to certain stocks were added in order to continue at a similar level of intensity as in previous years in the case of stocks for which there was a risk of fewer measurement data with the new protocol instituted by the new DCF. In total, **588** market sampling operations were conducted for 345 planned. It is worth noting that among the extra operations many were directed at sampling specific stocks (sole VIIIab and seabass notably).

Sea sampling:

Concurrent sampling involves sampling the discarded and retained fractions when a fisheries operation has been selected for sampling. All G1, G2 and G3 species are included. 513 trips were sampled in 2013 against 568 planned, which gives an overall 90% success rate.

The overall sampling achievement for the area is given below:

	<b>Planned</b>	<b>Achieved</b>	<b>% achieved</b>
<b>At-Sea</b>	<b>568</b>	<b>513</b>	<b>90%</b>
<b>On-shore</b>	<b>345</b>	<b>588</b>	<b>170%</b>
<b>Total</b>	<b>913</b>	<b>1101</b>	<b>121%</b>

Chondrichthyans:

The year 2013 statement has reached the objectives planned in the relevant national program proposal under section III.C. Biological - metier-related variables - Special consideration on Chondrichthyans.

As this survey is a recent action taken, we have brought improvements to the initial plan as to define a sustainable protocol. The survey, which was initially carried on all French fish markets (35), has been divided in two time stratification. A monthly survey on three of the biggest fish markets in term of Chondrichthyan's landings (Le Guilvinec, Lorient, Concarneau) and an annual survey of selected fish markets. This stratification provides a large amount of data compare to annual sampling of all French fish markets.

A total of 59 visits have been done in 2013; 36 for the monthly survey and 23 for the annual survey which represent 87% in regard to the fulfilment initially planned ([12 months × 3 fish markets]+32 other fish markets = 68 visits). It represents 244 commercial landings observed in which 31 species were identified (17224 individuals observed); with data collection on length, weight, maturity and sex. All the data collected by observers and scientists are computerized, checked and validated with specific software developed by the MNHN team. The datasets are then loaded in an Oracle database stored in a mainframe in the MNHN computer center.

**NA- III.C.2 Data quality: Results and deviation from NP proposal**

It was possible to make estimates of precision for the main species and metiers at a dedicated workshop using COST tools. Other studies have been done (but are not detailed in this report) on the 2010 sampling achievements with a view to the preparation of 2011 sampling programme, and these show that 30 to 50 trips per metier are necessary to obtain a CV of 20% for the species of interest for each metier. These results were presented at WKMERGE (January 2010) and the various RCMs since France does not wish to continue sea sampling at levels of intensity that do not permit satisfactory scientific use of the data collected. These



points, which were included in the National Programme 2011-2013, were discussed at RCMs in 2010.

The at-sea sampling achieved only 90% of the plan. The problems encountered in the Atlantic area were mainly due to administrative burdens, weather conditions, and unanticipated metier shifting at the end of the year.

France is using a global approach to optimise its sampling schemes and reach the best precision for the maximum number of species. This approach detailed in the Annex II of France NP proposal 2011-2013 and approved by ICES WKMERGE (2010, annex VI) is currently implemented after local expert comments before each sampling year. The a posteriori result is a range of CVs most of them reaching or approaching the desired precision (12.5% for landings and 40% for discards). As a consequence, not reaching the desired precision for ALL stocks must not be seen as a non-conformity or a deviation from the plan.

Chondrichthyans:

While the initial plan aimed to sample all French fish markets, only a part of them could be surveyed. In fact, besides the three fish markets visited monthly, 18 of the 32 others fish markets were visited annually and five of them twice a year to compensate the lack of data for the unvisited fish markets. The main difficulties of such a survey were the variation of Chondrichtyan’s landings due to fishing seasonality and /or the internal organization of fish market which allow or not a correct sampling during the process of sale.

As a consequence, it was necessary to develop a protocol more specific to Chondrichtyan’s landings based on a review of fishery statistics (by year and by month) on each fish market. The results of this study have led to draw up a protocol that include 26 potential fish markets of which three of them (Le Guilvinec, Lorient, Concarneau) are followed monthly. Those improvements lead to a new set of fish market which are planned to be visited in 2014 as followed: [12 months × 3 fish markets] + 23 other fish markets = 59 visits.

In conclusion, it should be noted that the survey of Chondrichtyan’s landings is new in the NP proposal, therefore the pre-established tables are not entirely adapted for those samplings at the moment. According to this, in the tables III.C.4 and III.C.6, there are neither “sampling frame code” (“undefined”) nor “planned total no. trips to be sampled” (“undefined”). Those tables are filled with new lines were the “metier” and “fishing ground” are “unknown”. We will be able to link up the commercial landings observed to the “metier” and the “fishing ground” as soon as the MNHN database will be switch into Ifremer’s Harmonie system.

We started to develop the interoperability processes which will allow to connect our database on the "Harmonie" database of Ifremer. We also started to develop the aggregation tools needed to provide statistical results and datasets for data calls.

**NA- III.C.3 Follow-up of regional and international recommendations**

RCM 2012 recommendation	Action taken
RCM NA 2012 recommends that the metier descriptions for fishing grounds under the remit of the RCM be updated by each MS in as much detail as possible. These descriptions to be used as a tool, in conjunction with outputs from the RDB, to identify metiers that could be	Done but not yet completed due to the large number of metiers to describe.

combined for regionally coordinated sampling plans	
RCM NA recommends MS put in place bilateral agreements for sampling of landings abroad where applicable	Done where needed. All bilateral agreements are annexed to the National Programme.
RCM NA recommends MS involved and that have obligations in the Boar fish fishery to set up a pilot program for sampling	The countries involved in the boarfish fisheries are Ireland, Denmark and Scotland (source Boarfish ICES advice 2013).

#### **NA- III.C.4 Actions to remedy shortfalls**

A quality-focused approach is being developed by Ifremer in order to monitor more effectively the execution of biological sampling plans. The protocols are now available on line at <http://www.ifremer.fr/sih> and numerous tools are in their implementation phase (data entry assistance by means of the Allegro tool, assistance in estimation and analysing the efficiency of sampling plans (an application of the COST tool)). See also the general considerations on sea observations at the beginning of section III.C.

In order to improve the achievement rates, the following actions have been undertaken:

- Updating of the sampling plan on a short time period
- Better cooperation with the industry by giving them access rights to the sampling dashboard 'WAO' and other communication actions;
- Facilitation of the administrative constraints for on-board observers.

**An operational coordinator for on-shore sampling has been named at Ifremer and started early September, It is expected a closer follow-up of the sampling plan.**

### **Mediterranean Sea and Black Sea**

#### **MED- III.C.1 Achievements: results and deviation from NP proposal**

##### Shore sampling:

Sampling is carried out at market in accordance with the usual procedures, and on landing for vessels under 12 metres (cf. "Transversal Variables" for more details on the sampling of landings). The samples were taken proportionally to the actual trips, and this may explain some differences between the planned and the realised sampling. The achievement rate is 129% (273 trips sampled out of 212)

##### Sea sampling:

In GSA 7, 98 demersal trawl trips were sampled against 150 in the plan.

As previous years, observers could not embark on board all continental Mediterranean professional vessels because of administrative problems concerning safety reasons (no more ad'hoc certificates delivered to vessel owners), but the situation steadily improves year after year.

In GSA08 (Corsica), 134 trips of the most important metier off the island were sampled by observers at sea and data will be available to GFCM and EU working groups as needed.

The overall sampling achievement for the area is given below:

	<b>Planned</b>	<b>Achieved</b>	<b>% achieved</b>
<b>At-Sea</b>	<b>294</b>	<b>232</b>	<b>79%</b>
<b>On-shore</b>	<b>212</b>	<b>273</b>	<b>129%</b>
<b>Total</b>	<b>506</b>	<b>505</b>	<b>100%</b>

### **MED- III.C.2 Data quality: Results and deviation from NP proposal**

It was possible to estimate precision for main species and metiers at a dedicated workshop and using COST tools. Every year, the sampling plan is revised to reflect the most actual fisheries behaviour.

France is using a global approach to optimise its sampling schemes and reach the best precision for the maximum number of species. This approach detailed in the Annex II of France NP proposal 2011-2013 and approved by ICES WKMERGE (2010, annex VI) is currently implemented after local expert comments before each sampling year. The a posteriori result is a range of CVs most of them reaching or approaching the desired precision (12.5% for landings and 40% for discards). As a consequence, not reaching the desired precision for ALL stocks must not be seen as a non-conformity or a deviation from the plan.

Sampling at sea in GSA07 was difficult as from the start of the programme, since very few vessels had an administrative authorisation to embark an observer. This number grew from 3 to 30 vessels in 2014, and the achievement followed the trend with 16 trips in 2010, 44 in 2011 and 73 in 2012. The objective remains high with 137 trips to sample, and the most recent result seems to confirm the improvement (10 trips sampled in April 2014).

### **MED- III.C.3 Follow-up of regional and international recommendations**

RCM 2012 recommendation	Action taken
The RCM MED&BS recalls its 2008 recommendation and recommends MS to investigate the accuracy of the geographical origin of landings and effort data (using the VMS data where possible). This information should be reviewed during the next RCM MED&BS	Data are available, particularly for big vessels as trawlers and purse seiners.
Concerning the east bluefin tuna stock (Eastern Atlantic and Mediterranean sea), the RCM Med&BS appreciates the progress achieved with the provision of metier- related data (length) from MS participating in RCM LDF (Portugal, France, Spain) to the PGMed chair. However, the Group recommends that the data are provided according to the required data format, in order to be actually utilized for a complete estimation of the relevant CV of the bluefin tuna.	French data on BFT in Bay of Biscay were correctly provided to PGMed.

### **MED- III.C.4 Actions to remedy shortfalls**

A quality-focused approach is being developed by Ifremer in order to monitor more effectively the execution of biological sampling plans. The protocols are now available on line at <http://www.ifremer.fr/sih> and numerous tools are in their implementation phase (data entry assistance by means of the Allegro tool, assistance in estimation and analysing the efficiency of sampling plans (an application of the COST tool). See also the general considerations on sea observations at the beginning of section III.C.

Sampling in Corsica (GSA8) has also been included officially in the French NP 2011-2013. The three regional main métiers (netters, offshore trawlers and large pelagics longliners) have been observed at sea, by implementing the national Obsmer protocol.

The administrative authorisation to embark an observer conditioned on safety elements, hampering the achievements of the sampling plan is slowly propagating to more vessels.

An operational coordinator for on-shore sampling has been named at Ifremer and started early September, It is expected a closer follow-up of the sampling plan.

### **Other Regions - Indian Ocean (IOTC)**

#### **IO- III.C.1 Achievements: results and deviation from NP proposal**

##### Purse seine port sampling

The purse seine fishery in the Indian Ocean has slightly increased its effort with the arrival of new vessels in 2013. The total number of trips was 122 in 2013 and the coverage by port sampling reached 96 % of trips.

##### Purse seine observer programme

The observer program in the Indian Ocean followed in 2013 the 2012 configuration combining an agreement with fishing companies and with TAAF administration in charge of monitoring fisheries in The Eparses Islands. 14 trips were observed reaching 11 % coverage.

The overall sampling achievement for seiners in the area is given below:

	<b>Planned</b>	<b>Achieved</b>	<b>% achieved</b>
<b>At-Sea</b>	119	117	96%
<b>On-shore</b>	12	14	116%

##### Longliner port sampling

24 trips were sampled on-shore out of a total of 474 trips in total for the longliner fishery. This is approximately the same coverage as usual.

##### Longliner at sea observations

Piracy occurring mainly north of Madagascar, the observer program on longliner is not affected and reached the expected coverage of 8 trips achieving around 5 % coverage of fishing activities of larger longliners (Length over all > 20 m) of the longline fleet. In the same time the drop of trips observed compared to 2012 is related to the exit from the fleet of these larger fishing vessels for economic reasons.

In order to improve coverage particularly for small longliners where observers cannot embarked with safety conditions, it has been set a self-reporting program (SRP) as recommended by RCM LDF (March 2010) with a minimum of 5 % coverage of effort like in regular observer programme on large longliners. A total of 398 sets have been sampled by self-reporting in representing near ~ 14 % coverage (in term of number of fishing sets). These rather high coverage data will be analyzed and results will be presented in 2014 IOTC working group meeting (Billfish and/or Ecosystem and Bycatch) in order to estimate the adapted coverage in terms of accuracy for this SRP.

### **IO- III.C.2 Data quality: Results and deviation from NP proposal**

#### Purse seine processing

The full re-engineering of the chain T3 ('Traitement des Thons Tropicaux') aimed at processing the European tuna purse seine and baitboat data started in 2011 (Cauquil, 2012a,b). It is not completely achieved due to the unexpected departure of the engineer in charge of the study and the delays required hiring someone with similar skills. The methodology to define new sampling strata has been modified and presented in April 2014 at an international working group held in Sète, France. Most of the data processing modules have been developed and validated and some corrections are currently in progress (Chassot 2014). The software will be finalized in 2014. Uncertainty estimates on catch data will be based on a procedure of re-sampling the distribution laws of size frequencies observed in the samples at strata scale.

#### Purse seine observer data

A detailed study on precisions associated with observer program data has been carried out for the Indian Ocean purse seine fishery (2003-2010) by Amandè et al. (2012). This study shows that the coverage level (4.6%) during this period resulted in a coefficient of variation (CV) of around 18% for the total bycatch estimate. CVs associated with bycatch estimates are highly dependent on the species frequency of occurrence: frequent species having the lowest CV estimates, but always below 50%. Improving CV of bycatch at the level of species would require a substantial increase in the observer coverage with a significant impact on the cost of the DCF and National Programs. Observer coverage financed by DCF is now around 10%, i.e. the level recommended by IOTC, although only 5% is mandatory.

Since 2013, a moratorium of fishing on DFAD (Drifting Fishing Agregating Devices) has been set in place by ICCAT during January and February which requires observer boarding. Moreover, fishing companies are engaged in a certification process with the ISSF (International Sustainable Seafood Foundation) including, in 2014, 100% coverage with scientific observers (human observer or electronic monitoring). This programme is in good progress in the Atlantic. These different initiatives conducted to a sharp increase in observer coverage (Fig. X). A good cooperation between IRD scientists and the French fishing companies allows ensuring good complementarities between the different programmes which are based on the IRD observer protocol and for which all the information collected is managed in the IRD ObServe database.

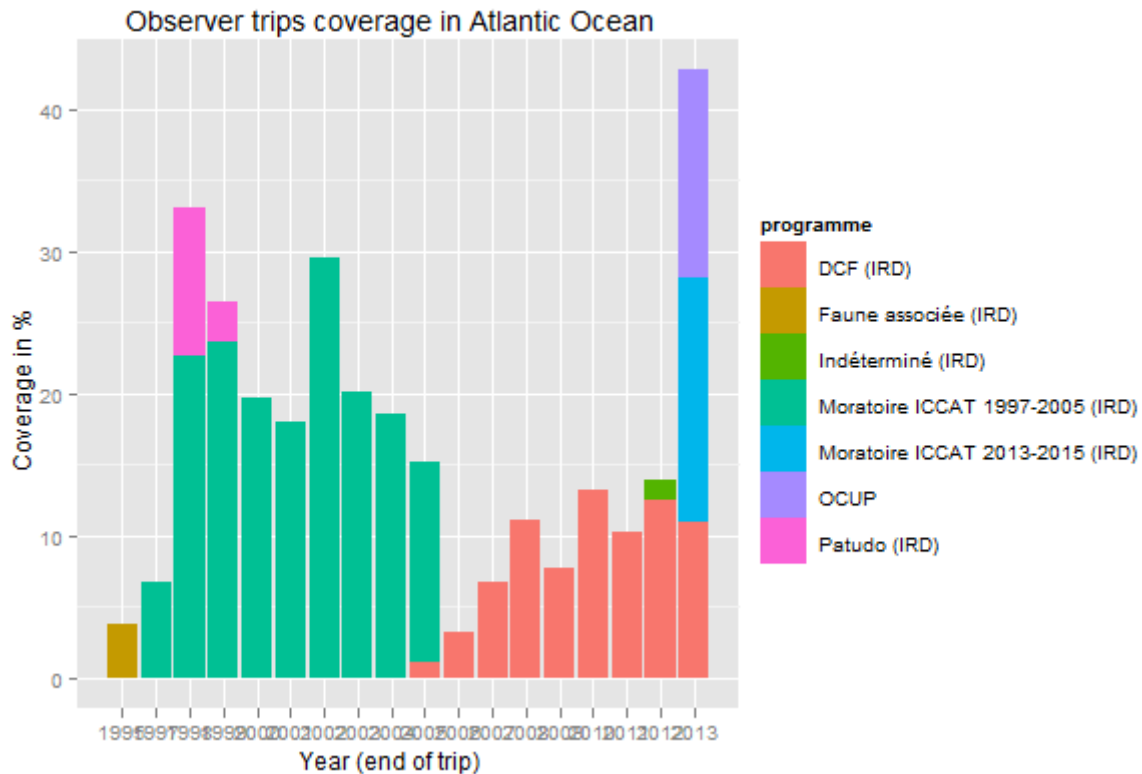


Figure 1: Tropical tuna purse seine observer trip coverage by programme. The sharp increase in coverage in 2013 is explained by the ICCAT Moratory and fishing companies initiative (OCUP programme)

**IO- III.C.3 Follow-up of regional and international recommendations**

Nothing to report.

**IO- III.C.4 Actions to remedy shortfalls**

Computation of CVs using an agreed method (Cost Tools) amongst RCM MED&BS-LP has been set in place during PGMed and RCM MED&BS-LP in September 2014. It was agreed that a data call (using the Standard Data Exchange Format) will be launched in march 2015 allowing computation of CVs during next meeting in 2015.

**Other Regions - Eastern Central Atlantic (ICCAT)**

**ECA-III.C.1 Achievements: results and deviation from NP proposal**

Bait boat port sampling

Only one French bait boat is still in operation in the Atlantic Ocean. This vessel realized 9 trips in 2013, 9 of which were sampled for species composition and size. The overall sampling achievement for the area is given below:

	Planned	Achieved	% achieved
At-Sea	0	0	

<b>On-shore</b>	9	9	100%
<b>Total</b>	9	9	100%

#### Purse seine port sampling

The purse seine fishery in the Atlantic Ocean has a slightly increasing number of trips compared to the reference period. The total number of trips in 2013 was 82. The sampling coverage is satisfactory with 83% of trips.

#### Purse seine observer programme

The observer program in the Atlantic Ocean in 2013 covered 9 trips representing 11% of total trips which is slightly above the target annual coverage of 10%. The overall sampling achievement for the area is given below:

	<b>Planned</b>	<b>Achieved</b>	<b>% achieved</b>
<b>At-Sea</b>	8	9	113%
<b>On-shore</b>	82	68	83%
<b>Total</b>	82	77	94%

### **ECA-III.C.2 Data quality: Results and deviation from NP**

#### Purse seine processing

The full re-engineering of the chain T3 ('Traitement des Thons Tropicaux') aimed at processing the European tuna purse seine and baitboat data started in 2011 (Cauquil, 2012a,b). It is not completely achieved due to the unexpected departure of the engineer in charge of the study and the delays required hiring someone with similar skills. The methodology to define new sampling strata has been modified and presented in April 2014 at an international working group held in Sète, France. Most of the data processing modules have been developed and validated and some corrections are currently in progress (Chassot 2014). The software will be finalized in 2014. Uncertainty estimates on catch data will be based on a procedure of re-sampling the distribution laws of size frequencies observed in the samples at strata scale.

#### Purse seine observer data

A detailed study on precisions associated with observer program data has been carried out for the Indian Ocean purse seine fishery (2003-2010) by Amandè et al. (2012). This study shows that the coverage level (4.6%) during this period resulted in a coefficient of variation (CV) of around 18% for the total bycatch estimate. CVs associated with bycatch estimates are highly dependent on the species frequency of occurrence: frequent species having the lowest CV estimates, but always below 50%. Improving CV of bycatch at the level of species would require a substantial increase in the observer coverage with a significant impact on the cost of the DCF and National Programs. Observer coverage financed by DCF is now around 10%, i.e. the level recommended by IOTC, although only 5% is mandatory.

Fishing companies are engaged in a certification programme with ISSF (International Sustainable Seafood Foundation) including, in 2014, 100 % coverage with scientific observers (human observer or electronic monitoring). This programme is in good progress in the Atlantic and will be set in place progressively in Indian Ocean. In this ocean, piracy risk implies presence of military forces on board reducing space availability for observers. For this area, electronic monitoring options have been tested (Chavance et al, 2013) and are seriously considered. A good cooperation between scientists and fishing companies permits to insure

complementarities of these programmes and gather all these informations in IRD ObServe database.

