



**FIRMS Steering Committee Meeting  
Seventh Session**

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**REVIEW OF THE FIRMS ACTIVITIES DURING THE INTERSESSIONAL  
PERIOD (March 2010 – November 2011)**

**Secretariat Report on Progress and Issues**

**Author: FIRMS Secretariat**

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| <b>Management Summary</b> |
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## 1. Developments on Marine Resource and Fishery inventories and related FIRMS fact sheets

Beyond the regular workflow and dissemination activity by FIRMS partners, main aspects regarding the inventories and the fact sheets are described in the following sections.

### 1.1 Marine Resource inventories

- ICCAT: during the ICCAT SCRS meeting on Oct. 2009, it was recommended to include pelagic sharks on the list of ICCAT species. ICCAT therefore provided a first sharks' inventory to FIRMS and the 6 corresponding records have been loaded in the data base. 5 high level Marine Resources were flagged in the inventory as no longer monitored (Albacore - Atlantic and Mediterranean Sea, Atlantic Bluefin tuna - East Atlantic and Mediterranean Sea, Sailfish and Spearfish - Atlantic, Skipjack tuna - Atlantic, Swordfish - Atlantic and Mediterranean Sea). Consequently related fact sheets have been removed from the FIRMS web site.
- ICES: following the revision of the ICES Marine Resource inventory during the FIRMS training on "Use of Word to XML converter tool" (Jan. 2010), 191 Marine Resources have been screened and most of the modifications have been reflected in the FIRMS data base and in the reference observations. Changes were mostly dealing with ICES names and marine habitat descriptors. A massive fact sheets update took place along the 2010 with the use of the Word-to-XML converter tool.
- NAFO has updated its marine resources inventory (November 2011) and depth zone information have been added to all monitored stocks. Reference observation and related fact sheets have been updated accordingly. This correction also had a positive impact on the thematic page "FIRMS on deep sea (high seas) demersal resources".
- SEAFDEC: At a national level, an exhaustive inventory has been delivered by Malaysian expert.
- SEAFO: 12 reference observations and related fact sheets were published according to the SEAFO inventory.

FAO – Article 6 RFBs:

- CECAF: A revision has been undertaken on the section "Small pelagic – Southern area of Eastern Central Atlantic" and related fact sheets were published. In addition, as a follow up of the 6<sup>th</sup> CECAF Scientific Sub-Committee (SSC6 – Sept.2011), the marine resource inventory has been confirmed to be owned by this Sub-Committee and maintained at regional level. The list of marine resources has been sent to the working groups' focal points for a further validation.
- SWIOFC: a revision of the inventory of Marine resources elaborated in 2007 by SWIOFC Scientific sub-Committee and formalised as part of FIRMS has been revised on the basis of the annex to the 4<sup>th</sup> session of this SWIOFC SC. Among these resources, 121 can be considered stable and have been loaded in FIRMS database.

FAO – Article 14 RFBs (full FIRMS partners):

- GFCM: 28 new Marine Resources have been proposed for addition in the inventory.
- IOTC: a first set of fact sheets have been produced with the use of the Word-to-XML converter tool.
- RECOFI: during an *ad hoc* RECOFI-FIRMS workshop the decision of building a regional marine resources inventory for RECOFI area has been taken. As first step a list of possible marine resources for the area has been created defining the presence/absence of the RECOFI key species (officially recognized by the SC) for each country. This list will be revised by country experts to evaluate the possibility of aggregating shared resources at regional level.

Further details of non-FAO partners' activities are available under the document section FIRMS FSC7/2011/2.

## 1.2 Fishery inventories

- NAFO: in addition of the high level fishery item, 22 new fisheries were identified, related records added in the inventory and guidelines provided for finalizing the compilation. NAFO is presently working on it.
- NEAFC: Based on the validated inventory, seven fishery reference observations have been loaded in FIRMS database and related fact sheets published.
- SEAFDEC: new inventory for sea cucumber fisheries has been structured based on Report of the Regional Study on Sea Cucumber Fisheries, Utilization and Trade 2007-2008. Related reference observations were loaded in the data base. Concerning the SEAFDEC-National approach an advanced fisheries inventory has been delivered by Malaysian expert.

FAO and its Article 6 RFBs:

- CECAF: Following the SSC6, national fishery inventories for eight countries have been declared in a validated status. Subsequently, more than 100 new fishery objects have been loaded in FIRMS database.

FAO RFBs article 14 (full FIRMS partners):

- GFCM: A proposal for approaching the creation of a high level fishery on GFCM management system has been accepted by the GFCM group.
- RECOFI: After the *ad hoc* RECOFI-FIRMS workshop, lists of fishing activities have been structured by the Secretariat (only exception Iran) and presented to the country representatives during the WGF5. Outcome from this meeting has been to have at least three fishery inventories ready before the FSC7 where they will be presented by the RECOFI representatives who will participate as observers.

## 1.3 Indicators on FIRMS Marine Resource and Fishery fact sheets

The following tables and graphs show the total number of units inventoried (1120 marine resources and 725 fisheries) and the trends regarding the production of fact sheets per partners vs. reference years.

The FIRMS web site is currently disseminating fact sheets as follows: 490 current records (i.e. primary observations: 446 marine resources and 44 fisheries) and 269 historical records (i.e. secondary observations: all marine resources).

Table 1: FIRMS Marine Resources and Fisheries inventoried units<sup>1</sup>, Reference Observations<sup>2</sup> (RO) and number of fact sheets<sup>3</sup>. (Updated November 2011)

| Partner | Inventoried units | Reference Observations |           | Fact Sheets by Reference Year |      |      |      |      |      |      |      |      |      |      |      |
|---------|-------------------|------------------------|-----------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|
|         |                   | Resources              | Fisheries | ≤ 2000                        | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| CCAMLR  | 3                 | 3                      |           |                               |      |      |      |      |      |      |      |      |      |      |      |
|         | 18                |                        | 7         |                               |      |      |      |      |      |      |      | 7    |      |      |      |
| CCSBT   | 1                 | 1                      |           |                               |      |      |      | 1    | 1    | 1    | 1    | 1    | 1    |      |      |
| FAO     | 26                | 26                     |           |                               |      | 14   | 1    | 8    |      |      |      |      |      |      |      |
|         | 1                 |                        | 1         |                               |      |      |      | 1    |      |      |      |      |      |      |      |
| CECAF   | 217               | 217                    |           | 29                            | 3    |      |      | 55   | 7    | 17   | 8    |      |      |      |      |
|         | 315               |                        | 118       |                               |      |      |      |      |      |      |      |      |      |      | 16   |
| RECOFI  | 104               |                        |           |                               |      |      |      |      |      |      |      |      |      |      |      |
|         | 95                |                        |           |                               |      |      |      |      |      |      |      |      |      |      |      |
| SWIOFC  | 138               | 121                    |           |                               |      |      |      |      |      |      |      |      |      |      |      |
| WECAFC  | 264               | 239                    |           | 36                            |      |      | 7    | 1    |      |      |      |      |      |      |      |
|         | 233               |                        |           |                               |      |      |      |      |      |      |      |      |      |      |      |
| GFCM    | 79                | 52                     |           | 1                             |      |      | 4    | 16   |      | 5    | 10   | 7    |      |      |      |
| IATTC   | 23                | 23                     |           |                               |      |      | 1    | 17   | 1    |      | 1    | 4    | 5    | 8    |      |
|         | 15                |                        | 1         |                               |      |      |      |      |      |      |      | 1    | 1    | 1    |      |
| ICCAT   | 29                | 28                     |           |                               |      |      | 1    | 2    | 2    | 3    | 7    | 5    | 3    |      |      |
| ICES    | 191               | 191                    |           |                               |      |      | 11   | 135  | 2    | 52   |      | 175  |      |      |      |
| IOTC    | 15                | 15                     |           |                               | 1    |      | 1    | 2    | 1    |      | 1    | 2    |      |      |      |
| NAFO    | 18                | 18                     |           | 1                             |      |      | 6    | 10   | 8    | 10   | 5    | 9    | 9    | 11   |      |
|         | 23                |                        | 1         |                               |      |      |      |      |      |      |      |      | 1    |      | 1    |
| NEAFC   | 11                |                        | 11        |                               |      |      |      |      |      |      |      |      | 8    |      |      |
| SEAFDEC | 14                |                        | 14        |                               |      |      |      | 6    |      |      |      |      |      |      |      |
| SEAFO   | 12                | 12                     |           |                               |      |      |      |      |      |      |      |      | 12   |      |      |
| TOTAL   | 1845              | 946                    | 153       | 67                            | 4    | 14   | 32   | 254  | 22   | 88   | 33   | 211  | 40   | 20   | 17   |
|         | 1845              | 1099                   |           | 802                           |      |      |      |      |      |      |      |      |      |      |      |

**Note**

- IATTC, ICCAT, CCSBT : historical observations are hidden, only the last one is available in internet
- CECAF, RECOFI: overall numbers of Fishery inventories may change during the on-going validation process. RECOFI's Marine Resource inventory is at preliminary stage.
- CECAF, SWIOFC: Marine Resource and Fishery objects have been created into the data base while the creation of the concerning Reference Observations is in progress.

