



FIRMS Steering Committee Meeting

Sixth Session

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REVIEW OF THE FIRMS ACTIVITIES DURING THE INTERSESSIONAL PERIOD

Secretariat Report on Progress and Issues

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1. Developments on inventories of Marine resources, and of fisheries

a- Inventory of Marine resources:

Regarding FAO and its Article 6 RFBs, developments on inventories are as follows:

- CECAF: A proposal was made on the basis of CECAF's scientific work concerning the revision of the structure for the pelagic resources in the southern part of the CECAF area. During the Accra workshop, only few amendments were proposed for the Marine Resources inventory regarding regional level information, but a number of additions were made regarding national level resources.
- SWIOFC: the inventory of Marine resources elaborated by 2007 SWIOFC Scientific sub-Committee is being formalised as part of FIRMS in close collaboration with SWIOFC Secretariat. The pre-inventory consists of about 150 Marine resources units, and will be reviewed and validated after the March 2010 Scientific Committee.
- WECAFC, RECOFI: no change

Regarding FAO RFBs article 14 which are full FIRMS partners:

- GFCM: 9 Marine resources were proposed as additions based on 2008 SAC Report.
- IOTC: no change

Non FAO Partners activity reports are compiled in documents FSC6/2010/2b, c, d, e ...

Regarding the inventories, the Secretariat pointed out in particular:

- SEAFO: A list of 12 Marine Resources were agreed by SEAFO's Scientific Committee and the corresponding records were loaded into the FIRMS data base.
- ICES: during the FIRMS training on "Use of Word to XML converter tool" the ICES Marine Resource inventory has been revised and a new version was provided. These modifications are being currently implemented in the FIRMS data base.
- ICCAT: during the last SCRS meeting (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 corresponding records will be soon loaded in the data base. Further amendments were proposed in the ICCAT resource inventory since 5 stocks are no longer monitored.

b- Inventory of Fisheries:

- CCAMLR: Reports on 7 of the 18 inventoried Fisheries were loaded into the FIRMS data base and published.
- CECAF: During the CECAF-FIRMS Workshop on validation of Resources and Fisheries inventories in the CECAF area (December 2009), fifteen CECAF member countries delivered proposals for revision of the pre-inventory of 355 fishery units which they were presented. These proposals will be discussed and possibly finalized during the next CECAF Scientific Sub-Committee (SSC 6) which will be held on 9-11 March 2010 in Accra.
- SEAFO: A pre inventory of 13 Fisheries were proposed.
- IATTC, NAFO: during the joint training on "Use of Word to XML converter tool" (July 2009), each partner approved one high level fishery item and corresponding records were loaded into the FIRMS data base.
- NEAFC: during the training on "Use of FIRMS infrastructure" (May 2009) a revision of the fisheries inventory was made and 11 corresponding reference observations were loaded.
- SEAFDEC: requested the extension of its inventory of national shark fisheries with a similar one on Sea Cucumber composed by 8 new national fisheries.

At the two “Workshops on the Assessment of Fisheries Stock Status in the South and Southeast Asia” (June and October 2009), the application of FIRMS and inventory approaches for member countries were explored. Malaysia presented to the subsequent SEAFDEC RTC workshop (January 2010) a comprehensive inventory of the Malacca Strait. This meeting requested SEAFDEC and FAO to build capacities in order to initiate national contributions to the SEAFDEC inventory.

- IWC: a training on development of exploratory case studies regarding IWC fishery inventories took place on September 2009. IWC is going to collect from its member states data on by-catch by fisheries (essentially defined as flag states, water areas, gear types and target species) of small whales, using the template of FIRMS fisheries inventory. This will either contribute to the creation of new fishery units (owned by IWC), or add information to existing fisheries: for example, IWC will explore the possibility of a link to ICES data on fisheries. IWC might also test the development of Whales Marine resources for species monitored by IWC

Comprehensive figures for the other FIRMS partners are presented in next section.

2. Reporting on status/trends of Marine resources, and of fisheries

The following tables and graphs show the total number of units inventoried (Stocks or Fisheries) and the trend of the production of fact sheets per partners vs. reference years. The FIRMS database contains a total number of 700 units inventoried.

Table 1: FIRMS Marine Resources and Fisheries inventoried units¹, Reference Observations² (RO) and number of fact sheets³. (Updated 15 February 2010)

Partner	Inventoried units	Reference Observations		Fact Sheets									
		Resources	Fisheries	≤ 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CCAMLR	3	3											
	18		7										7
CCSBT	1	1						1	1	1	1		
EUROSTAT	-	-	-										
FAO	26	26				14	1	7					
	1		1					1					
CECAF	227	221		29	3			55				8	
	315		-										
SWIOFC	113	7											
	70		-										
WECAFC	264	239		36			7	1					
	233		-										
GFCM	54	52		1			4	16		5	10		
IATTC	23	23					1	17				1	3
	15		1										
ICCAT	22	22					1	2	2	3	6	2	
ICES	148	148					11	135	2	52		27	
IOTC	15	15			1		1	2	1		1	2	
NAFO	18	18		1			6	10	8	10	5	9	2
	1		1	1									
NEAFC	11		11										3
SEAFDEC	6		6					6					
SEAFO	12	12											
Total	1596	787	27		4	17	34	270	18	72	29	37	10

