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**FIRMS WEB TRENDS STATISTICS OVER THE PERIOD 2007-2011**  
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**Management Summary**

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## **1. Web measurements basics**

The analysis of the FIRMS Web site is based on the Web traffic analysis generated by Google Analytics and by the open source software used in FAO, which is called AWStats (Advanced Web Statistics). Google Analytics is a free service provided by Google. It helps to analyze the way people access and use web sites. 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.

### **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.

### **1.2 Visits**

*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.*

A visit, also referred to as a session or user session, is used for measuring the amount of traffic a Web site gets.

### **1.3 Geographic location**

#### **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.

Similarly to AWStats, Google Analytics reports the country or territory from which visits originated, based on IP address of the visitor, which is mapped to a geographic region.

## 2. FIRMS Web trends (Oct 2007 - Oct 2011)

The analysis below is based on web traffic data provided by Google Analytics. This software was used to calculate various indicators from October 2007 to October 2011.

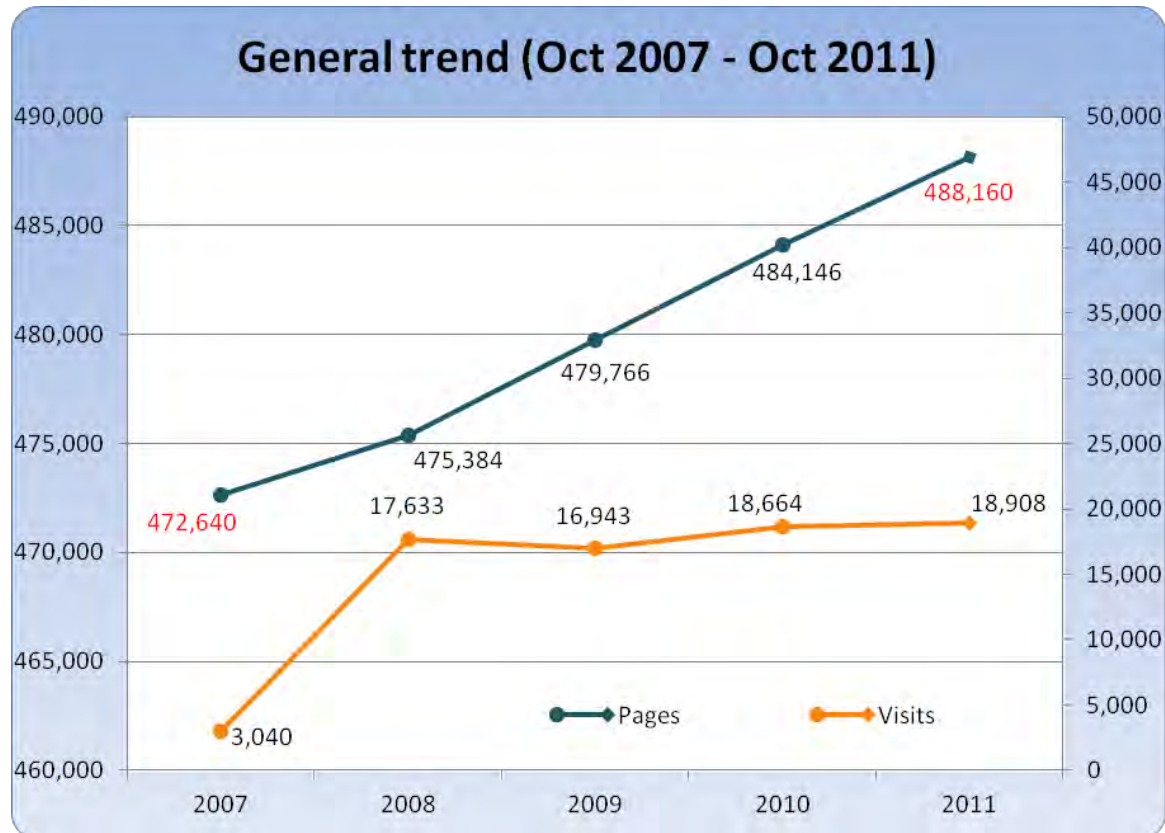


Fig. 2.1 FIRMS general trend

*Table 1 FIRMS general trend (Oct 2007 - Oct 2011)*

Year	No. Visits	No. Pages	No. Pages/Months
<b>2011 (Jan–Oct)</b>	18,908	<b>488,160</b> (actual value for 10 months: 406,800)	40680
<b>2010</b>	18,664	484,146	40346
<b>2009</b>	16,943	479,766	39981
<b>2008</b>	17,633	475,384	39615
<b>2007 (Oct–Dec)</b>	3,040	<b>472,640</b> (actual value for 3 months: 118,160)	39387