<sup>1</sup> For each Partner, the first row represents the number of Marine Resources and the second row the number of Fisheries; the inventoried units are the total number listed in Excel sources (excluding headers and groups)

<sup>2</sup> Reference Observations are inventoried units loaded in the FIRMS system with all the descriptive metadata

<sup>3</sup> Fact Sheets are inventoried units for which state and trend reports or other qualitative and quantitative information have been loaded in the system

**Table 2:** Fact sheets update turn-over (expressed in Percentage as ratio of number of fact sheets on total number of Reference Observation (RO) (Updated November 2011)

| Partner | Inventoried units | Reference Observations |           | Total Fact Sheets / Reference Observation (%) |      |      |      |      |      |      |      |      |      |      |      |
|---------|-------------------|------------------------|-----------|---|------|------|------|------|------|------|------|------|------|------|------|
|         |                   | Resources              | Fisheries | ≤ 2000  | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| CCAMLR  | 3                 | 3                      |           |   |      |      |      |      |      |      |      |      |      |      |      |
|         | 18                |                        | 7         |   |      |      |      |      |      |      |      | 100  |      |      |      |
| CCSBT   | 1                 | 1                      |           |   |      |      |      | 100  | 100  | 100  | 100  | 100  | 100  |      |      |
| FAO     | 26                | 26                     |           |   | 54   | 4    | 31   |      |      |      |      |      |      |      |      |
|         | 1                 |                        | 1         |   |      |      | 100  |      |      |      |      |      |      |      |      |
| CECAF   | 217               | 217                    |           | 13  | 1    |      |      | 25   | 3    | 8    | 4    |      |      |      |      |
|         | 315               |                        | 118       |   |      |      |      |      |      |      |      |      |      |      | 14   |
| RECOFI  | 104               |                        |           |   |      |      |      |      |      |      |      |      |      |      |      |
|         | 95                |                        |           |   |      |      |      |      |      |      |      |      |      |      |      |
| SWIOFC  | 138               | 121                    |           |   |      |      |      |      |      |      |      |      |      |      |      |
| WECAFC  | 264               | 239                    |           | 16  |      |      | 3    | 1    |      |      |      |      |      |      |      |
|         | 233               |                        |           |   |      |      |      |      |      |      |      |      |      |      |      |
| GFCM    | 79                | 52                     |           | 2   |      |      | 8    | 31   |      | 10   | 19   | 13   |      |      |      |
| IATTC   | 23                | 23                     |           |   |      |      | 4    | 74   | 4    |      | 4    | 17   | 22   | 35   |      |
|         | 15                |                        | 1         |   |      |      |      |      |      |      |      | 100  | 100  | 100  |      |
| ICCAT   | 29                | 28                     |           |   |      |      | 5    | 9    | 9    | 14   | 25   | 18   | 2    |      |      |
| ICES    | 191               | 191                    |           |   |      |      | 7    | 91   | 1    | 35   |      | 92   |      |      |      |
| IOTC    | 15                | 15                     |           |   | 7    |      | 7    | 13   | 7    |      | 7    | 13   |      |      |      |
| NAFO    | 18                | 18                     |           | 6   |      |      | 33   | 56   | 44   | 56   | 28   | 50   | 50   | 61   |      |
|         | 23                |                        | 1         |   |      |      |      |      |      |      |      |      | 100  |      | 100  |
| NEAFC   | 11                |                        | 11        |   |      |      |      |      |      |      |      |      | 73   |      |      |
| SEAFDEC | 14                |                        | 14        |   |      |      |      | 100  |      |      |      |      |      |      |      |
| SEAFO   | 12                | 12                     |           |   |      |      |      |      |      |      |      |      | 100  |      |      |