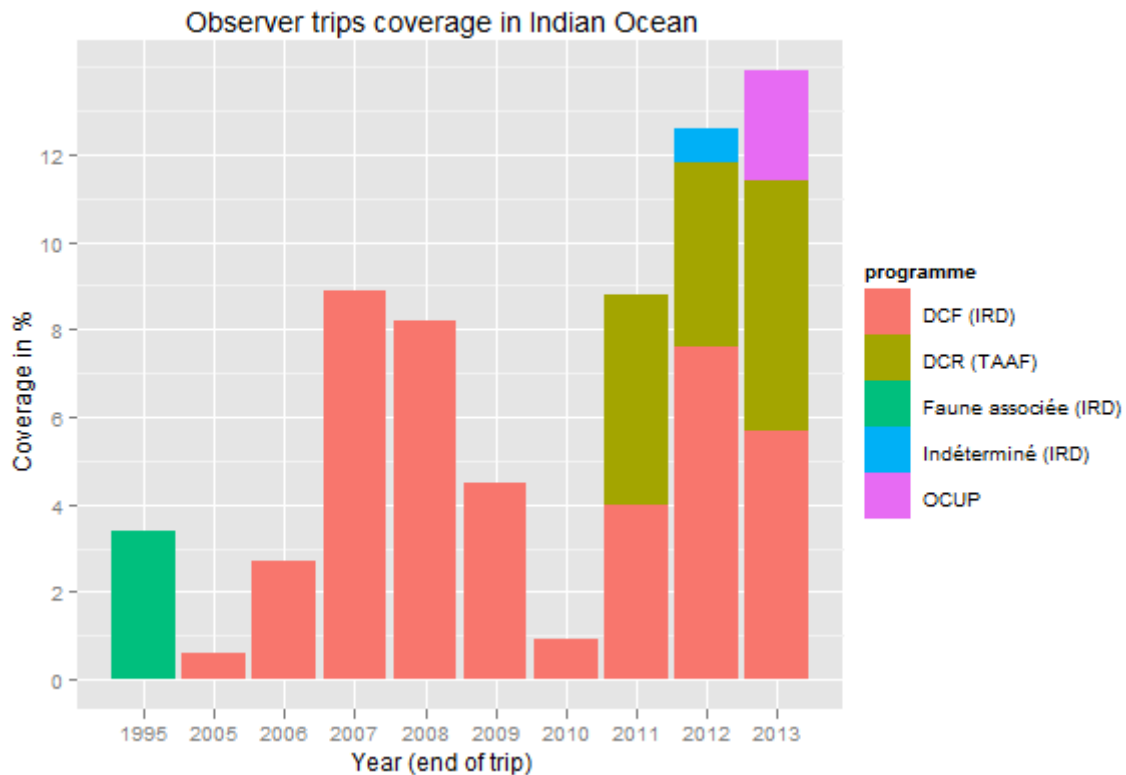


Figure 2: Tropical tuna purse seine observer trip coverage by programme showing the progressive increase coverage in the Indian Ocean

### ECA-III.C.3 Follow-up of regional and international recommendations

Nothing to report.

### ECA-III.C.4 Actions to remedy shortfalls

Computation of CVs using an agreed method (Cost Tools) amongst RCM MED&BS-LP has been set in place during PGMed and RCM MED&BS-LP in September 2014. It was agreed that a data call (using the Standard Data Exchange Format) will be launched in march 2015 allowing computation of CVs during next meeting in 2015.

## Other Regions - Western Central Atlantic (WECAF)

### Western Central Atlantic (WECAF)

#### WCA- III.C.1 Achievements: results and deviation from NP proposal

In this region, the shrimps *Penaeus subtilis* and *P. brasiliensis* and the southern red snapper *Lutjanus purpureus* have been routinely sampled for more than 30 years. Length structures



are provided regularly to FAO working groups. It should also be noted that the other *Lutjanus* species landed by Venezuelan liners are also sampled for size.

In connection with French Guiana SIH and additional Obsdeb sampling for the collection of transversal variables, landings of main commercial species targeted by coastal fisheries are also regularly sampled for length (*Sciaenidae*, *Ariidae*, etc.). This issue is considered as first interest at the level of the Guiana-Brazil shelf and the data collected are made available to WECAFC working groups.

8 samples at sea were planned (4 in 2012 and 4 in 2013) and could not be achieved due to the difficulties faced by the shrimp industry in Guyana (bankruptcy, drastic reduction of the number of vessels, ...). The sampling objectives have been withdrawn.

#### **WCA- III.C.2 Data quality: Results and deviation from NP proposal**

Nothing to report.

#### **WCA- III.C.3 Follow-up of regional and international recommendations**

Nothing to report.

#### **WCA- III.C.4 Actions to remedy shortfalls**

Nothing to report.

### III.D Recreational fisheries

#### All maritime regions (North Sea, North Atlantic, Mediterranean Sea)

Commission Decision 93/2010 provides for the estimation by weight of the volumes of recreational catches for certain species of significance in the regions concerned as listed in Appendix IV. The species relevant to France are: cod, eel and sharks in the North Sea and Eastern Channel (IV, VIId), sea bass, salmon, eel and sharks in the North Atlantic (in actual fact Western Channel and Bay of Biscay – VIIe, VIIIab) plus bluefin tuna eel and sharks in the Mediterranean.

Preliminary comments:

- France did not carry out any study on eel in marine waters, considering RCMs recommendations (RCM NS&EA 2009, RCM NA 2009 and RCM Med&BS 2010) recognising that such recreational fisheries are insignificant in EU marine waters.
- France carried out a national study on recreational fisheries over the period 2011-2012, by combining telephone and on field surveys in different seasons of the year. This study (as the last one) showed that sharks and rays are not target species for French recreational fishermen. So no specific survey was implemented in 2012 to monitor sharks recreational catches again. Selacians was only added as possible targets in the list of the general questionnaire used for surveys.

#### III.D.1 Achievements: results and deviation from NP proposal

##### Atlantic cod (*Gadus morhua*) in Eastern Channel and North Sea

As proved in 2007, 2009 and 2010, this activity concerns a very short part of the coastline (around 60 km), between Boulogne-sur-Mer and the Belgian border.

France didn't carry out any specific study on Atlantic cod in 2013. As mentioned in 2010, cod in VIId and IVc illustrates the difficulty to raise weak numbers of samples to a reduced and not well-defined population or to a smaller part of the region covered. Combining all data collected do not give enough information for focusing on small geographical strata and to allow to provide estimates with statistically based procedures. Moreover cost-efficiency of the surveys carried out (by phone and on sites) is bad (1€ per kg of recreational cod caught), according to the estimated volumes of the catches (between 60 to 120 tons).

According to the new French national survey done during 2011-2012, only 14 cods have been recorded into the raw data, which is too small to raise it to the whole population.

##### European Sea bass (*Dicentrarchus labrax*) in English Channel and North-East Atlantic

Year 2013 was devoted to the full analysis of the national survey carried out in 2012. A random digit dialling screening survey of 16 130 households led to the recruitment of a panel of 183 fishermen who agreed to fill regularly logbooks. In parallel, 151 fishermen were recruited on site by the association Promopêche, and 30 more via the sea bass fishermen panel set up in 2009. This resulted in 364 panel members keeping logbooks describing their catches (species, weight, size, etc ...). The focus of the survey on sea bass shows that in Atlantic region (Bay of Biscay and English Channel), the estimated recreational catch of bass in 2012 was 3 989 t (+/- 2 074 t), of which 3 191 t (+/-1 659 t) was kept and around 800 t released. Results split between Bay and Biscay and Channel cannot be provided with relative standard error.

More information and results of the study can be found at the following address :

[http://sih.ifremer.fr/content/download/20297/140668/file/4pages2013\\_peche\\_recreative.pdf](http://sih.ifremer.fr/content/download/20297/140668/file/4pages2013_peche_recreative.pdf)

#### Sharks in English Channel, North-East Atlantic, and Mediterranean sea

As abovementioned, sharks are not target species and never recorded during surveys into the 10 most species fished in these areas. The few raw data cannot even allow to have a rough estimate of the landings.

#### Bluefin tuna (*Thunnus thynnus*) in the Mediterranean

Since 2009 in France, all recreational fishermen targeting bluefin tuna must be registered and have to report officially their catches to the fisheries administration. FranceAgrimer is collecting the fishing declarations.

Practice of bluefin tuna recreational fishing changed due to other specific regulations. A quota (9 tons and 20 tons, in 2012 and 2013, respectively) is allocated to recreational fishermen. The fishing season is short (mid-June to mid October but most of time closed before the end of Summer since the quota is got). Fishermen can keep and land only one fish per day. As a consequence of these regulations aiming to reduce landings, “no kill” practice is increasing and tunas are then tagged before to be released (these practises need, however, to be agreed by the French administration).

The new monitoring system implemented at national level for bluefin tuna gives assurance to make the required data on recreational catches available. These data are also every year transmitted to ICCAT.

### **III.D.2 Data quality: Results and deviation from NP proposal**

The validated combination of a (telephone-based) approach based on socio-demographic criteria applied to the monitored households or fishermen populations with assistance from a specialist opinion polls institute (BVA) for cross-correlation of interviews and log-books provided by the panel of active fishermen guarantee the statistical quality of the extrapolations carried out subsequently. This cooperation between Ifremer and BVA has already proven its worth from 2006 in the national survey, while at the same time showing that there are large ways for further improvement and research with regard to the raising of data from small samples.

### **III.D.3 Follow-up of regional and international recommendations**

The 2009 WKSMRF workshop recommendations on the sampling methods applicable to recreational fisheries were applied, particularly for the redefinition of the methodological approach used for estimating seabass catches in the Atlantic region.

France did not carry out any study on eel in marine waters, considering RCMs recommendations (RCM NS&EA 2009, RCM NA 2009 and RCM Med&BS 2010) recognising that such recreational fisheries are insignificant in EU marine waters and then referring to the irrelevance of sampling marine recreational eel fisheries which are not really a real targeted practice.

No recommendations on recreational fisheries were made by RCMs 2012.

### III.D.4 Actions to avoid shortfalls

Nothing to report.

### Inland waters (eel and salmon)

#### IW-III.D.1 Achievements: Results and deviation from NP proposal

##### *Salmon :*

When declaring their catches, amateur and professional fishermen provide information on the length, weight, date and place for the individuals they have caught, accompanied by a scale sample. Interpretation of the scale samples thus provided along with the declarations makes it possible to improve our knowledge of salmon populations by determining the age and life characteristics of each individual.

Monitoring of salmon angling catches was conducted on the basis of a collaborative effort between ONEMA [Office National de l'Eau et des Milieux Aquatiques / French national agency for water and aquatic environments] and the FNPF [Fédération Nationale pour la Pêche en France / National federation for fishing in France].

Regular monitoring is provided throughout the fishing season by centralising in a national database the catch declarations made by anglers

Table III.D.1: FNPF achievements for 2013 – Salmon

<b>Planned operation</b>	<b>Completion</b>	<b>Comments</b>
Fishing effort	Completed	Provided by the number of migratory fish CPMA [ <i>Cotisation pour les milieux aquatiques / Subscription for aquatic habitats</i> ] subscriptions paid per <i>département</i> .
Production of kits to accompany salmon catch declaration documents	Completed	
Distribution of kits accompanying salmon catch declaration documents	Completed	14 local Federations supplied + ONEMA's catch interpretation centre. Each local Federation has distributed these kits to the relevant depositaries.
ONEMA-FNPF collaboration on catch data returns	Completed	Management of post-prepaid returns. Circulation of interim results back to local Federations.
Feedback of information to anglers	On-going	Analysis of 2013 data is on-going and this does not permit finalisation of the communication of information to anglers. This operation is necessary to ensure that declarations continue to be made over the long term.
Compensation of depositaries	Completed	Those depositaries that have returned data on catches have been identified and the numbers of

		catches reported by them have been calculated. This information is used to determine allocation of compensation. Payment has been made through the anglers' departmental' federations.
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Table IW-III.D.2 : Overview of the salmon fishing season 2013

Angling catches												
Administrative areas	Catches						TAC				reporting rate	
	Declared (N)			Estimated (N)			Target (N)		Take up (%)		MSW	1SW
	MSW	1SW	Total	MSW	1SW	Total	MSW	Total eggs	MSW	Global		
Artois-Picardy	7	7	14	7	7	14	NA	NA	NA	NA		
Normandy	150	289	439	178	333	511	148	2197953	120%	74%	84%	87%
Brittany	338	819	1157	346	822	1168	455	8683136	76%	33%	98%	100%
Aquitaine	210	21	231	210	21	231	NA	NA	NA	NA		
<b>TOTAL</b>	<b>705</b>	<b>1136</b>	<b>1841</b>	<b>741</b>	<b>1183</b>	<b>1924</b>	<b>603</b>	<b>10881089</b>	<b>87%</b>	<b>42%</b>	<b>95%</b>	<b>96%</b>

Table IW-III.D.3 : Fishing log results for 2013

CPUE (Catch Per Unit Effort )

Month	NB Catches	NB Hours	Hours/catches
3	7	1383	198
4	13	1670	128
5	18	1789	99
6	6	671	112
7	26	1371	53
8	20	548	27
9	20	536	27
10	37	346	9
<b>TOT</b>	<b>147</b>	<b>8313</b>	<b>57</b>
March to May	38	4842	127
June to October	109	3471	32

	Salmon 2011	Salmon 2012	Salmon 2013
Number of hours	6 121,5	7 577.6	8672
Number of anglers	45	56	67
Number of catches	65	83	156
Catch per angler	1,44	1,48	2.33
Max fishing effort per angler (hrs/angler)	476	436	620
Number > 300 hours	4	6	7

Max catch per angler	6	8	12
Number of anglers w/o catches	23	22	27
Number of trips	1525	1525	2003
Number of trips per angler	34	27.2	23
Average trip duration	4,00	4,02	4.4
Mean effort per angler	136	135.31	129
% anglers exceeding 300 hours	9%	11%	10%
Max number of fish per trip	2	2	3
% anglers without catches	51%	39%	40%

***Eel :***

The eel management plan adopted at the end of 2008 plus the overlap between catch monitoring measures have compromised the credibility of operations for declarations to be made by anglers.

The efforts made by government and the various partners involved in the collection of data have not yet permitted sampling of eel catches in rivers by anglers on the basis of either declarations or fishing logs.

For those who are monitored under the SNPE results are available.

Table IW-III.D.4 : Numbers of recreational fishers filing declaration with eel

Year	Recreational
2011	495
2012	482
2013	416

**IW-III.D.2 Data quality: Results and deviation from NP proposal**

Nothing to report

**IW-III.D.3 Follow-up of Regional and international recommendations**

Nothing to report

**IW-III.D.4 Actions to avoid shortfalls**

Eel

Given the difficulties encountered since 2010 and to meet regulatory requirements, two types of measures have been proposed:

- Treatment and monitoring of fishing authorizations
- Development of an application for banking statements.

The first works well but the computer application due to infrastructure problems will be deployed in the second half of 2014. The catch estimates will also follow the eel management plan.

### **III.E Stock-related variables**

#### **General considerations applicable to all areas (excluding migratory species)**

Collection of data such as individual weight, sex and maturity often requires more comprehensive access to the fish than their dimensions at market alone. Given this fact, the quantity of data for these variables is often more limited than for the numbers of fish that have been aged. Additionally, the necessity of following working group recommendations, obtaining information on maturity during the spawning peak for the species for example, will limit even more the availability of genuinely relevant data.

Data quality has been estimated on the basis of (i) methods for checking data at input into the central database, (ii) exploratory analyses and (iii) estimates and calculation of data precision levels implemented in national workshops for the preparation of data for the working groups. The tools employed were those developed by COST<sup>2</sup>.

Since the beginning of 2009, the French National Programme has included in its data collection programmes the species in group 3 (G3) as defined in 2008 by RCM-NS&EA, RCM-NA and RCM-Med&BS. The type G3 taxonomic groupings were judged to be too broad in some cases (for example, species gathered under the heading “squid”). France therefore preferred to adopt a more fine-grained description than that proposed by the RCMs.

Table III\_E\_1 was produced on the basis of EUROSTAT data and an R script was developed to generate it automatically. Since EUROSTAT data provide official (validated) information for all countries, the script was provided to a small number of Member States and made available to any user requesting it.

The levels of precision obtained for the biological variables have not yet been analysed. The COST tools enable these estimates to be made. They will be done gradually as when scheduled milestones come up. Most age reading is now done by the otolith centre in Boulogne-Sur-Mer. This grouping on a single site of age determination activities based on calcified structures not only enables a very real skill set in sclerochronology to be consolidated in Boulogne (which is reflected in its hosting of several DCF workshops on age determination issues), but in addition the implementation of a quality programme<sup>3</sup> combining double reading, referencing of each reading and the archiving of data and images.

#### **North Sea (IIIa, IV and VIId) & Eastern Arctic (I and II)**

##### **NS- III.E.1 Achievements: results and deviation from NP proposal**

###### Age reading:

The 2013 programme was achieved (see table III.E.3) except for seabass (*Dicentrarchus labrax*) and cod (*Gadus morhua*). The intensity of age determination of these species fell

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<sup>2</sup> COST: Common Open Source Tool. Project financed by the European Commission under service contract FISH/2006/15 Lot 2.

<sup>3</sup> [http://www.ifremer.fr/sih/affichagePageStatique.do?page=/produits/Synthese\\_francaises\\_des\\_procedure\\_es\\_d\\_estimation\\_d\\_age\\_V1..pdf](http://www.ifremer.fr/sih/affichagePageStatique.do?page=/produits/Synthese_francaises_des_procedure_es_d_estimation_d_age_V1..pdf)

short of what was planned. This is due to very low catches during CGFS and IBTS surveys in 2013, which limited the sampling programme. Where surveys are the only sources for these data, the numbers of fish collected may turn out to be lower than the objectives planned in the national programme since these depend on real catches. All fish are sampled

#### Maturity:

The 2013 programme was achieved (see table III.E.3) except for rays (*Raja spp.*) and saithe (*Polliachus virens*). Reasons for the skates are the same as for age reading (see above, fish collected during surveys). The level of age data for saithe (*Polliachus virens*) was achieved but all fishes were gutted and so it was not possible to measure the sex-ratio and the maturity of these fishes. **The planned number of 100 individual weights for seabass (*Dicentrarchus labrax*) could not be reached in 2013 since only 55 sea basses have been caught during the scientific survey.**

#### Individual weight:

This variable is collected systematically during sampling for age-length keys (e.g. sole, plaice, striped red mullet, whiting...) by means of purchases of fish lots at landings or at sea during Obsmer trips observations or research surveys. The 2013 programme was achieved (see table III.E.3). In 2013, new materials was bought at the end of the year to ease the individual weighting of fish during surveys, this has resulted in an improvement from previous years. The planned target for saithe (*Pollachius virens*) was not achieved because this species is gutted before landing. **The planned number of 100 individual weights for seabass (*Dicentrarchus labrax*) could not be reached in 2013 since only 55 sea basses have been caught during the scientific survey.**

#### Sex ratios:

The 2013 programme was achieved (see table III.E.3) with the only exception of saithe (*Pollachius virens*). The difficulty for saithe is that this species is gutted before landing.

### **NS- III.E.2 Data quality: Results and deviation from NP proposal**

Analysis of levels of precision **will** start for the biological variables **in 2015**. This will help the teams in optimising the number of individuals to collect.

### **NS- III.E.3 Follow-up of regional and international recommendations**

No recommendation was addressed to France by RCM NS&EA 2012..

### **NS- III.E.4 Actions to remedy shortfalls**

A quality-focused approach is being developed by Ifremer in order to monitor more effectively the execution of biological sampling plans. The protocols are now available on line at <http://www.ifremer.fr/sih> and numerous tools are in their implementation phase (data entry assistance by means of the Allegro tool, assistance in estimation and analysing the efficiency of sampling plans (an application of the COST tool). Furthermore, an automatic procedure for estimating precisions for all stocks is under development in 2014, and will complement the table III\_E\_3 in the future.



## North Atlantic (ICES areas V-XIV and NAFO)

### **NA- III.E.1 Achievements: results and deviation from NP proposal**

#### Age reading:

The programme was achieved (see table III.E.3) except for some species when data are collected during surveys and when catches are low. This is mainly the case for Roundnose Grenadier (*Coryphaenoides rupestris*) but also for pouting (*Trisopterus luscus*), ling (*Molva molva*) and red gurnard (*Aspitrigla cuculus*). All samples were provided by W-IBTS-Q4-EVHOE survey. Moreover, age data of Roundnose Grenadier (*Coryphaenoides rupestris*) are not used to stock assessment based on length distribution (WGDEEP 2013 report, section 9) because age determination of this species is very difficult (WKARRG, 2007). It should be noted that, as agreed in the relevant ICES working groups, 1820 otoliths of hake (*Merluccius merluccius*) and 2316 otoliths of monkfish (*Lophius piscatorius & budegassa*) were collected, prepared and archived without ageing (standardised methods must be redefined). In general, the main stocks being the object of an analytical assessment are correctly sampled. **The grenadier (*Coryphaenoides rupestris*) is no longer landed in Boulogne sur mer thus there is no individuals available for sampling. Sampling pout (*Trisopterus luscus*) is planned in 2014 during scientific surveys in the Channel, after age estimation testing has been carried out in France on this new species for age reading. Since 2010 only the EVHOE survey has provided samples for ling (*Molva molva*), but the number of individuals caught does not allow for reaching the goal (300). Idem for red gurnard (*Aspitrigla cuculus*), with EVHOE survey only not sufficient to reach the planned 1000 individuals.**

111 otoliths of Atlantic bluefin tuna (*Thunnus thynnus*) were collected, prepared and archived without ageing because this is new species for France and we must calibrated our age data with other countries which more experience than France.

