



FIRMS

FISHERIES AND RESOURCES
MONITORING SYSTEM

Secretariat report on Progress and Issues

Related to Doc. FIRMS FSC12/2021/2



Review of FIRMS activities during the intersession (May 2019 – September 2021, 29 months)

- Status of implementation of the FSC9-FSC10-FSC11 decisions
- Marine Resource module
- Fishery module
- Database content
- Web trends
- Trainings or skills development
- Promotional and outreach activities
- Secretariat resources in support of FIRMS
- Issues and potential activities



Access meeting documents at
<https://www.fao.org/fishery/nems/41327/en>



FSC11-FSC10-FSC9 Decisions

Status of implementation

FSC9

FSC11

FSC10

FIRMS Protocol and standards (Agenda item 9)

TWG to review the use of the coloured lights as a stock status Indicators (FSC11/D9.1).	
TWG to review definitions related to jurisdictional areas ('Highly Migratory' and 'Straddling between high seas and EEZ') (FSC11/D9.2).	
Secretariat to include agreed definitions in IMP standards (Biological stock', 'Assessment unit', 'Management unit', and 'Spatial scale') (FSC11/D9.3).	

Revised FIRMS Governance structure (Agenda item 10)

FSC endorsed the Collaborative Arrangement (with a termination period to 6 months) and related amendments of the Rules of Procedure (FSC11/D10.1).	
FSC endorsed the proposed Collaborative Institutions (namely IRD for the Tuna Atlas; and UW, SFP and FORTH for the GRSF) (FSC11/D10.2).	
FSC endorsed the GRSF value proposition and agreed to associated actions (FSC11/D10.3).	
TWG to review Partners' steps to review and validate GRSF UUIs, and consider holding a physical meeting during the first half of 2020 (FSC11/D10.4).	
FSC agreed to publicly launch the pilot GRSF during suitable future events, noting associated tasks (FSC11/D10.5).	
FSC agreed to broadly disseminate information on the GRSF (FSC11/D10.6).	
FSC endorsed the work on the Tuna Atlas (FSC11/D10.7).	

Planning for the next session of FSC (FSC12) (Agenda item 12)

FSC agreed to hold its next meeting in June 2021 (FSC11/D12.1).	
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Any other business (Agenda item 13)

The Secretariat agreed to consider that the GRSF pilot be presented during the COFI meeting in 2020 (FSC11/D13.1).	
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Election of Chairperson and Vice-Chairperson (Agenda item 14)

FSC requested nominations for the vice-chairperson position (FSC11/D14.1).	
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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), ii) 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).	
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).	

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)	
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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) (Agenda item 8)

The proposed modifications to IMP (version FSC9) can be applied and the new version published. (FSC9/D8.1)	
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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)	

FIRMS partners

- **CCAMLR**: 4 stocks updated, awaiting clearance for publication (rep. year 2021)
- **CCSBT**: updated and published (rep. year 2020)
- **GFCM**: 5 stocks updated, awaiting clearance for publication (rep. year 2019)
- **IATTC**: 8 stocks updated and published (rep. year 2020).
- **ICCAT**: 6 stocks updated and published (rep. years 2017, 2018, 2019)
- **ICES**: 200 stocks updated and published, work in progress for more. FIRMS-ICES inventory IDs mapped to the GRSF UUIDs. Improvements for area references in progress (Functional Units for Sandeel and Norway lobster)
- **IOTC**: 15 stocks updated and published (rep. year 2018), a new round of updates is in progress.
- **SEAFO**: 5 stocks updated and published (2 rounds of updates, rep. years 2019 and 2021)
- **SPRFMO**: 4 new stocks inventoried and published (rep. years 2017, 2018, 2019)
- **SIOFA**: 8 stocks initial inventory drafted
- **NPFC** (FIRMS Observer): 8 stocks case studies drafted as example of NPFC-FIRMS marine resource inventory.



