



FIRMS Steering Committee Meeting
Sixth Session
Hobart, Australia 24 – 26 February 2010
FIRMS WEB TRENDS STATISTICS OVER THE PERIOD 2007-2009
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Management Summary

Author	FIRMS Secretariat
Version	1
Project	FIRMS
Distribution	FIRMS Partners & Technical Group
Created	01 February 2010
Saved	07 February 2010
Printed	

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1. Web measurements basics

The analysis of the FIRMS Web site is based on the Web traffic analysis generated by the open source software used in FAO, which is called AWStats (Advanced Web Statistics). AWStats is a log analyzer which creates advanced Web, ftp, mail and streaming server statistics reports based on the rich data contained in server logs. This document also contains a comparison of statistics generated by AWStats and Google analytics. This comparison highlights noticeable discrepancies which shed some doubts on the results exposed below. More work will be required to understand the origins of these discrepancies.

1.1 Page Views

The definition of page view is:

A page view is counted with the successful loading of any document containing content that was requested by a web site visitor, regardless of the mechanism of delivery or the number and frequency with which said content is requested.

Page views are the measurement of a visitor's interest in a site and they provide an easy way to convey the popularity of a page or section of a site.

1.2 Visits

A visit, also referred to as a session or user session, is generally defined by the collection of pages viewed when someone browses a Web site. The definition of a visit is as follows:

A visit is counted when a unique visitor creates activity on a web site, measured using sequential page views, regardless of the duration of this activity as long as the period of inactivity between page views does not extend beyond 60 minutes.

2. Geographic location

2.1 How is it calculated and how reliable is it?

The country of origin of the access is calculated from IP address the user's computer is assigned when it connects to the internet - which may be fixed or dynamic. This is the IP address that is seen in the web server logs. Each IP address block is assigned by one of the regional internet registries to a particular country. AWStats uses a database built from data published by the regional internet registries to make the calculation of which country an originating IP number is coming from.

That said there are some shortcomings. Few conclusions can be drawn if the data says "US", "EU" or "unknown". If other countries are near the top then this can be considered interesting data. The data can be considered 95% accurate for other countries apart from the three mentioned above.

3. 2007 FIRMS Web trend

Year 2007	N. Visits	N. Pages	Source files
FIRMS web site	11.851	72.460	FIRMS all web site report 2007
FIRMS all FS	Not complete	Not complete	FIRMS factsheets report 2007
FIRMS search	Not complete	5.268	FIRMS search pages report 2007

Table 1: FIRMS 2007 web trend

- During 2007, FIRMS was visited 11.851 times and 72.460 pages were viewed. It must be said that, due to problems in the backup of the FIRMS logs, there are some gaps in the analysis, in particular no data has been registered for the month of September, seven days in July, three days during August and 24 days during the month of October. All together the gap covers a period of 64 days. In the total figures reported above, the number of visits and the number of pages viewed during these 64 days have been estimated. This means though that the monthly statistics for September and October will not be very significant. Besides, problems were encountered also for the factsheets and search pages report as for data was available only for half the month of December. Figures reported below on fact sheets and search pages were taken from the top-level pages of the 'all web site' report. Overall during this period visits show the typical flow: in fact, they are usually fewer from the Christmas period till the end of January, progressively increasing in the following months (May and June are usually higher), decrease again during the summer (August usually records the lowest rate of visits) and increase again during the fall months. The most popular months were May and November with just over 1.600 visits and 7.800-8.000 pages (Fig. 3). Seventy percent of the visits lasted between 0 seconds to 30 seconds. Each visitor spent an average of 5 minutes on the site to visit 6.11 pages.