Note

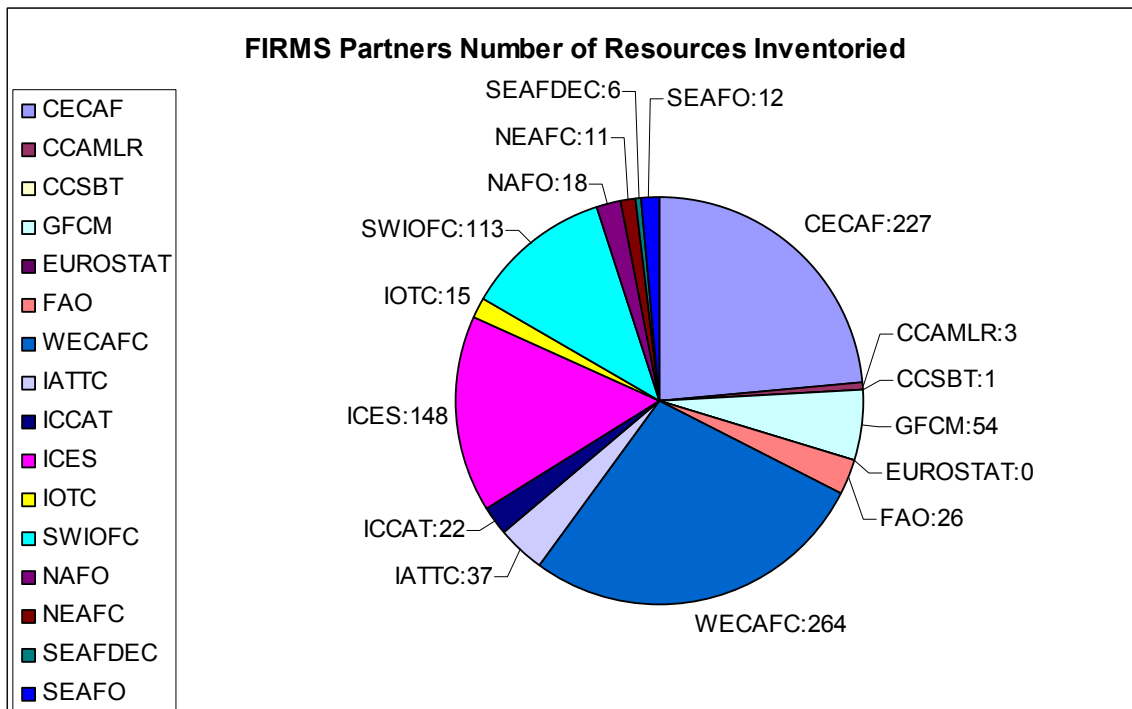
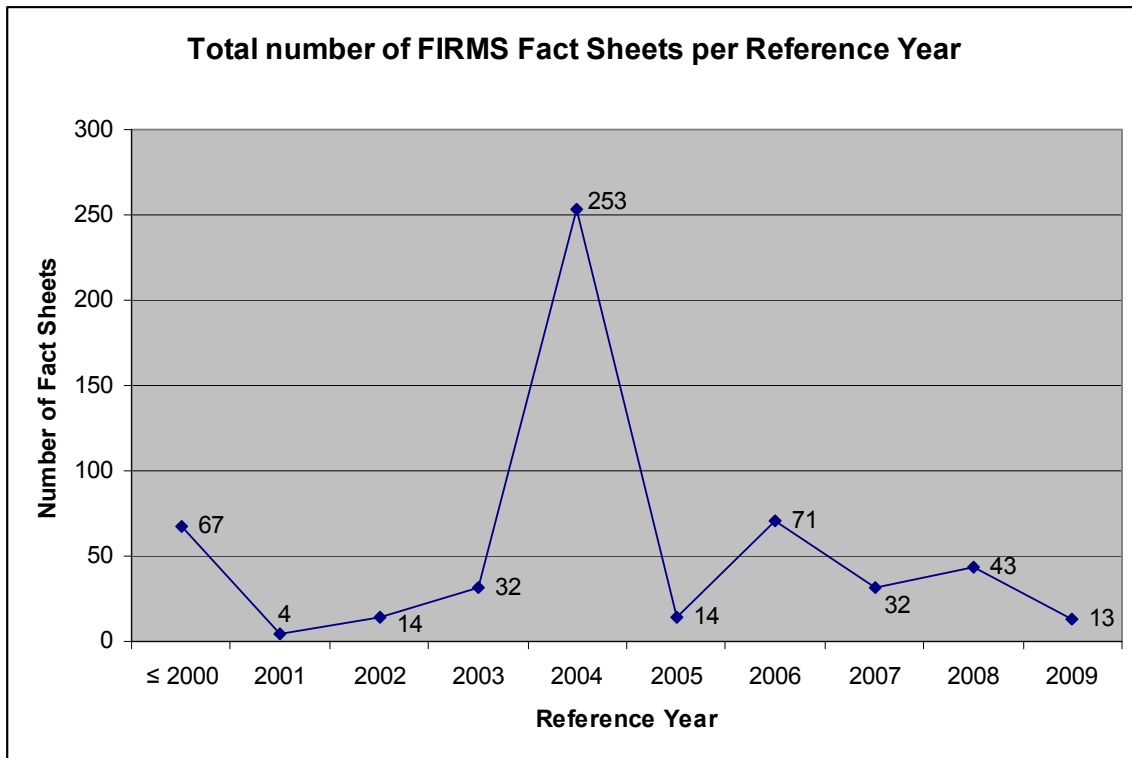
- Year: the Reference year value is considered
- CCSBT: former observations are hidden, only the last one is available in internet
- ICCAT: former observations are hidden, only the last one is available in internet for a total amount of 16 published primary fact sheets. Although 22 Resources are reported ICCAT is now monitoring 17 resources, sharks not included.
- SEAFDEC: 2 more Fisheries and 2 Marine Resources were prepared as case studies for National reporting (for Malaysia).

From 2009, IATTC, ICES, CCAMLR, NAFO and NEAFC use the new Word to XML Converter Tool. This new tool should facilitate the production of updates. The GFCM Excel template for reporting assessment and state of Mediterranean stocks has been aligned with the FIRMS Metadata.