#### Maturity:

The programme was achieved (see table III.E.3) except for European pollock (*Pollachius pollachius*), **cod (*Gadus morhua*)** and lobster (*Nephrops norvegicus*). The intensity of maturity data of European pollock (*Pollachius pollachius*) fell short of what was planned. Where the scientific survey is the source for this parameter, the numbers of individuals sampled (7 for all surveys) may be lower than those planned in the programme. **As regards Nephrops (*Nephrops norvegicus*), both the french fisheries and the realized number of samples in FUs of subarea VIII (30492) is largely more important than in the FUs of subarea VII (realised : 8999). However, the planned number of samples is inversely more important in subarea VII (20000) than in area VIII (10000). In consequence, it will be important in the future to adjust the planned number in order to take into account the decrease of effort in Nephrops fisheries in VII.. For cod (*Gadus morhua*), only scientific surveys may provide information on sexual maturity. In consequence, all cods are sampled during the scientific surveys but this is insufficient to reach the planned numbers.**

#### Individual weight:

The programme was achieved (see table III.E.3) except for cod (*Gadus morhua*), lobster (*Nephrops norvegicus*) and skates (*Raja spp.*). **For cod (*Gadus morhua*), only scientific surveys may provide information on sexual maturity. In consequence, all cods are sampled during the scientific surveys but this is insufficient to reach the planned numbers. For Nephrops (*Nephrops norvegicus*) and rays (*Raja spp.*), an important sampling effort is planned in 2014 to circumvent the difficulties encountered in 2013..**

### Sex-ratio:

The programme achieved most of its goal (see table III.E.3) except for pout (*Trisopterus luscus*) and skates (*Raja spp.*). As regards pout (*Trisopterus luscus*), the sample for sex-ratio will be realised during the future collection of otoliths during the surveys. For rays (*Raja spp.*), an important sampling effort is planned in 2014 to circumvent the difficulties encountered in 2013..

### **NA- III.E.2 Data quality: Results and deviation from NP proposal**

Analysis of levels of precision has started for the biological variables. This will help the teams in optimising the number of individual to collect.

### **NA- III.E.3 Follow-up of regional and international recommendations**

No recommendation was addressed to France by RCM NA 2012.

### **NA- III.E.4 Actions to remedy shortfalls**

A quality-focused approach is being developed by Ifremer in order to monitor more effectively the execution of biological sampling plans. The protocols are now available on line at <http://www.ifremer.fr/sih> and numerous tools are in their implementation phase (data entry assistance by means of the Allegro tool, assistance in estimation and analysing the efficiency of sampling plans (an application of the COST tool). ). Furthermore, an automatic procedure for estimating precisions for all stocks is under development in 2014, and will complement the table III\_E\_3 in the future.

## **Mediterranean Sea & Black Sea**

### **MED- III.E.1 Achievements: results and deviation from NP proposal**

The whole programme was achieved as planned (see table III.E.3), including collection of samples to contribute to the regional updating of biological parameters of blue fin tuna (RCM MED&BS multilateral agreement).

### **MED- III.E.2 Data quality: Results and deviation from NP proposal**

Analysis of levels of precision has started for the biological variables. This will help the teams in optimising the number of individuals to collect.

### **MED- III.E.3 Follow-up of regional and international recommendations**

No recommendation was addressed to France by RCM MED&BS 2012.

### **MED- III.E.4 Actions to remedy shortfalls**

A quality-focused approach is being developed by Ifremer in order to monitor more effectively the execution of biological sampling plans. The protocols are now available on line at <http://www.ifremer.fr/sih> and numerous tools are in their implementation phase (data entry assistance by means of the Allegro tool, assistance in estimation and analysing the efficiency of sampling plans (an application of the COST tool). Furthermore, an automatic

procedure for estimating precisions for all stocks is under development in 2014, and will complement the table III\_E\_3 in the future.

### **Other Regions - Indian Ocean (IOTC)**

#### **OI-III.E.1 Achievements: Results and deviation from NP proposal**

##### Biology:

In 2013, length-weight, sex, and macroscopic maturity stage data were collected at the IOT Ltd. cannery in Victoria (Seychelles) for 547, 537, and 540 yellowfin, respectively. The sampling only took place at the raw-pack processing line where large yellowfin are defrosted before being processed. Thanks to a collaborative research programme set in place with the IOT Ltd. Cannery, data were also collected in 2013 for bigeye (275, 277, 271 respectively) and skipjack (214, 270, 211, respectively) at the Seychelles Fishing (SFA) Authority lab.

#### **OI-III.E.2 Data quality: Results and deviation from NP proposal**

Nothing to report.

#### **OI-III.E.3 Follow-up of Regional and international recommendations**

Nothing to report.

#### **OI-III.E.4 Actions to avoid shortfalls**

In the past years, the collection of biological data at the tuna canneries of Abidjan (Côte d'Ivoire) and Victoria (Seychelles) has been strongly constrained by the access to the processing lines and the willingness of the cannery managers to collaborate. For the Indian Ocean, opportunistic sampling operations were conducted in 2013 to collect information for bigeye and skipjack in addition to regular sampling of large yellowfin at IOT Ltd.

In Victoria, resulting in a good and representative sample for the 3 species. A sampling design with clear target objectives has now been developed in collaboration with IOT Ltd. and the 3 species will be routinely sampled from 2014, with the exception of large bigeye that are not processed.

The sampling methodology in collaboration with IOT cannery started to be set in place in 2013. Objectives should be better fulfilled in 2014. Methodology and computation of Cvs will be established and conducted within PGMED and RCM MED&BS-LP

### **Other Regions - Eastern Central Atlantic (ICCAT)**

#### **ECA-III.E.1 Achievements: Results and deviation from NP proposal**

##### Biology:

No sampling activities took place at "Pêche et Froid" cannery of Abidjan for economic and logistic reasons. European purse seiners landed very few in 2013 for Abidjan cannery and fish was mainly exported through carriers outside Côte d'Ivoire. Furthermore, cannery supply origin was sometimes unknown (lack of traceability) and transformed fish may originate from

other oceans than Atlantic (i.e. Indian Ocean). Finally, cannery new managers did not facilitate collaboration with IRD for distrust reasons.

#### **ECA-III.E.2 Data quality: Results and deviation from NP proposal**

Nothing to report.

#### **ECA-III.E.3 Follow-up of Regional and international recommendations**

Nothing to report.

#### **ECA-III.E.4 Actions to avoid shortfalls**

In the past years, the collection of biological data at the tuna canneries of Abidjan (Côte d'Ivoire) and Victoria (Seychelles) has been strongly constrained by the access to the processing lines and the willingness of the cannery managers to collaborate.

For the Atlantic Ocean, a permanent technician from IRD is now permanently based in Abidjan since August 2013 for 2 years. The scientist in charge of these studies went to Abidjan beginning of 2014 to renew collaboration with the local canneries. A meeting was organized in February 2014 with cannery managers and succeeded in renewing collaboration. Sampling activities started again in 2014 but for yellowfin only. Bigeye and skipjack sampling has been organized with fishing companies and fish samples will be made directly on board vessels.

Contacts have also been taken with another cannery (Castelli) to enlarge opportunities to sample landings for other species with the required traceability.

### **Other Regions - Western Central Atlantic (WECAF)**

#### **Western Central Atlantic (WECAF)**

##### **WCA- III.E.1 Achievements: results and deviation from NP proposal**

In French Guiana, *Penaeus subtilis* and *P. brasiliensis* shrimps are systematically sexed prior to measurement and their stage of maturity recorded. Red snappers and coastal species are not aged, according to the difficulties for age reading in tropical areas.

##### **WCA- III.E.2 Data quality: Results and deviation from NP proposal**

Nothing to report.

##### **WCA- II.E.3 Follow-up of regional and international recommendations**

Nothing to report. **WECAFC Region is not covered by a RCM.**

##### **WCA- III.E.4 Actions to remedy shortfalls**

Nothing to report.

### **IW-III.E.1 Achievements: Results and deviation from NP proposal**

#### **Salmon:**

Monitoring of salmon angling catches was conducted on the basis of a collaborative effort between ONEMA [Office National de l'Eau et des Milieux Aquatiques / French national agency for water and aquatic environments] and the FNPF [Fédération Nationale pour la Pêche en France / National federation for fishing in France]. When declaring their catches, amateur and professional fishermen provide information on the length, weight, date and place for the individuals they have caught, accompanied by a scale sample.

Interpretation of the scale samples thus provided along with the declarations makes it possible to improve our knowledge of salmon populations by determining the age and life characteristics of each individual.

#### **Eel:**

Concretely, measurements already indicate a fall in the number of fishers but the implementation of the management plan for eel results in a better return statement (number of monthly records).

Biological measurements (length, weight and age) were performed on fish purchased from commercial fishermen on three management units affected by commercial fishing (glass eel out). Sampling is conducted annually where possible but to provide a complete sample every three years.

The eel supplier could not reach the target because of a timing problem (opening and closing the fishery) and market. For the upcoming program and to avoid this problem, a contract is being validated on the duration of the program.

## **III.F Transversal variables**

### **III.F.1 Capacity**

#### **III.F.1.1 Achievements: Results and deviation from NP proposal**

No deviation from NP proposal.

The collection of "fishing activity calendars" for 2012 progressed in accordance with the proposal contained in the NP2011-2013. This has enabled 2012 capacity data to be returned at the end of 2013 for all DCF regions (North Sea and Eastern Arctic, North Atlantic, Mediterranean and Black Sea, Other regions). In addition, the "fishing activity calendars" for 2013 are currently being collected in accordance with the proposal contained in the NP2011-2013. Therefore capacity data for 2013 should be available, as usual, by the end of 2014.

#### **III.F.1.2 Data quality: Results and deviation from NP proposal**

The activity survey was conducted exhaustively (annual census) for all French vessels belonging to the European fleet register.

#### **III.F.1.3 Actions to avoid shortfalls**

Since 2012, indicators about the completeness and the reliability of the preliminary documentation provided by available declarations ("logbooks", "monthly declarative forms", "sales notes data") have been given to better guide the observers' task. Vessels with less complete or reliable declarative data, new vessels or new ship-owners had priority in the direct survey. For the on-going survey, it should be noted that a new preliminary documentation has been added to the available declarations to improve the preliminary documentation and facilitate the observers' task. This is based on the estimation calculated after the application of a method of cross-validation and completion of "logbooks" or "monthly declarative forms" data with other available data sources : sales notes and aggregated VMS data<sup>4</sup>. These tasks have the aim to provide earlier in the first semester of the year N+1 the validated capacity data for year N based on activity survey finalised.

### **III.F.2 Effort**

#### **III.F.2.1 Achievements: Results and deviation from NP proposal**

No deviation from NP proposal.

In line with the proposal contained in the NP2011-2013, 1<sup>st</sup> group of effort data validated and qualified (Number of vessels, Days at sea, Hours fished, Fishing days, KW\*fishing days,

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<sup>4</sup> Demanèche et al. 07/2013 : Projet SACROIS "IFREMER/DPMA" V3.2.5

SACROIS is a validation tool for the fisheries statistics, aiming at crosschecking data from different sources, as demanded in article 145 of the EU control Regulation (EC Reg. 404/2011). The application is crossing information, at the most disaggregated level, from the fishing fleet register, logbooks, monthly declarative forms, sales notes, VMS and the scientific census of fishing activity calendars, in order to build a dataset compiling the most accurate and complete information for each individual fishing trip. The application verifies and controls the different sources of data, with the aim of displaying validated and qualified landings per species and effort data series. The application provides also several quality indicators and evaluates the completeness of the data flows.

GT\*fishing days and Number of trips) for 2012 and for vessels over 10m, all supra-regions and vessels under 10m in the Atlantic (North Sea and Eastern Arctic, North Atlantic) have been estimated in the beginning of the year 2014. At the same time, first estimates of these variables have been provided for 2013 bearing the inherent risk of errors and incompleteness of working with unqualified and invalidated data. The calculation of this 1<sup>st</sup> group of effort data is made on a monthly reference period by an estimation based on a cross-validation and completion of the logbooks or monthly declarative forms data with other available data sources: sales notes and aggregated VMS data<sup>5</sup>.

In line with the proposal contained in the NP2011-2013, 1<sup>st</sup> group of effort data for 2012 and for vessels under 10m., Mediterranean and Black Sea and Other regions vessels for which the coverage and precision of their available declarative data are insufficient, have been estimated on the basis of additional on-site sampling of trips data (catch assessment survey)<sup>6</sup>. Statistical estimates at levels of ad-hoc metiers by region have been produced in the beginning of 2014 with precision associated. Results obtained are promising and give a good overview of the fleets involved in these regions. Additional data source like “fuel data” in Guadeloupe, “phone surveys” in Martinique or “landings site fishing activities observations” in French Guiana constitute an advantage to provide better estimates. It is scheduled to calculate first estimates for 2013 for all regions during the first semester 2014.

For the 2<sup>nd</sup> group of effort data (Total length of nets, Number of hooks (lines and longlines), Number of pots and traps) and for vessels over 10m., all supra-regions and vessels under 10m. in Atlantic (North Sea and Eastern Arctic, North Atlantic), their calculation proved to be problematic and it has not been possible to derive these information for the years 2012 as explained in the revised version of the NP2011-2013 provided in August 2013. On-going initiatives began in 2011 and are currently continuing to enable gear characteristics data to be better informed. Nevertheless, no significant improvement of the quality of this declarative data has been observed for the year 2013 and procedures have to be set up to be able to estimate these variables in the beginning of the year 2015 for the year 2013.

In line with the revised NP2011-2013 provided in August 2013, for the 2<sup>nd</sup> group of effort data for 2012 and for vessels under 10m, Mediterranean and Black Sea and Other regions, statistical mean estimates and distribution at levels of ad-hoc metiers by region and on a yearly basis have been calculated in the beginning of 2014. They are based on the available sample provided by the on-site sampling of trips. As there is no sense to calculate a CV for such variables at the very general level of the entire fleet, for example of vessels of less than 10m in the "Mediterranean and Black Sea" region, NA is then provided in the III.F.1 technical table but each distribution of the 2<sup>nd</sup> group of effort data is available at levels of ad-hoc metiers by region.

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<sup>5</sup> See footnotes <sup>1</sup>

<sup>6</sup> « A new approach to estimate catches and fishing effort of small scale fisheries by sampling fishing trips on-site », ICES Annual Science Conference 2008, 22-26 September 2008, Halifax (Canada).

« Small scale fisheries on-site survey (A new approach to estimate catches and fishing effort of small scale fisheries by sampling fishing trips on-site) », poster, Fishery Dependent Information Conference, 23-26 June 2010, Galway (Ireland)

« Methodological issues to estimate catches and fishing effort of small-scale fisheries by sampling fishing trips on-site », Demanèche S. and al., 7th International Fisheries Observer & Monitoring

In line with the proposal contained in NP2011-2013, 3<sup>rd</sup> group of effort data (Number of rigs, Number of fishing operations and Soaking time) for 2012 and for all vessels, have not been calculated. Indeed the conclusions of the pilot study carried out in 2009-2010<sup>7</sup> have proved that the calculation of this group of variables was not feasible as such. Further investigation and study will be necessary to elaborate a procedure for their estimation.

### **III.F.2.2 Data quality: Results and deviation from NP proposal**

The Mediterranean catch assessment survey does not cover Corsica but first estimates for netters have been calculated in 2012 for 2011 based on declarative data available, fishing activity calendars, landings site fishing activities observations and on-board observations. It is scheduled to continue to improve the methodology applied in the course of 2014.

### **III.F.2.3 Follow-up of Regional and international recommendations**

France has supported the RCM Baltic 2010 recommendation confirmed by the Liaison Meeting 2010 to set up a workshop on transversal variables in order to improve the understanding of data collection. A workshop named "Common understanding and statistical methodologies to estimate/re-evaluate transversal data in small-scale fisheries" was organized on 21-23 May 2013 in Nantes with a co-chairing from France. The data collection practices (data sources, sampling methods and raising strategies) used to produce transversal variables by Member States in response to the DCF requirements with a special focus on the small-scale fisheries were notably reviewed during the workshop. The final report is available on the website about the data collection of the JRC :

[http://datacollection.jrc.ec.europa.eu/documents/10213/22901/2013-10-17\\_Final+report+WK+SSF+May+2013.pdf](http://datacollection.jrc.ec.europa.eu/documents/10213/22901/2013-10-17_Final+report+WK+SSF+May+2013.pdf)

### **III.F.2.4: Actions to avoid shortfalls**

At the end of 2013, an algorithm to allocate a métier to each trip based on the "fishing activity calendars survey" and the ordination of trip species (following 4th liaison meeting recommendation) has been developed and allows to inform 90% of the fishing trips estimated after the cross-correlation algorithm of the different available data sources<sup>8</sup>. Results are consistency with the outcomes of the statistical methodology developed during the European research programme carried on the year 2010<sup>9</sup> which lead up to an article published in 2012 in ICES journal of marine science<sup>10</sup> to better assign fishing effort of a trip to a given métier.

Moreover, the impossibility to provide estimates for the 2nd group of variables for vessels over 10m., all supra-regions and vessels under 10m in Atlantic (North Sea and Eastern Arctic,

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<sup>7</sup> Oceanic Developpement, 2010, "Elaboration d'une méthodologie de calcul des variables d'effort dans le cadre du programme national de collecte des données 2009-2010 pour l'amélioration du suivi de l'activité des navires de pêche professionnelle", final report.

<sup>8</sup> See footnotes <sup>1</sup>

<sup>9</sup> Bear D J B, et al. (2011) Development of tools for logbook and VMS data analysis. Studies for carrying out the common fisheries policy. Open call for tenders No MARE/2008/10 Lot 2 <http://www.ifremer.fr/emh/content/download/58726/810861/file/DG%20MARE%202008%20Lot%202%20Final.pdf>

<sup>10</sup> Deporte N, Ulrich C, Mahévas S, Demanèche S, Bastardie F (2012) Regional métier definition: a comparative investigation of statistical methods using a workflow applied to international otter trawl fisheries in the North Sea. ICES J. Mar. Sci. 69 (2) : 331-342

<http://icesjms.oxfordjournals.org/content/early/2012/01/18/icesjms.fsr197.full>



North Atlantic) is still a concern. On-going initiatives began in 2011 but are still on-going to enable gear characteristics data to be better informed. The "gear\*mesh-size\*dimension" referential agreed by region was defined but is still to be included into the IT chain. Therefore, no significative improvement of the quality of this declarative data has been observed for the year 2013 and procedures have to be set up to be able to estimate these variables in the beginning of the year 2015 for the year 2013. At a first stage, this information will be provided on a yearly reference period based on a sub-sample with reliable gear characteristics information, before attempting to report this information on a monthly basis.

Finally, the cross-correlation algorithm and the statistical methodology used to assess effort data based on on-site sampling data are continuously being improved based on back recommendations of end-users and statistical analysis. These methodologies have been proved to give overall good quality data. In addition, further developments are still necessary for full compliance with the various regulatory requirements using such data (RFMO requirements, Data call requirements ...) and work is continuing on that in the course of 2014.

### **III.F.3 Landings**

#### **III.F.3.1 Achievements: Results and deviation from NP proposal**

No deviation from NP proposal.

In line with the proposal contained in the NP2011-2013, landings data validated and qualified (Live weight of landings total and per commercial species, Value of landings total and per commercial species, Prices by commercial species and Conversion factors per species) for 2012 and for vessels over 10m, all supra-regions and vessels under 10m in the Atlantic (North Sea and Eastern Arctic, North Atlantic) have been estimated in the beginning of the year 2014. At the same time, first estimates of these variables have been provided for 2013 bearing the inherent risk of errors and incompleteness of working with unqualified and invalidated data. The calculation of this landings data is made on a monthly reference period by an estimation based on a cross-validation and completion of the logbooks or monthly declarative forms data with other available sources: sales notes and aggregated VMS data<sup>11</sup>. The cross-validation tool allows, amongst others, to better estimate the value of landings putting closer all different available data sources available.