Figure 2.1. shows that during the period October 2007- October 2011 the FIRMS number of visits and pages increased along time. The red values are partial estimations based on the average of monthly viewed pages considering that for 2011 this prevision concerns only two months.

In addition, in 2011, the current visits are already higher than those for 2010.

The bounce rate (the percentage of visitors who enter the site and leave it rather than continue viewing other pages) is pretty high in the home page (>50%) while it decreases when search pages are reached; the rate is even lower in the “FIRMS on Tuna” thematic page (~28%). In other gateway pages (i.e. Concepts) the bounce rate is instead very high (>78%). The average time on page has a similar behavior. These numbers suggest that users are interested in authoritative sources of information on status of fishery resources, but, in some cases, they give up for various reasons including outdated high levels pages, lack of friendliness, incomplete coverage, difficulty in finding what they are looking for.

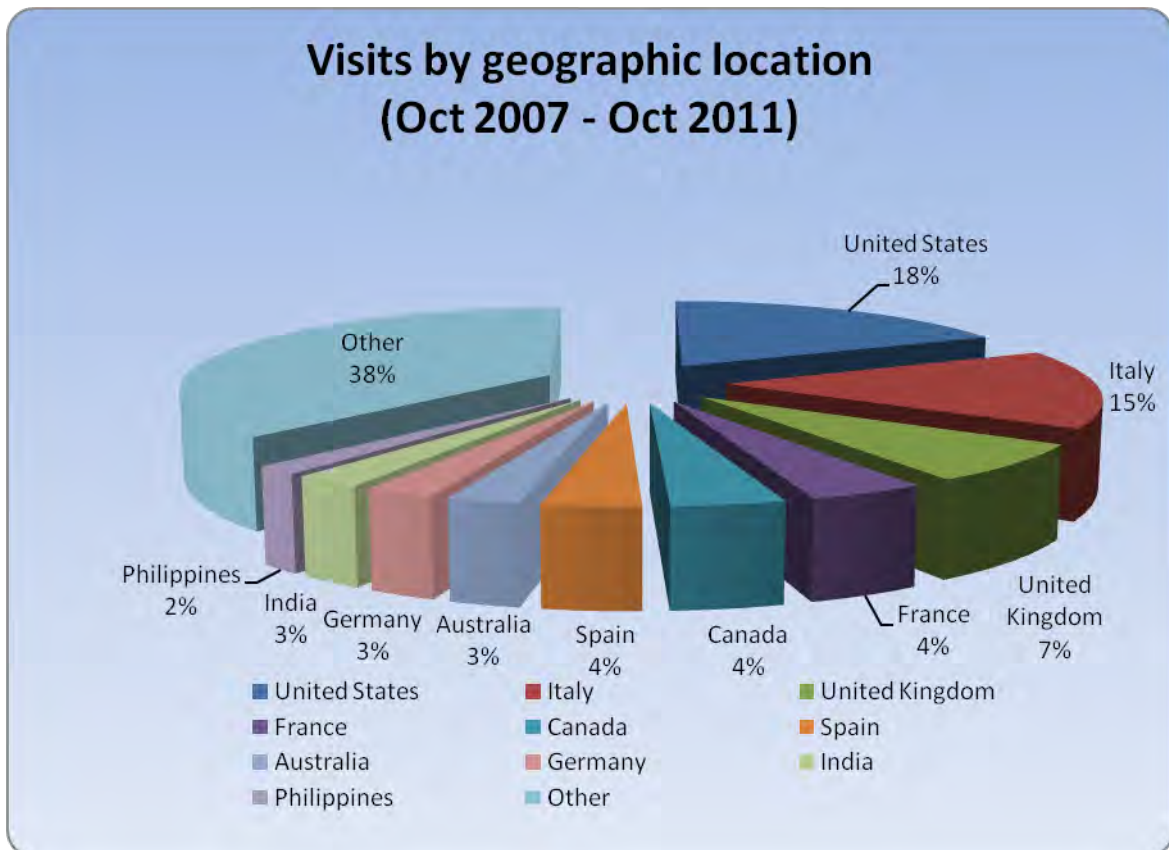


Fig. 2.2 Visits by geographic location