¹ 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)

² Reference Observations are inventoried units loaded in the FIRMS system with all the descriptive metadata

³ Fact Sheets are inventoried units for which status and trends reports have been loaded in the system



3. Development of Applications

Scope: the FIRMS website currently includes four modules: Marine resource, Fisheries, dynamic mapping component, and Content Management System (CMS).

a- Marine resources module

- Activities: this module has been updated and now accommodates the new FIRMS standard descriptors for stock status, and the modifications affecting Reference year- Reporting year. The Stock status summaries search page now enables a search by these standard descriptors, and the results page can be downloaded in CSV format.
- Output: Marine resource module implements all features decided by FSC5.

b- Fisheries module

Background: FSC5 decided to release to the public version 1 of the fisheries module, and agreed to proceed with publishing a limited number of fact sheets just to allow possible modifications to a more refined structure. Partners were encouraged to develop and/or review their submissions.

- Activities: The Secretariat has interacted closely with CCAMLR, CECAF, FI, IATTC, NAFO, NEAFC, and SEAFDEC in order to assist in the development of their first set of fisheries fact sheets. The contributions across the Partners have covered all thematic approaches including Fishery Management unit, Jurisdiction, Fishery Resource, Production system, and Fishing activity. A serious work concerned the refinement of the Fishery Indicators concept while formatting socio-economic information reported as part of the Big Numbers Project (Production system approach). A number of adjustments had to be made on the schema, and needs for revised definitions and tightening of concepts identified. Finally, the Fisheries entry page and search pages have been designed and released.
- Outputs: The current fisheries module accommodates most of the contributions provided by the above mentioned partners. 18 are already published, while 9 still await Partners final clearance. Outstanding issues on a range of Metadata aspects and conventions for organizing information have to be addressed and FSC6 is expected to provide guidance.

c- Development of mapping application

- Activities: the FIGIS mapping applications, now based on Geoserver infrastructure, is now stable and offers a big potential. A tricky bug, deeply buried in Geoserver and preventing the expected display of the Pacific centered projection, has been fixed. A version 1 of maps nested in Fisheries fact sheets has been released with the fisheries module. A prototype of species geographic distribution displayed as additional layer in the Marine resource maps will be demonstrated at FSC6. A dynamic mapping application of RFBs competence area is also being developed and will be demonstrated too.
- Output: more comprehensive map illustrations of stocks and fisheries

d- Workflow Management System (WMS)

The expression WMS covers the on-line Content Management System (CMS) and the conversion tools used upstream in order to streamline at Partner level the packaging of documents from their native format (Word or Excel). The CMS works satisfactorily and has not undergone any change. The Word to XML conversion tool has undergone a major upgrade.

New version of Word to XML conversion tool

- Activity: among the set of tools for an easy upload of the information into FIRMS, a new web based Word to XML converter tool developed by FIGIS was released on

June 2009. Basically the tool merge the information stored in the FIRMS data base (i.e. species, area, habitat descriptors, etc.) with the updates provided by the partner in a Word file (i.e assessment results, stock state and trend etc.). The converter tool can be configured on partner basis and the Word file is compiled according to simple formatting rules.

- **Output:** this new tool allows partners to use it extensively on their real data for the production of Marine Resource and Fishery fact sheets for the FIRMS website. IATTC and NAFO were the first partners to attend a dedicated training on July 2009 while a training to ICES was delivered on January 2010. ICES, IATTC and NAFO are currently producing and publishing fact sheets in an autonomous way. Although not yet utilized by the partners, Word templates ready for editing are also available for CCAMLR, NEAFC and IOTC.

e- Development of interoperability mechanisms

As part of the D4Science project, the FIGIS system develops web-services on its Fact sheets module, and FIRMS benefits from these features. A practical application of these services for FIRMS Partners is that they can now programmatically retrieve lists of updated Marine resources or Fisheries, in either HTML or XML format, for example for display from their website. Web-services are progressively being extended e.g. to retrieve programmatically selected sections of fact sheet content. This opens great perspectives of data processing across collections of fact sheets, and a first practical application is the dynamic mapping of all Stocks locations for a given specie.

4. Status of FIRMS website

From what precedes, this section is a concluding statement on the status of the FIRMS website, highlighting what's done and working well, what's not completed, and what should be started. It should be pointed out that **all decisions from FSC5 have been implemented regarding the website** (see annex 1).

Readers should understand that the FIRMS website is altogether an assemblage of the data loaded in its data base, and of different modules, therefore the status of the FIRMS website as grasped from the user perspective evolves from the status of the sum of its components.

a- Database content: Marine resources module

Table 3a / 3b shows by Partner:

- Number of inventoried resources / fisheries;
- Number of Reference Observations loaded / still to load;
- Number of currently published Fact sheets.

Table 3a: Marine resources – status of the FIRMS database

Partner	Marine Resources in the inventory	A. Ref. Obs. loaded / To load	B. Fact sheets published	B/A % published fact sheets / Ref. Obs. loaded
CCAMLR	3	3 / 0	0	0 %
CCSBT	1	1 / 0	1	100%
FAO	26	26 / 0	22	85%
CECAF	227	221 / 6	88	40%
WECAFC	264	239 / 25	44	18%
SWIOFC	113	7 / 106		0%
GFCM	54	52 / 2	25	48%
IATTC	23	23 / 0	20	37%
ICCAT	22	22 / 0	16	73%
ICES	148	148 / 0	146	99%
IOTC	15	15 / 0	4	27%
NAFO	18	18 / 0	18	100%
NEAFC	0	-	-	-
SEAFDEC	0	-	-	-
SEAFO	12	12 / 0	-	-
TOTAL	926	787 / 139	384	49 %

This table indicates that except for new joining Partners, Marine resources identified in the inventories have been mostly loaded. It also points out that half of loaded inventoried resources do not give way to published status and trends information.