In line with the proposal contained in the NP2011-2013, landings data for 2012 and for vessels under 10m, Mediterranean and Black Sea and Other regions, vessels for which the coverage and precision of their available declarative data are insufficient, have been estimated on the basis of additional on-site sampling of trips data (catch assessment surveys)<sup>12</sup>. Statistical estimates at levels of ad-hoc métiers by region have been produced in the beginning of 2014 with precision associated. Results obtained are promising and give a good overview of the fleets involved in these regions. Additional data source like "fuel data" in Guadeloupe, "phone surveys" in Martinique or "landings site fishing activities observations" in French Guiana constitute an advantage to provide better estimates. It is scheduled to calculate these first estimates for 2013 for all regions during the first semester 2014.

Conversion factors per species is a reference table which has been updated based on the on-going regulation.

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<sup>11</sup> See footnotes <sup>1</sup>

<sup>12</sup> See footnotes <sup>3</sup>

### **III.F.3.2 Data quality: Results and deviation from NP proposal**

The Mediterranean catch assessment survey does not cover Corsica but first estimates for netters have been calculated in 2012 for 2011 based on declarative data available, fishing activity calendars, landings site fishing activities observations and on-board observations. It is scheduled to continue to improve the methodology applied in the course of 2014.

### **III.F.3.3 Follow-up of Regional and international recommendations**

France has supported the RCM Baltic 2010 recommendation confirmed by the Liaison Meeting 2010 to set up a workshop on transversal variables in order to improve the understanding of data collection. A workshop named "Common understanding and statistical methodologies to estimate/re-evaluate transversal data in small-scale fisheries" has been organized the 21-23 May 2013 in Nantes with a co-chairing from France. The data collection practices (data sources, sampling methods and raising strategies) used to produce transversal variables by Member States in response to the DCF requirements with a special focus on the small-scale fisheries have been notably reviewed during the workshop. The final report is available on the website about the data collection of the JRC : [http://datacollection.jrc.ec.europa.eu/documents/10213/22901/2013-10-17\\_Final+report+WK+SSF+May+2013.pdf](http://datacollection.jrc.ec.europa.eu/documents/10213/22901/2013-10-17_Final+report+WK+SSF+May+2013.pdf)

### **III.F.3.4 Actions to avoid shortfalls**

The estimates of value of landings based on additional on-site sampling of trips data have to be improved because of the few data informed and the difficulty to divide landings between what will be sold on direct market and on auction market. It is scheduled to improve these estimates in the course of 2014.

At the end of 2013, an algorithm to allocate a metier to each trip based on the "fishing activity calendars survey" and the ordination of trip species (following 4th liaison meeting recommendation) has been developed and allows to inform 90% of the fishing trips estimated after the cross-correlation algorithm of the different available data sources<sup>13</sup>. Results are consistency with the outcomes of the statistical methodology developed during the European research programme carried on the year 2010<sup>14</sup> which lead up to an article published in 2012 in ICES journal of marine science<sup>15</sup> to better assign fishing effort of a trip to a given metier.

Finally, the cross-correlation algorithm and the statistical methodology used to assess effort data based on on-site sampling data are continuously being improved based on back recommendations of end-users and statistical analysis. These methodologies have been proved to give overall good quality data. In addition, further developments are still necessary for full compliance with the various regulatory requirements using such data (RFMO requirements, Data call requirements ...) and work is continuing on that in the course of 2014.

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<sup>13</sup> See footnotes <sup>1</sup>

<sup>14</sup> Bear D J B, et al. (2011) Development of tools for logbook and VMS data analysis. Studies for carrying out the common fisheries policy. Open call for tenders No MARE/2008/10 Lot 2 <http://www.ifremer.fr/emh/content/download/58726/810861/file/DG%20MARE%202008%20Lot%202%20Final.pdf>

<sup>15</sup> Deporte N, Ulrich C, Mahévas S, Demanèche S, Bastardie F (2012) Regional métier definition: a comparative investigation of statistical methods using a workflow applied to international otter trawl fisheries in the North Sea. ICES J. Mar. Sci. 69 (2) : 331-342

<http://icesjms.oxfordjournals.org/content/early/2012/01/18/icesjms.fsr197.full>

### III.G. Surveys

Five surveys were planned in the French programme 2011-2013. They correspond to historical series of surveys carried out by Ifremer in the Eastern Channel – North Sea regions (VIId, IV), in the Atlantic (VII and VIII sub-areas) and in the Mediterranean (GSAs 7 and 8). Their implementation and the results in 2012 are summarised in the different sections of this module.

Specific case of the blue whiting survey (BWS): concerning this DCF eligible survey, the RCM-NA laid down rules for the definition of national contributions to the cost of the annual cruise carried out in March-April by Ireland and/or the Netherlands. This international agreement concerns Member States contributing more than 5% to EU catch and is revised every year by the RCM. France (a single vessel processing blue whiting for surimi and whose catches are sampled through an efficient self-sampling protocol since several years) is no longer among the significant countries with respect to the defined catch threshold. RCM-NA 2008 therefore dispensed France from contributing to the financing of the BWS and this survey was therefore not included in the NP 2011-2013. It should however be pointed out that the self-sampling programme is continuing and data collected at sea are gathered at each return of the French factory-vessel. The data are validated, archived and analysed by Ifremer. The results of this processing are transmitted to the ICES working group WGWIDE every year.

#### III.G.1 Achievements: Results and deviation from the programme

##### North Sea (ICES areas IIIa, IV and VIId) & Eastern Arctic (ICES areas I and II)

##### ***III.G.1.1. International Bottom Trawl Survey, first quarter – IBTS***

The surveys conducted by France as part of the International Bottom Trawl Survey are primarily aimed at the annual estimates of abundance indices (global and recruitment ones) for the main demersal and commercial fish species exploited in the North Sea. Data collected are not only used by the international working groups for stock assessments but also provide inputs for numerous research programmes on biology and distribution of relevant species and on trends of North Sea populations. The first surveys were organised in the 1960s. France has participated in this ICES-coordinated international programme since 1976 in conjunction with the six other countries with coastlines on the North Sea

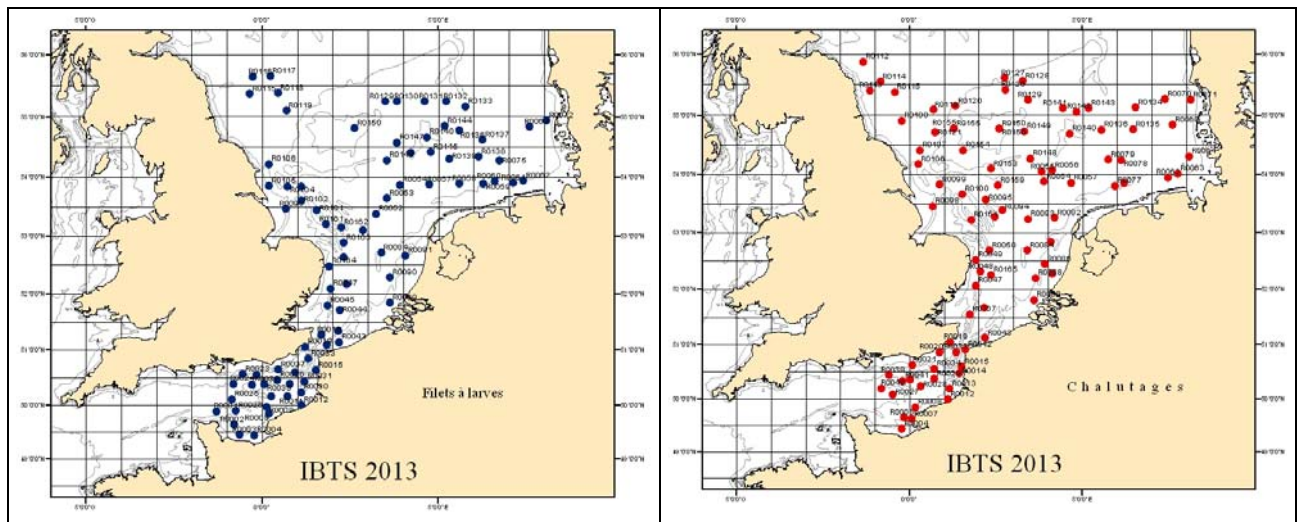
IBTS surveys are subject to rigorous protocols defined at international level under the coordination of the ICES working group WGIBTS: sampling stations are located in precisely defined rectangular cells (30 minutes latitude by one degree of longitude) and covered by two different research vessels, fishing gear is standardised, catch analysis follows strict rules in terms of parameters to be collected (catch composition, numbers of individuals and weight by species, length compositions for all fish and commercial shellfish, biological parameters such as sex ratios and maturity...). Age-length keys are built for the main species of fish, which are whiting, cod, haddock, Norway pout, herring, sprat and plaice. Each fishing operation is systematically associated with hydrological stations and all acoustic data are recorded on three frequencies and stored to be analysed on shore.

In order to quantify the larval abundance indices (group 0 for herring and sprat), night sampling with a MIK (Methot-Isaac-Kidd) net is also carried out following a standard protocol. Since 2006, continuous sampling of plankton (one sample per hour) is also performed by means of the Continuous Underwater Fish Eggs Sampler device (CUFES installed on R/V *Thalassa*). Zooplankton sampling with a Bongo net is also made systematic at

each hydrological station. It should be indicated that a sampling plan for monitoring phytoplankton was initiated in 2008, thus demonstrating the multidisciplinary character of the IBTS survey and the effort to ensure optimum use of the observation platform provided by R/V Thalassa. Likewise, at the request of WGIBTS and Herring Assessment WG (HAWG), some hauls are carried out in the Eastern Channel, in order to assess the herring resource in particular since 2009.

The 2013 IBTS cruise took place between 14 January and 15 February 2013, giving 32 days DCF availability in the study area including the eastern part of the English Channel. The scientific programme can be considered as fully achieved: at all were carried out 89 demersal hauls (105% compared with the number planned), 196 hydrological stations (before or after each haul or plankton station), 84 MIK and 162 Bongo hauls for zooplankton and fish larvae, 160 samples collected for phytoplankton analysis (Niskin bottles), 548 CUFES samples collected for mapping spawning grounds and habitats. Considering the zoo- and phytoplankton, herring and sprat larvae are identified, counted and measured on board, but all other samples are analyzed on land after the survey. In addition of pelagic hauls on herring schools, acoustic transects were also performed to estimate the herring resource in VII d. Lastly, observers were on board the Thalassa for marine mammals and sea birds during the first part of the survey in the Eastern Channel, wastes were counted and weighted at each trawl stations, and benthic species were determined at each station. All these results give evidence that the French contribution to IBTS program is become really an integrated and complete survey which will enable to provide inputs for the ecosystem approach defined by the new DCF regulation 199/2008 and also data for the Marine Strategy Framework Directive (MSFD) issues.

Drawing the comparison between achieved works and planned objectives is summarized in Table III.G.1. The Map III.G.1.1 shows the area covered (Eastern English Channel and southern part of the North Sea) along with the positions of the stations.



Map III.G.1.1 – 2013 IBTS French survey – Positions of daytime GOV bottom trawl hauls (left) and MIK net sampling of larvae at night (right)

The data characterising the stations and the analysis of the catches are recorded daily on board the vessel. Reading of calcified structures (around 4000 otoliths collected covering 16

species) to establish age-length keys is done by the sclerochronology centre of Boulogne sur Mer after the survey.

Final validation of the data takes place on land prior to archiving in the Ifremer's central *Harmonie* database. The information is also transmitted in the required formats to ICES in order to update the IBTS/DATRAS database and to make it available not only to all the countries participating in this international programme by providing yearly data on demersal resources but also to the scientific community on the basis of ICES-defined access rules. . Raw data and indicators can also be found at the following address <http://www.ifremer.fr/SIH-indices-campagnes/index>.

North Atlantic (ICES areas V-XIV and NAFO)

### **III.G.1.2. Western IBTS Fourth Quarter - EVHOE**

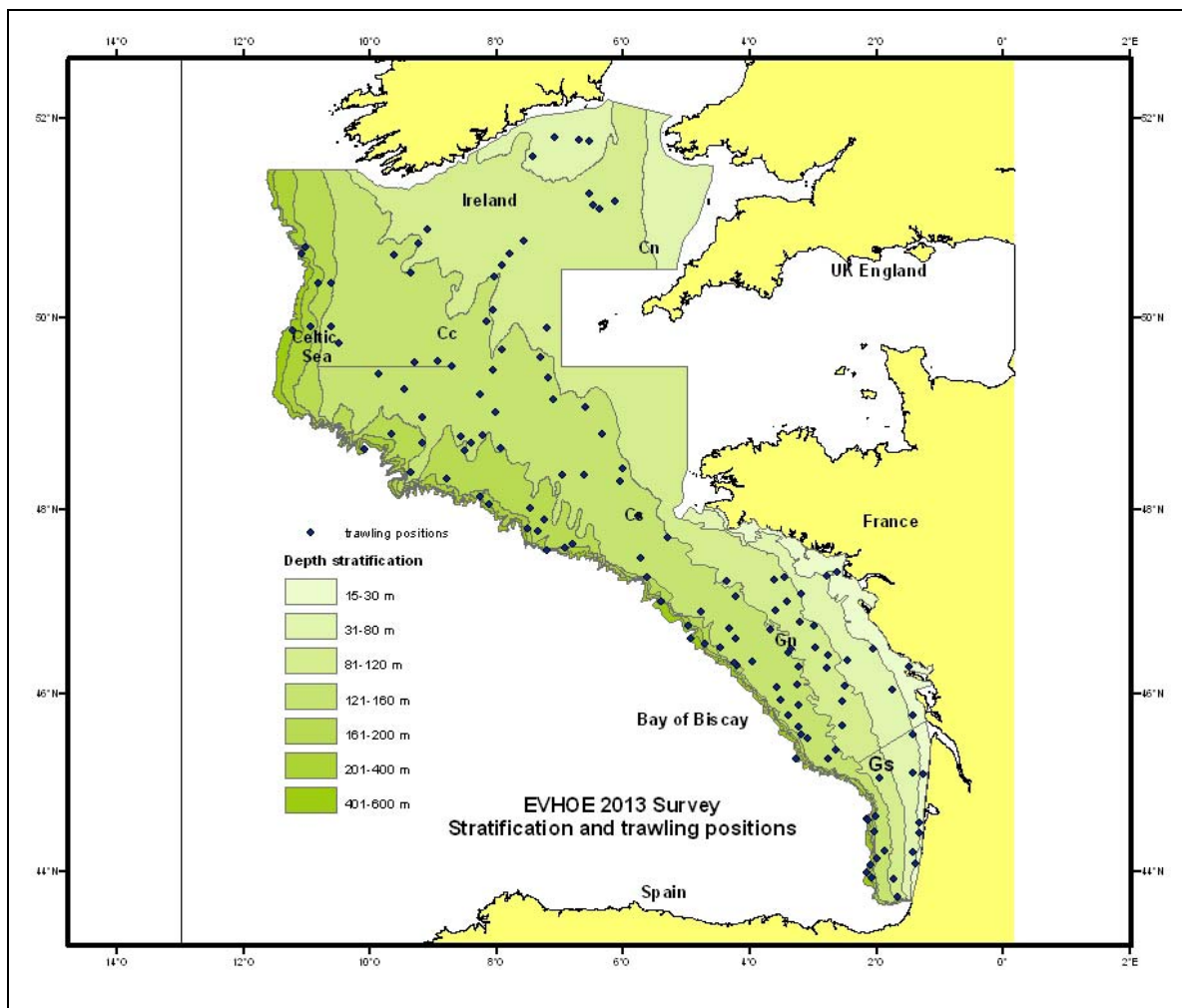
The Western IBTS 4<sup>th</sup> quarter survey, of which the EVHOE cruise (*E*valuation des *r*essources *H*alieutiques de l'*O*uest *E*uropéen - Assessment of Fisheries Resources in Western Approaches) is the French contribution, is aimed at observing the changes occurring over time in fish and invertebrate populations from the Bay of Biscay to the Celtic Sea and, by providing abundance indices on most of the demersal species (global and recruitment ones). Bottom trawl prospection is conducted each year between the end of October and the middle of December in standardized conditions (sampling scheme, fishing gear, catch analysis protocol) in compliance with the IBTS surveys protocols (see IBTS-Q1 above). The time series built up for abundance indices are used for annual stock assessments by the regional ICES groups concerned. Most notably, they allow the level of annual recruitment of the various species of commercial interest to be measured.

The data collected also provide a better understanding of the spatial occupation strategies of the sampled species over their life cycle. In the longer term, the existence of historical data series will allow analysis of the impact of fisheries on populations combination (species composition, length and age structure, adaptive strategies used by certain species). The EVHOE surveys also allow other studies to be done such as the monitoring of contamination by parasites and analysis of the dietary regimes of the main commercial species. This tightly focused work can provide input for the ecosystem approach defined by the new DCF regulation 199/2008 and to the observation programmes to be set up under the Marine Strategy Framework Directive (MSFD), more particularly because expert observers were in 2011 (for the first time) on board the *Thalassa* for collecting data on marine mammals and sea birds.

The W-IBTS-Q4 - EVHOE 2013 cruise took place between 17 October and 1 December 2013 on board R/V *Thalassa*. Over that period, 45 days were devoted to DCF issues. The targets of the scientific programme could be considered as achieved : 140 bottom trawl hauls on the regular areas compared with the 155 planned plus 5 bathy-pelagic trawl hauls, and 141 hydrology stations, that is to say 90% of achievement). 25 acoustic sounder transects were also collected during the nights. Some difficulties for trawling were met during the second part of the survey because of bad weather conditions, explaining that not all the hauls planned could be carried out. Table III.G.1 and Map III.G.1.2 summarise the details of this work and the hauls locations.

The data collected are recorded in real time on board using the IT resources of R/V *Thalassa*. Only the age reading of otoliths and illicia sampled to build length keys for the main commercial species and data processing to produce the abundance indices used by the

assessments working groups are carried out on land (Lorient laboratory and Boulogne sclerochronology centre) after the cruise.



Map III.G.1.2 – Map showing 2013 hauls positions of W-IBTS-Q4 – EVHOE survey

The increasing use of R/V *Thalassa* as an integrated platform to collect various types of data (such as for IBTS and PELGAS cruises) is to be underlined during the 2013 EVHOE survey : prospecting on the continental slope (deep-water resources), use of the multibeam echosounder ME70 for mapping benthic communities (acquisition of data on acoustic transects during the night and systematically during each trawling operation) and plankton sampling, data collection on marine mammals and sea birds. These operations, while not really completely part of DCF 2011-2013 issues, nevertheless point to future developments in the objectives of the French W-IBTSQ4 contribution in the context of a more comprehensive application of the ecosystem approach for fisheries and to contribute to objectives set up under the Marine Strategy Framework Directive (MSFD).

EVHOE data are stored in the Ifremer's central *Harmonie* database after their final validation on land. The information is also transmitted in the required formats to ICES in order to update the IBTS/DATRAS database and to make it available not only to all the countries participating in this international programme by providing yearly data on demersal resources but also to the scientific community on the basis of ICES-defined access rules. EVHOE raw

data and indicators can also be found at the following address <http://www.ifremer.fr/SIH-indices-campagnes/index>.

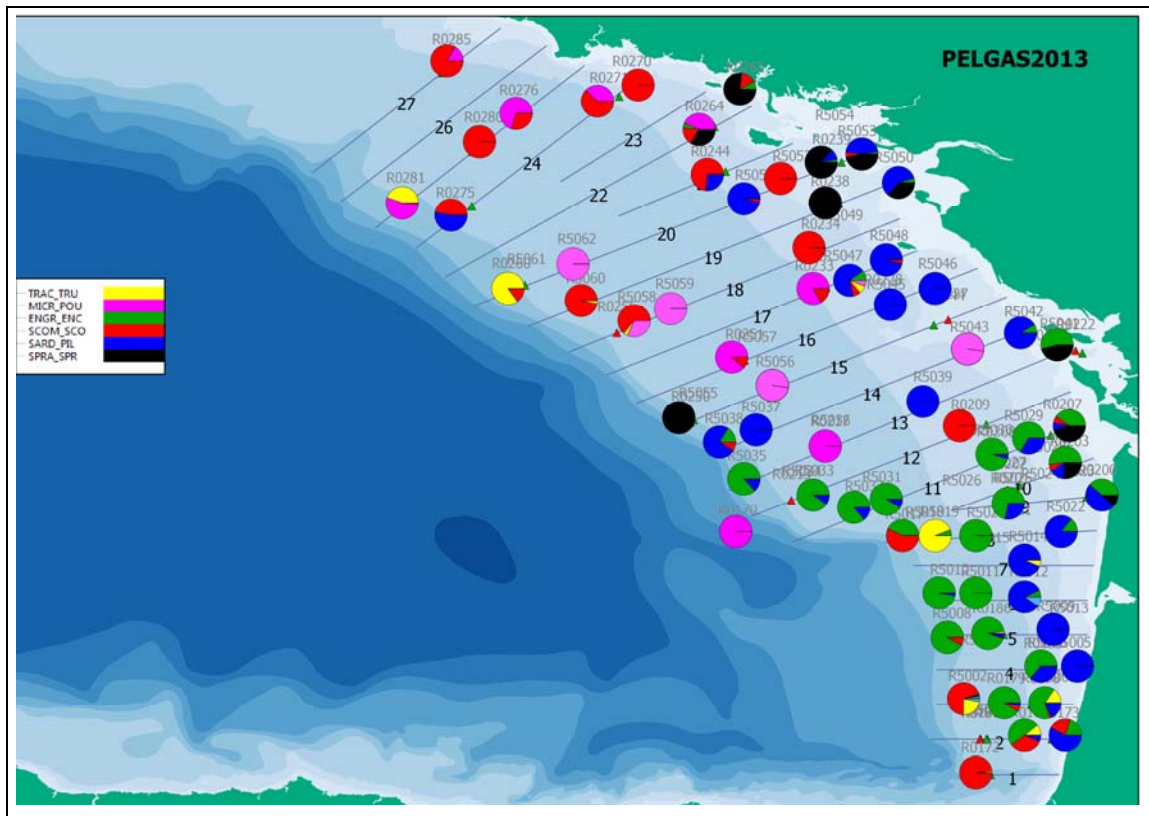
### **III.G.1.3. Sardine, anchovy, horse mackerel acoustic survey – SAHMAS-PELGAS**

The PELGAS survey (*petits PELagiques GAScogne* - Small pelagic fish in the Bay of Biscay) constitutes the French contribution to acoustic coverage of the distribution of the small pelagic fish resource between Gibraltar and the Celtic Sea within the framework of the DCR regulation under the heading “Sardine, anchovy, horse mackerel acoustic survey” (SAHMAS). Three coordinated national cruises carried out from south to north by Portuguese, Spanish and French scientists are carried out using the same technical and IT resources. ICES WGACEGG is in charge of this international coordination. The purpose of this international survey is also to make progress in understanding the functioning of the pelagic fisheries ecosystem in the Bay of Biscay and to provide the relevant abundance indices for the assessment of small pelagic stocks (anchovy, sardine, mackerel and horse mackerel) by ICES (WGANSA, WGHMSA).