Figure 2.2 shows that highest percentages of visits are originated by United States, Italy and UK. It should be noted that the figure for Italy may be inflated by the activity of the Secretariat which is regularly monitoring and updating the FIRMS site. The category “Other” includes Portugal, Japan, Norway, Denmark, Netherlands, Belgium and Brazil as top visitors among other countries.

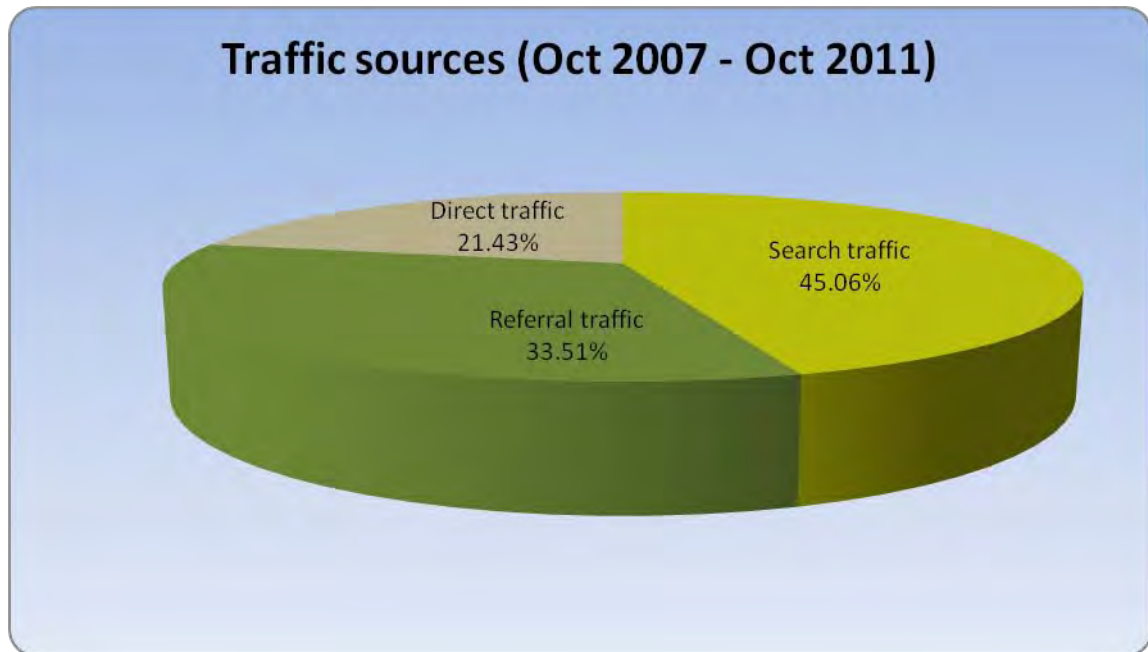


Fig. 2.3 Visits by geographic location

Figure 2.3 shows that traffic sources for the FIRMS web site are generated mostly by search engines and by referral sites.

- Search traffic is generated in the majority by Google search engine (about 90%), followed by Yahoo, Bing and others.
- The majority of referral traffic is due to the following web sites listed in decreasing order of importance: fao.org, en.wikipedia.org, gfc.m.org, iccat.int, images.google.com, friendofthesea.org, fishbase.org, iattc.org, ices.dk, ccsbt.org, seafo.org, nafo.int, seafdec.org, tuna-org.org. It should be noted that some of these sites contributed discontinuously to traffic in the considered time frame (e.g. friendofthesea.org and ices.dk had pikes of access in certain periods of the considered time range).
- Direct traffic visits are homogeneously distributed along the period considered (around 1500 visits per month), although in 2011 visits always are equal or higher than 1500 per month. Landing pages of direct traffic were mostly the home page and secondarily the search page interfaces.