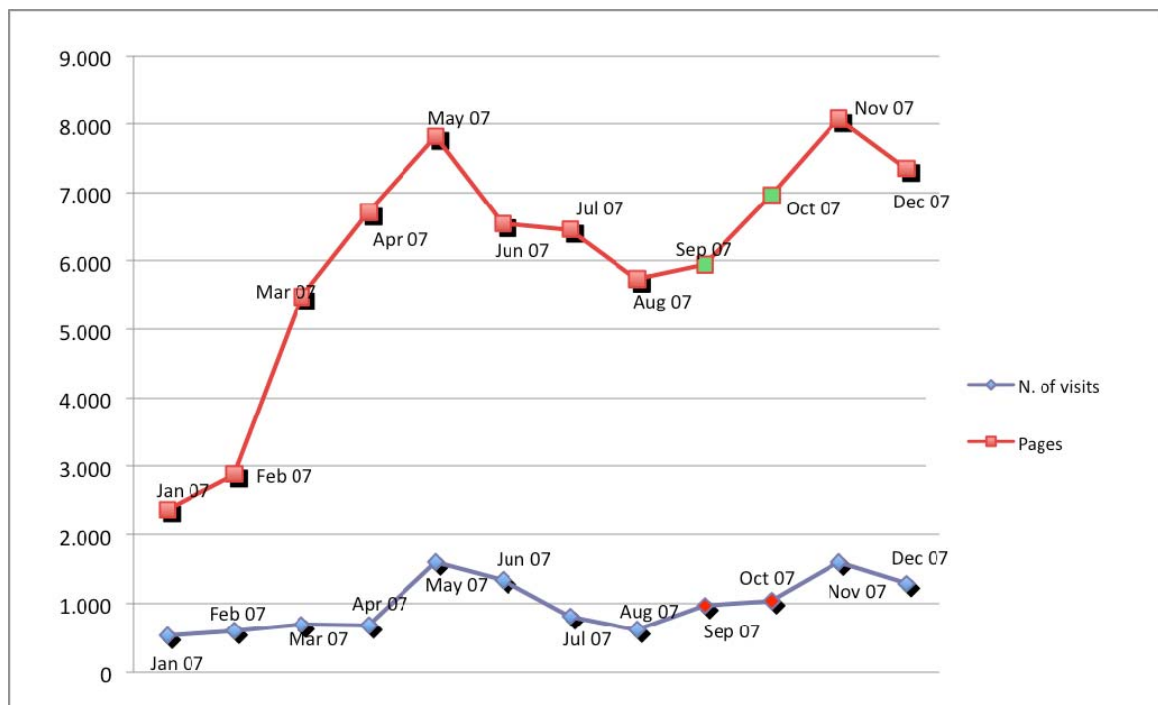


Fig. 3: FIRMS monthly trends – 2007

- North America (ca 72%) and Europe (ca 11%) are the regions that total nearly 100% of the visits. Considering what is reported above with regards to geographical distribution this information is not very interesting. (Fig. 3.1)

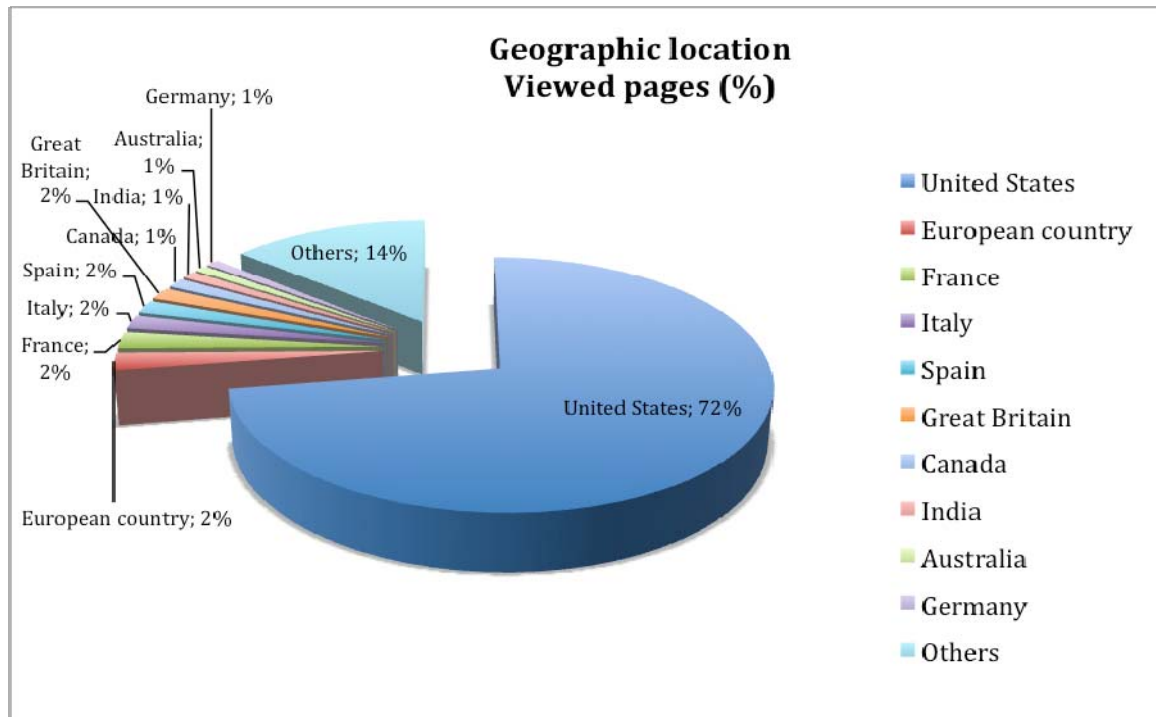


Fig. 3.1: FIRMS geographic location of visits – 2007

- Links immediately accessible from the home page (which was viewed 36.549 times) are influential in frequency of visited pages: the most frequently visited pages, excluding the home page, are [Concepts and Definitions] page visited 723 time followed by [Institutional partners] with 364 pages, the [Publications] page seen 346 times and top level links in the FIRMS inventory browser: [Deep sea marine resources – Global, 2005 which has been seen 320 times, followed by the Tuna and tuna-like species – Global, 2004 which has been seen 315 times]. Also the three FIRMS search pages have been used 5.268 times. Access to the FIRMS site through a direct links/bookmarks encompasses 85.1% of visits while 9.3% of visitors have access through use of search engines such as Google and Yahoo, and 9% access through a site pointing to FIRMS, with the following decreasing order of importance: fao > iccat > wikipedia > friendsofthesea > ccsbt > gfcmm. The explanation of this peculiar proportion between direct links/bookmarks and search engines is linked to the fact that the home page counts for nearly 50% of the viewed pages and users probably have direct access to the top page. This proportion changes if we look at access to the fact sheets.
- Some of the most frequent keywords used to find the FIRMS section from Internet Search Engines and Directories are: "fao", "tuna" and "marine".