PELGAS uses continuous data acquisition tools over an array of 27 transects perpendicular to the coastline (acoustic detection on five frequencies plus data collection in continue got with the multi-beam echo sounder available on the R/V *Thalassa* at a 10 knots speed, CUFES-based sampling of fish eggs every three nautical miles, surface hydrology, meteorology) and on-station operations (trawling when catch composition identification of echo-traces can not be correctly identified by scientific experts on board according to well known references, plankton sampling, bathysounder profiles). Using the different resources available on R/V *Thalassa*, it is possible to map the distribution of eggs and adult anchovies and sardines during spawning and provide an hydro-biological characterization of the spawning habitats. External observers are also participating in the survey to collect information on marine mammals and sea-birds abundance.

SAHMAS-PELGAS 2013 cruise took place between 23 April and 6 June 2013. 28 days were dedicated to the objectives set out in the DCF National programme, last days (not included in the eligible costs of the survey) being used for more scientific studies on relationships between anchovy behaviour and environmental conditions. It was possible to prospect along all transects planned. All the 27 transects were sampled. Acoustic data and environmental parameters were collected along more than 6100 nautical miles during the cruise and 110 pelagic trawl hauls (of which 51 by R/V *Thalassa*) were carried out in order to characterise the species composition of certain of the detections observed (cf. Table III.G.1, Map III.G.1.3). SAHMAS French objectives planned are so fully achieved.

It is noteworthy that since 2007 and the crisis met by the Bay of Biscay anchovy fishery, R/V *Thalassa* is accompanied during the first part of the mission by a pair of professional midwater trawlers whose task was to widen the detection area by operating four nautical miles to the north of the transects being prospected by the research vessel. The contribution of the professional fishing vessels allowed an increase in the density of coverage of the acoustic prospection and fishing (59 hauls in 2013) in response to detections as feed back to fishing operations done by R/V *Thalassa*. Scientists on board the professional vessels sampled the catch according PELGAS protocols, providing complementary data on hauls catch compositions.



Map III.G.1.3 – Acoustic transects and positions and catch compositions of identification pelagic hauls of SAHMAS-PELGAS 2013.

As in other years, advantage was taken of PELGAS 2013 to update knowledge of the biological variables (length/weight relationships, age-length keys, sexual maturity and fecundity, nutritional condition, and so on) of the main commercial species (anchovy, sardine, mackerel, horse mackerel and sprat). With a view to optimisation of the use of the platform provided by R/V *Thalassa*, observers were also on board in order to monitor the abundance of marine mammals and sea birds, contributing so to collect data to achieve already MFSD issues.

Acquisition and processing of echo-integration data were done in real time using the sounders of R/V *Thalassa* (five frequencies available and regular use now of the multi-beam fish echosounder Simrad ME70) and “MOVIES+” software. To be noted that the multi-beam echosounder provides real progress in terms of quality of the detections and on the behaviour of small pelagics schools. The raw data are stored in HAC format for all frequencies and processed partly on board. The biological samples collected are analysed partly at sea or on return to the laboratory (age-length keys, length/weight relationships, fecundity). Acoustic data, catch compositions of the hauls, biological data and abundance estimates are now stored in the acoustic database *Echobase* whose development was achieved in 2012.

Results of PELGAS 2013 were promptly processed to be communicated to the specific ICES working groups (WGHANSA, WGWIDE), which take place only some weeks after the end of the survey.

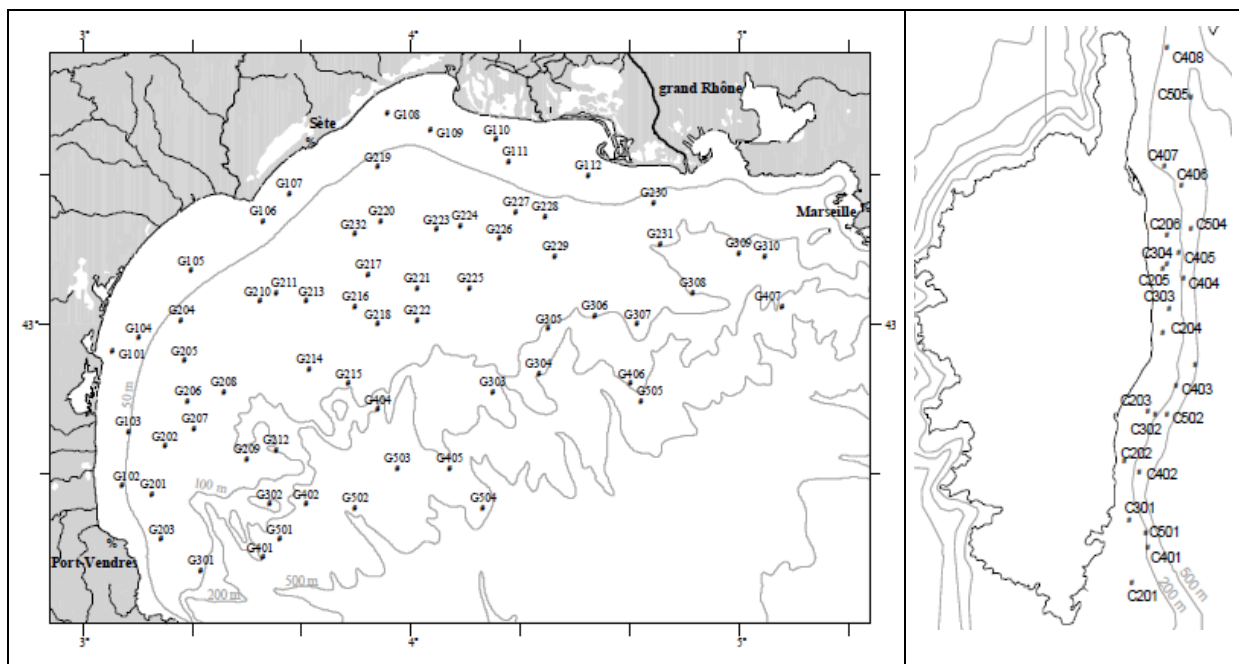


## Mediterranean sea and Black sea

### **III.G.1.4. Mediterranean international bottom trawl survey – MEDITS-FR**

The purpose of the MEDITS-FR survey (French component of MEDITS) is to assess the demersal resources in the trawlable areas at depths between 10m and 800m off the coast of Corsica (GSA 8) and in the Gulf of Lion (GSA 7). The MEDiterranean International bottom Trawl Survey (MEDITS) programme was launched in 1993 at the instigation of the European Commission. It involves participants from all Mediterranean and Black Sea Member States, plus Croatia and Albania depending of the years.

The bottom trawl hauls, whose positions are repeated as far as feasible from year to year, last between thirty minutes and one hour according to the depth (<200m or >200m) and are coupled with regular measurements of the bottom water temperature. All catches of fish, crustaceans and cephalopods are sorted, counted and weighed, according to the MEDITS standardised protocols. According to the international MEDITS protocol, 84 species of commercial importance are subjected to length sampling, and to determining of sex and maturity stages. Otoliths are collected for age reading for hake, red mullets (2 species), seabass, and gilthead seabream. Wastes are also counted and weighted at each trawl stations and fish samples are collected for studies on contaminants or various purposes.



Map III.G.1.4 – Positions of 2013 bottom trawl hauls in the French component of MEDITS (Gulf of Lion – left; Eastern Corsica – right).

The MEDITS-FR 2011 cruise took place between 23 May and 26 June 2013 on board R/V *L'Europe*, giving 35 days DCF availability as planned in the French NP. The scientific programme was achieved according to the good weather conditions found in Gulf of Lion and Corsica fishing areas (88 hauls out of the 90 stations to be sampled, that is to say 98% achievement). However military constraints become stronger from year to year, giving difficulties for sampling some areas. Table III.G.1 summarises the details of work done, and Map III.G.1.4 provides the positions of the hauls.

Given the size of R/V *L'Europe* and the limited scientific team on board, a large part of data is processed after the end of the cruise by the Sète laboratory staff. It is also the case for the age readings (Boulogne-sur Mer sclerochronology centre) and precise biological analyses. The data thus collected are archived after validation in the Ifremer's central *Harmonie* database. They are processed to provide feedback to professional bodies on stocks abundance and made available to GCFM and STECF working groups (SGMED for example), as needed. The MEDITS working group is also an end-user of these data. This latter group regularly produces estimators for fisheries abundance and population trends in standardised forms agreed between participating countries. Analysis of the data allows also their quality to be explored. France implemented in 2010-2011 for this issue two specific tools, *Coser* and *R-Sufi*, financed partly by the DCF and tested with success at international level by the MEDITSWG. MEDITS-FR raw data and indicators can also be found at the following address <http://www.ifremer.fr/SIH-indices-campagnes/index>.

All these results give evidence that the French contribution to MEDITS programme is become really a survey which will enable to provide inputs for the ecosystem approach defined by the DCF regulation 199/2008 and also data for the Marine Strategy Framework Directive (MSFD) issues. Several requests for access to the MEDITS data by international research programmes gave otherwise evidence of the interest of French MEDITS data.

### **III.G.1.5. Pan-Mediterranean pelagic survey - MEDIAS - PELMED**

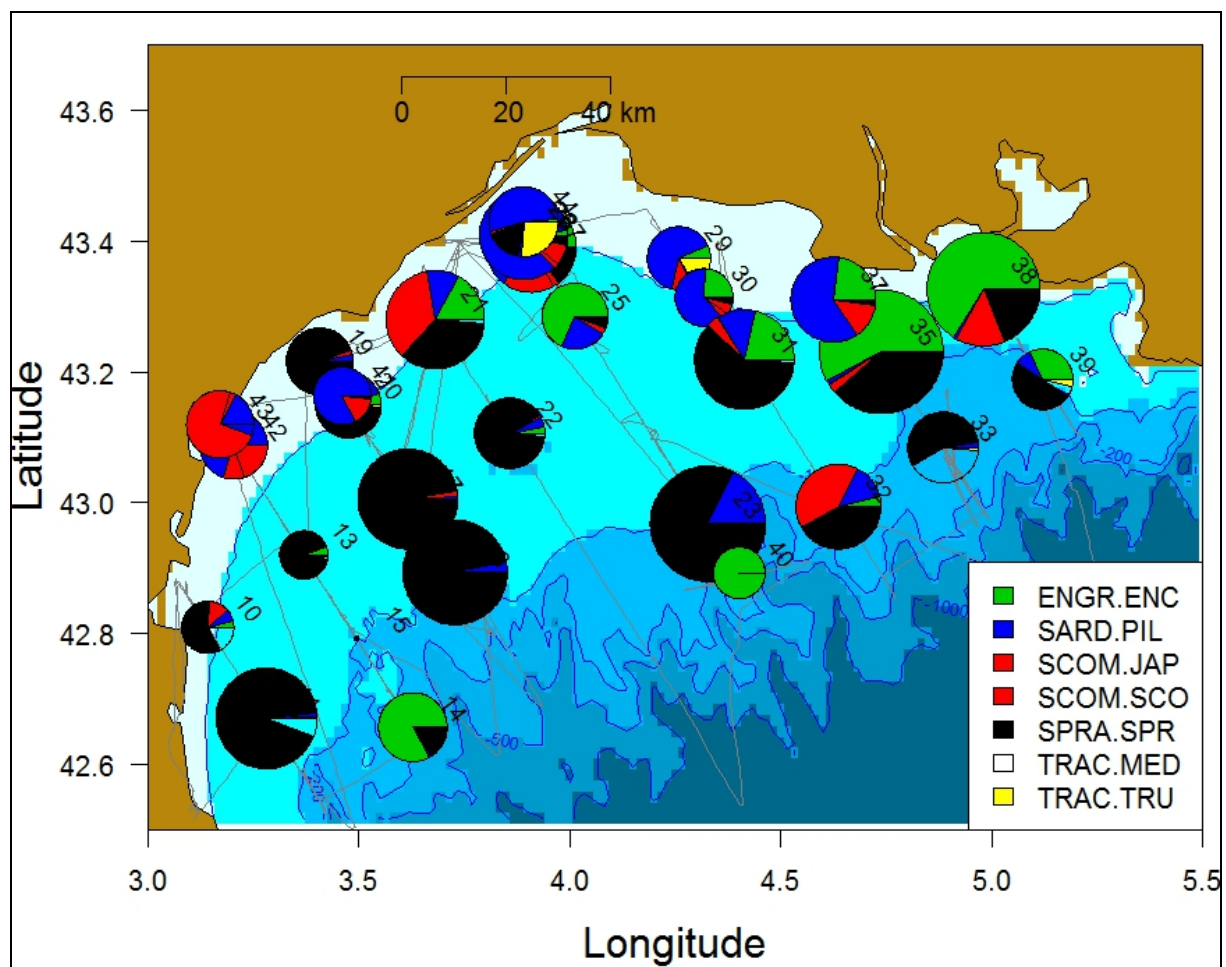
The PELMED surveys, which began in 1993, are aimed at assessing small pelagic resources in the Gulf of Lion using the echo-integration method combined with trawling for identification of the detections observed. Until 2007, each annual cruise involved systematic prospection during daylight (6 am. to 10 pm.) from Port-Vendres to Marseille along nine transects perpendicular to the coast and spaced at intervals of 12 nautical miles across the whole width of the continental shelf. Acoustic acquisition covered 366 nautical miles and hauls catches were analysed exhaustively (numbers and weights per species, length sampling, sampling for age-length keys for sardine, anchovy and hake, and updating of biological variables). Adopting an ecosystem approach, observations and counts were also made of cetaceans and birds encountered on the survey transects. The protocol is therefore highly comparable with that of the PELGAS survey carried out in the Bay of Biscay.

The context of the surveys aiming to small pelagic resources assessment changed in 2008. The European Commission asked Member States to coordinate their surveys efforts relating to these resources, which hitherto have been applied to suit national objectives and were not always part of DCR actions (RCM Mediterranean, Malta, 2006). RCM-Med&BS gave strong support for the implementation of this coordinated Pan-Mediterranean acoustic survey. In 2008 the MEDIAS (MEDiterranean Acoustic Survey) group defined a common protocol for the execution of the five acoustic surveys in the Mediterranean. The creation of the MEDIAS survey was made official by its inclusion in Appendix IX of Commission Decision EC/949/2008.

In accordance with the decisions of the project group, France extended the MEDIAS-PELMED survey for covering also the area between the south of the Ebro river mouth and Marseille (25 transects). In 2009, to implement MEDIAS coordination and Franco-Spanish cooperation, the southernmost part of the zone was to be covered by IEO and PELMED 2009 extending from Barcelona (transect 14) to Marseille (transect 29). The protocol thus provides for complete coverage of the distribution area of the northern anchovy stock of Catalonia and Gulf of Lion.

The MEDIAS-PELMED 2013 cruise took place between 27 June and 29 July 2013, giving 33 days for DCF issues. The area covered was the same as since 2009, from Barcelona to Marseille. All the transects were prospected (1704 nautical miles with acoustic data on 4 frequencies and regular sub-surface temperature collection) and 44 hauls were carried out to identify echo-traces (42 midwater and 2 bottom trawls at sounder depths of less than 40m, associated with 45 hydrological station). 37 zooplankton stations were also sampled.

Bad weather conditions did not facilitate work at sea during the whole survey and did not allow to prospect the last days (only 94% in terms of days at sea achieved). The collection of scientific acoustic data can be considered as adequate even though the rate in terms of number distance prospected in nautical miles is not fully achieved. No scientific consequences were highlighted by the GFCM group on stock assessment of small pelagics about an impact on the quality of the abundance indices time series in 2013.



Map III.G.1.5 – Transects and species composition of hauls carried out during the MEDIAS-PELMED 2013 cruise.

More frequent and complex detections were found in the Gulf of Lion and required more identification hauls. The details of this work are summarised in Table III.G.1. Map III.G.1.5 provides a view of the zone covered and the abundance levels of the main species found in the trawl hauls. At all 9833 fishes were measured of which 400 anchovies, 250 sardines, 170

sprats and 70 hakes were sampled for age reading. Data on 9 species were also collected for biological parameters updating. So the objectives planned for MEDIAS-PELMED 2013 can be considered as correctly achieved.

All the acoustic data (collected on four frequencies) are stored using *Movies+* software. The *Olex* navigation system allows prospection along the transects to be monitored and the various types of echo to be noted. Given the size of R/V *L'Europe* and the limited scientific team on board, a large part of the acoustic data is processed after the end of the cruise. It is also the case for the age readings (Boulogne-sur Mer sclerochronology centre) and precise biological analyses.

The storage of the acoustic data and abundance estimates is similar to that for Atlantic PELGAS survey, using the new *Echobase* tool developed in 2012. Data are processed to provide feedback to professional bodies on stocks abundance and made available to GCFM and STECF working groups (SGMED for example). Use of them is also done at international level in the MEDIAS working group, especially under the common format defined by the HACOUSMED project in 2011-2012.

### **III.G.2 Data quality: Results and deviation from the programme**

Some light deviations, mainly in terms of days at sea achieved, were recorded in 2013 between the planned work and the work really done (cf. Table III.G.1). Nevertheless, no negative consequences have been stressed by the ICES and GFCM assessment working groups using the 2013 French surveys data. The quality of the abundance indices time series was maintained.

Regarding data quality, a software (*Coser*) was developed by Ifremer in 2010-2011 for checking the surveys data consistency. For any French survey whose data are stored in the central *Harmonie* database, datasets are extracted under a common format and the *Coser* tool offers many options to explore the quality and the integrity of the data and to validate them by comparison with permitted ranges, then produces report on all inconstancies found. The same datasets, once consolidated, can be use as inputs to the software *R-Sufi* for calculating indicators on populations and their trends and for providing in particular ecosystem indicators 1 to 4 of Appendix XIII of Decision EU/93/2010.

### **III.G.3 Follow-up of regional and international recommendations**

As far as possible, the standardised protocols attached to each series of campaigns will continue to be followed, all the more so because they have in most cases been approved at international level by the relevant coordination groups (WGIBTS, WGACEGG, MEDITSWG and MEDIASWG).

As explained in the AR guidelines, there is no need to list recommendations that do not apply directly to MS. On the other hand only LM recommendations relevant to the AR year, that is to say the 2012 one, should be listed.

There is no recommendations concerning directly the five French surveys addressed to France by the three RCMs NS&EA, NA and MED&BS in their 2012 reports. Likewise no recommendation on surveys is concerning France in the 9<sup>th</sup> LM report of October 2012.

### **III.G.4 Actions to remedy shortfalls**

Nothing to report.

## **IV. Module of the evaluation of the economic situation of the aquaculture and processing industry**

### **IV.A Collection of data concerning the aquaculture**

#### **IV.A.1 Achievements: results and deviation from NP proposal**

The annual production survey was carried out according to plan by the DPMA. About 3 500 enterprises having a commercial activity were surveyed with questionnaire sent by post. The response rate was 70% for fish farm enterprise, 56% for shellfish ones.

The annual production survey is also permitting to update:

- the population size : checking for closed enterprises, verifying the activity of new units ;
- estimation of some of the DCF parameters (volume of sales, employment);
- the break down of population into DCF segments.