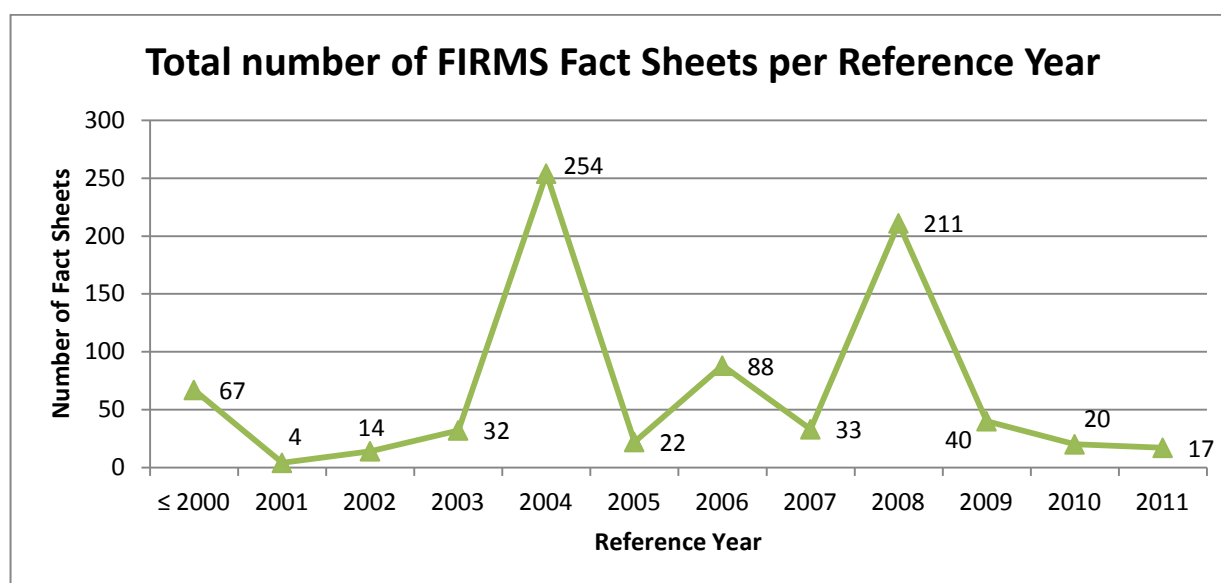


Figure1 Total number of fact sheets per Reference Year

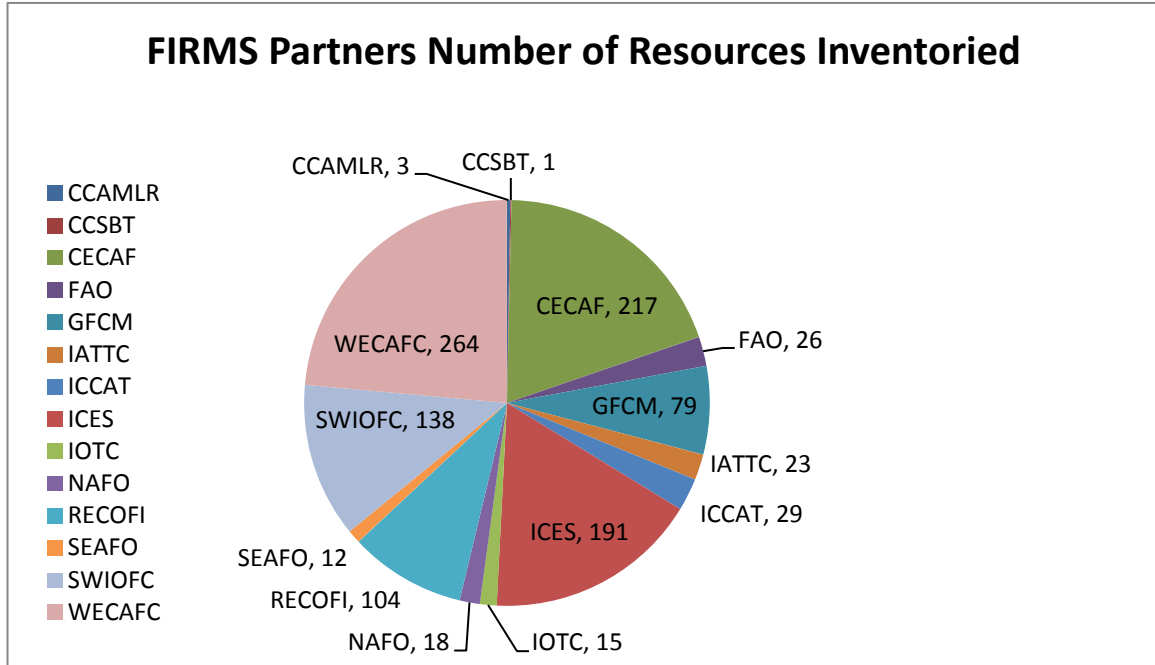


Figure2 FIRMS Partners Number of Resources Inventoried

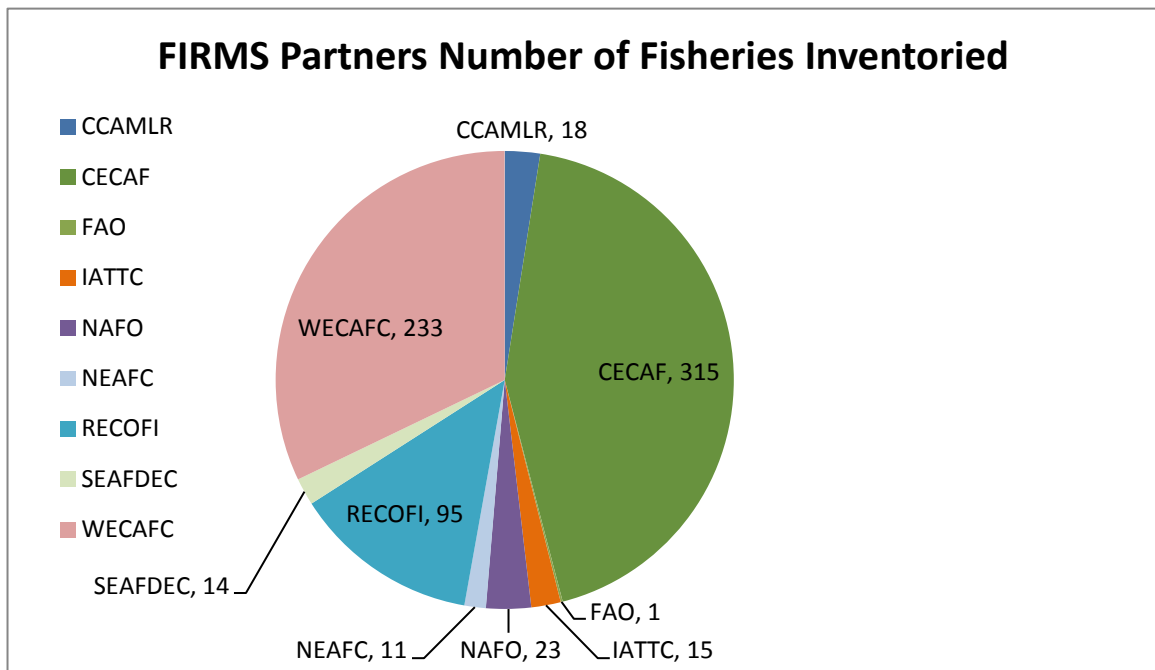


Figure3 FIRMS Partners Number of Fisheries Inventoried

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## 2. Development of Applications

Scope: the FIRMS website is currently articulating the following modules:

- FIRMS fact sheets: Marine Resource, Fishery
- FIRMS web site pages: Topic, Organization
- Web application
  - Workflow Management System (WMS), including Content Management System (CMS) and XML converter tools
  - Dynamic mapping component
  - Web services

### 2.1 FIRMS fact sheets

#### - **Marine Resource**

- Activities: this module has been updated with the upgrade of the standard descriptors and with minor improvements on the fact sheet layout.
- Output: Among standard descriptors, “Mangrove” controlled term has been added to Bottom type descriptors and “Inland waters” to Horizontal distribution. Marine resource module implements all features decided by FSC6.

#### - **Fishery**

Background: Following a test phase, the Fishery module is up and running and Fishery fact sheets are gradually loaded in the data base. The Secretariat foresees a major fact sheet upload during the 2012 as a follow up of national inventory validation.

- Activities: with the objective to enhance and further harmonise the reporting information structure, a model for the Jurisdictional and Management Unit approached Fishery fact sheets has been elaborated with NEAFC. In addition a revision and enhancement of the “Jurisdictional framework” section has been implemented following the upgrade of the FIGIS Organization fact sheet domain. Furthermore, the Fishery module has been updated with the upgrade of the standard descriptors and with minor improvements on the fact sheet layout.
- Outputs: a standardization of the Management section has been implemented while developing the NEAFC fact sheets, promoted as a general model. FSC7 is expected to provide guidance on the proposed model in order to enforce it at XML schema level. The new Management sub-section “Jurisdictional framework” has been implemented in the XML Schema and consequently in all Fishery fact sheets which include the sub components Management entity and Jurisdiction Area (respectively ManagementEntity/Mandate; ManagementEntity/ GeoCoverage/MaritimeArea).

### 2.2 FIRMS web site pages

- Activity: In the view of improving the audience of the FIRMS website, thematic pages have been developed in close consultation with Partners. The gateway pages of the FIRMS website have been upgraded, and can now be edited on-line through the FIGIS Content Management System. The Partners’ organizations summary description fact sheets have also been upgraded with a new template which includes a dynamic map of the RFB’s area of competence.
- Outputs: two thematic pages (“FIRMS on Tuna”, “FIRMS on deep sea (high seas) demersal resources”) have been implemented, discussed and published. Other three pages focusing on information arranged by region have been submitted to the virtual TWG for validation:

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“FIRMS in Eastern Central Atlantic”, “FIRMS in the Gulf, Oman Sea and South-western Arabian Sea” and “FIRMS in Southwest Indian Ocean” (this one is still in progress). A full text search field or other search facilities for launching from the home page a search across the whole FIRMS website is foreseen for the early 2012.

### 2.3 Web applications

#### - **Workflow Management System (WMS)**

The expression WMS covers the on-line Content Management System (CMS) and the conversion tools used to streamline at Partner level the packaging of documents from their native format (Word or Excel) into the XML format for the web dissemination. Although the CMS would need improvements (e.g. better performance in case of collections with many objects such as ICES, CECAF etc.) the current capacity still enables to sustain the current workload and has not undergone any change. The Word-to-XML converter tool has been slightly improved thanks to feedback collected from several partners who are using it extensively. The Excel-to-XML converter tool is in progress and it is planned to be released in the early 2012.

#### - **Dynamic mapping component**

- Activities: during the end of 2010 and early months of 2011 many steps have been tackled for delivering more comprehensive map illustrations of stocks and fisheries.
- Output: new maps are displayed within all FIRMS fact sheets showing multiple layers. In particular, up to three species distribution areas are now displayed together with the extent of Stocks location in the Marine Resource fact sheets. In Fishery fact sheets, maps display the RFBs' area of competence according to suitable projection together with the fishing activity area layer(s). The new application allows the following facilities: layer option switchers, dynamic legends, projection and zooming settings automatically adapted according to RFB's area of competence.

#### - **FIRMS data coverage maps**

A set of global maps has been designed in order to facilitate better understanding of the FIRMS data coverage both qualitatively (areas covered by FIRMS partners) and quantitatively (number of marine resources or fisheries inventoried). Maps have been generated according to the following assumptions:

- A qualitative representation in terms of Areas of competence of FIRMS partners;
- A separate representation between the Tuna, and the non-Tuna coverage in order to avoid problems of overlapping representation;

and additionally regarding quantitative maps:

- A separate representation of Marine resources and Fisheries, and for each a symbology that combines representation of the geographic extent and of the quantitative scale.
- Regarding symbology used in support of the geographic extent: a combined use (or crossing) of areas of competence and LMEs (as best fit) to illustrate in qualitative terms the geographic coverage (coastal, high seas); plus the distinction between areas covered by FIRMS partners and other areas covered with inventories developed outside the FIRMS partnership;
- Regarding symbology used in support of quantitative information: the distinction between three categories of inventories (validated, not validated, estimated); a breakdown of the count (as best fit the local situation) at either Regional, sub-regional, or National level.

Further technical details are available at

[http://km.fao.org/FIGISwiki/index.php/FIRMS\\_Geographic\\_coverage](http://km.fao.org/FIGISwiki/index.php/FIRMS_Geographic_coverage).

Once validated by FIRMS partners, the maps will be publicly available through the FIRMS website.

- **Web applications: web services**

- **Activities:** New web services have been developed for extracting information from the fact sheet XML outputs with different levels of granularity.
- **Output:** the FIGIS web services allows various operations on FIRMS fact sheets including: retrieval of all fact sheet IDs, full content of a fact sheet given an ID, content of a specific fact sheet section given an XPath<sup>4</sup>.