The three most frequent keyphrases used to find the FIRMS section from Internet Search Engines and Directories are: "flemish cap", "fao.org" and "powered by figis".

4. 2008 FIRMS Web trend

Year 2008	N. Visits	N. Pages	Source files
FIRMS overall	17.633	44.714	FIRMS Google Analytics
FIRMS all FS		18.272	FIRMS Google Analytics
FIRMS search		9.597	FIRMS Google Analytics
FIRMS web site	24.559	111.897	FIRMS all web site report 2008
FIRMS all FS	16.239	36.745	FIRMS factsheets report 2008
FIRMS search		6.574	FIRMS search pages report 2008

Table 2: FIRMS 2008 web trend

- During 2008 FIRMS was visited 24.559 times and 111.897 pages were viewed. It must be said that, due to problems in the backup of the FIRMS logs, there are some gaps in the analysis, in particular 16 days are missing in the statistics for the month of May, no data has been registered for the month of June and 28 days are missing in the July statistics. This means that overall 74 days have not been recorded. Statistic for these days have been estimated as an average over 356 days and include in the data reported above. This means, though, that the monthly statistics for the months of June and July in particular will not be very significant. During the year visits do not differ from the typical flow. The most popular month was October with over 2.500 visits and 12.020 pages followed by November and September with over 2.000 visits and 14.660 pages (Fig. 4). Seventy-six percent of the visits lasted between 0 seconds to 30 seconds. Each visitor spent an average of 4.4 minutes on the site to visit 4.67 pages.

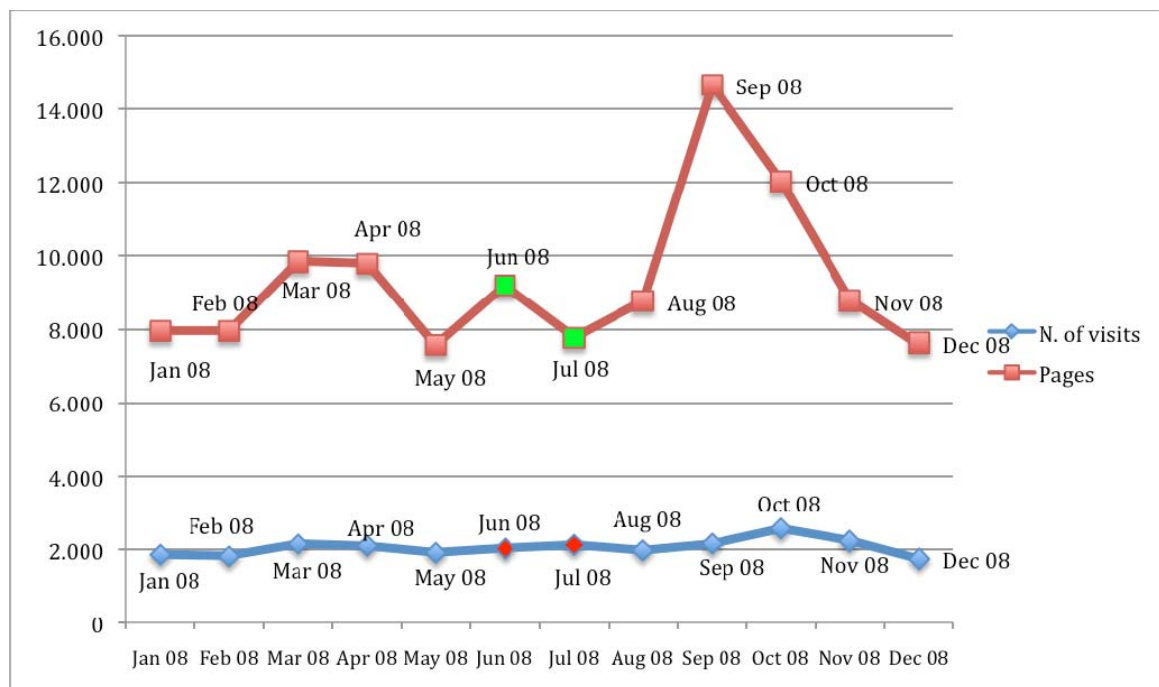


Fig. 4: FIRMS monthly trends – 2008

- North America is the region that covers 66 percent of the visited pages followed by the EU countries. There is nothing to signal compared to the results achieved during the previous year (2007) like shown in Fig. 4.1.