FAO and its Article VI RFBs:

- **WECAFC**: Inventory updated with 27 marine resources and published 29 factsheets (rep. year = 2016, 2019).
- **CECAF**: The SSC8 (Oct. 2018) provided new status updates for 102 stocks, of which an update of 34 marine resources was conducted, awaiting clearance for publication.
- **RECOFI**: Data call workshop (Aug. 2021) - draft inventory of 92 factsheets for Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia updated with assessment information (RECOFI WGFM2019) pending the review of the RECOFI Member States. UAE submitted stocks and fisheries national inventory.
- **SWIOFC**: 33 stocks updated (rep. year 2019), with 7 new entries in inventory, awaiting clearance for publication.

Content updates - Fishery module



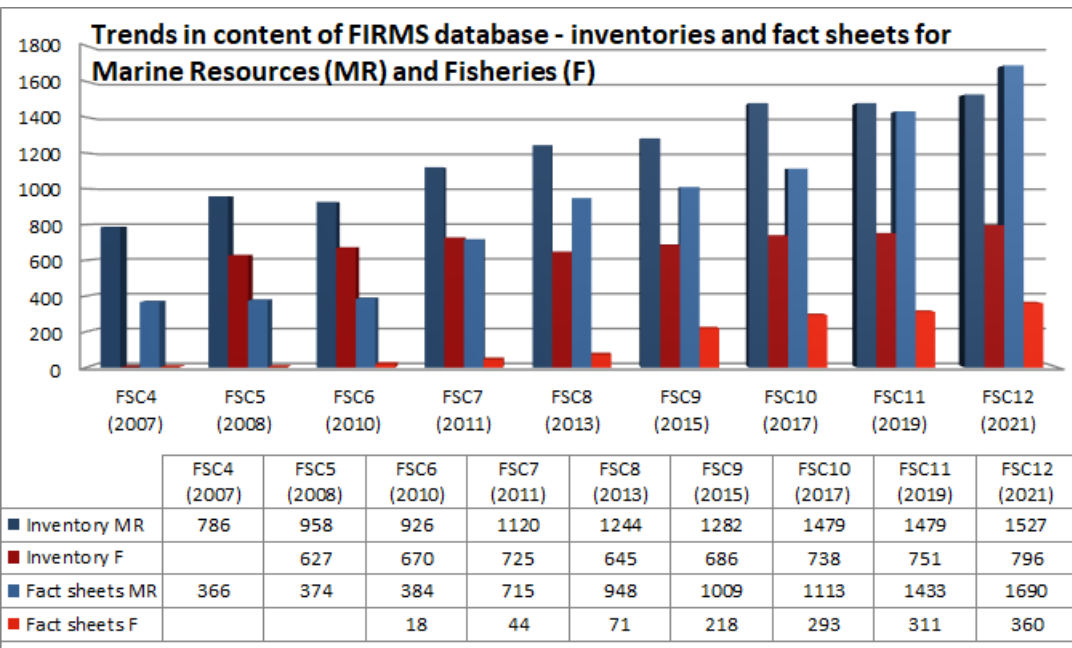
FIRMS partners

- **CCAMLR:** 4 fisheries updated, awaiting clearance for publication (rep. year 2021).
- **FCWC:** 38 fisheries inventoried and 22 published (rep. year 2020) for 5 member states (Benin, Cote d'Ivoire, Ghana, Nigeria, Togo), others in progress.
- **NASCO:** Updates for North Atlantic Salmon Fisheries was submitted; it is awaiting the FIRMS secretariat to process it and upload into the system.
- **NEAFC:** 7 fisheries updated and published (rep. year 2021)
- **SEAFDEC:** Results study on the Stock and Risk Assessment of Kawakawa and Longtail tuna (rep. year 2021, ref. year 2018) was submitted for possible upload in the system. The study overlaps fishery resources monitored by IOTC, the evaluation is in progress.
- **SEAFO:** 3 fisheries updated and published (2 rounds of updates, rep. years 2019 and 2021)
- **SPRFMO:** 4 new fisheries inventoried and published (rep. years 2017, 2018, 2019)
- **IATTC:** the Tunas and billfishes fishery updated and published (rep. Year 2020)
- **SIOFA:** 9 fisheries initial inventory drafted.
- **NPFC (FIRMS Observer):** 8 fisheries case studies drafted as example of NPFC-FIRMS marine resource inventory.