To correct the enterprise production data despite a 59% response rate, non answering units for reference year may be replaced by their data in the previous year if it's existing. Then remaining non answering enterprises are replaced by Hot Deck imputation: a missing reply is replaced by a random drawing among actual answers received from the same geographic region belonging to enterprises with the same legal status. For enterprises that never reply, their replacement unit may belong to slightly different segment from one year to the next one.

The DCF 2013 programme was carried out by the LEMNA and his partners. The socioeconomic data of 424 enterprises in the shellfish farms segments (specialised in production of oysters and/or mussels) was collected in 2013 from enterprise accounts management centres.

The 462 planned sample could not be achieved mainly due to a lack of data sources in the Mediterranean region. The account management centres are less present in this region than independent account experts and they need to implement the collection of more detailed data than pure accounting figures to fit the DCF programme needs.

As shown in the production survey, many enterprises can be considered as mainly involved in oysters or mussels farming. In France there are also some other enterprises that produce a mixture of these two species groups and some other shellfish. These farms cannot properly fit in the present segmentation. France reported their data under the "shellfish / others" segments.

To differentiate the main species produced by shellfish farms among "oysters", "mussels", "others", we select the species giving a turnover (value of sells of all ages and all destinations) of more than 60% of the overall aquaculture turnover. By this way, one enterprise may change between "oyster" / "others" or between "mussels" / "others" from one year to the next one. As shellfish farms sector represent a relatively big population, these changes have a low impact on segment size.

By decision of the national working group (BSPA, LEMNA, partners) in may 2012, the 60% level applies to data of reference years 2011 and 2012. Data for reference year 2010 was recalculated according to this level for the last year data submission.

A level of 70% was used in the previous programme (reference years 2008 and 2009), this mainly explains the diminution in size of the “shellfish others” segments while increasing the “mussels” and even more the “oysters” segment size. Considering the heavy and time-consuming work, BSPA did not recalculate data for these two first programmes to apply the 60% level.

Concerning the fish farm segments (production of trout, sea bass, etc.) the socioeconomic data from 58 enterprises was collected in 2013: 30 from account management centres and 28 through direct questioning to producers with the help of the CIPA.

For the “trouts in fresh water” segments, including data from account management centres (AMC) in the sample was a new practice in 2012 programme. The 2013 sample from AMC is larger than in 2012. This offers a better data accuracy and reliability than direct questioning to fish farms. Nevertheless, the objectives of planned data collection have not been reached in the “On growing » segment. The largest companies in these segments are less involved when an over-representation of small enterprises is observed.

We noticed a high variability in the number of companies in the “On growing » or « Combined » segments between reference years 2010 and 2011. Many enterprises were not reporting embryonated eggs or fry trout production in 2010. They moved from “On growing” segment to “Combined” segments in reference 2011. To compare the results between 2010 and 2011, the observed segment in 2011 for enterprises in the national survey has been copied out in their segment membership in 2010.

For data from the production survey in programme 2013, BSPA has changed the way to differentiate between these two segments to give more stability of segment membership from year to year.

In the marine fish farm sector, the planned sample was not reached in the “Sea bass & Sea bream in cages” segment. Economic data are collected by direct questioning of enterprises but this way is not easily accepted by enterprises. The 5 planned sample in “Seabass-Seabream / Hatcheries and Nurseries » could not be achieved as one middle size unit no more accepted to reply on socioeconomic data and a big size company was in a restructuring phase. Socioeconomic data are not available for 2013 for this segment as sampling rate is too low.

In the small marine fish farm sector (27 enterprises), 7 units have been included in a cluster named “other marine fish / on growing”: they are quite different one to one another in terms of species (Atlantic salmon or trout in sea cage or turbot), technique or size. But giving separated results will lead to important statistical confidentiality for production and employment indicators coming from the annual production survey.

Among the fish farm sample, 4 enterprises have been included but are specialized in sturgeon eggs production (“caviar”) for human consumption. This group cannot properly fit in the present segmentation.

#### **IV.A.2 Data quality: Results and deviation from NP proposal**

Economic data quality was reported as CV’s in the 2011 program for the first time.

The CV's for this programme will be reported in the coming data call in June 2014.

This is the third programme for which France has collected economic data on enterprises belonging to medium or even small population size. As the aquaculture sector is not largely studied on this aspect for many years, BSPA and LEMNA need to accumulate more data and experience to build validation rules and quality tests.

#### **IV.A.3 Follow-up of regional and international recommendations**

Nothing to report.

#### **IV.A.4 Actions to remedy shortfall**

During the previous years, a national working group - joining together BSPA, LEMNA and the partners for data acquisition - worked to harmonize the methods for determining the economic indicators, the sampling strategy, etc.

The national working group will continue these methodological improvements during the 2014 programme.

The difficulties met in 2013 have been analysed and corrective measures are going to be applied in 2014 in order to increase the achieved sample and to improve the quality of data.

#### **IV.B Collection of data concerning the processing industry**

##### **IV.B.1 Achievements: Results and deviation from NP proposal**

The collection of 2011 data on the processing sector of fisheries and aquaculture products (FAP) followed successfully the methodological framework and timetable implemented for 2009 and 2010 data collection. The 2013 data collection programme was conducted as planned.

##### **Sampling and data sources**

The first step of the survey consisted in updating the list of companies involved in FAP processing activities in 2012 in France including its overseas "*departments*" (DOM), using and crossing different data sources.

According to the definition of the scope in the current DCF Regulation, the relevant population list was updated and enlarged taking into account all companies involved in FAP processing, as a main or secondary activity, whether they are registered under:

- NACE rev 1.1 code 1520, which now corresponds to NACE rev 2 code 1020Z (processing and preserving of fish, crustaceans and molluscs) and part of NACE rev 2 code 1085 ie NAF code 1085Z (processing and preserving of fish and fish products)
- or other activity codes (e.g. NAF 4638A Wholesale of other food, including fish, crustaceans and molluscs).

As in 2011 and 2010, very small companies with no mandatory obligation of publishing detailed financial accounts were considered out of the scope. According to preliminary results of 2012 ESANE enquiry (SBS), it concerned about 75 individual businesses representing less than 1% of the total turnover of NAF10.20Z.

Moreover, 20 significant companies registered under NAF 10.20Z, processing snails or being only involved in the marketing of processed seafood (for example: Morpol France, Krustanord), were considered out of the scope.

The following data sources were cross-checked:

- the DCF database on FAP processing companies obtained for year 2011 : 300 enterprises with FAP processing as a main activity (“champ 1”) and 106 enterprises with FAP processing as a secondary activity (“champ 0”);
- the list of companies appearing in DIANE database (financial accounts database), under NAF codes 1020Z, 1085Z and 4638A;
- Professional databases on processing companies (ADEPALE: Association for processed food products enterprises) and professional press, for identifying newly created companies, merging operations and cessations of activity.

Cross-checking these lists led to updating operations, mainly consisting in suppressing companies having ceased their activity (or at least their FAP processing activity) in 2012 and in adding new created processing companies.

The second step was the actual execution of data collection, by the way of sending a questionnaire to each company of the list (census methodology), which was backed by telephone reminders in order to maximise percentage response. Available financial accounts for 2012 were collected in the same time, in the aim of cross-checking and complementing the responses of the processing companies.

In the end, the number of companies retained for 2012 is 295 companies with fisheries and aquaculture products processing as their main activity (champ 1).

The outcomes of this methodology can be found in Tables IV.B.1 and IV B 2.

**IV.B.2 Data quality: Results and deviation from NP proposal**

**Definition of variables**

The questionnaire successfully used for 2011 data was used again for 2012 campaign. It includes 17 basic and clear variables available in the annual statements of income and balance sheets of processing companies and gives the correspondence with the official national accounting classification codes (table 1).

**Table 1 :** Correspondence between the variables of the questionnaire and the classification codes of French income of statement and balance sheet (Cerfa)

Variables	French accounting Codes (Cerfa)
-----------	------------------------------------



INCOME STATEMENT	1	Turnover	FL
	2	Subsidies	FO
	3	Total of income	FR
	4	Wages and salaries of staff	FY + FZ
	5	Wages of temporary workers	YU (annexes)
	6	Imputed value of unpaid labour (1)	Family labour
	7	Purchase of fish and other raw materials	FU
	8	Other purchases and external costs	FW
	9	- of which energy costs (2)	Accounting codes (classes 602 & 606)
	10	Depreciation allowance	GA
	11	Total of operating costs	GF
	12	Financial costs	GV
	13	Extraordinary costs	HI
BALANCESHE ET	14	Fixed assets 2011	BK (net) 2011
	15	Fixed assets – 2010	BK (net) 2010
	16	Debts	EC
	17	Total value of assets	EE

(1) Unpaid labour of manager and family members

(2) In value or as a % of other purchases and external operating costs

These 17 variables of the questionnaire allow calculating all the requested variables of the DCF, using the following correspondence table (table 2).

**Table 2 :** Links between variables of the DCF and variables of the questionnaire

Variables of the DCF	Variables of the questionnaire
Turnover	Variable 1
Turnover in FAP processing	Variable 1 X % of processed FAP
Subsidies	Variable 2
Other income	=Variable 3 - Variable 1 - Variable 2
Wages and salaries of staff	=Variable 4 + Variable 5
Imputed value of unpaid labour	Variable 6
Energy costs	Variable 9 (or % of variable 8)
Purchase of fish and other raw materials	Variable 7
Other operating costs	=Variable 11 - Variable 7- Variable 9
Depreciation of capital	=Variable 14 - Variable 15
Financial costs	Variable 12
Extraordinary costs	Variable 13
Total value of assets	Variable 17
Net investments	=Variable 14 - Variable 15 + Variable 10
Debts	Variable 16

## **Estimation of missing data**

### **“Champ 1”:**

As planned in the national programme, the estimation of missing data for “champ 1” was optimized by stratifying the reference population to apply the best suited estimates to lacking enterprises, taking into account the disparity of economic performances within the sector.

Stratification was based on the technology and the range of processed products of the enterprises: the 295 companies were dispatched in 8 groups as shown in table 3. The figures for missing companies were obtained by applying them the average of the stratum.

Therefore, the stratification methodology applied for 2012 data allows differentiated and relevant analysis of economic performance of the different segments of the processing sector, which encompasses traditional technologies and products (canned fish, salted and smoked products...) and very innovative segments (delicatessen, sushis, prepared meals...), as well as mix multinational groups and small sized craft companies, which have radically different economic rationale and performances.

**Table 3** : Enterprises by stratum.

Main activity groups	Number of companies	Number of employees	Turnover (1000 €)	Turnover in FAP Processing
Preparation (primary processing)	80	2 778	866 010	757 399
Smoked salmon	44	4 448	931 062	714 082
Preserves and semi-preserves	37	2 302	879 103	847 220
Prepared meals	38	2 465	706 876	490 729
Delicatessen and traiteur products	28	2 899	1 135 566	699 728
Salting and smoking	13	629	114 388	103 672
Other	47	313	62 619	57 519
Shrimp processing	8	349	165 993	148 423
Total	295	16 184	4 861 618	3 818 772

Stratification methodology was used for estimating the turnover of companies which didn't respond to the survey. The turnover of a missing company was estimated by applying the average growth rate 2011-2012 of its activity group to its 2011 turnover. Other variables were then estimated from 2011 data for each company (applying a proportionality coefficient expressed in % of the turnover).

### **“Champ 0”:**

Champ 0 was not fully investigated in 2013, according to DCF regulation.

But, some companies from Champ0, having significantly increased the share of processed FAP in their turnover, have been transferred in Champ 1 database, and vice-versa.

### **Criteria for the definition of “champ 1” and “champ 0”**

The breakdown of the population between “champ 1” (FAP processing as a main activity) and “champ 0” (secondary activity) was done using following criteria:

A) The 295 enterprises of “champ 1” encompass:

- All enterprises registered under the NACE code 1020Z (227 companies), even realising less than 50% of their turnover in FAP processing;
- and 73 enterprises registered under other NACE (1085Z, 1089, 4639A, etc.) making more than 50% of their turnover in FAP processing.

One exception was made for Fleury-Michon Group (1085Z) which was included in “champ 1”, even if it realises about 40% of its turnover in FAP processing, considering it is a leader in surimi processing.

B) Enterprises of “champ 0”, are registered under different NACE (excluding 1020Z), and make less than 50% of their turnover in FAP processing.

### **Results and representativeness**

The entire reference population of enterprises was surveyed (census methodology).

The rates of response achieved (number of companies with available questionnaire and/or 2012 financial accounts) was 72 % for companies of “champ 1” (main activity).

For the parameters of the variables listed in Appendix XII of Commission Decision no. 949/2008, the coverage rates for the variables of “champ 1” were over 70% for 14 of the 21 mandatory variables (see details in Table IV B1 and IV B2).

Coverage rate in value is under 70% for 7 variables, not systematically fulfilled in the questionnaires.

- Energy costs (24%), due to the time needed for calculating it, which was a deterrent to many companies;
- Imputed cost of unpaid labour (43%), not reported in standard financial account in France, and often inexistent in industrial processing;
- Breakdown of total employment by gender (42 %), not reported in standard financial accounts of French companies;
- Total employment in FTE and breakdown by gender (42%), not reported in standard financial accounts of French companies.

Overall representativeness of the survey is considered as satisfying regarding the coverage rates over 70% for most of the variables.

As indicated in the JRC guidelines, CVs were calculated for variables with response rates <70%.

### **IV.B.3 Follow-up of Regional and international recommendations**

Recommendations from the auditors mandated by DG MARE (DevStat) were taken into consideration, particularly concerning:

- Calculation of response rates for each variable;
- Structure of the database. Sources of data and estimation methodology are better reported and available for each individual data;
- Procedure for data transmission, ensuring higher security regarding confidentiality of information.

### **IV.B.4 Actions to avoid shortfalls**

Overall, despite the survey is not mandatory, the response rate and the quality of data were satisfying for 2012 survey. 2011 results were sent to each company with the questionnaire, which seems to have been an incentive for them to respond.

Some improvement are however planned to remedy low response rates obtained on some variables. It is intended to use ESANE data (SBS), as soon as results will be available, in the aim of estimating more accurately energy costs, imputed value of unpaid labour and the number of employees in FTE.

## V. Module of evaluation of the effects of the fishing sector on the marine ecosystem

All details on technical issues on this module are summarized in Table V.1.

### V.1. Achievements: results and deviation from NP proposal

#### **Indicator 1 – Conservation status of fish species**

#### **Indicator 2 – Proportion of large fish**

#### **Indicator 3 – Mean maximum length of fishes**

#### **Indicator 4 – Size at maturation of exploited fish species**

The four ecosystem indicators can be calculated using the data routinely collected in research surveys, as indicated in Table III.G.1. The methods of reference for building these indicators do however remain to be defined at the international level. An approach by region would be appropriate. While awaiting such a definition, the information is meticulously archived in dedicated national databases (e.g. *Harmonie*) and automatic processing procedures were developed by Ifremer for providing ecosystem indicators routinely by using tools *Coser* (assessment of the quality of datasets extracted from *Harmonie* under a common format) and *R-Sufi* (calculation of *ad'hoc* estimators under various options) (see also section III.G.2). These tools have been tested for DCF and non DCF surveys and gave entire satisfaction. France is now able to produce the 4 DCF ecosystem routinely.

#### **Indicator 5 – Distribution of fishing activities**

#### **Indicator 6 – Aggregation of fishing activities**

#### **Indicator 7 – Areas not impacted by mobile bottom gears**

Ifremer carried on with the improvement of its operational method for calculation of indicators 5 to 7. The main evolutions during 2013 concern :

- Consolidation of the *AlgoPesca* Software Package, dedicated to the treatment of geolocalized data (VMS and GPS). Reminder of the content :
  1. calculation of straight line average speed between two pings, which is the key criteria in order to determine if the vessel is fishing, steaming, or in a harbour. Behind a threshold of 4,5 knots, the vessel is considered as fishing. This threshold is a parameter and will be modified according with the gear used;
  2. detection of the fixed positions of the vessels during more than 5 hours, as an indication of a potential port or a shelter not yet registered;
  3. visualisation of these fixed positions and the harbours and shelters still registered in the Harbours data base. Then the expert confirm the news ports to be included in the data base needed in the following modules of characterisation of the fishing trips;
  4. reconstitution of the dates and hours of start and end of the each fishing trip per vessel;
  5. reconstitution of the fishing sequences per vessel, per day and fishing area (ICES rectangles, grid cell of 10' to 1' of latitude by 10' to 1' of longitude ), including potentially others layers (EEZ, MPAs, ...);
  6. visualisation per vessel of the fishing trips calculated and speed profiles.

The main analysis carried out in 2013 concern the optimization of the estimation of fishing effort near the harbours : some small-scale coastal vessels can fished very close from the harbour. Two ways were analysed : define by harbor the exclusion zone of fishing, and modify the parameters of the algorithm.

The *AlgoPesca* was used in 2013 by IPMA, IEO and Marine Institute in order to produce VMS indicators responding to the SWW RAC's data call in the Intereg *Gepeto* project.

- Actualisation of the aggregation of data for the French vessels worldwide and foreign vessels in the French EEZ from 2008 to 2013, at four spatial scales : three matrix of square cells, (10, 3 and 1 minutes latitude by 10, 3 and 1 minutes longitude), and a description of the fishing activity by pings with an average linear speed below the threshold.
- Actualisation of the cross-validation of the logbooks and VMS data for the French vessels worldwide on a daily basis within the DPMA's *SACROIS* project. Crossing the daily spatial distribution of fishing time (at any level of spatial aggregation) with the daily catches recorded in the individual log books allows to produce also estimations of the spatial distribution of catches per species.
- Actualisation of several Web portals, with interactive mapping software, presenting VMS data (by country, gear, fleet, vessel length class) and offer a description within several spatial grids of the following parameters : number of vessels, number of hours of fishing, estimates of the total landings value extracted, estimates of the catches per specie, on a monthly and yearly basis.

Since 2011, IRD conceived and set in place a procedure enabling computing indicators 5 and 6 using VMS data for tuna purse seiners. The VMS data are currently collected from the CNSP at the end of the quarter and inserted into the BALBAYA database. Several processing steps enable the filtering of the VMS data and their linkage with the fishing trips of the purse seiners (Vangkeosay et al. 2009). The indicators are calculated automatically and an open office report is automatically generated using R program (Rodriguez et al. 2012,). These two indicators will be introduced in 2014 in the annual national statistical report submitted by IRD to tuna RFMOs.

### **Indicator 8 – Discarding rates of commercially exploited species**

The data required for the calculation of this indicator are collected under module A2 (metiers related variables). An observer-at-sea program aims to observe the entire catch and more particularly the discard fraction. Data from this program are used in particular for calculating discarding rates. These “*in situ* data” also provide a comprehensive source of knowledge and understanding of the activities and fishing strategies. From 2012 the program constitutes the basic material for research projects and expertise, which aims to develop knowledge bases needed for the analysis of strategies for reducing discards. All estimates of discard rates by métier are available in the 2012 report to the following address:

<http://archimer.ifremer.fr/doc/00167/27787/25978.pdf>

Concerning tropical tunas fisheries, a first attempt of generating automatically this indicator was made in 2011 but faced basic problems relative to methods to be used for computation of discard itself. A scientific paper is planned to be presented and discussed in IOTC and ICCAT working groups in 2013 to propose and compare some methods calculating these rates and computing total discards in agreement with present low observer programme coverage.

#### **Indicator 9 – Fuel efficiency of fish capture**

As mentioned in the national programme, this indicator could be calculated annually, given that the fuel consumption data is available on an annual basis.

### **V.2 Actions to remedy shortfalls**

#### **Indicator 1 – Conservation status of fish species**

#### **Indicator 2 – Proportion of large fish**

#### **Indicator 3 – Mean maximum length of fishes**

#### **Indicator 4 – Size at maturation of exploited fish species**

Nothing to report.

#### **Indicator 5 – Distribution of fishing activities**

#### **Indicator 6 – Aggregation of fishing activities**

#### **Indicator 7 – Areas not impacted by mobile bottom gears**

Nothing to report.

#### **Indicator 8 – Discarding rates of commercially exploited species**

For European seas, initial extrapolations show that indicator quality is highly dependent on the intensity of sampling of the métiers, the practices used by the vessels sampled and the quality of on-board analysis of catches. Concerning the sampling intensity, it has been noticed that the coverage rate of the sampling plan has been improving from 2010 to 2013. These improvements have been made possible by a closer cooperation between the administration, the fishermen and the scientists. Progresses still have to be made for some métiers.

#### **Indicator 9 – Fuel efficiency of fish capture**

The issue of quarterly estimation of fuel consumption, in order to meet the DCF requirement, is ongoing within the framework of the working group on economic data, led by the Directorate of Fisheries with participation of the partners of data collection.