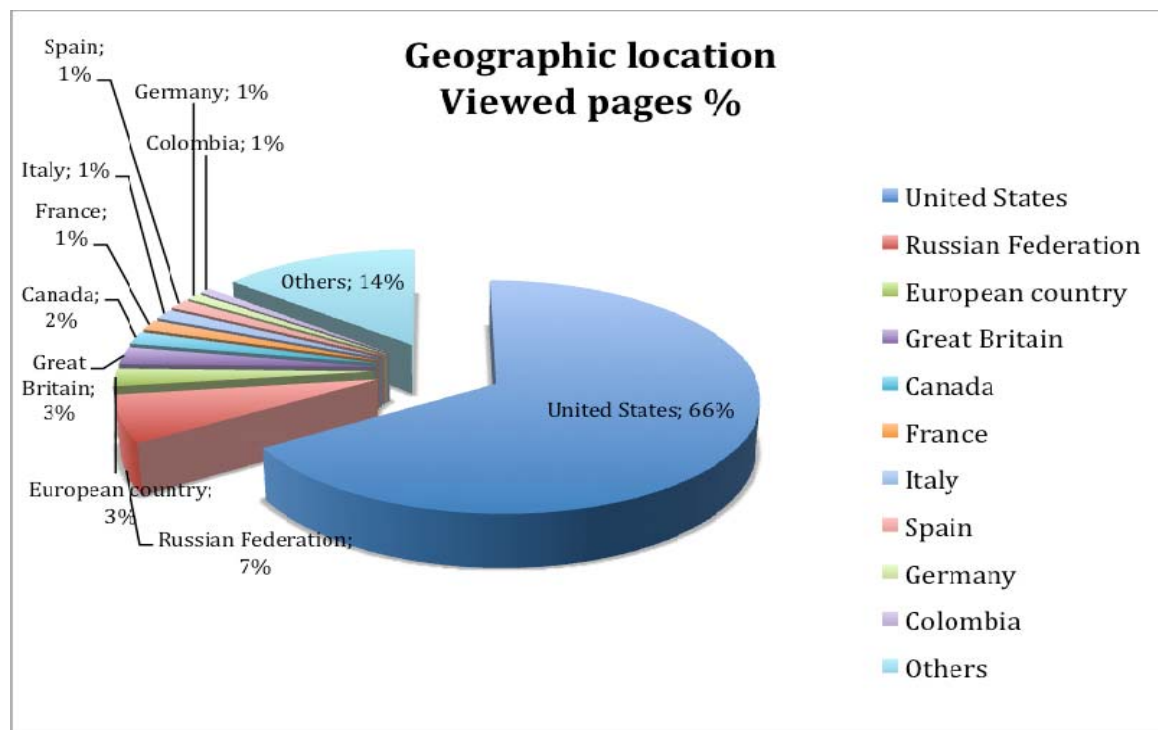


Fig. 4.1: FIRMS geographic location of visits – 2008

- The most frequently visited page, excluding the homepage which was seen 47.923 (42.8%) times, accessible from the left menu, is the [Concepts and Definitions] page visited 531 times followed by two top level links in the FIRMS inventory browser: [Squid – Global, 2005] which was seen 520 times, [Redfish – Flemish Cap, 2008] visited 491 times and the [Deep sea marine resources – Global, 2005] with 437 visited pages. The [Institutional partners] is included in the top ten most visited pages with 440 visits followed by FIRMS [Partner's data contributions] with 387 visits. The three FIRMS search pages have been used 6.574 (5.9%) times.
- Access to the FIRMS site through a direct link encompasses 79.7% of visits while 15.9% of visitors have access through use of search engines such as Google and Yahoo, and 4.2% access through a site pointing to FIRMS, with the following decreasing order of importance: fao > wikipedia > friendsofthesea > ccsbt > icaat > nafo > seafdec. Access to the fact sheets shows a different proportion in fact, direct links count for 56.4%, search engines for 38.6% and external pages for the remaining 4.6%.
- Some of the most frequent keywords used to find the FIRMS section from Internet Search Engines and Directories are: "fao", "tuna", "sea", "atlantic", "cap" and "Flemish". The three most frequent keyphrases used to find the FIRMS section from Internet Search Engines and Directories are: "fao.org" "flemish cap", and "firms fao".

5. 2009 FIRMS Web trend

Year 2009	N. Visits	N. Pages	Source files
FIRMS overall	16.943	42.676	FIRMS Google Analytics
FIRMS all FS		16.611	FIRMS Google Analytics
FIRMS search		11.674	FIRMS Google Analytics
FIRMS web site	22.680	119.446	FIRMS all web site report 2009
FIRMS all FS	13.055	23.161	FIRMS factsheets report 2009
FIRMS search		6.438	FIRMS search pages report 2009

Table 3: FIRMS 2009 web trend

- With regards to year 2009 the FIRMS Web site was visited 22.680 times and 119.446 pages were viewed. Some gaps in the statistics occurred, in particular 3 days during February and 4 days during October, besides data was collected up until October 2009 and the last two months of the year have been estimated. During the year visits do not differ from the typical flow. The most popular month was March with 2.239 visits and 12.281 pages followed by April and October with over 2.000 visits, while the months with the highest number of viewed pages are June and July with over 10.000 pages (see fig. 5). Seventy-five percent of the visits lasted between 0 seconds to 30 seconds. Each visitor spent an average of 4.8 minutes on the site to visit 4.81 pages.

