

FIRMS Steering Committee Meeting
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REVIEW OF THE FIRMS ACTIVITIES DURING THE INTERSESSIONAL PERIOD (June 2017 – April 2019)
Secretariat Report on Progress and Issues
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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 and Secretariat, main aspects regarding the inventories and the fact sheets are described in the following sections.

Further details of FIRMS partners' activities are available under the document section "Partners' reports" FSC11/2019/2a-2n.

1.1 Marine Resource inventories

- ICES: the ICES-FIRMS inventory is now compiled according to the ICES web service "Standard graphs Web Service APIs" (<http://standardgraphs.ices.dk/web/services.aspx>). Further cleaning and consolidation are needed due to new entries or no longer monitored assessment units. FIRMS-ICES IDs were also mapped and added in the inventory. The production of reports is in progress with 198 fact sheets already published.
- Fact sheets updates are in progress for CCAMLR, ICCAT, and IOTC.

FAO and its Article VI RFBs:

- WECAFC: Updated 2 marine resources and published 2 fact sheets (reporting year = 2016).
- CECAF: following the update of the inventory reported to FSC10 with the addition of 69 new marine resources, 96 marine resource fact sheets were published (reporting year = 2016). SSC8 (October 2018) provided new status updates for 104 stocks which are expected to be added during the coming FIRMS intersessional period.
- RECOFI: to enhance the data submission the 11th RECOFI Working Group on Fisheries Management (WGFM11) agreed to update RECOFI-FIRMS National Focal points list and organize a RECOFI-FIRMS side event during the 10th RECOFI Session, Rome, June 2019.

1.2 Fishery inventories

- No updates took place in the inventories among the FIRMS partners, however there were updates in the fishery fact sheets for IATTC and NEAFC. Updates for CCAMLR, NAFO and NASCO are in progress.

FAO and its Article 6 RFBs:

- WECAFC: within the updated inventory already reported at FSC10, 13 new fishery records were added for a total of 25 fisheries which were compiled along the WECAFC-FIRMS collaboration. The focus on this inventory was on the target species Queen Conch, Spiny Lobster and Flyingfish, WECAFC-FIRMS fishery fact sheets were published for 9 countries (Bahamas, Belize, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, and Turks and Caicos islands).
- WECAFC under the CLME+ project¹, specifically under the component "Shrimp and Groundfish Fisheries of the North Brazil Large Marine Ecosystem", during the Data Preparation Workshop (23 – 25 October 2018, Barbados) a joint template

¹ The CLME+ Project is a 5-year project (2015-2020) implemented by the United Nations Development Programme (UNDP) and co-financed by the Global Environment Facility (GEF). <https://www.clmeproject.org/>

for stocks and fisheries inventories and data for stock assessment was presented. About 60 fishery records were drafted, 19 of them are in advanced pending validation by French Guiana, Guyana, Suriname, and Trinidad and Tobago for being published as fishery fact sheets.

- CECAF: During SSC8 (October 2018) an improvement on citation/authorship of CECAF-FIRMS fact sheets was discussed and approved for FIRMS to follow-up. To ease the submission of up to date data, the list of CECAF-FIRMS National Focal Points will be updated, moreover the new CECAF-FCWC-FIRMS collaboration will foster it in the FCWC subregion. The introduction of market information and enhancement of the socio-economic information in FIRMS was also suggested.
- SWIOFC: SSC 7 (December 2016) and SSC 8 (February 2018) provided draft Stocks status report – plan to update in June-July all available stocks (~190) reported in “APPENDIX E - Summary tables: Status of fish stocks in the South West Indian Ocean”
- RECOFI: The Terms of Reference of the FIRMS Regional Focal Point which will be in charge of supporting National Focal Points on the submission of their fisheries data were approved.

1.3 Indicators on FIRMS Marine Resource and Fishery fact sheets

The following tables and graphs show the total number of units inventoried (**1479** marine resources and **751** fisheries) and the trends regarding the production of fact sheets per partners vs. reporting years.

The FIRMS web site is currently disseminating fact sheets as follows: **1050** current records (i.e. primary observations: 792 marine resources and 258 fisheries) and **699** historical records (i.e. secondary observations: 641 marine resources and 58 fisheries)².

² These figures include case studies not included in the following summary tables and graphs. Specifically the following fact sheets: 3 fisheries BNP (FAO Big Number Project); 2 fisheries DG Mare; and 5 in approved status (not published) BOBLME project marine resource (1) and fisheries (4)

Table 1: FIRMS Marine Resources and Fisheries inventoried units³, Reference Observations⁴ (RO) and number of fact sheets⁵. (Updated 30th April 2019)

Partner	Inventoried units	Reference Observations		Fact Sheets by Reporting Year									
		Resources	Fisheries	≤ 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CCAMLR	19	19		3		15			19				
	19		19	7	18				19				
CCSBT	1	1										1	
FAO	60	22		4	18								
	41		41	41									
CECAF	286	287		126		6				96			
	289		198		77		4						
RECORF	143												
	68		68			68							
SWIOFC	137	137		117									
WECAFC	269	243		48				1		2			
	275		49							23	2		
GFCM	135	80		46	24	1		5	31				
IATTC	23	36										8	
	16		1									1	
ICCAT	29	29		11	4	3	4	5	3	6			
ICES	332	325		373		83	1	1	6	48	97	45	
IOTC	15	15		7						15			
NAFO	18	18		62	12	4	11	8	7	3	7	7	
	5		5	3	3	4	5	2	1				
NASCO	7		1				1			1			
NEAFC	11		11	8							6	7	1
SEAFDEC	14		14	8									
SEAFO	12	12		12				5	2	5		5	
	6		1			1							
Total	2230	1224	408	876	156	185	26	27	88	199	112	74	1
		1632		1744									

Notes

- IATTC and CCSBT: as per these partners' policies, historical observations are hidden, only the latest reports are available in internet.
- FAO bodies: Numbers of reference observations and related fact sheets are changing due to the current inventories' validation and loading process as well as new interactions with new bodies' representatives.
- Figures for BNP (FAO Big Number Project) (3 fisheries), DG Mare (2 fisheries), and BOBLME project (1 marine resource and 4 fisheries) are not reported due to their nature of case study or because of their initial status (BOBLME).

Table 2: Fact sheets update turn-over expressed in percentage as ratio of number of fact sheets on total number of Reference Observation (RefObs). (Updated 30th April 2019)

³ 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). When source inventoried units are validated, one "inventory record" is created in the FIRMS database for each inventories unit.

⁴ Reference Observations are "inventoried units" loaded in the FIRMS system against the "inventory records", with all the stable/long lived descriptive metadata

⁵ Fact Sheets are inventoried units for which state and trend reports or other qualitative and quantitative information have been loaded in the system. The most recent fact sheet for a given inventoried unit is the primary observation, while older fact sheets have a status of secondary observation, which according to partners' policy remain or not in the public domain.