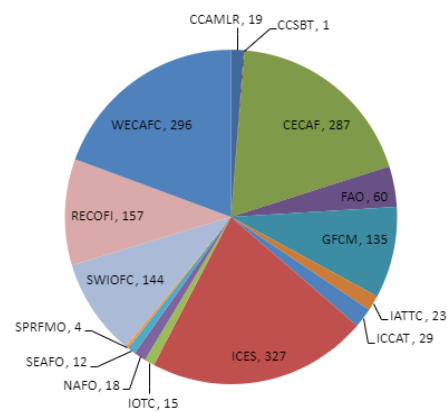
FAO and its Article VI RFBs:

- **WECAFC:** 15 fisheries published for 4 countries (Dominica, French Guiana, Saint Kitts and Nevis, Saint Lucia). Target species: Queen Conch, Spiny Lobster and Flyingfish.
- **RECOFI:** Data call workshop (Aug. 2021) - 68 fisheries pending updates for Bahrain, Iran, Oman, Qatar. Draft inventory for the other member states is in progress. UAE submitted stocks and fisheries national inventory.

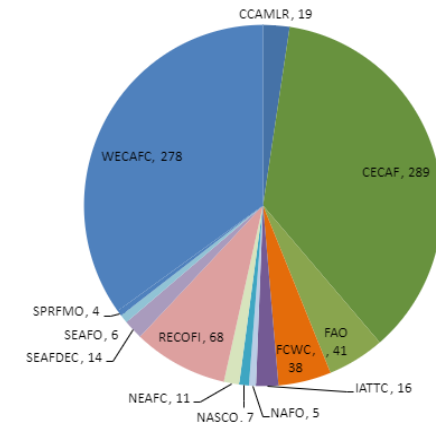
Database content



FIRMS Partners Number of Resources Inventoried



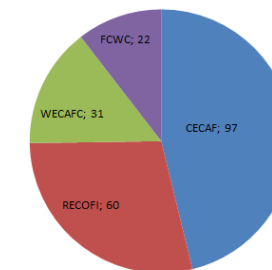
FIRMS Partners Number of Fisheries Inventoried



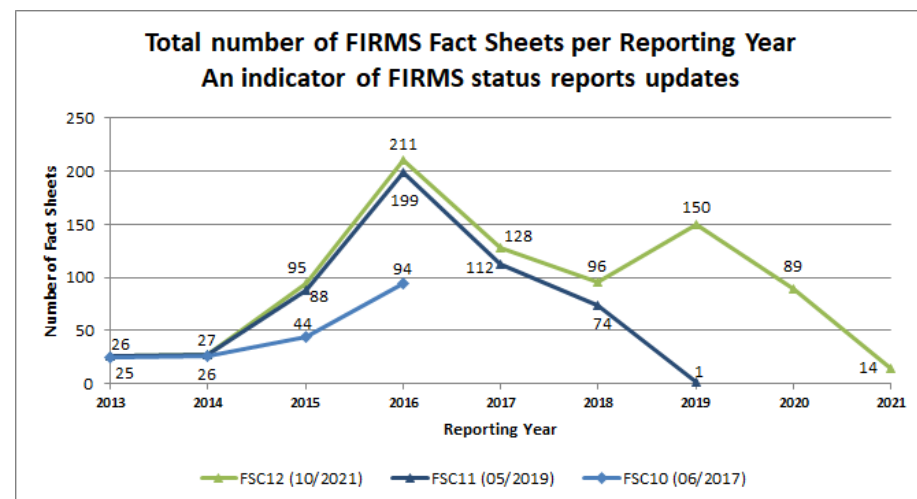
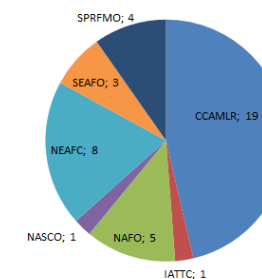
More than 2 000 fact sheets!