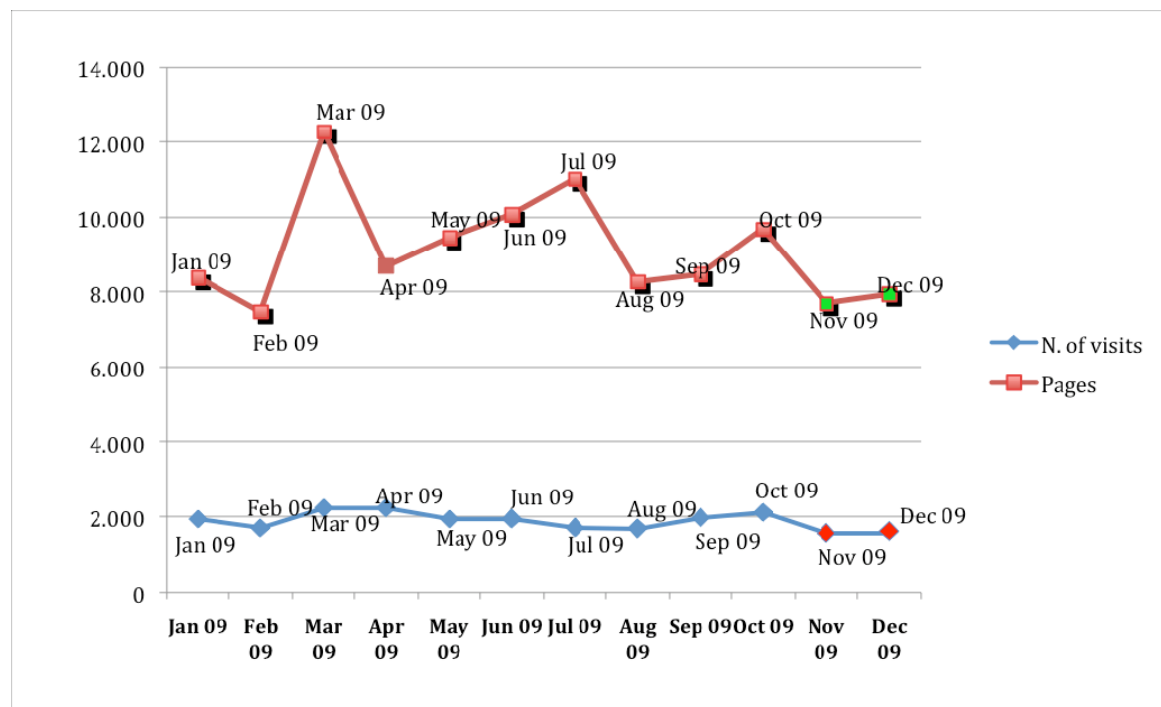


Fig. 5: FIRMS monthly trends – 2009

- North America is the region that covers 73% of visits followed by EU countries as shown in Fig. 5.1.