Partner	Inventoried units	Reference Observations		%Fact sheets/RefObs								
		Resources	Fisheries	2011	2012	2013	2014	2015	2016	2017	2018	2019
CCAMLR	19	19			79			100				
	19		19	95				100				
CCSBT	1	1									100	
FAO	60	22		82								
	41		41									
CECAF	286	287			2				33			
	289		198	39		2						
RECOFI	143											
	68		68		100							
SWIOFC	137	137										
WECAFC	269	243							1			
	275		49						47	4		
GFCM	135	80		30	1		6	39				
IATTC	23	36									22	
	16		1								100	
ICCAT	29	29		14	10	14	17	10	21			
ICES	332	325			26			2	15	30	14	
IOTC	15	15							100			
NAFO	18	18		67	22	61	44	39	17	39	39	
	5		5	60	80	100	40	20				
NASCO	7		1			100			100			
NEAFC	11		11							55	64	9
SEADEC	14		14									
SEAFO	12	12					42	17	42		42	
	6		1		100							

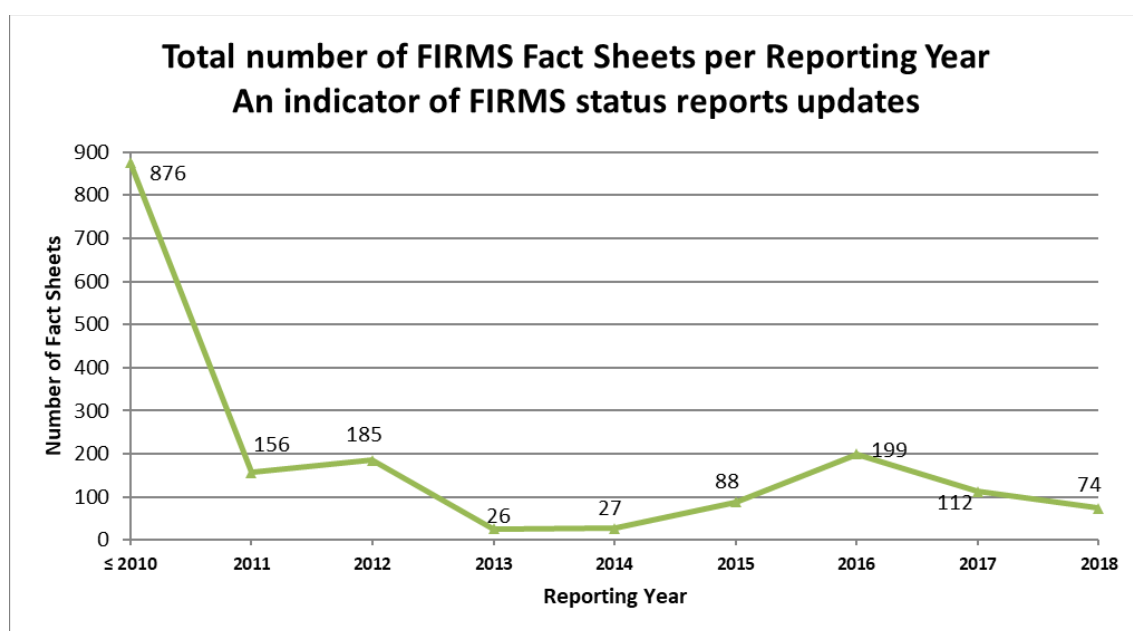


Figure 1: Total number of fact sheets per Reporting Year.