Table 3b: Fisheries – status of the FIRMS database

Partner	Fisheries in the inventory	A. Ref. Obs. loaded/ To load	B. Fact sheets published	B/A % published fact sheets / Ref. Obs. loaded
CCAMLR	18	7 / 0	7	100 %
CCSBT	0	-	-	-
FAO	1	1 / 0	1	100%
CECAF	315	0 / 315	-	-
WECAFC	233	0 / 233	-	-
SWIOFC	70	-	-	-
GFCM	0	-	-	-
IATTC	15	1 / 14	0	0%
ICCAT	0	-	-	-
ICES	0	-	-	-
IOTC	0	-	-	-
NAFO	1	1 / 0	1	100%
NEAFC	11	11 / 0	3	27%
SEAFDEC	6	6 / 0	6	100%
SEAFO	0	-	-	-
TOTAL	670	27 / 562	18	66 %

b- Website Shell

The FIRMS website shell matches requests of subsequent FSCs.

- short and simplified URLs
- languages: English and French;
- access to member services under login control
- links to latest fact sheet published

Further developments suggested:

- Dynamic update with geographic representation for the Data coverage page
- Improvements of the “Concepts and definitions page”, and dissemination of the FIRMS Metadata
- Developments as per FSC6 decisions in relation with the target audience (eg regional corners, synoptic views, ...)

c- Marine resources dissemination module

- Stable and completed as per various FIRMS meetings requests
- Layout and functional modifications related to the implementation of Reference + Reporting years, and FIRMS standard descriptors for status and trends up-and-running.
- Includes dynamically embedded maps with Antarctic (for CCAMLR) and Pacific centered (for IATTC and SEAFDEC) projections;

Further developments suggested:

- development of synoptic views of Stocks Status and Trends

d- Fisheries dissemination module

Notwithstanding a few decisions expected from FSC6 on the template, the fisheries module should now be able to take a cruise speed and to host a growing number of fishery fact sheets.

Further developments:

- implementation of additional Metadata as per needs identified
- an intuitive browser page addressing the inherent complexity of the fishery concept
- enhanced multi-thematic maps
- Fishery locator

e- Mapping module

This module covers three mapping applications in FIRMS:

- Geo-selector: enables a user to launch from a map interface a search on Marine Resources fact sheets;
- Maps nested in individual Marine resource Fact sheets, or Fishery fact sheets, with three type of projections depending on location of the Resource (essentially Atlantic, Pacific, Antarctic);

Further developments suggested:

- Finalisation of Marine resources maps with the additional display of Species geographic distribution.

- Enhancement of the mapping application for the fisheries module, with inclusion of dynamic maps of RFBs area of competence.
- Geographic representation of the FIRMS data holding

f- Content Management System

- Version 3 of the CMS as reported to FSC5, stable and matching all requests made through previous FIRMS meetings;
- a multilingual user interface;
- a fact sheets loading mechanism, with necessary data integrity control steps;
- a fact sheets publishing workflow composed of 4 steps, with various user rights at each step including editing, reviewing, approving and publishing;
- a multilingual user assistant;
- creation of blank observation, and cloning of an existing observation.
- an XML downloading mechanism, for accessing the XML as loaded in the system. This is useful for a user willing to edit XML according an already existing template and reload it with a modified year of reference;

Possible improvements (for memory):

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.

g- Services offered by the FIGIS infrastructure to the Partners

- a marine resource or fisheries fact sheet can be returned in html, or in xml format. The later enables a partner to reformat it for another purpose (eg as pdf to include as part of a paper report, or as html as part of a partner website).
- web-services are available that enable a Partner’s website or system to query and retrieve all fact sheets of a given collection, and further to retrieve specific content.

h- Web trends statistics

The monitoring of usage of the FIRMS website has been set up during 2009 through the open source software used in FAO, called AWStats (Advanced Web Statistics). The detailed and illustrated analysis of web trends statistics during years 2007, 2008, 2009 is available in document FIRMS FSC6/2010/Inf.74. This document also contains a comparison of statistics generated by AWStats and Google analytics (the later was used to report to previous FSCs). This comparison highlights noticeable discrepancies which

⁴ accessible on FIRMS FSC6 meeting page at ftp://ftp.fao.org/FI/DOCUMENT/FIGIS_FIRMS/2010/inf7e.pdf

shed some doubts on the results exposed below. More work will be required to understand the origins of these discrepancies.

Comparing FIRMS Web trends during the last three years (see Fig. 6) it is clear that the number of visits has increased by about 60% between 2007 and 2008 while the number of pages viewed has increased by about 100% (Figure 1). This growth rate is comparable with that of FAO Species fact sheet, or Fishery Country Profiles. The traffic has however stabilized between 2008 and 2009 while that of its comparators has not, reflecting probably the stabilization of the FIRMS partnership, and the absence of active promotion (e-bulletins) during 2008/9. During the three years the number of visits per visitor was stable around 1.3 visits/visitor while the number of pages per visit has decreased by about 22% (from 6.1 to 4.7 pages /visitor).