On the FIRMS Marine Resources, two web services are available:

- **StocksBySpecies:** it searches through all Marine Resource factsheets referring to a certain species and builds up a list of stocks.
- **StocksByFaoArea:** it searches through all Marine Resource factsheets occurring within a certain FAO major fishing area or the related sub-levels (sub-area, division, sub-division) or intersecting the concerning FAO major fishing area. A list of stocks is provided as result and arranged under the sub elements Inclusion and Intersection.

Partners and users can exploit the web services for displaying FIRMS fact sheets or sub parts in other contexts (e.g. Partners' websites). Web services can fish from FIRMS data specific information (e.g. State and Trend descriptors, Fishery indicators) that can feed other kind of dissemination facilities. More technical details on web services are available at <http://www.fao.org/fishery/topic/18038/en>

### 3. Status of FIRMS website

This section is a concluding statement on the status of the FIRMS website, which highlights what is done and working well, what is not completed, and what should be started. It should be pointed out that most decisions from FSC6 have been implemented regarding the website (see Annex 1).

#### 3.1 Database content

During the inter-session period, few new Marine Resource objects have been stored in the FIRMS data base and related fact sheets have been produced and disseminated. FIRMS is presently disseminating information on 446 Marine Resources through 715 published fact sheets (446 primary and 269 secondary observations). The state and trend standard descriptors have been increasingly provided by partners and they are now available for 600 fact sheets.

Concerning the newborn Fishery module, the loading process is rapidly increasing (i.e. around hundred objects have been created in October-November 2011) and related fact sheets will be soon produced and disseminated.

FIRMS is presently disseminating information on fisheries through 44 published fact sheets.

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<sup>4</sup> XPath: XPath uses path expressions to select nodes or node-sets in an XML document. Since all FIRMS fact sheets are XML based it is possible to extract whatever piece of information from any reports for being reutilized in other contexts.

Table 3. Published fact sheets (primary and secondary observations) per partner (Updated November 2011), and short term plans

| Partner               | Currently published                          |           | Additional fact sheets planned in the short term plans |            |
|-----------------------|--|-----------|--|------------|
|                       | Marine Resource                              | Fishery   | Marine Resource  | Fishery    |
| CCAMLR                |  | 7         |  |            |
| CCSBT                 | 1  |           |  |            |
| FAO                   | 23   | 1+3*      |  |            |
| CECAF                 | 119  | 16        |  | 111        |
| SWIOFC                |  |           | 138  |            |
| GFCM                  | 43   |           |  |            |
| IATTC                 | 8  | 1         |  |            |
| ICCAT                 | 22   |           |  |            |
| ICES                  | 374  |           |  |            |
| IOTC                  | 8  |           |  |            |
| NAFO                  | 73   | 2         |  |            |
| NEAFC                 |  | 8         |  |            |
| SEAFDEC               |  | 6         |  |            |
| SEAFO                 | 12   |           |  |            |
| WECAFC                | 44   |           |  |            |
| <b>TOTAL</b>          | <b>715</b>                                   | <b>44</b> | <b>138</b>   | <b>111</b> |
| <b>Overall totals</b> | <b>Marine resources: 853; Fisheries: 155</b> |           |  |            |

\*3 Fishery fact sheets have been developed under the Big Number Project (BNP) and published within the FAO collection.

It should be noted that some partners' policies lead them to hide published fact sheets in order to avoid the dissemination of historical, or (when the history consists of only one report) of outdated information. For this reason the overall number of published fact sheets can show a fluctuating trend over the years. One of the most obvious consequence of such policies is (at FIRMS level) the temporary loss of any information related to those marine resources or fisheries.

### 3.2 Website Shell

In addition of what was achieved by FIRMS FSC6,

- Short and simplified URLs
- Languages: English and French
- Access to member services under login control
- Links to latest fact sheet published

the FIRMS website shell now offers:

- Thematic pages
- Improved layout for FIRMS web site pages including Meetings and Publications
- Improved Data coverage pages , with an additional short term prospect that these pages will include the data coverage maps prepared for review by FSC7.

### **3.3 Marine Resource and Fishery dissemination modules**

In addition of what was achieved by FIRMS FSC6, major improvements have been achieved on:

- Map display
- Fishery fact sheets layout
- Fishery fact sheets browser page

### **3.4 Mapping module**

In addition of what was achieved by FIRMS FSC6, major improvements have been achieved on:

- Overall map features and facilities
- Additional display of Species geographic distribution in Marine Resource fact sheets
- Inclusion of dynamic maps of RFBs area of competence in Fishery fact sheets

### **3.5 Services offered by the FIGIS infrastructure to the Partners**

- Marine Resource or Fishery fact sheets can be returned in HTML, or in XML format. The later enables a partner to reformat it for another purpose (e.g. as PDF to include as part of a paper report, or as HTML as part of a partner website)
- State and Trend Summaries can be downloaded as Excel files for further analysis
- Web-services are available enabling Partner's websites or systems to query and retrieve specific subsets of factsheets given an area or a species.

### **3.6 Web trends statistics**

The detailed and illustrated analysis of web trends statistics during years 2007-2011, 2008, 2009 is available in document FIRMS FSC7/2010/Inf.7<sup>5</sup>

Here follows some conclusions based on the above mentioned document. The analysis conducted was based on the web trends provided by Google Analytics and the referring period is October 2007-October 2011. Furthermore, a comparison of some indicators between FIRMS and the Fisheries and Aquaculture Department website (FI) was made basing on the web trends provided by AWStats (Advanced Web Statistics) provided by FAO corporate IT unit.

The analysis of FIRMS Web trends (see Fig. 4) shows clearly that both number of visits and pages increased linearly along the considered period. The red values are partial estimations based on the average of monthly viewed pages considering that for 2011 this prevision concerns only two months. In addition, in 2011, the current visits are already higher than those for 2010.

The bounce rate is higher for the home page and other gateway pages (i.e. Concepts) while it decreases significantly for search interfaces and thematic pages.

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<sup>5</sup> Accessible on FIRMS FSC7 meeting page at [ftp://ftp.fao.org/FI/DOCUMENT/FIGIS\\_FIRMS/2011/inf7e.pdf](ftp://ftp.fao.org/FI/DOCUMENT/FIGIS_FIRMS/2011/inf7e.pdf)