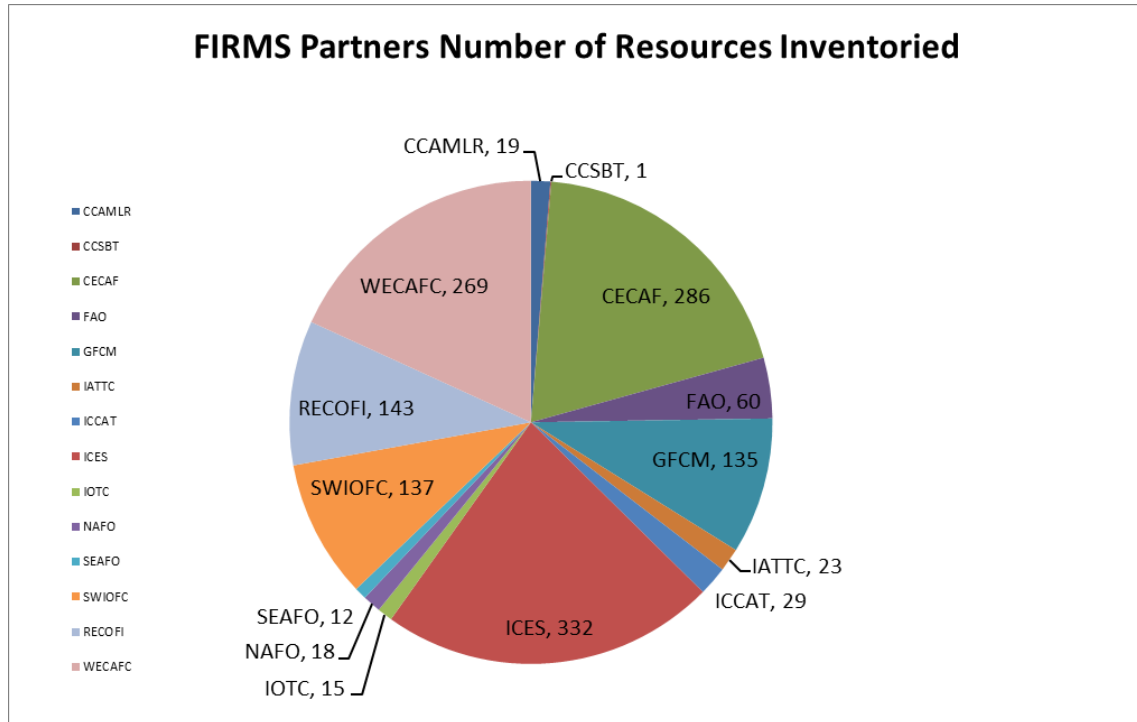


Figure 2: FIRMS Partners Number of Resources Inventoried

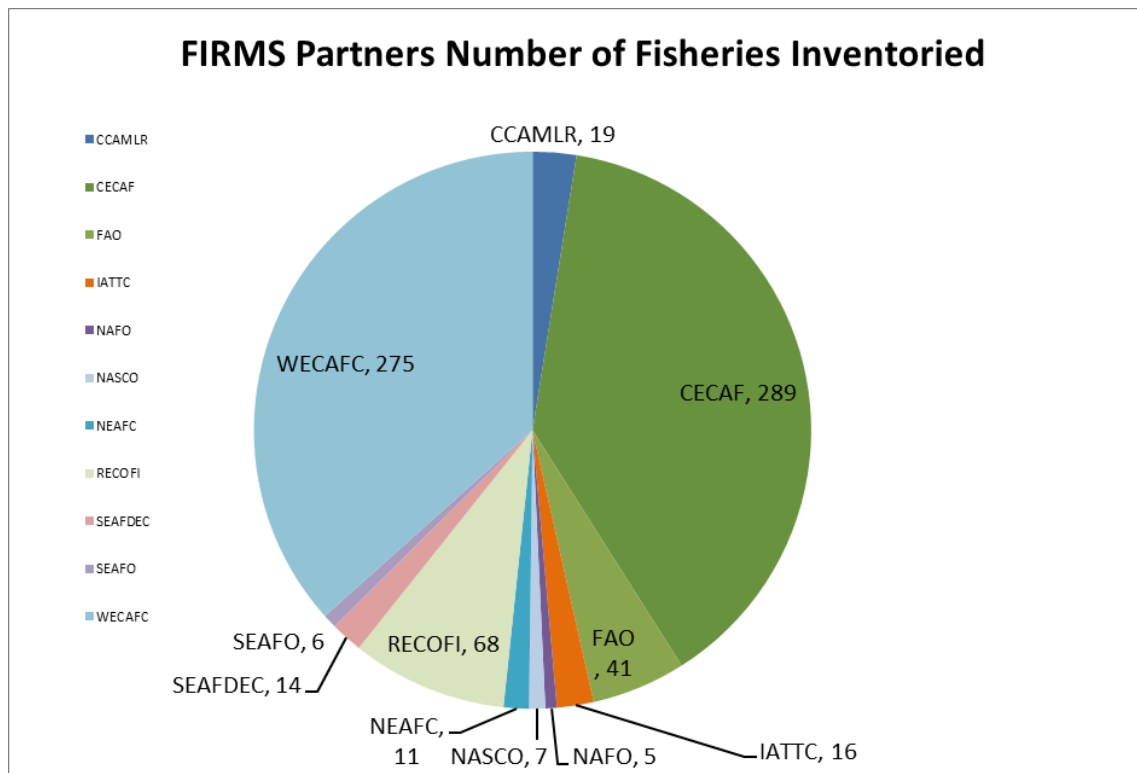


Figure 3: FIRMS Partners Number of Fisheries Inventoried

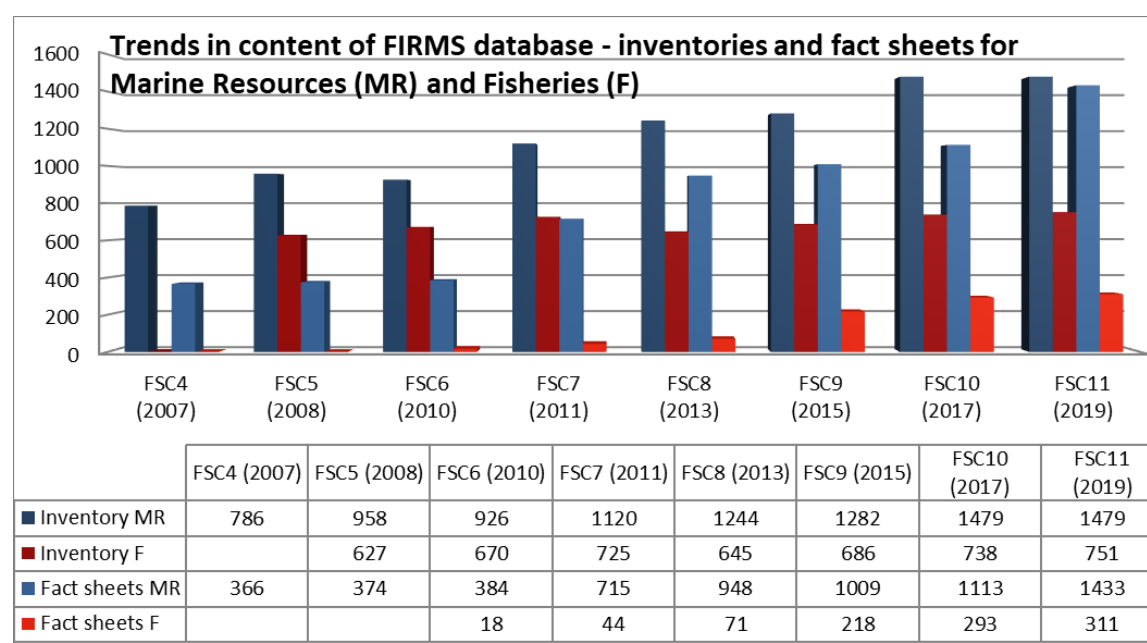


Figure 4: Trends in content of FIRMS database – inventories and fact sheets for Marine Resources (MR) and Fisheries (F)

Figure 4 depicts the growing trend across FSCs of inventoried Marine resources and fisheries, and fact sheets published (i.e. status and trends reports) for these inventories. Since the FIRMS launch, the total effort to produce status and trends reports can be calculated as the total number of primary (i.e. “current”) and secondary (i.e. “past”) observations for both Marine Resource (1433 observations) and Fisheries (311 observations).

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 i) Content Management System (CMS) and ii) Word/Excel-to-XML converter tools;
 - Dynamic mapping component including: i) stocks geographic extents with species distributions and competence areas and ii) Stocks and Fisheries map viewer;
 - Web services for identity data and summary indicators of stocks and fisheries.

During the intersession, no significant application development took place. FIAS efforts regarding the underlying FIGIS infrastructure are geared towards alignment of FIGIS with the new corporate IT policies, and preparing for major upgrade and migration of the FIGIS fact sheet module (which powers FIRMS) to modern technologies.

2.1 FIRMS fact sheets

Marine Resource module

This module has been updated with the display of the state and trend traffic light icons in those collection of fact sheets for which partners gave explicitly their consensus (i.e. IATTC, ICCAT, NAFO and SEAFO). (FSC9/D7.2, TGW 5, and TWG 5.1-5.3).

Regarding past FSC decisions, among others, it is still pending the alternative layout for no longer monitored marine resources (Monitoring period), and the display of partners' logo in the fact sheets.

Following TWG 6.1 and TWG 6.2 recommendations, the FSC11 is expected to make final decision regarding the update of definitions and values for the standard descriptors: Biological Stock, Assessment Unit, Spatial Scale, and Management Unit.

Fishery module

This module has been further updated with a few improvements of the overall layout. Like the marine resource module the alternative layout for closed fisheries (Fishery life cycle) and the display of partners' logo in the fact sheets have not been implemented yet. The new text fields for Indicator of data reliability - Fishery importance are supported but not fully implemented nor utilized yet.

2.2 FIRMS web site pages

The main pages of the FIRMS web site are in three languages, English, French and Spanish. The system has been also configured to support fact sheets in the three languages.

Since FSC10 the FIRMS home page has been updated with a new world map echoing the visual identity of the new FIRMS Stocks and Fisheries map viewer, and additional links to the viewer were also added.

Regarding the overall upgrade of the FIRMS website, the Office for Corporate Communication (OCC) produced a mock-up in collaboration with the FIRMS Secretariat for the new FIRMS Website under FAO.org. FSC10 approved the proposal. However its implementation has not started yet pending the above mentioned major upgrade and migration to modern technologies.

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 and Secretariat level the compilation of documents from their native format (Word or Excel) into the XML format for the web dissemination.

The following improvements took place during the intersessional period:

- The Excel/Word-to-XML converter tool was further configured for the "minimum data requirement" approach and massively utilized to produce and publish reference observations and fact sheets, particularly for the ICES-to-FIRMS semi-automated procedure; and
- The Excel transformation has been further improved for both fact sheets modules to handle time series data such as catch/landings or other indicators (including dynamic harvesting from ICES web services).

Dynamic mapping component

The FIRMS “Stocks and Fisheries Map viewer” was published by FSC10 as part of the FIRMS website (<http://firms.fao.org/firms/stocks-fisheries-map-viewer>). With this new interface, users are able to access information on marine resources and fisheries through a global map, browsing icons by area. Stock status and fishing activities information, as well as links to source fact sheets, are provided in pop-ups. In addition, a free text search tool enables quick access to FIRMS data with export facilities. The viewer can be also embedded in partners’ websites with focus on selected areas of competence.

This recent web product has been developed in the context of the planned renewal of the FIRMS website and fact sheets. The viewer is expected to better serve users by facilitating the perusal of stocks and fisheries inventories of the FIRMS partners.

FIRMS data coverage maps

No changes were made in the data coverage maps published in the FIRMS website.

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 several decisions from FSC9 have been implemented regarding the new user interface for stocks and fisheries while the renewal of the website is in progress considering the possible migration under FAO.org offering new features and layouts. (See full status of implementation of FSC9 decisions in Annex 1 and FSC10 decisions in Annex 2)

3.1 Database content

During the intersessional period, some new Marine Resource inventory records have been stored in the FIRMS database and the related fact sheets have been produced and disseminated.

FIRMS is presently disseminating state and trends information through 1433 published fact sheets (792 primary and 641 secondary observations).

Concerning the Fishery module, FIRMS is presently disseminating information through 316 fact sheets (258 primary and 58 secondary observations).

It should be noted that some partners’ policies lead them to unpublish 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 the loss of any information related to those marine resources or fisheries at FIRMS public site level. However this information still resides in the FIRMS database with an unpublished status.

3.2 Website shell

Since FSC10, the FIRMS website shell now offers a new World map in the FIRMS home page and links to the Stocks and Fisheries map viewer.