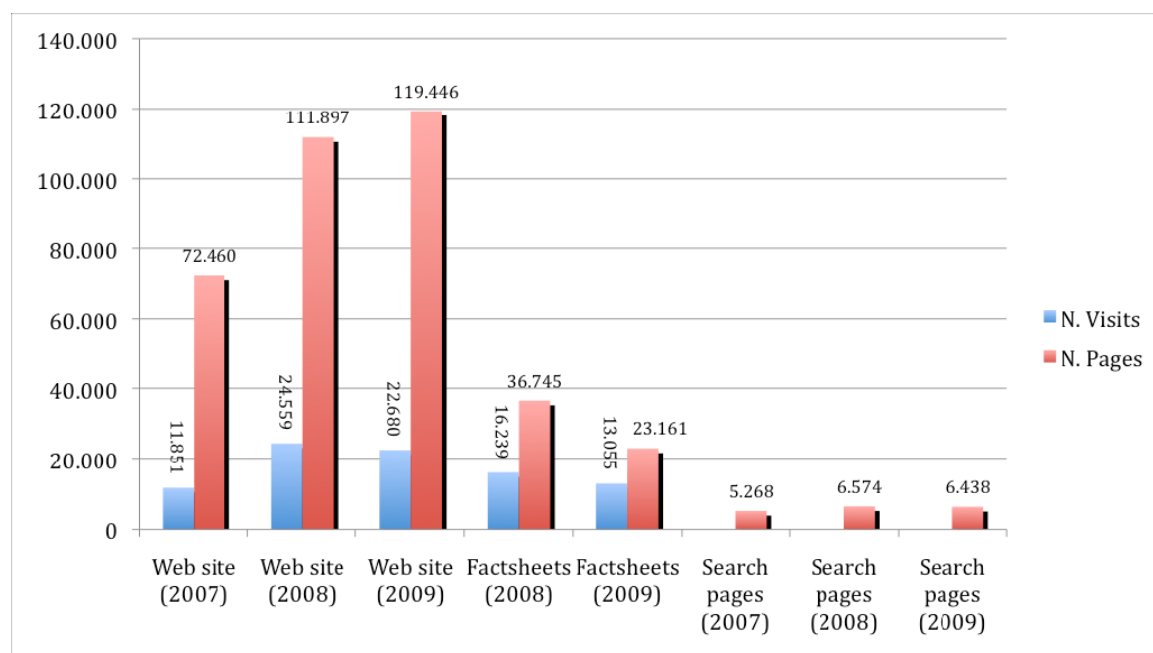


Figure 1: FIRMS Web statistics 2007-2009

Accessibility and traffic sources show that 80% of visits access FIRMS directly⁵ (i.e. the visitors know exactly where to go) while, on average, around 12% of the visitors access the system through search engines and the remaining 8% arrive through other sites such as fao.org, wikipedia.com, icatt.int, friendsofthesea.com, gfc.org, nafo.int, seafdec.org, and ccsbt.org. This indicates a strong traffic coming essentially from the partners themselves and a very limited outreach. Access to the fact sheets shows however a different proportion, with an access through search engines which increases between 2008 (39%) and 2009 (49%).

North America dominantly, 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.

⁵ Google analytics on the contrary indicates that 70% of access is through search engines

A number of conclusions presented at previous FSC are confirmed:

- the recommendations for making FIRMS more visible through Referring sites has positive impacts: 18.5% of visitors have access through a site pointing to FIRMS, with the following decreasing order of importance: fao > wikipedia > friendsofthesea > gfcms > iccat > ccsbt > nafo.
- Google Web trends show also the very positive impact of a new referring site such as Fishbase implemented in October 2009.
- links immediately accessible from the home page are influential in frequency of visited pages. The most visited pages (excluding the Home page and search pages) during the three years period are:
 - Concepts and Definitions
 - Squid Global – 2005
 - Redfish Flemish Cap – 2008 (2008-2009 Web trends)
 - Institutional Partners
 - Tuna and Tuna-like species Global – 2004
- the most frequent keywords used to find the FIRMS section from Internet Search Engines and Directories are: fao, sea, fisheries, tuna, resources and cap. The three most frequent keyphrases used to find the FIRMS section from Internet Search Engines and Directories are: “fao.org” “gfcms”, and “flemish cap”. However the google stats show that visit time for these general keywords is among the shortest. The average time on site is much higher regarding use of specialised keywords such as “firms”, “operational units”, “north atlantic swordfish”, “stock status fao37”, “merou blanc”, “sardine morocco”, “thorny skate”, which hints that the audience is restricted to scientists specialists.

Conclusions:

The statistics indicate that, at the moment, the most important clients are the scientists involved in the development of FIRMS and their close contacts, either as information contributors (interacting with the site) or information users. This narrow range of audience is quite normal at this stage of development of a growing system that not yet well known out of the circle of developers, to the other potential users. The possible causes for the low outreach are further analysed in document FSC6/2010/4

Proposed actions:

- Continue to make FIRMS more comprehensive, and foster timely updates from Partners, in order to make visitors coming on a regular basis to check the status of monitoring and management of marine resources.
- Ensure good understanding of site thematic and geographic coverage based on geographic representations dynamically updated.
- Ensure that all FIRMS partners have drawn links from their website to FIRMS, and exploit FIRMS services from their website (eg retrieve dynamic lists of their Resources and Fisheries). All FIRMS partners should encourage their constituency to do so.
- Develop corners that would target various audience, eg a place that promotes Global review, Regional views including synopses on status and trends of regional resources, ...

5. Training or skills development

A continuing remote technical support to partners in their information contributions to FIRMS, or in development of their inventories or reporting templates was ensured, notably to IOTC, SEAFO, CCAMLR, and 3 to 4 SEAFDEC member countries.

Upon demand by RFB partners, delivery of 2 to 4 days training to individual RFB staff on FIRMS principles, website, and information management toolkit. Training took place at either FAO HQs (SWIOFC, BCC, IWC, NEAFC) or at partners HQs (NAFO, IATTC, ICES); as outcome of these training sessions, better understanding of FIRMS (BCC, IWC), inventories being refined (SWIOFC), partners able to make full use of FIRMS information management toolkit (IATTC, NAFO, NEAFC, ICES).