- A growing trend across FSCs of inventoried marine resources and fisheries, and fact sheets published (i.e., status and trends reports)
- A growing variety of fisheries both fishing activity and management units
- Catch/Landing time series for more than 40% of the records

FIRMS Partners Number of Published Fishery Factsheets from a Fishing Activity Perspective



FIRMS Partners Number of Published Fishery Factsheets from a Jurisdictional and Management Unit Perspective

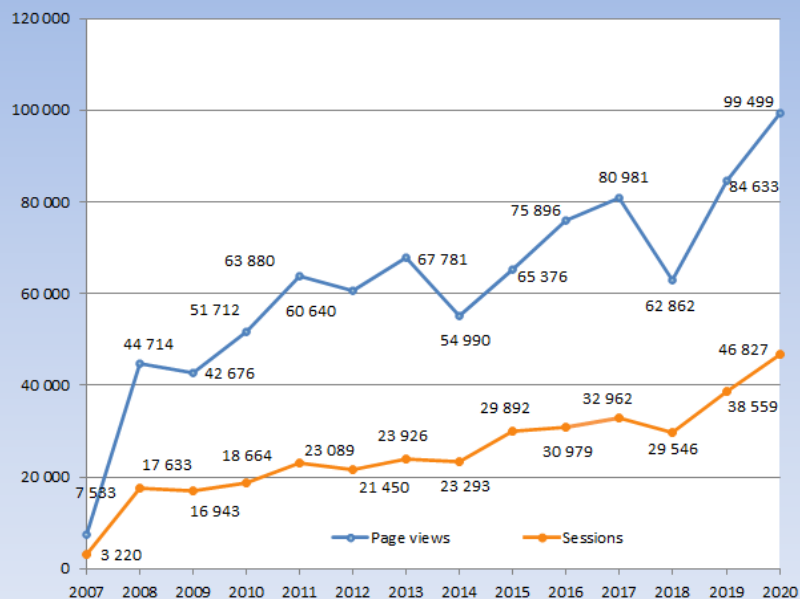


GRSF – Tuna Atlas

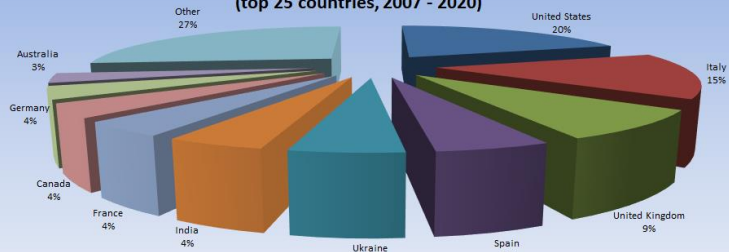
- These new products bringing many more records and data (see TWG reports)

Web trends

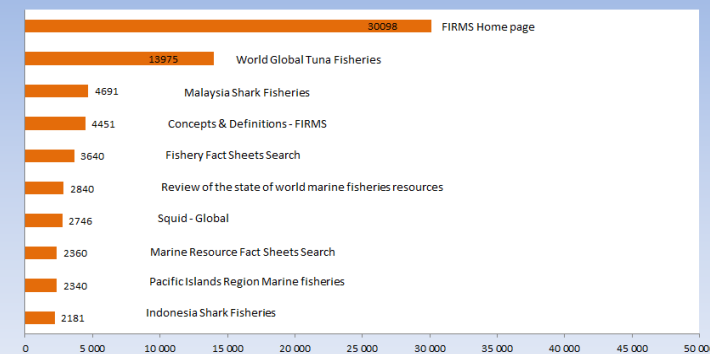
General trend (2007 - 2020)