3.3 Marine Resource and Fishery dissemination modules

The Traffic light approach was activated for the published fact sheets of selected partners (i.e. IATTC, ICCAT, and NAFO). Here, a traffic light icon complements the state and trend description of the marine resources, providing a visual indication: red for overfished and green for not overfished. More information can be found at http://figisapps.fao.org/FIGISwiki/index.php/FIRMS_Fishery_Resources_Standard_descriptors_for_State_and_trend and in the Information Management Policy (IMP) document.

In addition of what was obtained by FIRMS FSC9 and FSC10, further improvements are regularly implemented at layout level any time the need emerges from new data submissions.

3.4 Mapping module

The mapping module is integrated within FIGIS. Thus the work done on other FIGIS thematic web-mapping interfaces gave positive side effects on FIRMS.

Specifically:

- More technical improvements resulted in faster map loading and display, and a better support for mobile and tablet devices;
- The FIRMS fisheries/marine resources data layer displayed in the map viewer are regularly updated through a semi-automated data processing flow, and available for retrieval through the FAO GeoNetwork (<http://www.fao.org/geonetwork>); and
- Additional layers could be potentially exploited in the FIRMS Stocks & Fisheries map viewer by existing FIGIS mapping capabilities.

At FSC10 a point was taken with CCAMLR regarding their classification system for areas. Codes, labels and shapefiles provided by CCAMLR could be added within FIRMS as part of the RFB standard geographic systems. Similar to ICCAT or IATTC such layers would be displayed in the CCAMLR-FIRMS fact sheets.

3.5 Services offered by the FIGIS infrastructure to the Partners

Following services are regularly available:

- 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.
- Two new web services were developed to retrieve selected information from the Marine Resource and Fishery module with focus on state and trend indicators and on key components of fisheries (target species, fishing gear type etc.). These services are also functional for the update of the FIRMS

stocks and fisheries map viewer and for the ICES-to-FIRMS semi-automated fact sheets production workflow.

- Geospatial web services are also available for embedding maps in partners' websites including a customizable version of the new Stocks and Fisheries map viewer.

3.6 Web trends statistics

The detailed and illustrated analysis of web trends statistics during years 2007-2018 is available in document FIRMS FSC11/2018/Inf.8⁶. Here follow some conclusions based on the above-mentioned document. The analysis conducted is based on the web trends provided by Google Analytics and refers to the period January 2007 - December 2018.

The upward trend of 2015 - 2017 shows a considerable overall increase in FIRMS usage, after a period (2012 - 2014) of fluctuation (as described in the previous reports FSC8-FSC9-FSC10). The negative trend reflected in 2018 was most likely due to a deficient availability of the FAO web server with frequent downtimes (to be further investigated). In 2018 the server experienced a total downtime of about 33 days, i.e. 9% of time unavailability. It should be noted that this 9% unavailability closely matches the negative difference between 2017 and 2018 for the number of sessions. And with the understanding that a frequent downtime is a discouraging factor to users for coming back, it can be fairly reasonably assumed that the growth recorded during previous years would have steadily continued.

The analysis on traffic sources shows that access to FIRMS through search engines (mostly Google) is about 43%, while 41% is referral sites, and the remaining 16% is due to direct traffic.

The bounce rate is about 50% or even less for the home page and for the search interfaces; it is more variable for fact sheets with higher and lower values.

The average session duration (the average length of a session) is 00:02:34 but with greater peaks in selected pages.

These numbers suggest that the fact sheets (authoritative sources of information on status of fishery resources) continue to trigger interest when users manage to access them.

In terms of device categories, an analysis for the period 2016-2018 indicated a higher share of mobiles and tablets vs. desktop, respectively about 15% and 3% of the total sessions. To note that the mobile devices has nearly doubled in comparison with the previous analysis made for FSC10 where the share for mobile devices was about 9%.

The following results are based on cumulated web trends across the whole 2007-2018 period. These coarse scale results can be interpreted only as global and smoothed over an 11-year period.

Mostly North America followed by Europe is the region with the highest level of visits followed by several Asian countries. 65% of the visits are made by English-based browsers. Most of countries worldwide (except some landlocked countries) have accessed FIRMS.

⁶ Doc. FIRMS FSC11/2018/Inf.8 is accessible at http://www.fao.org/fi/static-media/MeetingDocuments/FIRMS/FIRMS_FSC11/inf8e.pdf

Similar to previous analysis, the top sessions per “landing” page, those pages which are accessed the most frequently by users through textual links, banners or others references, including search engine results are:

- the FIRMS Home page;
- the Tuna and Tuna-like Species – Global and the World Global Tuna Fisheries;
- the Fishery Fact Sheet Search;
- Concepts and Definitions – FIRMS;
- Marine Resource Fact Sheet Search,
- other Fishery and Marine Resources fact sheets, particularly the ones containing management information.

Regarding the recent release of the FIRMS Stocks and Fisheries map viewer (monitored in Google Analytics since February 2017), the following is observed: i) a higher average session duration (00:03:41), ii) a higher ratio of pages per session (2.99), and iii) it would be positioned within the top ten landing pages if the analysis is constructed from the time of its release until December 2018.

These figures together with previous analysis made for FSC10 and FSC9 bring to the following considerations:

- users are interested by an authoritative source of information on the state of resources;
- the overall positive trends give a good outlook for 2019 and the FIRMS Stocks and Fisheries map viewer is expected to further contribute;
- in spite of the observed growth of mobile and tablets vs. desktop, these figures are not aligned yet along the overall trend of mobile usages vs. desktop (about 50% or even more), this suggests the need of an improved compatibility of FIRMS website for mobile devices so as to be better ranked by Google.
- the preliminary assessment on key words suggests that more efforts should be allocated for the search engine optimization, possibly concurrently with the new fact sheets module developments.;
- the possible migration of FIRMS under FAO.org should result in an increase of the overall web trends.
- although global /regional syntheses respond to users’ interest the developed thematic pages did not grow as expected;
- the referral traffic is still confirmed as an important source of accessing FIRMS and the addition of specific links, not only the home page but also the fact sheets, from partners websites would bring additional traffic and consequently the visibility to partners’ reports;
- the high referral traffic is also due to the web site cross-referencing, e.g. the addition of relevant FIRMS fact sheets (i.e. country related ones) to the FACP fact sheets contribute to raise awareness of FIRMS as authoritative source of information; FishBase is also contributing as important source of referral traffic);
- generally, a need to proceed with a strong communication plan agreed upon and supported by all FIRMS partners.

4. FIRMS Technical Working Group (TWG) meetings

Three TWG meetings were held during the intersessional period, two e-meetings (TWG 6.1 December 2017, TWG 6.2 April 2019), and TWG 6 jointly held with the BlueBRIDGE TWG3 on GRSF (7 - 9 February 2018 FAO headquarters, Rome, Italy). The meeting document FIRMS FSC11/2019/3 “Summary of TWG6 recommendations” summarizes the themes and the main recommendations which were presented and discussed during the three sessions. In brief, these concern i) FIRMS definitions for standard concepts (Biological Stock, Assessment Unit, Management Unit, Spatial scale), ii) the maturing of GRSF (definition of GRSF assessment unit and fishing unit,

standards for unique identifiers, time dependent data), and iii) recommendations on FIRMS governance structure for GRSF.

Meeting Reports for the three meetings are available in documents Inf.7a, Inf.7b, Inf.10.

5. 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. Recent focussed assistance includes liaising with CCAMLR, CECAF, GFCM, IATTC, ICCAT, IOTC, NAFO, NASCO, NEAFC, and RECOFI for the submission of new reports and/or due to change of the focal point.