## **VI. Module for management and use of the data**

### **VI.1 Achievements: Results and deviation from NP proposal**

#### **Development of IT fisheries tools by MSIPA (DPMA):**

#### **DCF Information System managed by the Directorate for Fisheries and Aquaculture**

Four projects are identified to meet DCF regulation:

1. The implementation of a central Web site for the management of datacalls, from the entry of data by datacallers to the providing of responses
2. The development of a Content Management System to facilitate exchange of documents between French partners (GedNet)
3. The implementation of a DCF datawarehouse to help the constitution of responses
4. The analysis of Regional Databases and a common data exchange format, that continues the work on data dictionaries initiated by French partners in 2009

In 2013, projects “1” and “2” were on maintenance and operations (M&O), so no cost has been generated. Furthermore, the directorate for fisheries hasn’t attended steering committees for regional databases.

Works were focused on the transfer of the information system from the ministry of agriculture to the ministry of ecology, happened in 2013. A new staff in the ministry of ecology took over the downstream sector of the Fisheries and Aquaculture Information System (FAIS), and especially the cross of data and the datawarehouse (Business Intelligence represented below).

The following diagram shows the relationship between the projects of DCF information system.



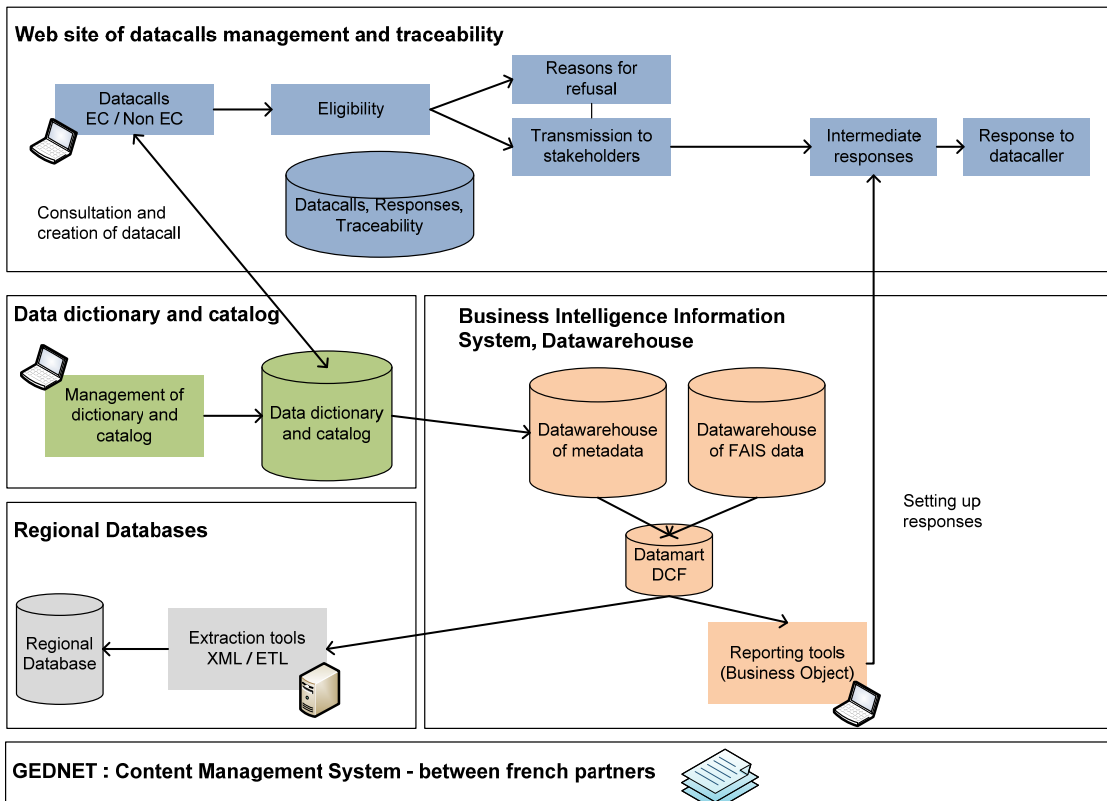


Figure 1 : Organization of DCF projects

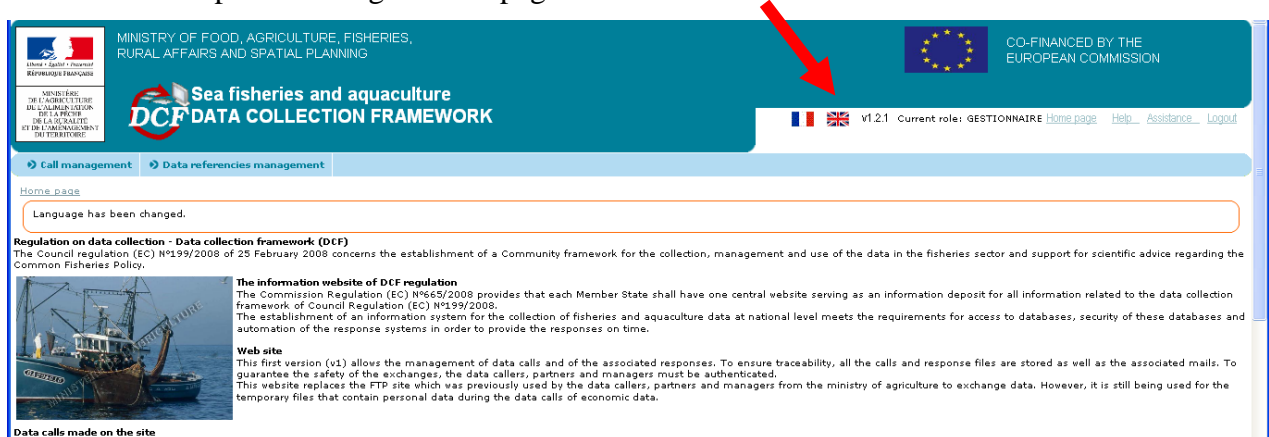
## **Project 1 : Central Web Site of datacalls management**

The DCF Web site is accessible on the Internet by secure encrypted dataflow (https) and a personal authentication. Access profiles are:

1. DMFA managers, national correspondent : datacall management, creation of a new datacall, eligibility and automatic transmission to partners, upload of the final response, management of references and users
2. Partners: consultation of eligible datacalls transmitted to them, uploading files for DMFA. Those files are not viewable by the datacaller, who can only download the final answer.
3. EC consultation: this profile was created for the European Commission, and provides access to all datacalls, in progress or completed. The user is able to consult the workflow of datacall and responses.
4. Full consultation: this profile is the same as EC consultation, and can view also the files provided by partners. It will be attributed to DMFA responsible.
5. Datacaller: A datacaller profile is granted to any person who contact the DMFA and want to make a datacall. Datacallers can create new datacalls, verify the eligibility, and download responses. They consult only their own datacalls.

The home page of the website presents briefly the DCF regulation and how the website operates.

The last release provides English web pages.



**Figure 2 : Home page of the website in English**

## **Project 2 : GEDNET – Content Management System**

A secure FTP site was established in 2009 to gather data collected from partners, including personnel data, and responses. This site is now replaced by the Content Management System GEDNET.

Main features are the following:

1. A scoreboard allows partners to set widgets they want to see in front page.
2. Secured workspaces allow users to access to different documents they share.

3. A task management displays workflows in progress
4. Documents can be modified online, locked, versioned

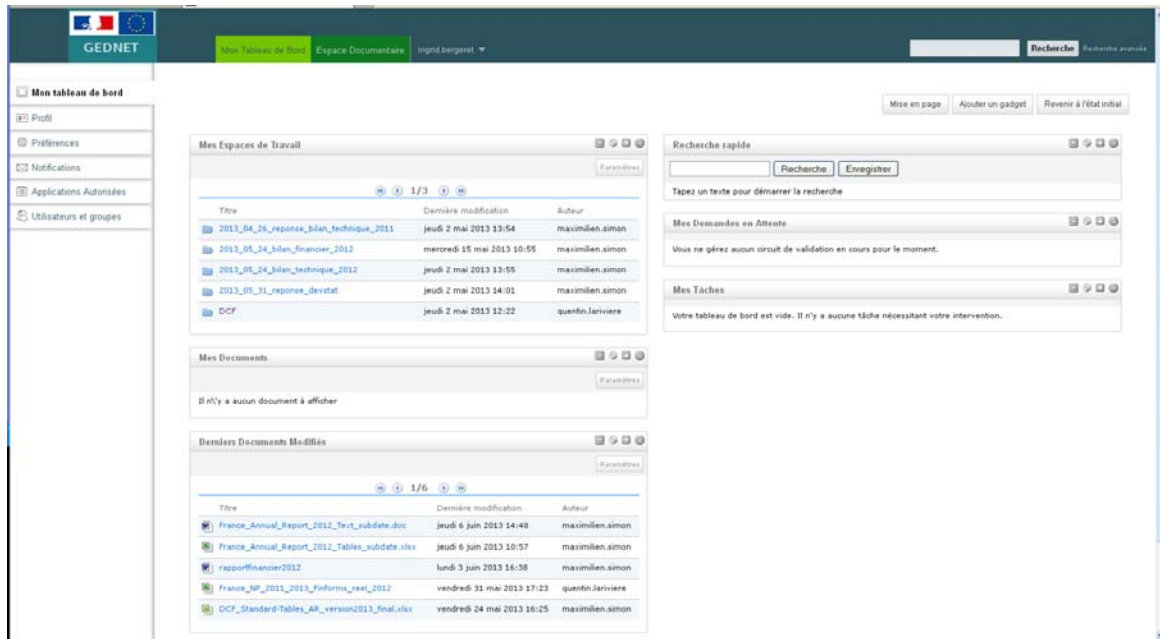
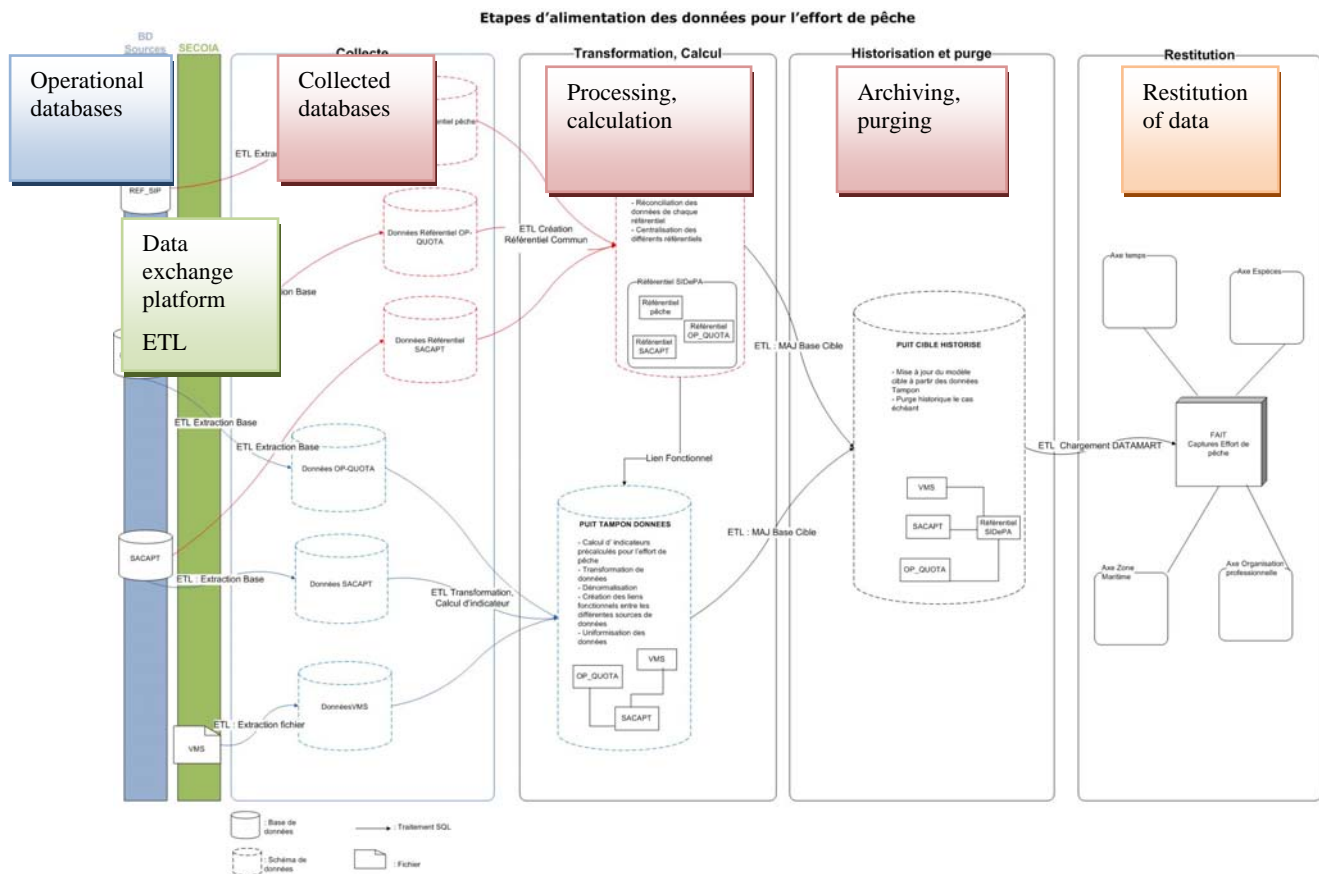


Figure 3 : Scoreboard of the CMS Gednet

### **Project 3 : Datawarehouse**

Design and realization works began with the writing of general specifications, the allotment of project realizations, the analysis of technical architecture, and the detailed specifications of the management of references in the datawarehouse.

The target project continued with the constitution of a first datawarehouse based on operational databases, on which a BI technology (Business Object) has been leaned.



The transfer of the directorate for fisheries from the ministry of agriculture to the ministry of ecology in may 2012 has resulted in the moving of datawarehouse servers in a new datacenter, and the appointment of a new realization team, based in Bordeaux. This new team is really involved in the project only since 2013.

During 2012, different subcontracts permitted us to work on datamarts and Business Object universes to present different data involved in DCF, like effort data.

### **Project 4 : Regional Databases**

A first steering comity was held in early 2011 to perform an analysis of scenarios for the establishment of regional databases. The French directorate for fisheries and aquaculture has been actively involved, and has proposed a French statement. In 2012, the directorate for fisheries attended the steering committee for Mediterranean Regional Database in Rome, in order to initiate exchanges on data policy and scope of the database. In 2013, the directorate hasn't participated to regional database meetings. It can be stressed that al the RDB steering committees meetings 2013 were in fact postponed to 2014.

### **Development of IT fisheries tools by Ifremer:**

*Allegro* software offers scientists and technicians a palette of forms required for the entry of all the types of data to be collected as part of DCF and during fieldwork in general. Its main purpose is thus to cover the whole range from economic surveys to biological sampling (on board and onshore) or scientific surveys. In addition, this software aims to provide data collectors with all the preliminary documentation required for their data collection activities. In 2013, the IT development effort for *Allegro* software focused on :

- the revamping of the scientific surveys data entry software for at sea scientific survey. This new module of *Allegro* (more known at the moment under its working name *Tutti*) is cover all surveys carried out by Ifremer. The work started in 2012 and continued in 2013.
- the revamping of data entry software for the fishing effort and catches data of small scale vessels. These transversal data are collected by enquiries and sampling at the landing ports(*OBSDEB*). This new module of *Allegro* aims to offer an improved interface with *Harmonie* database and to benefit from all facilities available in *Allegro*. The work started in 2013 with a prototyping.
- adding a new facility for the quality control of data positions, such as Vessel Monitoring System. It consists of a GIS plugin.

IT developments were also made in 2013 on the central system operating around the *Harmonie* database :

- to produce a generic tool for raw data extraction from *Harmonie* database. This tool allows building easily queries using a friendly user interface for extracting data in response to user's requests, especially for DCF needs. The developments of the tool started in 2012 and continued in 2013.
- to produce a tool for management of referential data. The different data collected through the DCF are inherently wide-ranging, but they are based on a common set of referential data. It concerns for instance the list of commercial species, taxonomic references, FAO gears, ports, commercial categories, fishing sectors, etc. This tool consists of different user interface allowing viewing and updating the referential data. It allows also defining grouping referential data (e.g. the different levels of DCF fishing metiers) and takes into account the concept of regionalization, i.e. the fact that a single reference may have different names depending on the region, and that some references are specific to one or several given regions. The developments of the tool started in 2012 and ended in 2013 for a first subset of the referential data. They will continue in 2014 for the other referential data.

Specific developments have been made concerning a wider use of the *COST* tool, often considered as difficult to implement. Biological data under *COST* format are now routinely provided by the *Harmonie* system. In 2013 a specific effort was devoted to improve the preparation of datasets in answer to data calls : a team (CREDO) regrouping experts in stocks assessments was created, whose mandate is to develop generic R scripts which can be next adapted by each expert for his own stocks or provide automatic processing of data for less important species.

Finally, first analysis was carried out in to improve the tool *WAO*, which enables to follow in real time the way collection of data on the field happened. Effort dealt in 2013 with a new module concerning the updating of biological parameters (stock variables), which is often a weakness identified in the French annual report..

All DCF regions benefit from these works and IT improvements. In general, the specifications are drawn up by Ifremer or consultants assisting programme managers. The IT developments are carried out by subcontractors.

### **Development of IT fisheries tools by IRD (Tropical tunas):**

#### AVDTH 2013

AVDTH is the main tool used by IRD to input data from logbooks and harbour samplings. As AVDTH is designed to manage the whole logbooks data, it must be updated every time the logbooks change. In 2013 AVDTH was also updated to match the new IOTC and ICCAT logbooks released in January 2013, which now supports the FAD management data. Several tools related to AVDTH were also updated (Convert, AKADO) and translated in English.

#### ObServe

ObServe is an integrated information system developed by IRD, designed to manage onboard scientific observation end-to-end. It is shared by several countries and organisms: IEO, AZTI (Spain), SFA (Seychelles), TAAF, IRD (France). Since 2010 the software evolved according to the different users feedback. In 2013 we developed version 3. The roadmap for the 2013 (v3) version can be seen at:

- <http://forge.codelutin.com/versions/377>
- <http://forge.codelutin.com/versions/394>
- <http://forge.codelutin.com/versions/398>
- <http://forge.codelutin.com/versions/400>
- <http://forge.codelutin.com/versions/393>
- <http://forge.codelutin.com/versions/402>
- <http://forge.codelutin.com/versions/431>

Most of the improvements aim to:

- Keep the software up to date regarding the observation protocols
- Improve the data completion by adding automatic calculations
- Make the administration more efficient while the number of users and trips managed are rising
- Satisfy the foreign user needs

#### T3+ (*Traitement des Thons Tropicaux*)

In 2013, the development of T3+ tool has been continued to improve the results quality. This tool combines a database and software. Its goals are the following:

- establish a centralized database with collected detailed data from logbooks and sampling operations
- produce series of statistical processing (corrections, extrapolations)
- establish a centralized database with corrected fine data

Specific works have been done in 2013 on:

- improve the reliability of statistical processing for level n°2 (species composition correction)
- development of statistical processing for level n°3 (extrapolation of samples to the total catches)
- elaboration of an installation procedure

Use of data :

All details on transmission of data and data calls are summarized in Table VI.1.

**VI.2 Actions to avoid shortfalls**

No deviation but some difficulties to build the data sets in response of data calls requesting data under the SGMOS format. Strata are not always corresponding with the national sampling protocols

## VII. Follow-up of STECF recommendations

Recommendations from all STECF-EWGs held in 2012 were browsed and only three recommendations addressed directly to Member States were noted here (see below). All recommendations referring to modification of tables and text for NP 2011-2013 and AR 2013 were followed-up in bilateral between France and EU to come up with a final version of the NP and AR.

Source	Recommendation	Action taken
STECF- EWG 12-01	STECF-EWG 12-01 recommends that MS scientific institutions involved in data collection have online access to VMS and logbook data, as well as data collected under the Control Regulation.	France complies already with.
STECF- EWG 12-20	When a MS proposes a pilot study in its NP, details of the duration of the study should be given, together with information on when the results are to be expected. This and which STECF Expert Group will be responsible for the evaluation should be included in the guidelines.	France will comply with, but does not carry out pilot study in 2013.
STECF- EWG 12-20	STECF EWG 12-20 reminds MS to gain experience with VMS & Logbook tools before the proposed workshop takes place as the experience exchange will be crucial for the success of the Workshop.	France processed VMS data regularly on a monthly basis. French experts attended the ICES SGVMS.