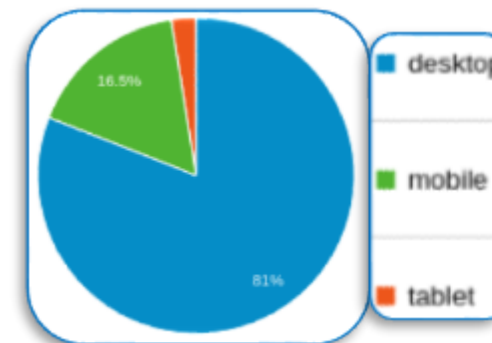
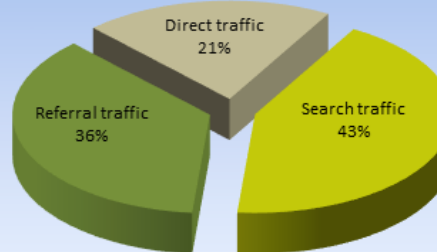
Visits by geographic location (top 25 countries, 2007 - 2020)



Top landing pages (2015 - 2020)



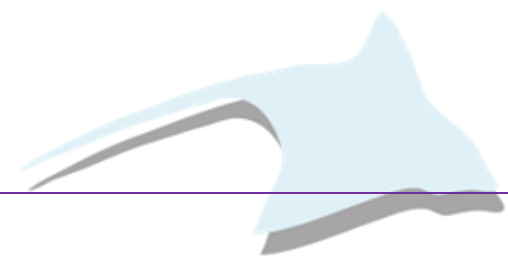
Traffic sources (2007 - 2020)



Upward trend

- Constant increase in overall FIRMS usage
- Bounce rate decrease in pages with relevant information

Trainings or skills development



Regular support to FIRMS Partners

- Focused assistance for data submission for CCAMLR, CECAF, GFCM, FCWC, ICCAT, ICES, IOTC, NASCO, NEAFC, RECOFI, SEAFO, SEAFDEC, SPRFMO, SWIOFC, and WECAFC.
- IATTC and CCSBT submit their updates in completely autonomy. (Usually also NAFO)

Awareness raising and training to prepare the accession of new RFBs to the FIRMS Membership

- **NPFC:** Introduction of FIRMS to the NPFC Scientific Committee (Nov. 2020), draft inventories of stocks and fisheries for the North Pacific to present next NPFC SC session (Dec. 2021).
- **CTMFM:** Introduction to the FIRMS partnership and discuss content of the Annex 2 of the arrangement.

Focused capacity building projects

To develop Partners' capacity and of their Member States towards a streamlined reporting from statistical data collection, to a regional database of catch and effort harmonized with the inventory of fisheries, and to disseminate fisheries status and trends.

- **WECAFC:** Facilitation of the update of the WECAFC-FIRMS inventories of stocks and fisheries, support to **DCRF** (Data Collection Reference Framework) in WECAFC-CRFM-OSPECA Fisheries Data and Statistics Online Working Group (FDS-WG)
- **FCWC:** Online Regional **Workshop** and preparatory sessions to strengthen the knowledge and expertise within Member States in terms of fisheries data collection systems required for successful data reporting at national, regional and global level. Support development of the FCWC **regional fisheries database**, and to provide support to CECAF working groups.
38 fisheries inventories and 22 factsheets published (rep. year 2020) amongst the 5 member states, and the others in progress.
- **RECOFI:** "**Data Call Workshop**: updating stocks and fisheries inventories", together with other 2 workshops "Minimum Data Reporting Regional Database Workshop" and "An introduction to SDG 14.4.1 and its regional application ". Training on inventory and draft updates. UAE new data submission. Recommendations and nomination of regional and national focal points.