WECAFC - under the CLME+ project (as mentioned in par. 1.2), a Data Preparation Workshop was organized in Barbados on 23 – 25 October 2018. The meeting brought together 14 participants including fisheries officers, government organizations and FAO. The main objective of the workshop was to provide training on data preparation for stock assessment purposes and fisheries status/trends monitoring, enhance capacities in fisheries data and statistics collection at the national and sub-regional levels, and review status of data availability for the shrimp and groundfish fisheries of the NBSLME. The current state of the FIRMS inventories for the NBSLME was reviewed and updated with inputs from participants while building a joint template for stocks and fisheries inventories and data for stock assessment. Participants reviewed availability of data including, inter alia, time series of landings and fishing effort, length frequencies and socio-economic information. Additionally, a review was made of the biological parameters (e.g. length-weight relationship, growth, maturity) available for key shrimp and groundfish species in the NBSLME and data gaps identified.

FCWC - within the context of the TCP/RAF/3512 “Strengthening routine fisheries data collection in West Africa: Benin, Cote d’Ivoire, Ghana, Liberia, Nigeria, Togo and Fishery Committee of the West Central Gulf of Guinea (FCWC)”, during its final workshop the FIRMS Secretariat conducted back-to-back a FCWC-FIRMS Workshop. The objective of the meeting was to: i) discuss the benefits within the CECAF-FIRMS collaboration for FCWC sub-regional organisation and its Member Countries; and ii) discuss the update of the Fishery inventories of FCWC Member countries. In addition, this was an opportunity to raise awareness on a related matter regarding how FAO and FIRMS can support the contribution of Member Countries to Sustainable Development Goal (SDG) Indicator 14.4.1 “Proportion of fish stocks within biologically sustainable levels” under the SDG Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development. This activity is being lead to the final signature of the FIRMS Partnership Arrangement with FCWC.

WCPFC/SPC – two WCPFC-FIRMS case studies showcasing the possible contribution to the FIRMS knowledge base were developed based on the publication “The Western and Central Pacific Tuna Fishery: 2016 Overview and Status of Stocks”: i) Marine Resource Fact Sheets: Skipjack tuna - Western and Central Pacific Ocean and ii) Fisheries Fact Sheets: WCP Tuna fisheries.

The list of past training sessions is available in FIRMS website – members’ area at <http://firms.fao.org/firms/training/en> (login required).

6. Promotional and outreach activities

The promotional and outreach effort proceeded according to FSC8/FSC9/FSC10 recommendations to work towards increasing the number of partners and promoting FIRMS through partner's websites.

During the intersession, FIRMS had intense outreach activity and overall attended 11 RFB statutory meetings, 2 Conferences, and 4 project meetings. In details, the following activities were carried out:

- FIRMS Secretariat attended the CECAF-PESCAO project kick-off meeting, in Akosombo, Ghana, April 2019.
- FIRMS Secretariat presented FIRMS and the new developments at the RECOFI WGFM11, Muscat, Oman, February 2019.
- FIRMS Secretariat introduced the FIRMS Partnership at the 7th SPRFMO Annual Meeting. The Hague, The Netherlands, 24 January 2019.
- FIRMS Secretariat presented the Global Record of Stocks and Fisheries (GRSF) at the GFCM FishForum 2018, Roma, Italy December 2018.
- FIRMS chairperson delivered materials for the Introduction of the FIRMS Partnership to the OSPESCA Regional Directors meeting, December 2018.
- FIRMS Secretariat presented FIRMS and the new developments at the WECAFC, SAG9 Bridgetown, Barbados, November 2018.
- FIRMS chairperson presented FIRMS at the Data Collection Reference Framework in the WECAFC Region Prepared for the 3rd Meeting of the CFMC/OSPESCA/WECAFC/CRFM/CITES Working Group on Queen Conch Panama City, Panama, 30 October – 1 November 2018.
- FIRMS Secretariat introduced the WECAFC-FIRMS success story at the Innovative data management services for sustainable fisheries and aquaculture. Copernicus. Brussels October 2018.
- FIRMS Secretariat presented the Status of FIRMS inventories for the NBSLME. Data Preparation Workshop. 23 – 25 October 2018 Bridgetown, Barbados. (See details in Par. 5)
- FIRMS Secretariat presented FIRMS and the new developments at the CECAF SSC8, Abidjan, Côte d'Ivoire, October 2018.
- FIRMS Secretariat introduced the WECAFC-FIRMS success story at the Data needs for Blue Growth; Policy issues and information needs for sustainable fisheries. 4th Geo Blue Planet Symposium. Toulouse, France 4-6 July 2018.
- FIRMS Secretariat introduced "Expand FIRMS Partnership, towards completing the global coverage of stocks and fisheries status and trends". Seventh Meeting of Regional Fishery Body Secretariats Network (RSN-7). Italy, Rome, 7 and 13 July 2018. This activity has led to the final signature of the FIRMS Partnership Arrangement with SPRFMO.
- FIRMS Secretary updated on WECAFC-FIRMS. WECAFC/CRFM/IFREMER Shrimp & Groundfish Working Group. UN House. Barbados, 17-18 May 2018.
- FIRMS chairperson presented the FIRMS Highlights and Requests and WECAFC-FIRMS RDB Project Highlights. Presentation prepared for Joint OSPESCA/WECAFC/CRFM/CFMC Caribbean Spiny Lobster Working Group. March 2018, Dominican Republic.
- FIRMS Secretariat organized a FCWC-FIRMS Workshop in Monrovia, Liberia 23-24 November 2017. (See details in Par. 5)
- FIRMS Secretariat within the FAO-WECAFC Shrimp and Groundfish CLME+ sub-project promoted the WECAFC-FIRMS Partnership during the FAO-

WECAFC Shrimp and Groundfish CLME+ sub-project Launching Workshop.
Port of Spain, Trinidad and Tobago, 20-24 November 2017.

- FIRMS Secretariat presented FIRMS and the new developments at the WECAFC SAG8 Merida, Mexico 3-4 November 2017.

Following FSC10 and RSN7, the FIRMS Secretariat also sent invitations to RFBs to join FIRMS as new members. Invitations were sent to eight RFBs: CPPS, CTMFM, FCWC, NAMMCO, NPFC, SIOFA, SPRFMO and WCPFC/SPC, and this resulted in:

- Two new RFBs (SPRFMO and FCWC) signing the FIRMS Partnerships agreement at FSC11;
- Three RFBs responding positively (CTMFM, NPFC and SIOFA), have proposed the FIRMS membership at their statutory meetings and discussions are ongoing; and
- Three RFBs (CPPS, NAMMCO and WCPFC/SPC) are evaluating the possibility of joining the partnership.

7. Secretariat Resources in support to FIRMS

Similarly to previous reports, the overall effort spent by the FIRMS Secretariat on various aspects of FIRMS activities has been monitored during the 23 months of the intersession (June 2017 - April 2019), and the corresponding cost is compiled by major activity in Table 5. References to the previous intersessional periods are provided in Table 6.

This report should be interpreted being aware that this analysis excludes a major part of the time which the FIRMS Secretariat invested in the GRSF developments.

The total time (along the 23 months) invested amounts to 2.63 man-years for an equivalent of \$263.959. Normalised to a 1-year period, we obtain 1.37 man-year effort for an equivalent of \$137.717, slightly below (in terms of effort) and above (in terms of costs) in respect of the previous intersessional period 2016-2017 (1.54 man-years for an equivalent of \$ 128 691).

Comparison to the older intersessional periods tells that the costs of this intersession are within the average fluctuations: 1.48 man-year effort for an equivalent of \$116 667 for 2013-2015; 2.02 man-years for an equivalent of \$150 247 for 2011-2013; 1.81 man-years for an equivalent of \$121.000 for 2010-2011; 2 man-years for an equivalent of \$135.000 for 2009; 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:

- 61% of the effort for information contributions (against 61% in 2016-2017, 75% in 2014-2015, 61% in 2011-2013, 67% in 2010-2011, 58% in 2009, 30% in 2007/8 and 44% in 2006): i.e. FAO inputs or assistance to Partners inputs including through training, and regular maintenance of FIRMS infrastructure;
- 18% of the effort for software design and development (against 33% in 2016-2017, 17% in 2013-2015, 33% in 2011-2013, 27% in 2010-2011, 34% in 2009, 44% in 2007/8 and 73% in 2006): essentially maintenance of the software, further improvement of the Word/Excel-to-XML converter tool for minimum data requirement and for data harvesting via web services (I.e. ICES), and few improvements at interface level particularly for the FIRMS Stocks and Fisheries map viewer;

- 22% of the effort for management and marketing (against 6% in 2016-2017, 8% in 2014-2015, 7% in 2011-2013, 6% in 2010-2011, 8% in 2009, 23% in 2007/8 and 13% in 2006).