A specific workshop (the first of this kind) was organized with CECAF on the validation of resources and fisheries inventories in the CECAF area” (Accra, December 2009), as per recommendation of CECAF 5th Scientific Sub-Committee (Casablanca, December 2007). 15 countries actively participated to this workshop, which has been very successful as reported in document FSC6/2010/4. It contributed to improve inventory guidelines in the national context and regional consolidation. The workshop conclusions will be brought to CECAF SSC6 (Accra, March 2010) which will consider eventual publication of the inventory in FIRMS.

The list of training sessions (also available on FIRMS website) is compiled in Table 4 :

Organization / place of training	Training content	Training date
ICES – Copenhagen	Use of Word to XML converter tool. Compilation of Marine Resource fact sheets. Introduction on FIRMS on-line editing tool. Revision of the Marine Resources inventory.	January 2010
CECAF - Accra	Revision of national inventories in CECAF area, and consolidation at regional level; discussions on the Guidelines and identification of guideline sections requiring improvement.	December 2009
IWC - Rome	Application of FIRMS standard reporting format; development of exploratory case studies regarding IWC fishery inventories, and connections of IWC by-catch records to existing inventories fisheries.	September 2009
NAFO; IATTC - Halifax	Use of Word to XML converter tool. Compilation of Marine Resource and Fishery fact sheets. Introduction on FIRMS on-line editing tool.	July 2009
BCC - Rome	Introduction to FIRMS system. Guidelines on compilation of Marine Resources and Fisheries inventories. Introduction to FIRMS fact sheets.	July 2009
SWIOFC - Rome	Introduction to FIRMS platform. Guidelines on compilation of SWIOFC inventory for Marine Resources and Fisheries. Introduction on FIRMS on-line editing tool.	June 2009
NEAFC - Rome	Use of FIRMS on-line editing tool, introduction to Word to XML converter tool, introduction and compilation of NEAFC Fisheries inventory.	May 2009

6. Promotional and outreach activities

The promotional and outreach effort has been directed towards harnessing participation of Partners (Eurostat-DGMare, SEAFDEC) or Observers (WCPFC, IWC) still searching their way in FIRMS, and more generally to invite non-involved RFBs to join FIRMS. Table 5 summarizes FIRMS Secretariat’s interventions.

Table 5 : promotional and outreach interventions of FIRMS Secretariat

Organization / place of training	Training content	Training date
SEAFDEC and APFIC - Bangkok	FIRMS Secretariat participated to the 1st and 2nd FAO-SEAFDEC workshop on the assessment of South and SouthEast asian resources (Bangkok, June 2009, and October 2009), attended by 10 countries. The meeting was technically lead by FAO's Fisheries conservation and management division (FIR) with the aim to improve regional and national capacities on stock assessment based on data poor methods, and improve the quality of reporting on the state of world fishery resources. The FIRMS Secretariat introduced the inventory approach in support to monitoring and reporting. As a follow-up action, FIRMS Secretariat provided technical assistance to Malaysia in the development of Malaysian national inventory of resources and fisheries; this work was presented by Malaysia at SEAFDEC Regional Technical Consultation on Fishery Information and Statistics in Southeast Asia (Jan 2010).	June and October 2009
WCPFC – Pacific islands	A document has been prepared by FIRMS Secretariat for presentation by FAO's Senior Tuna Fisheries Officer at the WCPFC Scientific Committee meeting (August 2009), indicating FIRMS status and stressing benefits for WCPFC to join the Partnership. WCPFC is the last Tuna RFMO not yet a FIRMS member. WCPFC Secretariat indicated that it would not be opposed to proceed with some case studies.	August 2009
Benguela Current Commission (BCC) - Rome	The BCC newly appointed data manager visited FAO in order to be briefed on FIRMS. The briefing covered: the description of the Partnership arrangement; introduction to FIRMS system; guidelines on compilation of Marine Resources and Fisheries inventories; introduction to FIRMS fact sheets.	July 2009
RSN2 - Rome	as agreed at FSC5, the FIRMS Secretariat has presented the status of FIRMS development to RFBs attending the second RSN meeting (March 2009). RFBs were invited and encouraged to join FIRMS	March 2009
CECAF - Cotonou	The issue of "FIRMS data ownership" was presented to CECAF members at CECAF 19th Commission meeting. The Commission endorsed a central role for its Scientific-sub committee regarding the dissemination of FIRMS concepts at national level, the coordination of national or sub-regional inventories, and the ability to endorse through its peer review mechanisms scientific assessments implemented outside of its realm, for publication in FIRMS.	December 2008
DGMare – Bruxelles	FIRMS was presented to DGMare in Bruxelles during a lunch Conference (August 2008). This presentation was made in the context of EC's internal discussions regarding the transfer of responsibility from Eurostat to a DGMare's division for representing EC in FIRMS.	August 2008

Arrangements were made with Fishbase and links have been drawn from Fishbase to FIRMS marine resources fact sheets.

FIRMS has not been presented to donors:
 FIRMS has not been presented to any conference or event:
 There was no need to update the FIRMS brochure.

7. 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 19 months of the intersession (ie between 07/2008 and 01/2009), and the corresponding cost is compiled by major activity in table 6. The total time invested amounts to 3.16 man-years for an equivalent of \$213.000; normalised to a 1 year period, we obtain 2 man-year for an equivalent of

\$135.000, compared with 1.25 man-year for an equivalent of \$136.000 during year 2007-08, and 4.4 man-years for an equivalent of \$440,000 during year 2006.