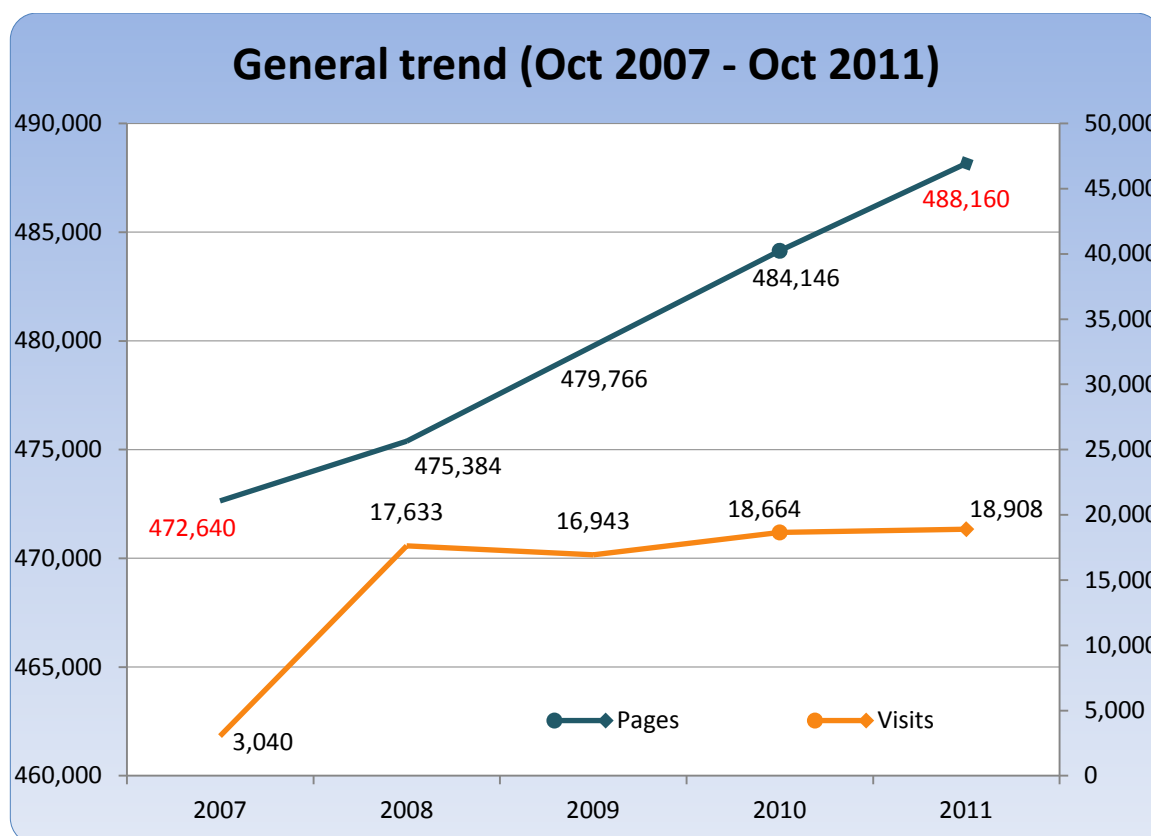


Figure 4 General trends for Pages and Visits

Accessibility and traffic sources show that 45% of visitors access FIRMS through search engines (mostly Google) while about 34% reach FIRMS through referral sites and the remaining 21% of visits is due to direct traffic. Data from previous web trend analysis show that, most of the visits were due to direct traffic, and the changing of the kind of visits can be addressed to various factors including the addition of FIRMS links in partner's and non-FIRMS' partners websites, the growing number of fact sheets and some promotional activities (i.e. e-Bulletins).

Mostly North American, then European countries are the regions with the highest level of visits. 70% of the visits are made by English-based browsers. Most of countries worldwide (except some landlocked countries) have accessed FIRMS.

Among the top viewed pages, there are the home page, the search page interfaces and several fact sheets. Among the fact sheets, the most consulted ones are:

- the higher level global or regional syntheses;
- the tuna fact sheets which are the most visited both for the Marine Resource and Fishery domains.

A comparative analysis with the FI website and three of its most popular modules was conducted along the period Nov.2010 - Oct.2011, when both time series are consistently available. The FIRMS fact sheets compare reasonably well with selected FI domains: FIRMS Marine Resource and Fishery fact sheets correspond to 56% of Aquatic Species fact sheets (a very popular source of information), and about 14% of National Aquaculture Sector Overview (NASO) and Fishery and Aquaculture Country Profile (FACP) (most consulted domains on the FI website).

These figures support the following conclusions:

- confirmation that users are interested by an authoritative source of information on the state of resources, but that a significant proportion of these users are not immediately satisfied; various hypotheses can be put forward, including outdated high levels pages, insufficient global synopses, lack of friendliness or attractiveness of the home page, incomplete coverage, etc.) ;
- promote more higher level/frequently updated global /regional syntheses, regional synoptic products to respond to users interest;
- promote linking to FIRMS information from greater number of referential websites does bring additional traffic;
- add relevant (i.e. country related) FIRMS fact sheets to the very popular FACP's fact sheets will raise awareness of FIRMS as authoritative source of information (planned with the forthcoming release of the upgraded FACP module);
- likewise, add relevant (i.e. species related) FIRMS fact sheets to FI FishFinder's aquatic species fact sheets.

#### 4. Training or skills development

The FIRMS Secretariat ensured a continuing remote technical support to partners in their information contributions to FIRMS, or in the development of their inventories or reporting templates.

Upon demand by RFB partners, the FIRMS Secretariat has delivered 2 to 4 days training to individual RFB staff on FIRMS principles, website, and information management toolkit. Training took place at FAO HQs for NAFO in December 2010. Regarding CECAF, the SSC6 (Accra, Sept 2011) provided the opportunity to train a few national focal points who could not benefit from the Dec. 2009 workshop. The outcome of the training activity in the CECAF area was the subsequent presentation of the validated national inventories at CECAF SSC6, which will represent the next massive upload for the Fishery module.

Following the model of the regional training activities in the CECAF area, a training workshop has been organized with RECOFI for building-up resources and fisheries inventories in the RECOFI region (Cairo, July 2011). 6 of 8 RECOFI member countries actively participated to this workshop, providing data for compiling the inventories. The workshop results were reviewed by the 5<sup>th</sup> RECOFI's Working Group on Fisheries Management (Tehran, Oct. 2011) which set-up a road map towards becoming a FIRMS member.

The list of training sessions (also available in FIRMS website – members' area) is compiled in Table 4.

**Table 4.** Latest FIRMS training sessions

| Organization / place of training | Training content  | Training date  |
|----------------------------------|---|----------------|
| CECAF – Accra, Ghana             | In occasion of the CECAF SSC6, aside training sessions were provided to the representatives of the following countries: Ghana, Liberia, Côte d'Ivoire.  | September 2011 |
| RECOFI – Cairo, Egypt            | During the RECOFI-FIRMS Workshop on Resources and Fisheries inventories, a collective training on guidelines and templates for marine resource and fisheries inventories was provided. Two specific sessions were dedicated to the identification of fisheries focused on the Fishing Activity thematic approach using 3d diagrams and on a tentative list of marine resources in the area based on RECOFI key species. | July 2011      |

|                    |  |               |
|--------------------|--|---------------|
| NAFO – Rome, Italy | Training was provided for identifying new fishery management units and guidelines were illustrated for finalizing the compilation. | December 2010 |
|--------------------|--|---------------|

## 5. Promotional and outreach activities

The promotional and outreach effort proceeded according to FSC6 recommendation to work towards increasing the number of partners and promoting FIRMS through partner's websites. In order to contact new Institutions the following actions have been taken:

- WCPFC was contacted by IATTC in coordination with FIRMS Secretariat – Response still awaited
- During COFI meeting in Rome (February 2011), FIRMS was promoted through a permanent booth in FAO's atrium, and at a side event entitled "Information sharing in fisheries and aquaculture: Collaborative global initiatives in support of management, monitoring and research".
- During COFI meeting, NASCO informally indicated their interest to join FIRMS
- FIRMS progress status was presented at RSN3 meeting in Rome, February 2011, and all present RFBs invited to join.
- Letters of invitation to nine RFBs (WCPFC, SPC, NAMMCO, NASCO, BCC, OLDEPESCA, CTMFM, PSC, IHPC) have been sent in June 2011 by FI's ADG on behalf of the FIRMS Partnership. Feedback was received from SPC, NAMMCO, NASCO and BCC. SPC and NAMMCO decided to attend FSC7 as Observer.
- After Eurostat notified in December 2010 its decision for freezing temporarily the EU membership until further arrangement can be made with DG-Mare, FI responded in July 2011 to this letter inviting DG-MARE to join the FIRMS partnership; this invitation was further discussed at Director's level during a visit of FI at DG-MARE in July 2011. DG-MARE officially responded in September 2011 with a positive mindset to this invitation, while specifying the conditions under which it would contribute socio-economic information to FIRMS.

Concerning the advertisement of FIRMS, and following the recommendation of the FSC6 and previous meetings, all members should draw links from their websites to FIRMS. In addition they should promote FIRMS within their internal mechanisms, including by inviting their member countries to draw links from their national websites.

Nine of twelve partners did draw links in their websites with different level of visibility. GFCM and more recently SEAFO allowed access to FIRMS fact sheets through specific sections of their websites with different mechanisms.

In order to diversify FIRMS website audience and to promote FIRMS contents, the production of information corners focussing on thematic or geographic information was initiated and its further evolution will be driven according to partners' feedback.

The following table summarizes training-promotional activities conducted during the intersessional period.

**Table 5** : promotional and outreach interventions of FIRMS Secretariat

| Organization / place of meeting | Description  | Date           |
|---------------------------------|--|----------------|
| RECOFI WGFM5 – Teheran, Iran    | FIRMS Secretariat attended the Fifth Session of the Working Group on Fisheries Management of RECOFI. The WGFM5 approved a road map towards the expected decision of RECOFI to apply as a full member of FIRMS at its thirteen session in 2013: two RECOFI representatives will attend as Observers and part of the FAO delegation, the next FIRMS SC meeting (December 2011) and will present the status of the fisheries inventory work in the RECOFI region. | October 2011   |
| CECAF SSC6 – Accra, Ghana       | FIRMS Secretariat participated to the Sixth CECAF Scientific Sub-Committee (Accra, September 2011), attended by country representatives. While validating inventories and discussing the workflow, FIRMS approach has been further promoted and introduced to those countries which did not attend the ad hoc FIRMS workshop (Accra December 2009).  | September 2011 |
| SWIOFC SC4 - Mahe, Seychelles   | FIRMS Secretariat attended the 4th Session of the South West Indian Ocean Fisheries Commission (SWIOFC) Scientific Committee (Mahe, December 2010). FIRMS got clearance for publishing marine resources inventory that can be considered endorsed by the Commission itself.  | December 2010  |

## 6. Secretariat Resources in support to FIRMS

As in the previous report, the overall effort spent by the FIRMS Secretariat on various aspects of FIRMS activities has been monitored during the 21 months of the intersession (02/2010 - 11/2011), and the corresponding cost is compiled by major activity in table 6.