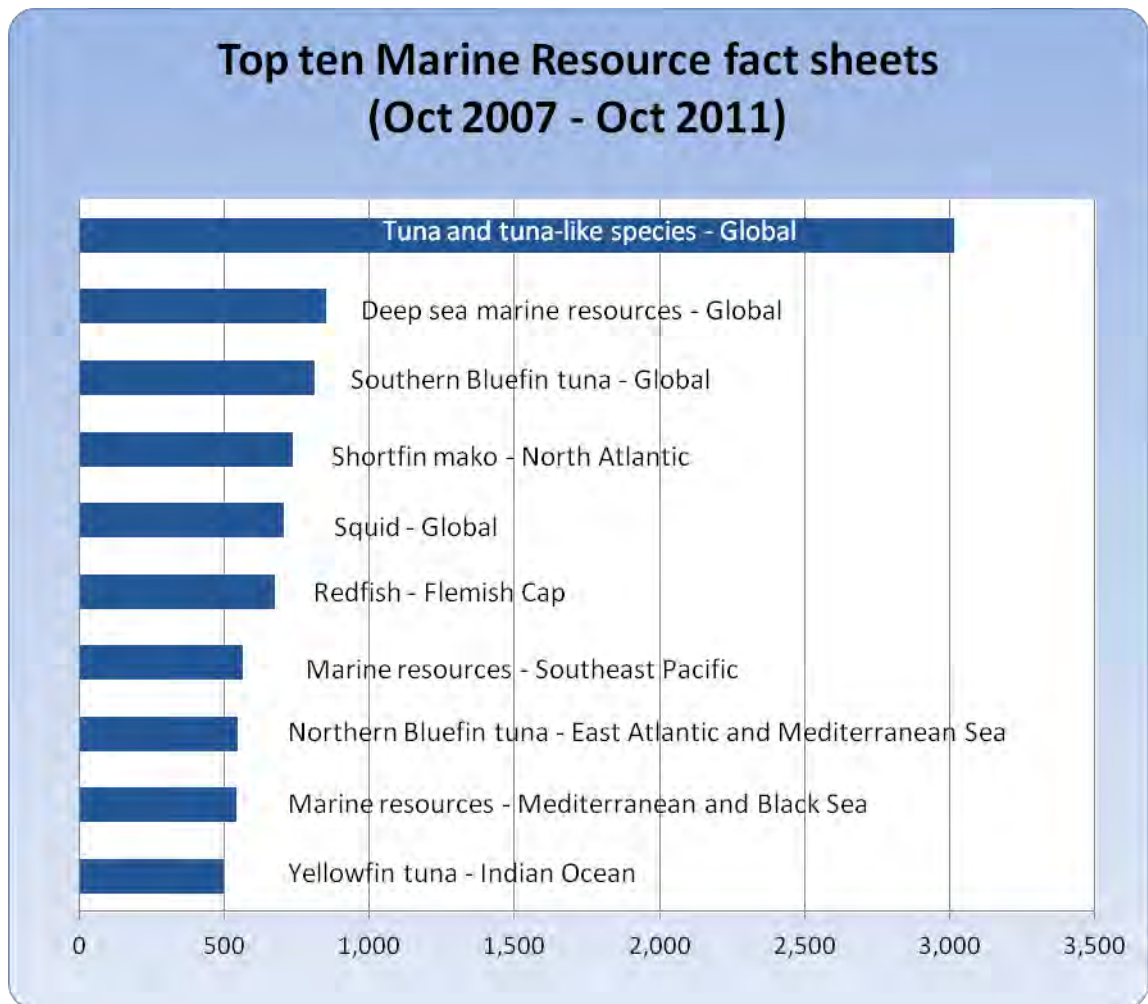


Fig. 2.4 Top ten Marine Resource fact sheets

Figure 2.4 relies upon the number of visits per Marine resource fact sheet. Information on Tuna is considerably more requested (more than threefold higher) across considered years than other fact sheets.