This represents a substantial increase if compared with the previous 2007/8 yearly effort reported to FSC5

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

- 34% of the effort (against 44% in 2007/8 and 73% in 2006) was dedicated to software design and development: essentially Word-to-XML convertor, the new fisheries module, and the dynamic mapping tool;
- 58% of the effort (against 30% in 2007/8 and 44% in 2006) for information contributions (ie FAO inputs or assistance to Partners inputs including through training, and regular maintenance of FIRMS infrastructure);
- 8% of the effort (against 23% in 2007/8 and 13% in 2006) to management and marketing;

In addition, a budget of \$60.000 (\$40.000 normalised to a one year period) has been allocated to travel costs in support to training, promotional activities, and the CECAF workshop.

These figures confirm that the allocation of effort is increasingly directed towards support to information contributions, and less on software development.

The overall yearly budget level of \$175.000 during this 2008/9 period confirms the cruise level budget reported at FSC5. A major difference with previous period is that the resources were mainly supplied by RP, with only 6% from extra budgetary funds (23% during period 2007/8). This extra-budgetary funding is a component of the 4 years Japanese trust fund project GCP/INT/069/JPN entitled "Promotion of sustainable fisheries: support for strengthening function of and coordination among Regional Fishery Bodies (RFBs)/Regional Fisheries Management Organizations (RFMOs)". This project started in July 2008 and a modest component amounting to \$ 100.000 over 5 years has been secured for the support to FIRMS training activities. Some saving made during 2009 will be accrued during 2010 enabling.

Table 6: Effort in man x days spent on FIRMS by major activity during period 08/2008 to 01/2010

	Software development (days)				Information contributions (days)			(days)	(days)
	Word to XML convertor	Update stocks module	Dynamic mapping tool	New fisheries module	Training / assistance to Partners	Direct Data update (FAO)	Routine maintenance website and Wiki	Management and marketing	Total
M.Taconet		1		10	18			45	84
P. Bravo								4	4
A. Gentile	17	4	1	15	15	46	17		99
E. Balestri				30	122	182			334
Sylvain Caillot,	10	2	20	3	5				40
F. Calderini	1	1	2	4		2	1		11
T. Jarrett		4	2	1		2			7
Marco Balestra	52	5	1	13					71
TOTAL effort	80 d.	17 d.	58 d.	76 d.	191 d.	184 d.	18 d.	55 d.	646 d.
% time/activity	12%	3%	9%	11%	28%	27%	3%	8%	100%
TOTAL \$US									\$205,000

for reference

TOTAL effort 2006	668 d.	182 d.	98 d.	948 d.
TOTAL \$US 2006				\$440,000
TOTAL effort 2007/8	159 d.	108 d.	83 d.	360 d.
TOTAL \$US 2007/8				\$180,000

8. Difficulties encountered during the inter-sessional period

Within “cruise speed inputs” limits reported in the above Resources chapter, there were no real budgetary constraints, and additional FAO Regular Programme allotments even allowed to spare some extra-budgetary money and to reallocate this amount for 2010 activities. The Secretariat should be able during the forthcoming inter-session to maintain a cruise speed inputs level similar to the previous period.

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

Technical: as experienced by ICES, the 2008 proprietary version of the Word-to-XML converter tool was not able to adapt to the new Windows Vista platform and the FIRMS Secretariat decided in February 2009 to take this opportunity to undertake a major upgrade of this tool, which indeed caused some delays in Partners’ training and information contributions.

Scheduling: it proved also rather difficult to coordinate in a timely fashion all inputs required from the many Partners regarding the implementation of the standard Status and Trends descriptors, as well as the development of Fishery case studies. Partner’s responses are often quite delayed.

These difficulties are however relatively minor and normal and most of the activities planned at FSC5 can be reported as being implemented to FSC6 (see annex 1)

9. Planned activities during the coming intersessional period.

Besides the normal assistance to established Partners and maintenance of FIRMS website, this section presents Secretariat view point on developments which should logically follow from progress made during past intersession. These developments can be articulated around four main areas: necessary enhancements to the fisheries module (and to a lesser extent to marine resources module), specific training/assistance to regional Partners aiming at validation of additional national inventories, development of pages and products aiming at attracting a more diversified audience, promotion of FIRMS and (if retained by FSC6) NatFIRMS at relevant forums. For some of these activities, FSC6 might decide to convoke a Technical Working Group.

a- Enhancements to the FIRMS modules

Necessary enhancements will be brought to the fisheries module in order to handle the expected growth

The Fishery module will undergo the Metadata modifications as deemed necessary by FSC6 after first stage experiment by the Partners. Map representations will also be enhanced, in particular by embedding Jurisdictional area maps, and species distribution maps.

With the expected growth of the number of fisheries in the FIRMS data base, friendly ways to access Fishery records, including interactive mapping, and intuitive browsing will be necessary. These tools will be developed and some experimentation powered by ontology based toolkits will strive to demonstrate how individual reports can be dynamically networked and logically connected with each other finally offering to users multifaceted views on the Fishery system.

The maintenance cycle of Resources and Fisheries Inventories proceeds through Excel, and an important objective is to streamline this maintenance life cycle. This requires the upgrade/development of tools which the Secretariat will develop:

- The actual interest expressed by a number of Partners for the Excel format which offers a comprehensive view over a collection of records requires the development of a facility enabling to download in Excel format these inventories.
- Just like the word-to-Excel converter tool, an upgrade of the Excel-to-XML converter tool is necessary in view of the numerous forthcoming fishery records which will have to be uploaded;

Interoperability mechanisms will eventually be developed between FIRMS and Partner systems for dynamic access to fishery fact sheets located in Partners site. Such perspective could be envisaged for GFCM.

Regarding the Marine resources module, enhancements will concern dynamic maps with the additional inclusion of FAO Species distribution maps overlaid in the Stocks/Management units location maps.

b. training and assistance

Specific training/assistance to regional Partners aiming at validation of additional national inventories: assistance to CECAF towards publishing of its national inventories will be pursued. This might include the specific training of a CECAF information manager focal point.