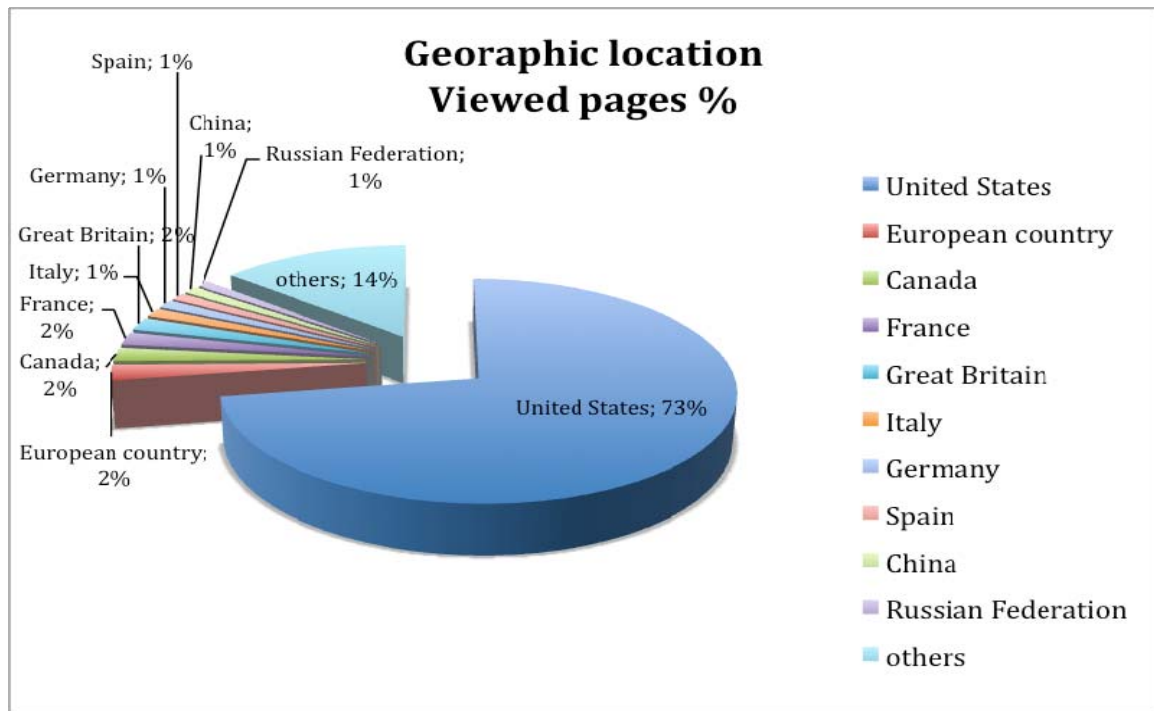


Fig. 5.1: FIRMS geographic location of visits – 2009

- The most frequently visited page, after the homepage which was visited 50.946 (42.6%) times, accessible from the left menu, is the [Concepts and Definitions] page visited 695 times followed by [Squid – Global, 2005] which was seen 543 times, [Institutional partners] page with 530 visits and the two top level links in the FIRMS inventory browser: [Tuna and tuna-like species – Global, 2004] with 424 visits and [Redfish – Flemish cap 2008] 421 visits. The [Partner's data contribution] is included in the top ten most visited pages with 397 visits followed by FIRMS [Publications] with 382 visits. The three FIRMS search pages have been used 6.438 (5.4%) times.
- Access to the FIRMS site through a direct link encompasses 80.1% of visits while 14.1% of visitors have access through use of search engines such as Google and Yahoo, and 5.6% access through a site pointing to FIRMS, with the following decreasing order of importance: fao > wikipedia > icaat > seafdec > nafo > gfcf. If we look at the access to the fact sheets pages the proportions are inverted between direct links (36.7%) and internet search (48.7), while external pages were used 14.5% of the time
- Some of 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*", "*gfcf*", and "*flemish cap*".
- However the google stats show that on the other hand, 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 again demonstrate that the audience is restricted to scientists specialists.

6. Comparing FIRMS Web statistics over the period 2007-2009

Comparing FIRMS Web trends during the last three years (see Fig. 6) it is clear that the number of visits have doubled in 2008-2009 compared to 2007 while the number of viewed pages have nearly doubled, while Web trends for the year 2008 and 2009 are very similar.

The most popular months were during the spring (March, April and May) and during the fall season (October and November).

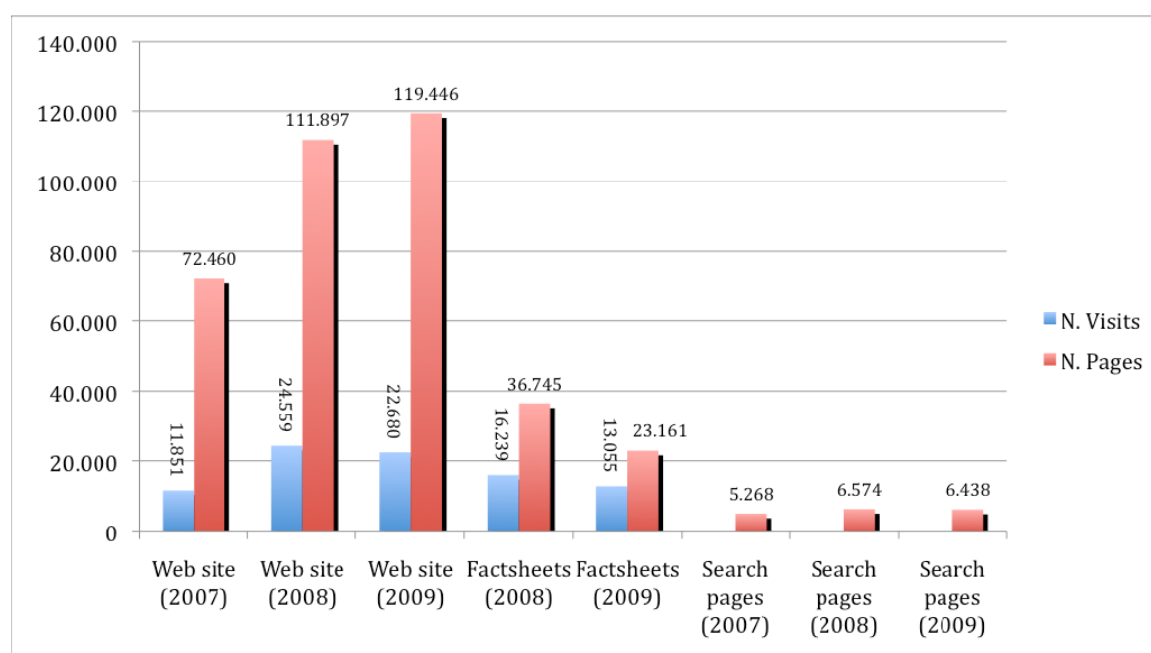


Fig. 6. FIRMS Web statistics 2007-2009

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 as follows:

- In 2007 1.3 Visits/Visitor
- In 2007 6.11 Pages/Visit
- In 2008 1.29 Visits/Visitor
- In 2008 4.67 Pages/Visit
- In 2009 1.35 Visits/Visitor
- In 2009 4.81 Pages/Visit

Accessibility and traffic sources show a common trend for the three years. Direct traffic encounters for 80% of visits while around 10-14% of visitors have access through search engines and the remaining 10-6% of traffic is due to referring sites. The most used referring sites pointing to FIRMS are:

- fao.org

- wikipedia.com
- icaat.int
- friendsofthesea.com
- gfcf.org
- nafo.int
- seafdec.org
- ccsbt.org

The most visited pages (excluding the gateway 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

7 Comparing FIRMS Web statistics with other FAO Fisheries collections

FIRMS Web statistics have also been compared to other fisheries collections over the same period of time, in particular with the Species Identification and Data Programme (SIDP) sub site and the Fisheries and Aquaculture Country Profiles. The results of this analysis are reported below. For both collections statistics for 2007 are not complete as figures start from March 2007, the missing data has been estimated and the same is for the 2009 statistics as the AWStat logs are missing for half the month of November and the whole of December, this data should come available shortly, in the meantime statistics over this period have been estimated.

7.1 SIDP web statistics 2007-2009

Year 2007	N. Visits	N. Pages	Source files
SIDP sub site	13.482	26.607	SIDP sub site report 2007
SIDP factsheets	57.267	85.854	SIDP factsheets report 2007
SIDP search	5.180	7.499	SIDP search page report 2007
SIDP all sub site	75.929	119.960	
Year 2008	N. Visits	N. Pages	Source files
SIDP sub site	10.916	29.776	SIDP sub site report 2008
SIDP factsheets	82.080	187.795	SIDP factsheets report 2008
SIDP search	11.790	43.919	SIDP search page report 2008
SIDP all sub site	104.786	262.490	
Year 2009	N. Visits	N. Pages	Source files
SIDP sub site	16.686	50.984	SIDP sub site report 2009
SIDP factsheets	87.673	260.171	SIDP factsheets report 2009
SIDP search	15.458	64.815	SIDP search page report 2009
SIDP all sub site	119.817	375.970	