The above distribution tell that a significant increase occurred on management and outreach while a significant decrease concerned the IT support. The former is partly a consequence of the integration in the FIRMS team of Mrs Paula Anton, while the latter is due to corporate IT policies and redirection of FI IT resources on the upgrade of the FIGIS platform, a precondition to the evolution of the FIRMS application. The overall stagnation or decrease is also due to nearly one year vacancy of the data manager consultancy position (see difficulties faced with Human resources below).

It should also be noted the in-kind contribution of NOAA with the part-time assignment of Ms. Nancie Cummings as FIRMS Chairperson and her very active contribution to the regional WECAFC-FIRMS project.

In addition:

- A budget of \$35.000 (\$18.000 normalised to a one-year period) has been allocated by FAO's RP for the attendance of the secretariat and in support to participants at FSC11 meeting, and for the participation of the secretariat at the various FAO RFB statutory meetings (CECAF, RECOFI, WECAFC, GFCM, SPRFMO);
- EU provided extra-budgetary support through various projects for a total amount of \$ 30.000 (\$ 16.000 normalized to a one year period): EU/WECAFC-FIRMS phase 2 project supported FIRMS secretariat involvement in the development of WECAFC inventories; EU/BlueBRIDGE supported participants travel at joint FIRMS-TWG6 and BB-TWG3 on the Global Record of Stocks and Fisheries (GRSF) (Rome, February 2018);
- GEF/CLME+ project contributed with \$ 10.000 to the FIRMS component of the Data preparation workshop (Barbados, November 2018).
- FAO's TCP in support to FCWC allocated \$ 30.000 to the FCWC-FIRMS workshop

This "extra" support to FIRMS growth which amounts to \$ 105.000 (ie \$ 55.000 normalised to a one year period) confirms a growing effort for outreach and training during the recent years (\$ 44.000 for FSC9/10, \$ 41.000 for FSC8/9, \$ 20.000 for FSC7/8, \$31.000 for FSC6/7 intersession, \$40.000 for FSC5/6, normalised to a one year period).

This analysis shows that while stepping into the new FAO Strategic Framework, the Regular Programme support to FIRMS has been strengthened and primarily to support information contributions, while extra support for FIRMS growth was maintained through a mix of Regular programme and extra-budgetary sources mobilized by the Secretariat. The total amount of funding remains globally stable compared with the previous intersessional period.

Table 5: Effort in [man x days] spent on FIRMS by major activity during period 06/2017 – 04/2019 (23 months).

Application requirements and Software development (days)						Information contributions (days)			(days)	(days)
	Web site upgrade and technical support	Marine Resource module	Fishery module	Dynamic mapping tool –thematic pages – FIRMS data coverage	Word/ Excel-To-XML	Training / Assistance to Partners (including inventories & meetings)	Direct Data update (FAO)	Routine maintenance website and Wiki	Management and marketing/ outreach	Total
M. Taconet						5			70	75
A. Gentile	4	2	2	3	10	103	10	9	7	150
P. Anton						13			29	42
S. Savore						5				5
T. Berger		4	1							5
K. Viparthy	3									3
O. Liberatori									20	20
T.Cantarelli						29				29
B. van Niekerk						13				13
G. Gorelli	3				5	60	100	5		173
M. Balestra	2			3	3					8
E. Blondel				44						44
N. Matovu	2									2
J. Santamaria Fernandez	5				5					10
TOTAL effort (days)	19	6	3	50	23	228	110	14	126	579
% time/activity	3	1	1	9	4	39	19	2	22	100
Total HR \$US	\$6,908	\$3,841	\$1,834	\$13,825	\$8,779	\$95,554	\$27,829	\$6,346	\$99,045	\$263,959

The overall (human resources and travels) yearly budget level of \$ 188.662 during the FSC10/11 intersessional period (\$ 173.142 during the FSC9/10 intersessional period; \$158.000 during the FSC8/9 intersessional period; \$170.000 during the FSC7/8; \$156.000 during FSC6/7; \$175.000 during FSC5/6) confirms a cruise level budget reported since FSC5, while positioning FSC10/11 as the highest budget level in the serie. Under the new Programmatic framework implemented at FAO, the amount of FAO Regular Programme resources which has been allocated to maintain FIRMS was consolidated, which confirms an internal recognition that FIRMS is among the “global goods”. The Secretariat is continuing its effort to mobilize extra-budgetary funding when regional interest is expressed for FIRMS. In the forthcoming period, the WECAFC-FIRMS activities involving FIRMS will continue under the GEF/CLME+ and WECAFC-FIRMS phase 3 projects; extra-budgetary funded projects are secured in 2019-21 in support to the CECAF region (FCWC) under the PESCAO project, and FIRMS activities are planned under the Bay of Bengal LME phase II project (start in 2019). Support to FIRMS/GRSF and FIRMS/TunaAtlas is expected under the EU BlueCloud project over period 2019-2022 provided EU grant is confirmed. The inputs of RFB partners to EBF-raising or opportunities are welcomed.

Table 6: Historical trends of total effort and costs.

	Software development	Training/Assistance – Data update	Management and Maintenance	
TOTAL effort June 2017 – April 2019 (23 months)	101 d.	338 d.	140 d.	568 d.
TOTAL \$US				\$ 263,959
TOTAL effort February 2015 – May 2017 (28 months)	266 d.	441 d.	88 d.	795 d.
TOTAL \$US				\$300,281
TOTAL effort February 2013 - January 2015 (24 months)	112 d.	463 d.	69 d.	644 d.
TOTAL \$US				\$233,336
TOTAL effort December 2011- January 2013 (14 months)	169 d.	291 d.	58 d.	533 d.
TOTAL \$US				\$175,288
TOTAL effort 2010-11 (22 months)	179 d.	400 d.	70 d.	649 d.
TOTAL \$US 2010-11				\$211,118
TOTAL effort 2009 (21 months)	231 d.	375 d.	73 d.	646 d.
TOTAL \$US 2009				\$205,000
TOTAL effort 2007/8	159 d.	108 d.	83 d.	360 d.
TOTAL \$US 2007/8				\$180,000
TOTAL effort 2006	668 d.	182 d.	98 d.	948 d.
TOTAL \$US 2006				\$440,000

8. Difficulties encountered during the inter-sessional period

Financial resources: 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. Normal maintenance of the FIRMS programme has remained a priority area for the Fisheries and Aquaculture Department and has become part of the FAO Strategic Objective 2 “Sustainable use of natural resources”.

During the forthcoming intersession, the Regular Programme will continue to support content updates and dedicate some resources to support the upgrade and migration of the underlying FIRMS software. The EBF resources in support to regional uptake of FIRMS in BOBLME, WECAFC, CECAF-FCWC, and GRSF and TunaAtlas are promising in terms of FIRMS coverage expansion, but additional EBF resources and/or partnerships will be necessary to support GRSF and SDGs.

Human resources: the new FAO corporate policies for consultants imposing the establishment of a roster for each typology of consultancy based on more stringent minimum requirements has also significantly affected the capacity of the Secretariat.