The total time invested amounts to 3.17 man-years for an equivalent of \$211.000. Normalised to a 1 year period, we obtain 1.81 man-year effort for an equivalent of \$121.000, a level quasi similar to the previous intersessional period (2 man-years for an equivalent of \$135.000).

Comparison to the older intersessional periods is also provided: 1.25 man-year for an equivalent of \$136.000 during years 2007-08, and 4.4 man-years for an equivalent of \$440,000 during year 2006 (launch of FIRMS).

The distribution of costs by main type of activities is as follows:

- 27% of the effort (against 34% in 2009, 44% in 2007/8 and 73% in 2006) was dedicated to software design and development: essentially the finalization of the Fishery module, the upgrade of the dynamic mapping tool and the Word-to-XML converter tool. and;
- 67% of the effort (against 58% in 2009, 30% in 2007/8 and 44% in 2006) for information contributions (i.e. FAO inputs or assistance to Partners inputs including through training, and regular maintenance of FIRMS infrastructure);
- 6% of the effort (against 8% in 2009, 23% in 2007/8 and 13% in 2006) to management and marketing;

In addition, a budget of \$55.000 (\$31.000 normalised to a one year period) has been allocated to travel costs in support to training-promotional activities (CECAF, SWIOFC, RECOFI SC meetings, and RECOFI workshop). \$30.000 of this budget was provided through a Japanese trust fund. These figures nearly compare with those of the previous period (\$40.000 normalised to a one year period)

This analysis shows that the amount of funding remained globally stable compared with the previous intersessional period. It should be noted that the huge work done on maps has been

only partially computed to FIRMS since all FIGIS powered websites benefited of such mapping engine upgrade.

The figures also confirm the continuing trend of effort increasingly directed towards support to information contributions, and less on software development.

The overall yearly budget level of \$156.000 during this 2010/11 period (\$175.000 during 2008/09) confirms a cruise level budget reported since FSC5. However during the forthcoming biennium, fewer FAO Regular Programme resources will be granted and these resources aim at assuring the current maintenance capacity. Additional efforts will be supported by extra-budgetary resources: the on-going Japanese trust fund project GCP/INT/069/JPN will provide this support in 2012 but this project will elapse by the end of 2012 and other project sources will have to be identified.

Table 6: Effort in [man x days] spent on FIRMS by major activity during period 02/2010 – 11/2011.

|                        | Software development (days) |                        |                                     |   |                    | Information contributions (days)  |                          |                                      | (days)                   | (days)    |
|------------------------|-----------------------------|------------------------|-------------------------------------|---|--------------------|-----------------------------------|--------------------------|--------------------------------------|--------------------------|-----------|
|                        | Web site upgrade            | Marine Resource module | Fishery module including guidelines | Dynamic mapping tool – thematic pages – FIRMS data coverage | Word/ Excel-To-XML | Training / Assistance to Partners | Direct Data update (FAO) | Routine maintenance website and Wiki | Management and marketing | Total     |
| <b>M. Taconet</b>      |                             |                        | 10                                  | 10  |                    | 15                                |                          |                                      | 30                       | 65        |
| <b>E. Balestri</b>     |                             | 6                      | 25                                  |   | 5                  | 180                               | 165                      | 15                                   |                          | 396       |
| <b>A. Gentile</b>      | 11                          | 3                      | 10                                  | 12  | 10                 | 25                                | 15                       | 18                                   |                          | 104       |
| <b>M. Balestra</b>     | 4                           | 2                      | 11                                  | 5   | 14                 |                                   |                          |                                      |                          | 36        |
| <b>F. Sibeni</b>       |                             | 1                      | 4                                   |   |                    |                                   |                          |                                      |                          | 5         |
| <b>E. Blondel</b>      |                             |                        |                                     | 20  |                    |                                   |                          | 1                                    |                          | 21        |
| <b>A. Fabiani</b>      |                             |                        |                                     | 10  |                    |                                   |                          |                                      |                          | 10        |
| <b>T. Jarrett</b>      |                             |                        |                                     |   |                    |                                   |                          |                                      |                          | 0         |
| <b>F. Calderini</b>    | 3                           |                        |                                     | 3   |                    |                                   |                          |                                      |                          | 6         |
| <b>P. Bravo</b>        |                             |                        |                                     |   |                    |                                   |                          |                                      | 6                        | 6         |
| <b>TOTAL effort</b>    | 18                          | 12                     | 60                                  | 60  | 29                 | 220                               | 180                      | 34                                   | 36                       | 649       |
| <b>% time/activity</b> | 3                           | 2                      | 9                                   | 9   | 4                  | 34                                | 28                       | 5                                    | 6                        | 100       |
| <b>TOTAL \$US</b>      | \$8,899                     | \$3,667                | \$24,159                            | \$24,216  | \$9,508            | \$59,355                          | \$36,785                 | \$12,493                             | \$32,037                 | \$211,118 |

For reference

|   | Software development | Training/Assistance – Data update | Management and Maintenance |           |
|---|----------------------|-----------------------------------|----------------------------|-----------|
| <b>TOTAL effort 2010-11 (19 months)</b> | 179                  | 400                               | 70                         | 649       |
| <b>TOTAL \$US 2010-11</b>               |                      |                                   |                            | \$211,118 |
| <b>TOTAL effort 2009 (21 months)</b>    | 231 d.               | 375 d.                            | 73 d.                      | 646       |
| <b>TOTAL \$US 2009</b>                  |                      |                                   |                            | \$205,000 |
| <b>TOTAL effort 2007/8</b>              | 159 d.               | 108 d.                            | 83 d.                      | 360 d.    |
| <b>TOTAL \$US 2007/8</b>                |                      |                                   |                            | \$180,000 |
| <b>TOTAL effort 2006</b>                | 668 d.               | 182 d.                            | 98 d.                      | 948 d.    |
| <b>TOTAL \$US 2006</b>                  |                      |                                   |                            | \$440,000 |

## **7. Difficulties encountered during the inter-sessional period**

Within “cruise speed inputs” limits reported in the above Resources chapter, there were no real budgetary constraints on both Regular Programme allotments and Project funding support. Regarding the 2012-13 biennium, normal maintenance of the FIRMS programme remains a priority area within FI but further development efforts will be possible only under extra-budgetary funding (EBF) sources. The current Japanese Trust fund will still support FIRMS development during 2012 (last project year) but new EBF will have to be mobilized from 2014.

The difficulties and related delays were rather of technical and scheduling nature.

Technical: the FIGIS mapping engine was completely rebuilt for allowing the above mentioned new features absorbing a considerable amount of Secretariat’s time.

Scheduling: responses from a number of partners are often quite delayed or absent both in occasion of discussions on technical issues (e.g. proposals delivered to the e-TWG) and when a feedback is requested for updating the inventories or producing fact sheets. Ultimately the above mentioned delays caused a reduced productivity or upgrade of FIRMS fact sheets.

Nevertheless most of the activities planned at FSC6 can be reported as being implemented to FSC7 (see Annex 1).

## **8. Potential activities during the coming intersessional period.**

Besides the normal assistance to Partners and the maintenance of FIRMS website, this section presents Secretariat’s view point on the developments which should logically follow from the progress made during this intersession. It should be made clear that these developments are conditional to the capacity to mobilize additional project resources. These developments can be articulated around five main areas: enforcement of data collection and data validation framework, enhancements of the FIRMS modules (fact sheets, maps, thematic pages, etc.), provision of specific training/assistance to Partners, improvements of the FIRMS Content Management System and, last but not least, promotion of FIRMS.

For some of these activities, FSC7 might decide to convoke a Technical Working Group. FSC7 will establish priority areas of development.

### **8.1 Broadening of the FIRMS coverage**

In those areas where the FIRMS coverage is weak, RFBs are invited to interact with the FIRMS Secretariat in order to expand the FIRMS data coverage, through development and validation of inventories and generation of reports (fact sheets) on status and trends. Such activity will build on the experience matured through the recent work done with CECAF and RECOFI,

### **8.2 Enhancements to the FIRMS modules**

- The Marine Resource and Fishery modules may need to be improved according to the issues addressed to the e-TWG concerning structure and content of the inventories, the data model and the layout.
- With the aim of improving FIRMS communication and increasing the web site audience, the overall web site layout should be improved with a better design and additional features. The home page, in particular, should be enriched with facilities and graphical

elements for helping users to easier access and exploit the latest information as well as other data stored in the FIRMS data base. Further developments of thematic pages and information corners would be consistent along this way.