Promotional and outreach activities

Outreach

- During the intersession, FIRMS attended about 25 meetings including RFB statutory meetings, conferences, and project meetings.
- See full list in Annex 5 of doc. FIRMS FSC12/2021/2 (CECAF, CFI, CWP, FAO, FCWC, IORA, KMFRI, NPFC, RECOFI, SIOFA, WECAFC, WIOMSA)
- SFP: project proposal to UNDP Ocean Innovation Challenge with the goal "Establish the GRSF traceability units (TU) as fit-for-purpose for use by the seafood industry, government agencies, and NGOs".

GRSF pilot release

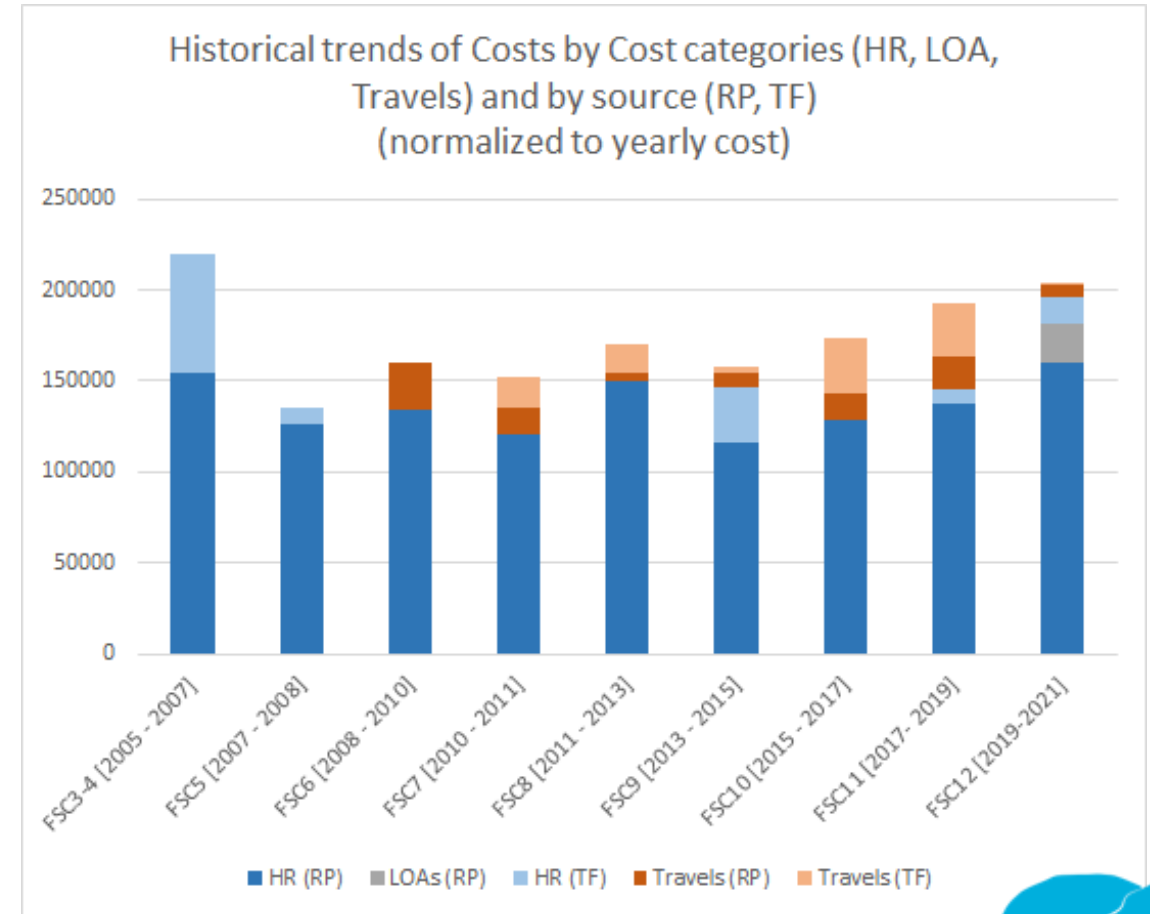
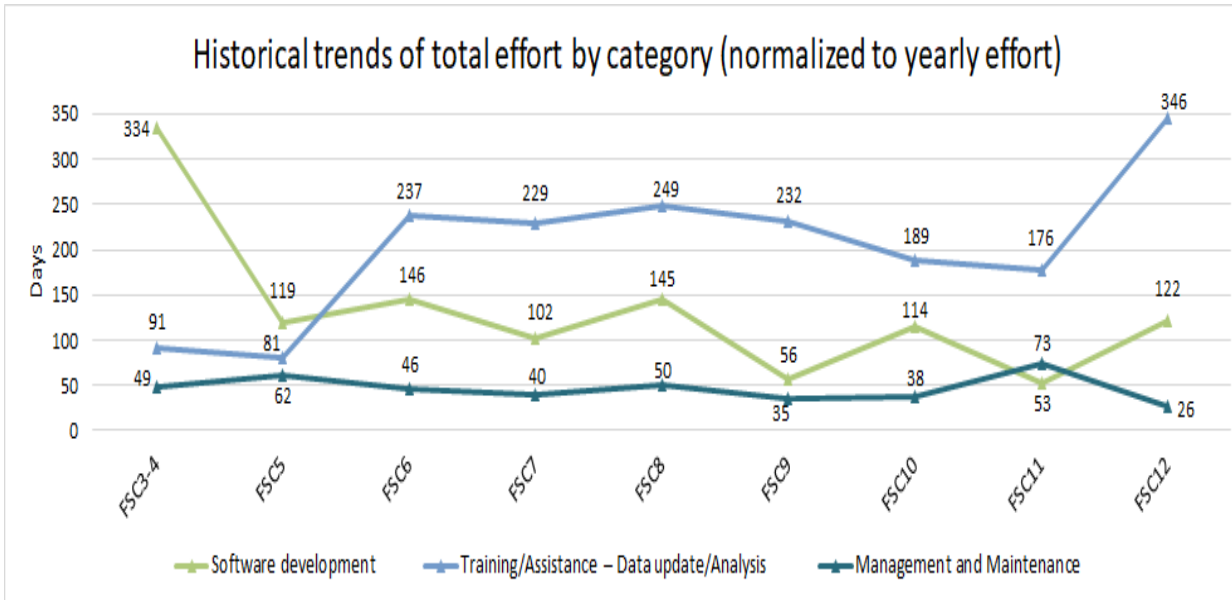
- Following FSC11 decision, the GRSF was publicly released in November 2019 at the FAO International Symposium on Fisheries Sustainability (FAO, Rome).
- Blue-Cloud Webinar/Video: "Fish, a matter of scales - Expanding cross-domain digital resources for fisheries management"
- GRSF UUIDs addition in FIRMS, RAM, and FishSource databases.
Some Partners are considering the addition of the UUIDs in their databases.