Compounded with natural turn-over of team members (Giulia Gorelli in the present case left the team), this policy has weakened the FIRMS Secretariat capacity at least during the period April 2018 – April 2019: it accelerated the leaving of Marco Balestra (software developer) and strongly delayed the recruitment of a successor to Giulia Gorelli, leaving this consultancy of FIRMS data management position vacant for nearly one year, until Mrs. Bracken van Niekerk could finally be appointed in April 2019. This situation was however mitigated with the outreach activities of Paula Anton (FAO FIAS fishery officer).

Software maintenance/development: Other difficulties experienced by the Secretariat concern the software maintenance and development in FAO, where technical Departments such as FI are confronted to a new IT policy which is centralizing developments and support capacities.

Scheduling: Some delays took place with partners and, in some cases, stock/fishery status reports are still awaited. However, the minimum data requirement approach in force since FSC10 contributed to a faster workflow and a lighter workload while focusing on key information of the marine resource and fishery modules. The semi-automatic procedure supported by web services, put in place with ICES, has also proofed its effectiveness for such massive updates of information.

See Annex 1 and Annex 2 for pending activities from FSC9 and FSC10.

9. 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. These developments should be prioritized and the accomplishment of some of them will depend upon the capacity to mobilize additional project resources.

These developments can be articulated around four main areas:

- Expanding FIRMS coverage and timeliness of reporting;
- Pending FSC11 decision on GRSF governance leadership, contribute to the further development and maintenance of the GRSF;
- Support SDG 14.4.1 requirements and FIRMS national pilot activities;
- Renewal of FIRMS website, along with upgrade/migration of underlying FIGIS software;
- Updating the data model and FIRMS standards;
- Publish the FIRMS inventories which are still in Excel format;
- Promotion of FIRMS.

For some of these activities, FSC11 might decide to convoke a Technical Working Group (e.g. through e-Meetings). FSC11 will establish priority areas of development.

9.1 Expanding FIRMS coverage and timeliness of reporting

Expanding FIRMS geographic data coverage thanks to new Partners:

In those areas where the FIRMS coverage is weak or absent, 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 can build on the capacity building experience matured through the work done with CECAF, RECOFI, and WECAFC.

The South Pacific Ocean represents a necessary area for expansion of data coverage for which the recent SPRFMO partnership arrangement is already a big step towards.

Specific effort should be made to convince the following RFBs to join FIRMS:

Tuna bodies: Western and Central Pacific Fisheries Commission (WCPFC) [and The Pacific Community (SPC)] is the only Tuna body not yet member of FIRMS. Tuna bodies member of FIRMS should concur the invitation to WCPFC/SPC to join.

Expanding FIRMS geographic coverage through full integration of the Global Record of Stocks and Fisheries (GRSF) and its public release

Pending FSC11 decision, the GRSF will be publicly released. With FIRMS taking governance leadership over GRSF, this bears a potential to drastically increase the FIRMS stock coverage. Realizing this potential should be assessed as part of the SDG14.4.1 developments along with FAO's plan to revise its global SOFIA indicator. After the release of the GRSF, its maintenance and extension will be the new challenges for which FIRMS partners are invited to propose viable solutions as described and requested in the meeting document FSC11/2019/5 "The Global Record of Stocks and Fisheries (GRSF)".

It should be reminded that the FIRMS Secretariat dedicated much effort on GRSF during the FSC10/FSC11 intersessional period. The work on the GRSF was also the opportunity to review the content of the FIRMS database. Several fact sheets were amended, missing data or incorrectly entered were fixed, in some occasions Partners were asked to report with a data structure compliant with the GRSF (e.g. indications on species/gear/flag state for fishery records).

Improving reporting timeliness:

Since FSC9, some partners have expressed the need of streamlining the process of data contribution for reducing the workload and improving the reporting timeliness. Progress is being made both by the Secretariat and these partners to explore new technologies and adopt new strategies (i.e. web services, minimum data requirement approach). So far some of the adopted solutions are well working (i.e. ICES) and the Secretariat will further adapt the capacities of FIRMS to enable such streamlining. A similar approach has been assessed with SPC for WCPFC tuna stock status reporting.

Other areas of development will depend upon the intentions of the existing partners and the newly appointed observer organizations.

9.2 Renewal of the FIRMS user interface

Objective for FSC12 would be to improve the stocks and fisheries map viewer and the release of the new FIRMS website. Integration of GRSF unique identifiers within the FIRMS fact sheets and related services should be also made available.

The layout of FIRMS fact sheets could be tailored to regional needs.

So far FIRMS managed to consolidate a big amount of data organized in the two original stocks and fisheries modules in a stable and well-structured way and accessed through specific search interfaces.

9.3 Promotion of FIRMS

As per usual FSC recommendations, different strategies will be adopted for FIRMS promotion.

Priorities agreed in the past sessions were the following:

- 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 increase the dissemination of FIRMS fact sheets from Partners' website, while tailoring the layout and content for use by e.g. fishery managers;
- 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 COFI and to organize a side event for raising awareness of the ongoing activities.

FIRMS partners are expected to promote FIRMS in their regional context, good examples arise from WECAFC, and possibly CECAF-FCWC with the accession of FCWC and the PESCAO project.

Promoting the role of FIRMS in SDG14.4.1 would also be a good opportunity for FIRMS visibility.

FIRMS could benefit from a strengthened communication capacity at FAO including through social media coverage.

Annex 1 - Status of implementation of FSC9 decisions – April 2019

	Done
	In progress
	Not yet tackled

	Decisions	Status of implementation
FIRMS membership (Agenda item 3) - Review of new prospective Partners (Agenda Item 3b)	Send letters to inactive partners to encourage participation (FSC9/D3.1)	
	Open up the partnership to LME projects and organizations in order to broaden coverage (FSC9/D3.2)	
	Send letters to prospective partners to clarify their intentions (FSC9/D3.3)	
Review of Annex 2 (Agenda item 4) - Proposed modifications by existing Partners (Agenda item 4b)	The FIRMS Secretariat should examine how to enable linkages between the VME DataBase and FIRMS fact sheets. (FSC9/D5.1)	
	Further discussions concerning possible inclusion of VME governance within the scope of FIRMS will take place at the VME meeting 2–4 March 2015. (FSC9/D5.2)	
	The deep-seas RFMOs at FIRMS and participating in the VME meeting agreed to recommend that the planned inventory of deep-seas fisheries should be implemented, taking into account inclusion in FIRMS. (FSC9/D5.3)	
REPORT OF E-TECHNICAL WORKING GROUP 4 (SUMMARY REPORT OF E-TWG 4, DOC. FIRMS FSC9/2015/3 AND RELATED INFO DOCUMENTS INF. 7.A, B, C, D) (AGENDA ITEM 7)	Displaying state and trend standard descriptors (TWG 4.1) – FSC9 agreed that a table showing the standard descriptors would be displayed, using both the contributor's descriptions and FIRMS descriptions where available, and, where not, only the FIRMS descriptions. (approved as FSC9/D7.1)	

	During this meeting, it was agreed to move towards the “traffic light approach” where possible. NAFO will lead this work and it will be referred to an intersessional TWG (to be held in late June) for further elaboration. (approved as FSC9/D7.2)	
	Inventory template improvement (TWG 4.3) – indicator of data reliability: addition of a new free text field. This was agreed. (approved as FSC9/D7.3)	
	Fishery importance, viewpoint and description: addition of two new free-text fields. This was agreed. (approved as FSC9/D7.4)	
	For reference year, the definition agreed is: “The last year considered in the stock assessment and/or fishery status.” (approved as FSC9/D7.5)	
	For reporting year, the definition agreed is: “The publication year of the source of the information.” (approved as FSC9/D7.6)	
FIRMS Information Management Policy (IMP)	The proposed modifications to IMP (version FSC8) can be applied and the new version published. (FSC9/D8.1)	
REVIEW OF STRATEGIC ASPECTS – ENABLING MORE TIMELY INFORMATION, BROADENING GEOGRAPHIC/THEMATIC COVERAGE; TARGET AUDIENCE/COMMUNICATION AND PARTNERSHIPS (AGENDA ITEM 9)	The chairperson concluded that the FSC9 supported the project idea and that the proposal for a face-to-face TWG would be made once and if the project funding were confirmed. (FSC9/D9.1)	
	FSC9 reiterated the conclusions of FSC8 regarding guidance on proper credit and maintenance of the integrity of FIRMS reports. (FSC9/D9.2)	
	FSC9 asked the FIRMS Secretariat to send letters, where applicable and affordable in terms of resources, for membership of LME institutions or collaboration with LME projects (FSC9/D9.3)	
	[Direction of FIRMS website revision (agenda item 9c)] The	