In addition a FIRMS website attractive to a more numerous and diversified audience could be achieved through the development of the following features:

- graphical representations of synoptic views of Stocks' status and trends;
  - maps visually showing facts and trends based on standard indicators;
  - services to information providers: fact sheets can be retrieved and displayed on Partners' websites: this strengthens Partner's information dissemination capacity and necessarily increases FIRMS audience;
  - more language versions: adding a language should be decided on a needs basis, just like French has to be added when working in CEEAF area.
- Map representations may be further enhanced, in particular by adding the capacity to display multiple layers for marine resources/stocks, fishing activity areas, EEZs, RFBs' area of competence and species distribution in single maps within fact sheets and through an interactive maps viewer application.
  - With the expected growth of the number of fisheries, friendly ways to access Fishery records, including an intuitive browsing system able to handle the multi-faceted aspect of fisheries, would be necessary. In this view an interaction with the i-Marine project is envisaged for a shared knowledge base.
  - The maintenance cycle of Resources and Fisheries Inventories proceeds through Excel and an important objective is to streamline this maintenance life cycle. This requires to finalize the upgrade of the Excel-to-XML converter tool, a task already started during 2011.

### **8.3 Training and assistance**

- Specific training/assistance to regional Partners aiming at validation of additional national inventories: assistance to RECOFI and CEEAF towards publishing their national inventories will be pursued. This might include the specific training of information manager focal points.
- At least one regional workshop will be held in developing regions during the next intersessional period for the validation of national inventories. This will be jointly organized by the FIRMS Secretariat in collaboration with RFB Secretariats; candidates are SWIOFC, WECAFC and SEAFDEC.
- More generally where exploratory actions are necessary, the Secretariat will assist Partners or Observers (e.g. SPC, WCPFC, NAMMCO) with development of Case studies.
- Dedicated training could be arranged for those partners willing to adopt the Word-to-XML or, once ready, the Excel-to-XML converter tools.
- Normal assistance to established Partners: the assistance will consist of the existing remote assistance prevailing during the publishing workflow, and the specific training sessions as requested by Partners.

#### **8.4 Content Management System (CMS)**

One evident improvement should concern the overall behaviour of the CMS when handling collections containing numerous fact sheets (e.g. ICES, CECAF). The performance (time response and friendliness of the user interface) is getting worse when attempting to work on such collections.

Furthermore, the FIRMS CMS could evolve towards full integration of the Word-to-XML converter tool.

The interface of the workflow management system could be simplified in response to remarks made at TWG2:

- distinct management of the Reference Observation, which would become only available to the FIRMS administrator.
- a given fact sheet will be displayed under only two possible stages, a draft stage and a final stage. The “draft stage” will be editable only by users having a editing rights, but will be viewable by all users having logged into the Members area. The “final stage” will either be published on the internet, or if urgently needed hidden from the internet.

#### **8.5 Promotion of FIRMS:**

Depending on the outcome of FSC7 discussions different strategies will be adopted for FIRMS promotion.

- to seek participation of more RFBs
- to adopt a communication plan shared by FIRMS Partners through the identification of:
  - key-messages
  - audience (target and secondary users)
  - implementation steps (e.g. poster, improved home page, information corners, *etc.*)
- to promote links to the FIRMS website from national agencies websites
- to increase the dissemination of FIRMS fact sheets from Partners' website
- to communicate broadly on FIRMS synoptic views on status and trends
- to communicate on FIRMS progress at Partners' meetings
- to report on FIRMS progress at next COFI and to organize a side event for raising awareness of the ongoing activities

**Annex 1 - Status of implementation of FSC6 recommendations – November 2011**

|           |          |                 |
|-----------|----------|-----------------|
| completed | on-going | not yet started |
|-----------|----------|-----------------|

**Table 1: Against FSC6 recommendations**

| Recommendations of FSC6  | Status of work - November 2011   |
|--|--|
| <ul style="list-style-type: none"> <li>SPC and IATTC have been asked to approach WCPFC.</li> </ul>   | <p>WCPFC was contacted by IATTC in coordination with FIRMS Secretariat – Response still awaited</p>  |
| <ul style="list-style-type: none"> <li>COFI is an appropriate forum for outreach.</li> </ul>   | <p>Summary and presentation were delivered at RSN3 meeting in Rome, February 2011</p>  |
| <ul style="list-style-type: none"> <li>The Secretariat will write to SPC, NASCO and NAMMCO to suggest that they become full member.</li> <li>ICES have agreed to back the Secretariat's effort to approach NASCO, and the same for IATTC regarding the Pacific Salmon Commission and the Great Lakes Fishery Commission.</li> <li>FIRMS Secretariat will approach the South American RFBs and examine the potential involvement of Inland Capture bodies.</li> </ul> | <p>Letters of invitation to WCPFC, SPC, NAMMCO, NASCO, BCC, OLDEPESCA, CTMFM, PSC, IHPC have been sent in June 2011. Feedback with expression of interest was received from NASCO, NAMMCO, and BCC</p> <p>During COFI, NASCO informally indicated their interest to join FIRMS</p> <p>After Eurostat notified in December 2010 its decision for freezing temporarily the EU membership until further arrangement can be made with DGMare, FI responded in July 2011 to this letter inviting DG-MARE to join the FIRMS partnership; this invitation was further discussed at Director's level during a visit of FI at DG-MARE in July 2011. DG-MARE officially responded in September 2011 with a positive mindset to this invitation, while specifying the conditions under which it would contribute socio-economic information to FIRMS.</p> |
| <ul style="list-style-type: none"> <li>All partners should draw links from their site to FIRMS site, and should promote FIRMS within their internal mechanisms, including inviting their member countries to draw links from their national websites</li> </ul>  | <p>Last status reported: 9 out of 12 did draw links</p> <p>CCAMLR, IOTC, NEAFC seem not linking to FIRMS, action from their part is recommended.</p> <p>SEAFO has added a dedicated page to link all its SEAFO-FIRMS fact sheets.</p>  |
| <ul style="list-style-type: none"> <li>Efforts will be made to improve the usability of the FIRMS website, e.g. by introducing a full text search in the home page;</li> </ul>   | <p>The upgrade of the FIRMS website (a precondition to the full text search in the home page) has been implemented in June-July 2011</p> <p>The full text search functionality has not yet been implemented</p>  |
| <ul style="list-style-type: none"> <li>Efforts will be made to improve the audience of the FIRMS website: thematic or geographic information corners will be developed in close consultation with Partners and Partners will be invited to author these pages;</li> </ul>  | <p>Two thematic pages ("FIRMS on Tuna", "FIRMS on deep sea (high seas) demersal resources") have been implemented, discussed and published. Other two pages focusing on information arranged by region have been submitted to the virtual TWG for validation: "FIRMS in Eastern Central Atlantic" and "FIRMS in the Gulf, Oman Sea and Southwestern Arabian Sea" and "FIRMS in Southwest Indian Ocean".</p>  |
| <ul style="list-style-type: none"> <li>It was agreed that socio-economic fact sheets such as BNP examples are eligible for presentation in FIRMS;</li> </ul>   | <p>Senegal BNP fact sheets are available in FIRMS as examples</p>  |
| <ul style="list-style-type: none"> <li>The technical working group will further review the first set of Fishery fact sheets with the objective to enhance and further harmonise the reporting information structure.</li> </ul>  | <p>NEAFC fishery management unit fact sheets were developed. Other partners (NAFO, CCSBT, GFCM) have expressed the willingness to develop similar ones.</p>  |
| <ul style="list-style-type: none"> <li>The "ancestor" and "end date" will be added to Marine resource Metadata;</li> <li>The Secretariat will work out a technical proposal that best takes into account the points made in paragraph 64 and make it available to technical working group for approval.</li> </ul>   | <p>A proposal was made (<a href="http://km.fao.org/FIGISwiki/index.php/Talk:Marine_Resource">http://km.fao.org/FIGISwiki/index.php/Talk:Marine_Resource</a>) and submitted to Technical Working Group by mail 09/06/2010 (feedback received from ICCAT).</p> <p>Consequently it has been tested on two inventories (ICES, CECAF), and Marine Resource guidelines and</p>   |