Table 4: SIDP 2007 - 2009 web trend

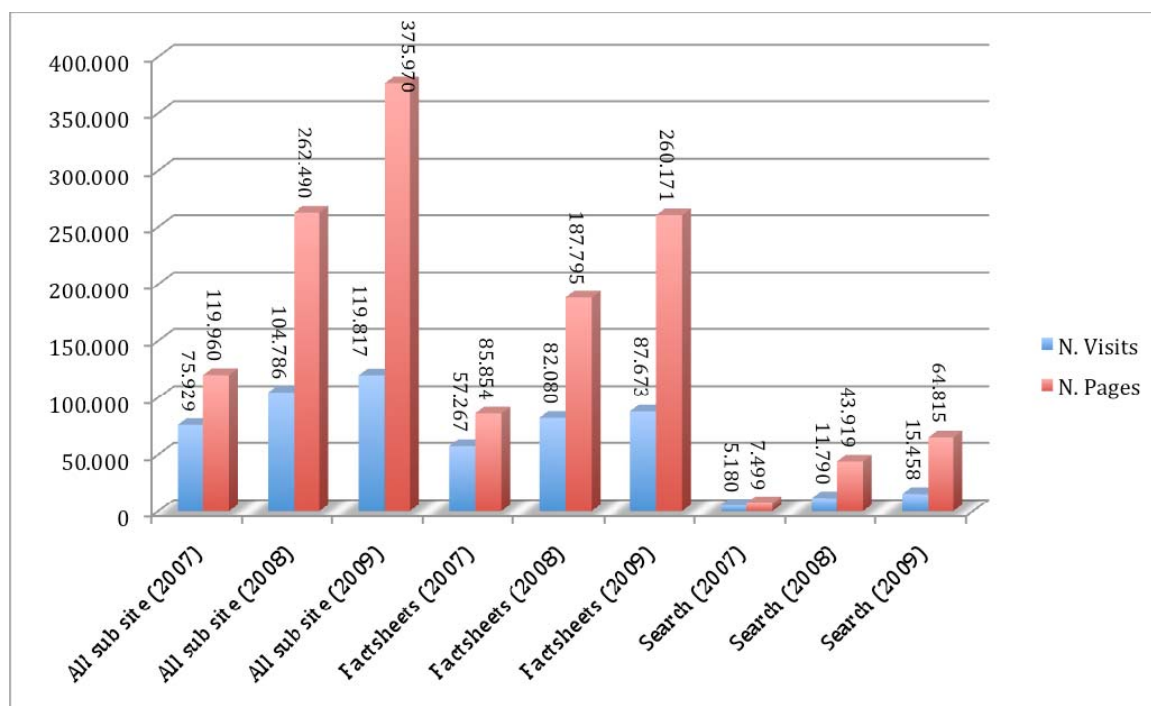


Fig. 7. SIDP Web statistics 2007-2009

The graph above shows that the most visited pages of the SIDP site are the factsheets and that the number of page views has tripled from 2007 to 2009. Compared to the factsheets statistics for FIRMS, which recorded a maximum of page views in 2008 with 36.745 pages, SIDP have totalled a maximum of page views in 2009 with 260.171 pages. Comparing the all web site statistics of the two web sites still a big difference is noticeable, overall we can say that SIDP pages have scored a number of views that is three times higher than FIRMS pages.

7.2 Country profiles web statistics 2007-2009

Year 2007	N. Visits	N. Pages	Source files
CP search	17.264	27.915	CP search page report 2007
Country profile factsheets	80.624	252.267	CP factsheets report 2007
CP all	97.888	280.182	
Year 2008	N. Visits	N. Pages	Source files
CP search	21.296	40.330	CP search page report 2008
Country profile factsheets	181.520	471.716	CP factsheets report 2008
CP all	202.816	512.046	
Year 2009	N. Visits	N. Pages	Source files
CP search	21.240	37.097	CP search page report 2009
Country profile factsheets	278.807	624.960	CP factsheets report 2009
CP all	300.047	662.057	

Table 5: Country profile 2007 - 2009 web trend

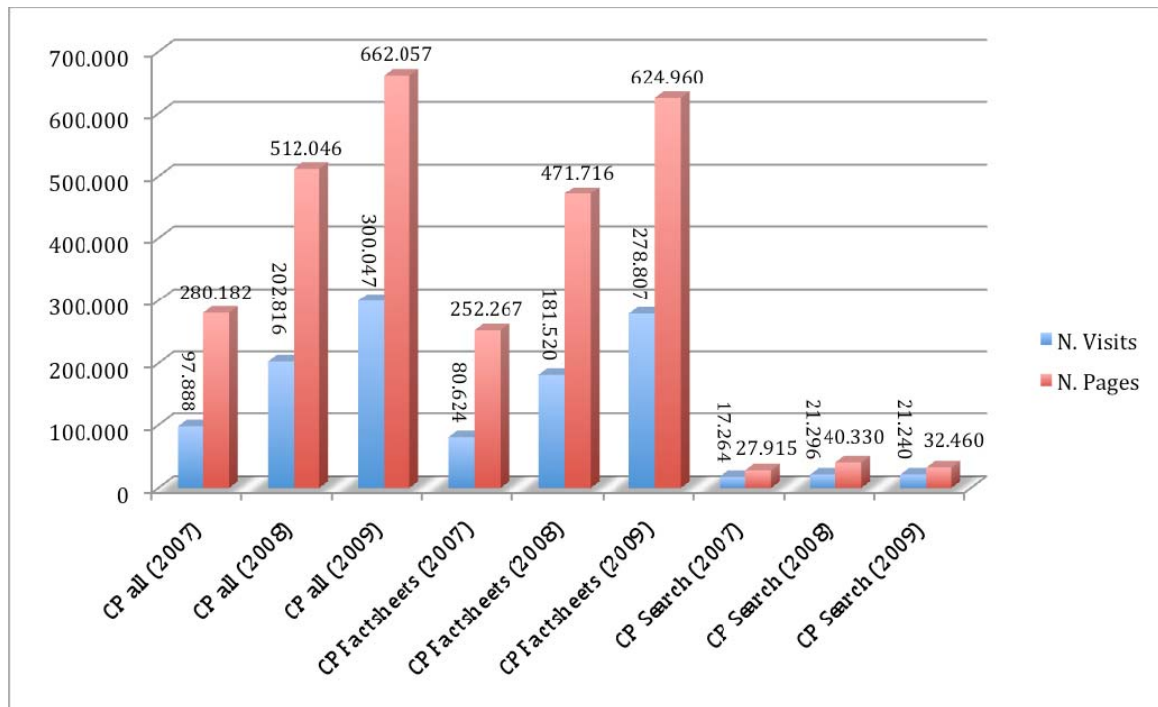


Fig. 8. Country profiles Web statistics 2007-2009

Web statistics for Fisheries and Aquaculture Country Profiles show a significant increase in the three-year period analyzed, in particular with regards to the factsheets. When comparing these statistics with the FIRMS ones, the results show that page views for the CP factsheets were 17 times higher than for FIRMS factsheets.