	FSC9 approved the directions and the above schedules (FSC9/D9.4).	
	[A role for FIRMS in the iMarine initiative (agenda item 9d) (FIRMS FSC9/2015/4b)] The FIRMS Secretariat will ensure that FAO, through its position on the iMarine advisory board, will represent the interest of FIRMS and its partners, and will communicate relevant information and strategic decisions back and forth. (FSC9/D9.5).	
ANY OTHER BUSINESS (AGENDA ITEM 12)	The Steering Committee felt that a strong statement to the FAO was warranted. The following was agreed: Recognizing FIRMS as a partnership between FAO and various Regional Fishery Bodies, it was felt that using a subdomain web name http://firms.fao.org was the most appropriate address to use for FIRMS. (Refer to Article 3 of the FIRMS Partnership Arrangement). Future discussion on this could take place if and when needed. (FSC9/D10.1)	
	Executive summary: Noting that a full report can be a daunting task for readers, it was agreed that an executive summary of the full report highlighting the tone of the meeting and the main decisions could be included both as a part of the report and pasted in the body of the e-mail notification. (FSC9/D10.2)	

Annex 2 - Status of implementation of FSC10 decisions – April 2019

The following summary of FSC10 decisions is extracted from the Annex 4 (Agreed Work plan for the intersession) of the FSC10 report.

Progress on the development of FIRMS Partnership (Agenda item 4a)

The Secretariat will work towards expanding FIRMS coverage, in particular with the need to improve coverage in the Pacific Ocean area. The Secretariat will invite the following Regional Fishery Bodies to become Partners: IPHC, NPFC, CPPS, SIOFA, BCC, PSC, SPRFMO, WCPFC (FSC10/D4.1).	
Mr Campanis will help in this process liaising with BCC and SIOFA (FSC10/D4.2).	
The Secretariat will evaluate the eligibility of the Cephalopods International Advisory Council (CIAC) in FIRMS and report to Partners (FSC10/D4.3).	

• **Proposed modifications by existing Partners (Agenda item 5b)**

The Secretariat will evaluate the eligibility of the Cephalopods International Advisory Council (CIAC) in FIRMS and report to Partners (FSC10/D4.3).	
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• **Review of FIRMS activities during the intersession (Agenda item 6)**

The Secretariat will continue updates to FIRMS inventories, and seek for timely updates from Partners including through Data calls. For FAO RFBs (CECAF, RECOFI, SWIOFC, WECAFC) and in order to improve cohesion and timeliness, concerned focal points are requested to work liaise closely with the respective RFB Secretariats and FIRMS Secretariat. The RFB Secretariat representatives will be invited to attend the TWG meetings (FSC10/D6.1).	
The Secretariat will seek participation of more RFBs and will continue the promotion of FIRMS (together with all partners) through capacity building activities with selected RFBs upon availability of extra-budgetary funding resources, currently WECAFC, and FCWC have secured such EBF (FSC10/D6.2).	
A workshop is planned in the FCWC area with a focus on fisheries inventories in the subregion, with the aim to monitor fisheries trends and the state of the art regarding SDG 14.4.1 in the involved countries. Mr Sedzro is expected to liaise with the FIRMS and FCWC Secretariats to prepare this workshop (FSC10/D6.3).	
The Secretariat will provide metrics of its effort in updating the inventories and the fact sheets for each Partner (FSC10/D6.4).	
Regarding completing FCS8 and FCS9 decisions, the following are still pending: i) alternative layout for no longer monitored marine resources (Monitoring period), li) the display of partners' logo in the fact sheets, and iii) the indicator for data reliability.	

• **A role of FIRMS in support of SDG 14.4.1 "Proportion of fish stocks within biologically sustainable levels." (Doc 2017/4d) (Agenda item 8a) and**

● **Global Record of Stocks and Fisheries (GRSF) – BlueBRIDGE project (Agenda item 8c)**

The Secretariat will continue towards the finalization and ultimate release of the Global Record of Stocks and Fisheries (FSC10/D8.1).	
The FIRMS Partners will be involved in testing the logic of the unique identifier standards and of the validation workflow during the intersession (FSC10/D8.2).	
The Secretariat was tasked to continue working towards a fully-fledged proposal for the FIRMS governance and business model by presenting and getting feedback on this above model at various forums, including the FAO SDG 14.4.1 Capacity Building workshop (end 2017) demonstrating the kind of support that FIRMS could offer in this regard, the final BlueBRIDGE EAB-TWG (with FIRMS partners invited to participate), with the goal to eventually table an elaborated proposal at an extraordinary session of FSC involving RFB Executive Secretaries which could take place back-to-back with COFI33 in July 2018 (FSC10/D8.3).	

● **Traffic light in support to SDG 14.4.1 (Agenda item 8d)**

FSC10 agreed that partners' mapping rules for state and trends should be displayed within a dedicated section of the FIRMS website, and that the relevant mapping rules should also be readily accessible from each fact sheet (FSC10/D8.4)	
FSC10 agreed that a table of marine resources Globally and by Partner informing on the total number of stocks inventoried, and for those informed with status reports with associated traffic light icons would be a beneficial addition on the website. The Secretariat will submit a proposal at the TWG (FSC10/D8.5).	

● **Enabling more timely and comprehensive information (Agenda item 8e)**

Work will continue towards enabling the harvesting of data from ICES in a fully automatic process. The Secretariat will liaise with the Partners to identify if similar solutions can be applied elsewhere (e.g. CCAMLR, SEAFO) (FSC10/D8.6).

● **Review of the FIRMS Partnership Arrangement and proposals for amendments (Doc. FIRMS FSC10/2017/4b) (Agenda item 8f)**

The Secretariat will follow-up with the legal office to propose final amendment to the Partnership Arrangement and Rules of Procedures. It was suggested to investigate whether the FAO bodies would legally fall in the category of FIRMS Associated Members and thus finalize the amendments to the partnership agreement (FSC10/D8.7).	
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● **The new FIRMS data services and Website (Agenda item 8g)**

The Secretariat will conduct an online survey amongst external users of FIRMS information (FSC10/D8.8).	
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The Secretariat will work on refinements to the Stocks and Fisheries map viewer (FSC10/D8.9).	
FSC10 endorsed the design proposal of the new FIRMS website, and encouraged the Secretariat to further develop this proposal for review and feedback from Partners through the TWG (FSC10/D8.10).	
A renewal of the communicational material (e.g. brochure, poster) will be addressed together with the release of the new website (FSC10/D8.11).	

● **FIRMS Protocol and standards (Agenda item 9)**

The Information Management Policy (IMP) will be finalized with the corrections agreed upon by FSC10 (FSC10/D9.1).	
The group concluded that a more extensive review of the proposed modifications to the FIRMS standard descriptors and relative controlled terms be conducted during the next intersession by the Technical Working Group (FSC10/D9.2).	

Annex 3: Web trends statistics for FIRMS over the period 2007-2018

Meeting document FIRMS FSC11/2019/Inf.8, accessible at
http://www.fao.org/fi/static-media/MeetingDocuments/FIRMS/FIRMS_FSC11/inf8e.pdf