Between 1 and 3 regional workshops will be held in developing regions during the next two years for the validation of national inventories. This will be jointly organized by the FIRMS Secretariat in collaboration with RFB Secretariats; candidates are SWIOFC, RECOFI, WECAFC, SEAFDEC.

More generally where exploratory actions are necessary, the Secretariat will assist Partners or Observers (e.g. WCPFC, IWC) with development of Case studies.

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.

c- Development of pages and products aiming at attracting a more diversified audience

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

- more insights on the home page that the site is active and that the DB grows: spatial and temporal representation of FIRMS database coverage;
- graphical representations of synoptic views of Stocks' status and trends;
- maps visually showing facts and trends based on standard indicators;
- specific site sub-sections: a global entry point, regional corners (eg Mediterranean) thematic views (eg Tunas).
- 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;
- an ever increasing coverage, geographically and thematically (tackled through validation of more inventories);

- more language versions: adding a language should be decided on a needs basis, just like French has to be added when working in CECAF area.

FSC6 will pinpoint priority areas of development.

d- Promotion of FIRMS:

Depending on the outcome of FSC6 discussion on the NatFIRMS issue, different strategies will be adopted for FIRMS promotion. A decision to make further steps towards NatFIRMS will probably require:

- to seek participation of more RFBs
- to adopt a communication plan shared by FIRMS Partners;
- to promote links to the FIRMS website from national agencies websites;
- to disseminate FIRMS fact sheet from Partners' website;
- to communicate broadly on FIRMS synoptic views on status and trends;
- to communicate on FIRMS progress and NatFIRMS at Partners' meetings;
- to report on FIRMS progress at next COFI and seek COFI members opinion regarding NatFIRMS;
- to organize a side event during COFI on NatFIRMS in order to foster donors' support.

Annex 1: Status of implementation of FSC5 recommendations

Recommendations of FSC5	Status by FSC6
It was recommended that the FIRMS Secretariat formally invite the organizations identified at the last steering committee (NAMMCO and NASCO).	WCPFC was further contacted more discussions with IWC NAMMCO and NASCO still to contact
It was agreed that the FIRMS Secretariat circulate a short summary on FIRMS to potential partners and participants to the RSN (Regional Secretariats Network).	Summary and presentation were delivered at RSN2 meeting in Rome, February 2009
The FIRMS Secretariat was invited by DG MARE to discuss various issues in order to have a smooth transition in leadership to the FIRMS partnership	FIRMS Secretariat was invited by DGMare to deliver a lunch conference, in September 2008. In September 2009, decision was made during hearings between DG MARE and DG ESTAT at director's level on the hand-over of the FIRMS follow-up from Eurostat to the expert units of MARE
At FSC6, identification of potential users of the FIRMS system should be addressed	Meeting document prepared for FSC6
The topic of NatFIRMS will once again be addressed at FSC6.	
link to other systems e.g. FishBase to include local names of species (trade and common names) in the FIRMS systems. This was not felt to be an urgent matter. Inclusion of local names will be addressed at the next FSC6 after the end users of the system are better identified	
Under Status of the FIRMS website, the look and feel of the website was briefly discussed. It was decided to postpone any decisions on alterations until such time as the end users can be better identified.	
It was noted that links from Partners' web sites is an effective way to enhance the visibility of the FIRMS site and all Partners were highly encouraged to create such links on their websites including making their FIRMS factsheets available as part of their website.	8 partners out of 13 have drawn links. Links have been drawn from Fishbase to FIRMS
The FIRMS Secretariat will concentrate, in close collaboration with FIRMS partners, on populating the site i.e. loading and managing data rather than development of new modules and utilities.	
Encourage timeliness by direct links from the home page of last 3 updated fact sheets.	done
services for synoptic understanding should be improved: with the implementation of FIRMS status and trends standard descriptors, outputs of S&T summaries should be downloadable in csv and pdf formats	done
TWG2's response to Reference Year and Reporting year (Par.35, complemented by Annex 4b) was endorsed.	done
Par. 53 and 54, dealing with fisheries module layout issues requiring additional development were supported.	done

Recommendations of FSC5	Status by FSC6
<p>It was agreed that the Fisheries module can be released to the public.</p> <p>It was agreed to proceed with publishing a limited number of fact sheets just to allow possible modifications to a more refined structure. Partners are encouraged to develop and/or review their submissions.</p> <p>“Ecosystem module”, (par. 65, complemented with Annex 5) was not adopted but will be placed on agenda at a future meeting.</p> <p>Preparatory work to determine how partners categorize their management measures will be coordinated by the Chairperson for presentation at FSC6.</p> <p>FAO and ICES will present some examples where there are subcomponents of stocks.</p>	<p>done</p> <p>done – 30 fisheries (18 published, others in draft form)</p> <p>paper prepared by CCAMLR</p> <p>to be done</p>
update IMP	to be done
<p>It was agreed that SEAFDEC would coordinate a review, in close cooperation with the FIRMS Secretariat and partners, with a view, to modify only if necessary the Annex 1.2 of the IMP (reference terms for Marine resources) will be discussed at FSC6.</p>	to be done
<p>The FIRMS Secretariat was tasked with developing the next version of the Information Management Policy in particular management concepts and data dictionary of the Fisheries Module, to be circulated to Partners before the next meeting</p>	to be done
FIRMS will be presented to the EU	done
Fund raising project considered with GEF	considered, but not realistic if not associated to an environmental conservation concern
Have Chair and Secretariat prepare presentation to COFI	not presented to COFI, but RSN2 instead

Annex 2: Web trends statistics for FIRMS

accessible at ftp://ftp.fao.org/FI/DOCUMENT/FIGIS_FIRMS/2010/inf7e.pdf