Secretariat resources in support of FIRMS

Increased resources available during 2019-21

- significant time for capacity building support to new partners
- focused effort on the new investments in Global Tuna Atlas and GRSF along with the increased amount of data to manage
- Resources also from projects (BlueCloud, CLME+)
- New FAO colleagues part of the team: Bracken, Anne Elise, Arturo
- Appreciated in-kind time contributions from various partners





Perspectives pending FSC12 decisions

- Expanding FIRMS coverage and timeliness of reporting;
- GRSF and Tuna Atlas: support further development (2022) and maintenance of the two systems;
- Support SDG 14.4.1 requirements and FIRMS national pilot activities;
- Renewal of FIRMS website, along with upgrade/migration of underlying FIGIS software;
- Progressing FIRMS standards in certain areas;
- Publish the FIRMS inventories which are still in Excel format;
- Promotion of FIRMS.

FIRMS Capacity building activities – upon funds availability

- FCWC: Support statistical data collection for certain Member States' Artisanal and industrial Fisheries, and support FCWC fisheries regional database.
- In collaboration with ASFA: collect in OpenASFA the Grey research literature and/ or datasets that can support evidence on status of fisheries and fishery resources, with focus to data poor countries in Southeast Asia.

Perspectives on Processes/Issues/Resources for next inter-sessional period



Issues

- Timely contributions!
- Timely contributions!
- Timely contributions!

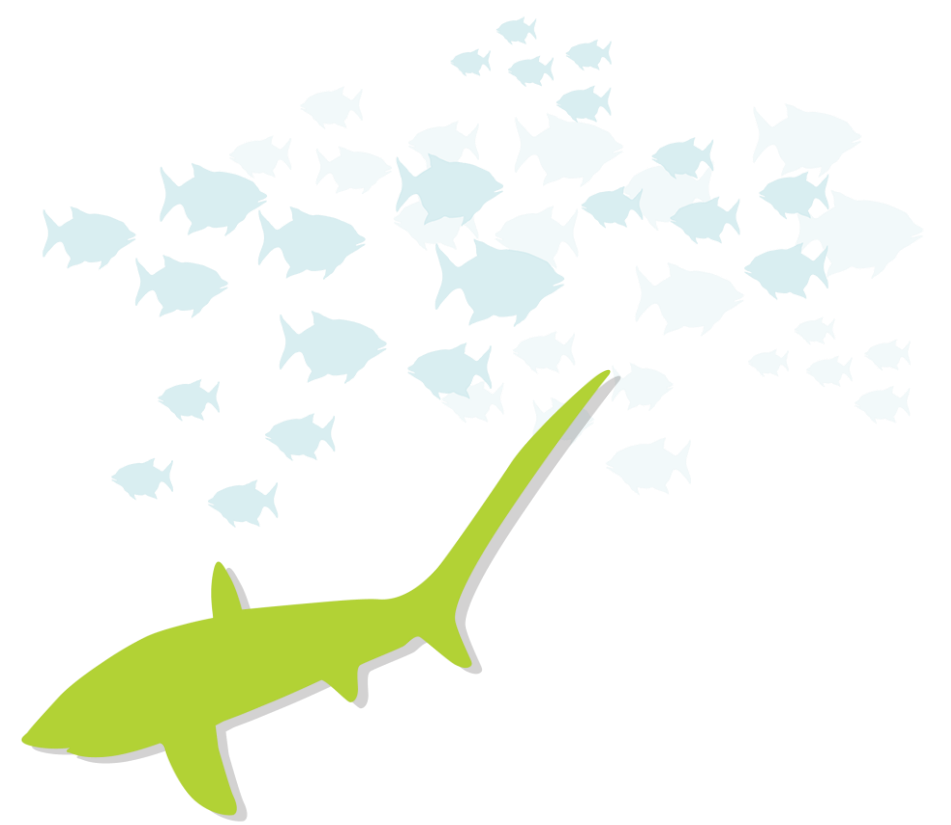
Increase coverage

- Content coverage: encourage Partners for submission catch; new workflows expected to facilitate the data submissions.
- Geographic coverage: expansion expected through the data collated and disseminated in the Global Record of Stocks and Fisheries (GRSF) and the utilization of the UUIDs. A significant increase in coverage is also expected from the SDG 14.4.1 national questionnaire.
- The Data call policy adopted by FSC11 will be pursued.
- Expand Partnership: further engage potential partners (CTMFM, NPFC, WCPFC...)

Financial resources

- it is expected that the Regular Programme will continue to support content updates including the national SDG14.4.1 questionnaire cycle.
- The RP will also dedicate some resources to support the upgrade and migration of the underlying FIRMS software.
- EBF resources will continue to be necessary in support to regional uptake of FIRMS in various regions including BOBLME, WECAFC, CECAF-FCWC, RECOFI.
- GRSF and Tuna Atlas are promising in terms of FIRMS coverage expansion including the SDG14.4.1 national data, but additional EBF resources and/or partnerships will be necessary for fully supporting this extension.

Questions?





Thank you ▪ Merci
Благодарю ▪ ¡Muchas gracias!
謝謝 ▪ شكرا

FIRMS-Secretariat@fao.org