|  |   |
|--|---|
|  | <p>Excel template were updated accordingly.</p> <p>The implementation at FIRMS web-site level is still pending (i.e. XML schema implementation, XSL-for fact sheet display, the search results, browse inventory, etc., and inclusion of relevant data in Reference Observation and Fact Sheets)</p>  |
| <ul style="list-style-type: none"> <li>• "Mangrove" will be added to Bottom-type classification and "inland waters" to "Horizontal distribution classification.</li> <li>• The spatial scale category and jurisdictional area will be further reviewed by the virtual technical working group during the intersessional period.</li> </ul>   | <p>Mangrove and Inland waters have been added in:</p> <ul style="list-style-type: none"> <li>• Excel Reference Terms and Template files (FR_ReferenceTerms.xls - FR_Templates.xls)</li> <li>• XML Schema</li> <li>• RTMS</li> </ul> <p>Jurisdiction Area: an upgrade of the data model has been implemented concerning the Management entity and the sub components Jurisdiction Area (respectively ManagementEntity/Mandate ; ManagementEntity/GeoCoverage/MaritimeArea). Modifications already reflected in all published Fishery fact sheets and reference observations as well as in the related Excel inventories.</p> <p>The Spatial scale categorization still has to be addressed as well as the harmonization with the Marine resources schema. A documentation of the proposal and ongoing discussion is available in FIRMS Wiki at <a href="http://km.fao.org/FIGISwiki/index.php/Geographic_reference_descriptors">http://km.fao.org/FIGISwiki/index.php/Geographic_reference_descriptors</a></p> |
| <ul style="list-style-type: none"> <li>• Members not present at this meeting will be notified of this proposal regarding NatFIRMS.</li> </ul>  | <p>FSC6 report dispatched, however with no specific notification.</p>   |
| <ul style="list-style-type: none"> <li>• The meeting agreed that under the principles and operational context outlined in paragraphs 64-72, and providing that this proposal is adopted by consensus of all the partners, further steps to NatFIRMS development can be initiated. This would include considering modifications to Rules of Procedures as needed, developing a Map of Operational areas, and developing guidelines for Partners.</li> </ul> | <p>No real action taken up-to now due to lack of resources. However opportunities have been identified:</p> <ul style="list-style-type: none"> <li>- articulation of NatFIRMS and Fishery Country Profiles,</li> <li>- development of partnerships with other interested entities such as Fishbase consortium, UBC, Ocean Trust, ...</li> <li>- an in-depth inventory has been developed with Malaysia</li> </ul> <p>Some FAO funding made available in July 2011 might enable to take some steps</p>   |
| <ul style="list-style-type: none"> <li>• COFI is the appropriate forum to present both FIRMS progress and the NatFIRMS concept, in order to gain further insight regarding State interest and to receive their guidance.</li> </ul>  | <p>Done at RSN3 meeting</p>   |
| <ul style="list-style-type: none"> <li>• It has been agreed that the FIRMS partners will utilise the FIGIS wiki as a collaborative tool for project related documentation, discussions and single point of access for project related resources.</li> </ul>  | <p>Wiki used on regular basis by Secretariat</p>  |
| <ul style="list-style-type: none"> <li>• The participants agreed that the architecture and vision delivered would be suitable as an information management framework in support of the EAF.</li> </ul>   | <p>FIRMS reporting tool will be proposed for inclusion as part of the EAFNet toolbox</p>  |

**Table 2: Against the Intersessional work plan, as elaborated in document FSC6/2010/3a.**

| Action  | Post FSC6 status – by July 2011  |
|---|--|
| I. Enhancement to Fisheries and Marine Resources module   |  |
| <ul style="list-style-type: none"> <li>Metadata modifications</li> </ul>  | Partially<br>See above comments (i.e. start/end monitoring date, bottom type, horizontal distribution, jurisdiction area etc.)   |
| <ul style="list-style-type: none"> <li>Maps – species, RFB competence areas</li> </ul>  | Done – maps included dynamically in the FIRMS fact sheets when georeferences provided  |
| <ul style="list-style-type: none"> <li>Workflow management: Excel based information, maintenance life cycle</li> </ul>  | Partially<br>The Excel to XML converter tool has been initiated but it is still in early stage of development.   |
| <ul style="list-style-type: none"> <li>Interactive mapping to access fishery records</li> </ul>   | Not started - complex  |
| <ul style="list-style-type: none"> <li>Ontology driven navigation among records (fuzzy logic)</li> </ul>  | Foundations laid as part of the FLOD knowledge base – concepts can be demonstrated at FSC7 in order to receive feedback and get directions for further implementation steps                          |
| II. Training / Assistance to Partners   |  |
| <ul style="list-style-type: none"> <li>Routine remote assistance to established partners</li> </ul>   | On-going   |
| <ul style="list-style-type: none"> <li>Outreach efforts to Observers (WCPFC, IWC, SPC)</li> </ul>   | A model of a WCPFC fact sheet <sup>6</sup> developed on the basis of FAO Tuna global publication   |
| <ul style="list-style-type: none"> <li>Minimum one and up to three regional workshops (SWIOFC, SEAFDEC, RECOFI)</li> </ul>  | SWIOFC workshop delayed,<br>- FIRMS-RECOFI workshop took place in July 2011<br>- FIRMS Secretariat attended CECAF SSC in September 2011<br>- FIRMS Secretariat attended RECOFI WGFM5 in October 2011 |
| III. Pages and Products aiming at diversified audience  |  |
| <ul style="list-style-type: none"> <li>Spatial and temporal representation of FIRMS database</li> </ul>   | Maps of data coverage for Resources and Fisheries have been designed, produced and published in FIRMS website<br>A prototype of dynamic mapping of FIRMS data coverage is under development          |
| <ul style="list-style-type: none"> <li>Geographical representations of synoptic views of stocks' status and trends</li> </ul>                                     | Not started  |
| <ul style="list-style-type: none"> <li>Maps visually showing facts and trends based on standard indicators</li> </ul>   | Not started  |
| <ul style="list-style-type: none"> <li>Specific Site sub-section: a global entry point with regional corners e.g. tunas, or the Mediterranean.</li> </ul>         | Tuna thematic page<br>High Seas Deep Seas page<br>Regional thematic pages are in progress for CECAF, RECOFI and SWIOFC regions.  |
| <ul style="list-style-type: none"> <li>Services to information providers: fact sheets can be retrieved and displayed on Parties websites</li> </ul>               | Service Available –<br>Partners still expected to use  |
| <ul style="list-style-type: none"> <li>Increasing coverage geographic.</li> </ul>   |  |
| IV. Promotion of FIRMS  |  |
| <ul style="list-style-type: none"> <li>Seek participation of more RFBs including those bodies / organisations associated with Inland Capture Fisheries</li> </ul> | Done through RSN3, and 9 letters of invitation co-signed by FI's ADG and FIRMS chairperson dispatched  |
| <ul style="list-style-type: none"> <li>Adopt a communication plan shared by FIRMS partners</li> </ul>   | Not started –<br>The preliminary version of a FIRMS poster <sup>7</sup> has been developed and exhibited during COF  |

<sup>6</sup> See <http://firms.fao.org/firms/resource/10055/en> (login required)

<sup>7</sup> See on FIGIS Wiki <http://km.fao.org/FIGISwiki/index.php/FIRMS> (login required)

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|  | - A more elaborated version still has to be developed<br>An improved FIRMS website interface has to be designed   |
| <ul style="list-style-type: none"> <li>Promote links to the FIRMS website from national agencies websites</li> </ul>                               | Partners to report on status  |
| <ul style="list-style-type: none"> <li>Disseminate FIRMS fact sheet from Partners website</li> </ul>   | Partners to report on status.<br>Implementation plans or interest expressed by IATTC, ICCAT, IOTC<br>SEAFO has implemented links to each of their fact sheets |
| <ul style="list-style-type: none"> <li>Communicate broadly on FIRMS synoptic views on status and trends</li> </ul>                                 | Done through FI's e-bulletin and UN Atlas of Oceans newsletter  |
| <ul style="list-style-type: none"> <li>Communicate on FIRMS progress and NatFIRMS at Partners' meetings</li> </ul>                                 | Partners to report on status.   |
| <ul style="list-style-type: none"> <li>Report on FIRMS progress at next COFI meeting and seek COFI members' opinions regarding NatFIRMS</li> </ul> | Done – but only with little emphasis regarding NatFIRMS   |
| <ul style="list-style-type: none"> <li>Organise a side event during COFI on NatFIRMS in order to foster donor support.</li> </ul>                  | Side event organized  |

**Annex 2: Web trends statistics for FIRMS**

accessible at [ftp://ftp.fao.org/FI/DOCUMENT/FIGIS\\_FIRMS/2011/inf7e.pdf](ftp://ftp.fao.org/FI/DOCUMENT/FIGIS_FIRMS/2011/inf7e.pdf)