## VIII. List of acronyms and abbreviations

AZTI	AZTI-Technalia Foundation
CPUE	Catch Per Unit of Effort
CRO	Centre de Recherches Océanologiques (Abidjan, Côte d'Ivoire)
CRODT Sénégal)	Centre de Recherches Océanographiques de Dakar Thiaroye (Dakar,
DCR	Data Collection Regulation (Council Regulation 1543/2000)
DCF	Data Collection Framework (Council Regulation 199/2008)
DPMA	Directorate for Marine fisheries and Aquaculture
EVHOE	<i>Évaluation des ressources Halieutiques de l'Ouest-Européen</i> / French evaluation of Western European Fisheries Resources (part of W-IBTS-4thQ survey)
FBA	Fleet Based Approach
GFCM	General Fisheries Commission for the Mediterranean
IBTS	International Bottom Trawl Survey
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
IEO	<i>Instituto Español de Oceanografía</i> / Spanish Institute of Oceanography
IFREMER	<i>Institut Français pour l'Exploitation de la Mer</i> / French Institute for the Exploitation of the Sea
IOTC	Indian Ocean Tuna Commission
IRD	<i>Institut de Recherche pour le Développement</i> / Institute for development research
ISRA	<i>Institut Sénégalais de Recherches Agricoles</i> / Agricultural Research Institute, Senegal
JRC	Joint Research Centre
MEDIAS	MEDiterranean International Acoustic Survey
MEDITS	MEDiterranean International bottom Trawl Survey
ORC	Oceanographic Research Centre
PELGAS	<i>Campagne acoustique PELagiques-GAScogne</i> / French acoustic survey for small pelagics in the Bay of Biscay (part of SAHMAC survey)
PELMED	<i>Campagne acoustique PELagiques-MEDditerranée</i> / French acoustic survey for small pelagics in the Mediterranean (part of MEDITS survey)
PGCCDBS	ICES Planning Group on Commercial Catch, Discards and Biological Sampling
PGMED	Mediterranean planning group for methods
RCM	DCR/DCF Regional Coordination Meeting
RFMO	Regional Fisheries Management Organisation
SFA	Seychelles Fishing Authority
SGMED	Sub-Group for the Mediterranean (STECF sub-group)
SGRN	Sub-Group for Research Needs (STECF sub-group)
STECF	Scientific, Technical and Economic Committee for Fisheries
TAAF	Terres Australes et Antarctiques Françaises
WCPFC	Western and Central Pacific Fisheries Commission

WECAFC	Western Central Atlantic Fishery Commission
WPEB	IOTC Working party on Ecosystem and Bycatch
WPTT	IOTC Working party on Tropical Tunas
WPDCS	IOTC Working Party on Data Collection and Statistics

NB : for ICES Working Groups acronyms see Technical Table II.B.1 and VI.1

## **IX. Comments, suggestions and reflections**

## **X. References**

### **DCF Framework:**

Council regulation (EC) 199/2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support scientific advice regarding the Common Fisheries Policy.

Commission regulation (EC) 665/2008 laying down detailed rules for the application of Council regulation (EC) 199/2008.

Commission Decision /2010/93/EU adopting a multi annual Community programme for the collection, management and use of data in the fisheries sector for the period 2011-2013.

Council regulation (EC) 1078/2008 laying down detailed rules for the implementation of Council Regulation (EC) 861/2006 as regards the expenditure incurred by Member States for the collection and management of the basic fisheries data

Anon. 2009. Guidelines for the submission of National Programme Proposals on the National Data Collection Programmes under Council Regulation (EC) 199/2008 Commission Regulation (EC) 665/2008 and Commission Decision 2008/949/EC (version 2009). Annex to SGRN 2009 report.

Anon. 2013. Guidelines for the submission of Annual Reports on the National Data Collection Programmes under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2010/93/EU - Version 2013. 26p.

Anon. 2011. Report of the 8th Liaison Meeting between the Chairs of the RCMs, the chair of ICES PGCCDBS, the chair of PGMED, the ICES representative, the Chair of SGRN DCF EWG's and the European Commission. DG Maritime Affairs and Fisheries, Brussels, Belgium, 4th and 5th October 2011.

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RCM NS/EA report 2012, RCM NA report 2012, RCM MED&BS report 2012, RCM LDF report 2012.

### **Biological data:**

ICES. 2010. Report of the Workshop on methods to evaluate and estimate the precision of fisheries data used for assessment (WKPRECISE), 8-11 September 2009, Copenhagen, Denmark. ICES CM 2009/ACOM:40. 43 pp.

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Vigneau J. and S. Mahevas (2007). Detecting sampling outliers and sampling heterogeneity when catch-at-length is estimated using the ratio estimator. ICES Journal of Marine Science, 64(5), 1028-1032.

Vigneau J., 2008 - Common tool for raising and estimating properties of statistical estimates derived from the Data Collection Regulation (COST). European Commission, FISH/2006/15 – lot 2, Project no : SI2.467814. Title: Studies and Pilot projects for carrying out the common fisheries policy.

### **Transversal data:**

Anon. 2008. Report of the 4<sup>th</sup> Liaison Meeting between the Chairs of the RCMs, the chair of ICES PGCCDBS, the chair of PGMED, the ICES representative, the Chair of SGRN and the European Commission Brussels, 20-22 February 2008. 3 pp.

ICES CM 2008 / K:14. A new approach to estimate catches and fishing effort of small scale fisheries by sampling fishing trips on-site. Sébastien Demaneche, Claude Merrien, Joël Vigneau, Olivier Guyader, Patrick Berthou, Patrick Lespagnol, Emilie Leblond, Fabienne Daures. <http://www.ices.dk/products/CMdocs/CM-2008/K/K1408.pdf>

Demaneche S., Merrien C., Bruneau M., Lespagnol P., Reynal L., Guyader O. and J. Vigneau. Small-scale fisheries on-site survey. A new approach to estimate catches and fishing effort of small scale fisheries by sampling fishing trips on-site. Poster. Fishery Dependent Information Conference, august 23-26 2010, Galway Ireland. <http://www.marine.ie/fisherydependentdata/>

Demaneche S. *et al.* 2010. Projet SACROIS Ifremer/DPMA. Final Report period 2008-2010.

Océanographie Développement/Ifremer, 2010. *Élaboration d'une méthodologie de calcul des variables d'effort dans le cadre du programme national de collecte des données 2009-2010 pour l'amélioration du suivi de l'activité des navires de pêche professionnelle* [Establishment of a methodology for the calculation of effort variables under the 2009-2010 national data collection programme for the improvement of monitoring of activity by professional fishing vessels], Interim Report.

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Amandè M, Chassot E, Chavance P, Murua H, Delgado de Molina A, Bez N (2012) Precision in bycatch estimates: the case of tuna purse-seine fisheries in the Indian Ocean. ICES Journal of Marine Science 69:1501–1510

Cauquil P., 2012a. T3+: Tropical tuna data processing. Installation manual. UMR 212 EME, Institut de Recherche pour le Développement, 14 p.

Cauquil P., 2012b, T3+: Système de traitement et de gestion des données statistiques thonières tropicales, Documentation des traitements. UMR 212 EME, Institut de Recherche pour le Développement, 40 p.

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- Rodriguez C. et J. Barde, 2011. Inventaire des sources de données disponibles au Centre de recherche Halieutique. Rapport interne de l'Observatoire Thonier, IRD. 229 p.
- Observatoire Thonier, 2012a. Manuel à l'usage des observateurs embarqués à bord des thoniers senneurs tropicaux. 1/ Instruction pour la collecte des données. 69 p.
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## XI. Annexes

### Annex 1 : List of bilateral and multilateral agreement

<b>BILATERAL &amp; MULTILATERAL AGREEMENTS (FR)</b>							
<b>MSs</b>	<b>content</b>	<b>coordination</b>	<b>description of sampling / sampling protocol / sampling intensity</b>	<b>data transmission</b>	<b>costs</b>	<b>access to vessels</b>	<b>validity</b>
FR - IE	a) 54 FR vessels operating or landing in IE and transported for first sale in FR to be covered under 2011-2013 NP. b) 4 IE pelagic vessels operating or landing for first sale in FR on an opportunistic basis to be covered under 2011-2013 NP.		a) Length, maturity and age of hake, monkfish and megrim landings, in accordance with FR NP. Sampling intensity: in accordance with the rules laid down by the regulation. b) Length, maturity and age of mackerel, horse mackerel and herring landings, in accordance with the IE NP. 10 samples of herring, mackerel, horse mackerel and/or albacore tuna to be sampled annually by contractor that will send data from primary-process to the Irish Marine Institute where it will be aged. Sampling intensity: 10 samples to record age, sex, length, maturity.	a) FR responsible for submitting the data to the respective end-users and to IE. b) IE responsible for submitting the data to the respective end-users and to FR.	a) Eventual additional sampling costs will be included within FR NP 2011. b) Eventual additional sampling costs will be included within IE NP 2011.		
FR - NL	a) Landings and discards by FR-NL vessels fishing on FR register, landing for first sale in NL, to be included within NL NP.		a) Length and age of discards and landings, in accordance with NL NP. Levels and coverage of sampling to be as agreed at the annual RCMs NS&EA and NA in compliance with NL sampling scheme.	a) NL responsible for submitting the data to the respective end-users and to FR.	a) Eventual additional sampling costs will be covered within the NL NP from 2011 onwards.		
FR-ES	a) Landings by all European tuna vessels in Abidjan b) Biological sampling at canneries	a) An annual coordination meeting taking place alternatively in FR and ES	a) Sampling of landings for species and size composition. Levels of coverage according to agreed minimum samples by strata b) Monitoring of "Faux poisson" landed (quantities, species	a) ES responsible for submitting the data to the respective end-user	a) Additional sampling costs presented by ES within the Spanish National program		

			composition and size structure) c) Biological sampling at canneries (size, sex and maturity)				
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## Annex 2 : Bilateral agreement between France and Ireland



**Bilateral Agreement between the Marine Institute Ireland and France (Ministere de l'Agriculture et de la peche) for the collection of length, maturity and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2008/949/EC.**

**Agreement:**

1. Fifty four vessels fishing on the French register, which operate and / or land into Ireland and transported for first point of sale to France, will be sampled as part of the 2011-2013 National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the French National Sampling Programme from 2011
2. In addition, four pelagic vessels fishing on the Irish register which operate and / or land for first sale into France, on an opportunistic basis, will be sampled as part of the 2011-2013 National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the Irish National Sampling Programme from 2011.

**Description of sampling:**

1. The sampling will be for length maturity and age of Hake, Monkfish and Megrin landings, sampling will be carried out in accordance with the French National Sampling Programme.

**Sampling Intensity:** In accordance with the rules laid down by the regulation.

2. The sampling will be for length maturity and age of mackerel, horse mackerel and herring landings, sampling will be carried out in accordance with the Irish National Sampling Programme.

Ten samples of herring, mackerel, horse mackerel and/or albacore tuna will be sampled annually by a contractor based in Douarnenez, France. This contractor will collect and primary-process the samples and send the data to the Irish Marine Institute where they will be aged. The data will be submitted by the relevant Irish scientist to WGWIDE, HAWG and/or ICCAT.

**Sampling Intensity:** Ten samples will be processed and age, sex, length, maturity information recorded. These data will be sent to the French scientist with responsibility for submitting French data to the ICES WGWIDE.



**Data responsibility:**

1. France is responsible for submitting the data to the relevant ICES Expert Groups, and to the EC, under the requirements of its Data Collection Framework. France will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to Ireland as and when requested.

2. Ireland is responsible for submitting the data to the relevant ICES Expert Groups, and to the EC, under the requirements of its Data Collection Framework. Ireland will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to France as and when requested.

**Contact persons:**

National Correspondent: [fran.o'brien@marine.ie](mailto:fran.o'brien@marine.ie)

Marine Institute, Ireland

Signed: 

Date: 4/02/2010



*Marine Institute*  
Foras na Mara

Rossville

Oranmore Galway

Tel: 353 91 387 200

Fax: 353 91 387 201

[enquiries@marine.ie](mailto:enquiries@marine.ie)

Ministère de l'Agriculture

Signed: 

Date: 15/03/2010

[patrice.chabot@agriculture.gouv.fr](mailto:patrice.chabot@agriculture.gouv.fr)

DIRECTION DES PÊCHES MARITIMES  
ET DE L'AQUICULTURE

3 place de Fontenay  
75007 PARIS  
FRANCE

## Annex 3 : Bilateral agreement between France and the Netherlands

### **Bilateral Agreement between the Netherlands (Centre for Fisheries Research) and France (DPMA) for the collection of length and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2010/93/EU.**

#### **Additional information:**

RCM North Sea and Eastern Arctic (2008) recommended that The Netherlands and France should establish a bilateral agreement on the sampling of the landing French trawlers landing into the Netherlands. These trawlers are operated by a Dutch company, but sail under the French flag. As the vessel fly the French flag and are selected for sampling within the French National Programme, France holds the obligation to sample these vessels. But, as France doesn't have access to the majority of the landings, The Netherlands will take over this responsibility.

#### **Agreement:**

- (1) Landings and discards by French-Dutch vessels fishing on the French register, which land for first sale into the Netherlands, will be sampled as part of the Netherlands National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the Netherlands National Sampling Programme from 2011 onwards.

#### **Description of sampling:**

- (1) The sampling will be for length and age of discards and landings, sampling will be carried out in accordance with the Netherlands National Sampling Programme.

#### **Sampling Intensity:**

- (1) Levels and coverage as agreed at the annual meeting of RCM NS&EA and NA and in compliance with the Dutch sampling scheme.

#### **Data responsibility:**

- (1) The Netherlands is responsible for submitting the data to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. The Netherlands will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to France as and when requested.

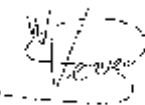
#### **Contact persons:**

In The Netherlands: Siets Verver (siets.verver@wur.nl)

In France: Patrice Chasset (Patrice.chasset@agriculture.gouv.fr)

#### **Signatures:**

For CVO



Siets Verver  
Det. Head Centre for Fisheries Research  
CVO

For DPMA



Patrice Chasset  
National correspondent  
MAAF/DPMA/MAS

Date: 31/03/2010

Date: 31/03/2010

## Annex 4 : Bilateral agreement between IRD and IEO



### MÉMORANDUM D'ACCORD ENTRE L'INSTITUT ESPAGNOL D'OCÉANOGRAPHIE (IEO) ET L'INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT (IRD)

L'INSTITUT ESPAGNOL D'OCÉANOGRAPHIE (*Instituto Español de Oceanografía*, ci-après, IEO), Organisme Public de Recherche rattaché au Ministère des Sciences et de l'Innovation, par le biais du Secrétariat d'État à la Recherche et dont le siège social se trouve à Corazón de María 8, 28002 Madrid, Espagne, représenté par M. Eduardo Balguerías Guerra en sa qualité de Directeur,

et

L'INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT (ci-après, IRD), établissement public de nature scientifique et technologique, n° SIRET 180006025 00159 Code APE 7219Z, ayant son siège 44 boulevard de Dunkerque, Le Sextant, CS 90009, 13572 Marseille Cedex 02 France, représenté par son Président, Monsieur Michel Laurent, lui-même représenté par Monsieur Yves Duval, représentant de l'IRD France Sud.

Ci-après appelés globalement les « Signataires » :

- Possédant des intérêts communs dans la recherche concernant les thonidés tels que :

- L'emploi de la même stratégie d'échantillonnage ainsi que des mêmes procédures de recueil et de traitement des statistiques thonières, définies en commun.
- Leurs respectives responsabilités similaires concernant les amateurs thoniers, leurs administrations de pêche et l'U.E. pour la fourniture de statistiques sur la pêche.
- Leur implication conjointe dans le cadre plus général du Règlement (CE) 199/2008 du Conseil du 25 février 2008 qui institue un cadre communautaire pour le recueil et la gestion des données nécessaires au respect de la politique de pêche commune.

- Leur intérêt général dans les recherches scientifiques concernant les espèces de thonidés tropicaux et poissons à bec (biologie, comportement, évaluation de stocks...), et notamment dans le cadre des Organisations régionales de pêche, en particulier la Commission Internationale pour la Conservation du Thon Atlantique et la Commission des Thonidés de l'Océan Indien.

- Estimant qu'il convient d'avancer en la matière et désireux de manifester par écrit leur accord mutuel à ce sujet.

- Manifestant que chaque Institution reconnaît la capacité juridique et l'indépendance de l'autre à l'heure de définir ses besoins et d'établir ses priorités en matière de recherche.

Et désirant accorder un cadre plus formel à ces intérêts partagés et intensifier les cadres de collaboration, conviennent de signer le présent Mémoire d'Accord (ci-après, le « Mémoire ») :

*Un : Objet du Mémoire*

L'objet du présent Mémoire est la définition des modalités de coopération entre l'IEO et l'IRD dans le contexte du Règlement (CE) 199/2008 du Conseil du 25 février 2008 instituant un cadre communautaire pour le recueil et la gestion des données nécessaires au respect de la politique de pêche commune

*Deux : Cadre et formes de coopération*

A) Sans préjudice des projets et programmes que l'une ou l'autre des institutions serait susceptible de promouvoir dans ses domaines d'action, la collaboration entre celles-ci pourra envisager les aspects suivants :

115 - Répondre à l'ensemble des obligations énoncées dans le Règlement (CE) 199/2008 du Conseil du 25 février 2008. Ce PA couvrira l'ensemble des objectifs relatifs aux ressources thonières tropicales, à l'exception des aspects sociaux-économiques.

- Suivi des données de base de la pêche (effort, captures, composition spécifique et structure démographique des captures).

- Projet pilote d'estimation des rejets et captures accessoires par le biais d'observateurs embarqués, qui représenteront entre 5 et 10 % de la flottille.

- Études biologiques (croissance et reproduction des thons albacore et thons obèses).

B) Ce Mémoire laisse la porte ouverte à une éventuelle définition de programmes spécifiques de collaboration pouvant être établis dans n'importe lequel des domaines couverts par le présent Mémoire.

Pour chaque initiative concrète, des actions spécifiques seront conçues et détailleront l'activité à réaliser, les personnes et institutions impliquées, les moyens disponibles, le budget et le financement.

#### Trois : *Comité de Suivi*

Un Comité de Suivi (ci-après, le Comité) sera créé et doté de deux représentants désignés par les deux Institutions, avec les fonctions suivantes :

- Orienter les travaux de recherche pour la réalisation du programme ;
- Évaluer les résultats des actions en cours et de celles déjà achevées ;
- Examiner les questions relatives à l'évaluation des résultats ;
- Proposer des solutions en cas de difficulté dans l'application de ce Mémoire ou des actions spécifiques et dans l'exécution des actions de coopération.

Le Comité se réunira aux dates que fixeront les institutions d'un commun accord, et les signataires s'engagent à remettre au Comité un rapport scientifique périodique tous les 12 mois, ainsi qu'une étude finale au terme des travaux.

#### Quatre : *Financement*

Chaque institution assumera, sur ses budgets ordinaires et à condition qu'il existe une consignation budgétaire respectant toute la législation en vigueur pour chacun des signataires, les frais relatifs à l'exécution des programmes et les actions issues du présent Mémoire.

Cela dit, chacun des signataires pourra rechercher le financement interne ou externe nécessaire pour une bonne coopération et contribuer à l'atteinte des objectifs de ce Mémoire.

Cinq : *Durée*

Ce Mémoire entrera en application à compter de la date de signature. Il aura une durée de 4 ans et pourra être prolongé dans le temps sur accord exprès entre les signataires, manifesté par écrit avant la fin de ce délai de validité, et avec indication des termes de la prolongation.

Six : *Cessation de l'application*

Le présent Mémoire pourra cesser de s'appliquer d'un commun accord ou sur décision de l'un ou l'autre des signataires, sur préavis envoyé de façon digne de foi à l'autre partie au moins six mois à l'avance par rapport à la date de terminaison proposée. Au cas où il existerait une action spécifique en vigueur s'inscrivant dans le cadre du présent Mémoire, la faculté de résilier le présent ne pourra être exercée tant que n'aura pas fait l'objet d'arbitrage la formule de finalisation desdites actions spécifiques.

Sept : *Dispositions finales*

Ce document n'est pas soumis au Droit International et il n'est pas juridiquement contraignant.

Toute difficulté pouvant survenir quant à l'application et à l'exécution du présent Mémoire ou des actions spécifiques devra être résolue d'un commun accord par le Comité de Suivi. Les éventuels problèmes n'ayant pas pu être résolus par ce Comité seront soumis à la consultation des Autorités compétentes des deux signataires. En tout état de cause, les éventuels litiges n'ayant pu être résolus à l'amiable seront portés devant les juridictions compétentes de la partie défenderesse.

Et comme preuve de conformité, l'Institut Espagnol d'Océanographie et l'Institut de Recherche pour le Développement signent le présent Mémoire d'Accord en deux exemplaires sur toutes ses pages.

**Pour et en représentation de  
l'Institut Espagnol  
d'Océanographie.**



**M. Eduardo Balguerías Guerra**  
Directeur de l'IEO

Date :

Lieu :

**Pour et en représentation de  
l'Institut de Recherche pour le  
Développement.**

**Magali ROUBIEU**  
Administratrice du Centre  
IRD-FRANCE SUD

**M. Michel Laurent**  
Président de l'IRD

Date : Montpellier

Lieu : 19.5.11