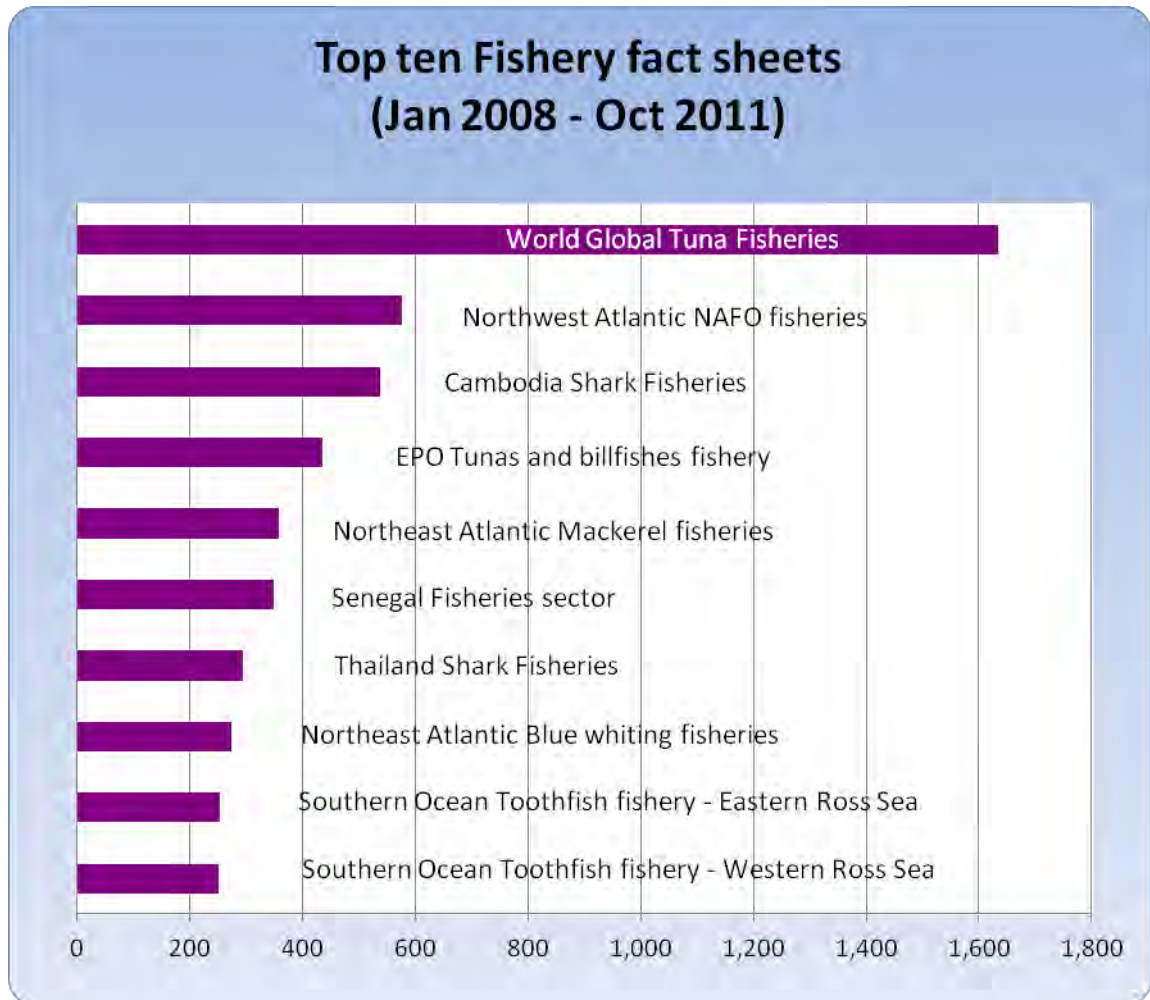


Fig. 2.5 Top ten Fishery fact sheets

Similarly to figure 2.4, the figure 2.5 shows the number of visits per Fishery fact sheet and again global information on Tuna is considerably more requested although also many other type of fisheries are visited often. It should be noted that the time frame is different in this graph since the very first Fishery fact sheets were released in late 2008.

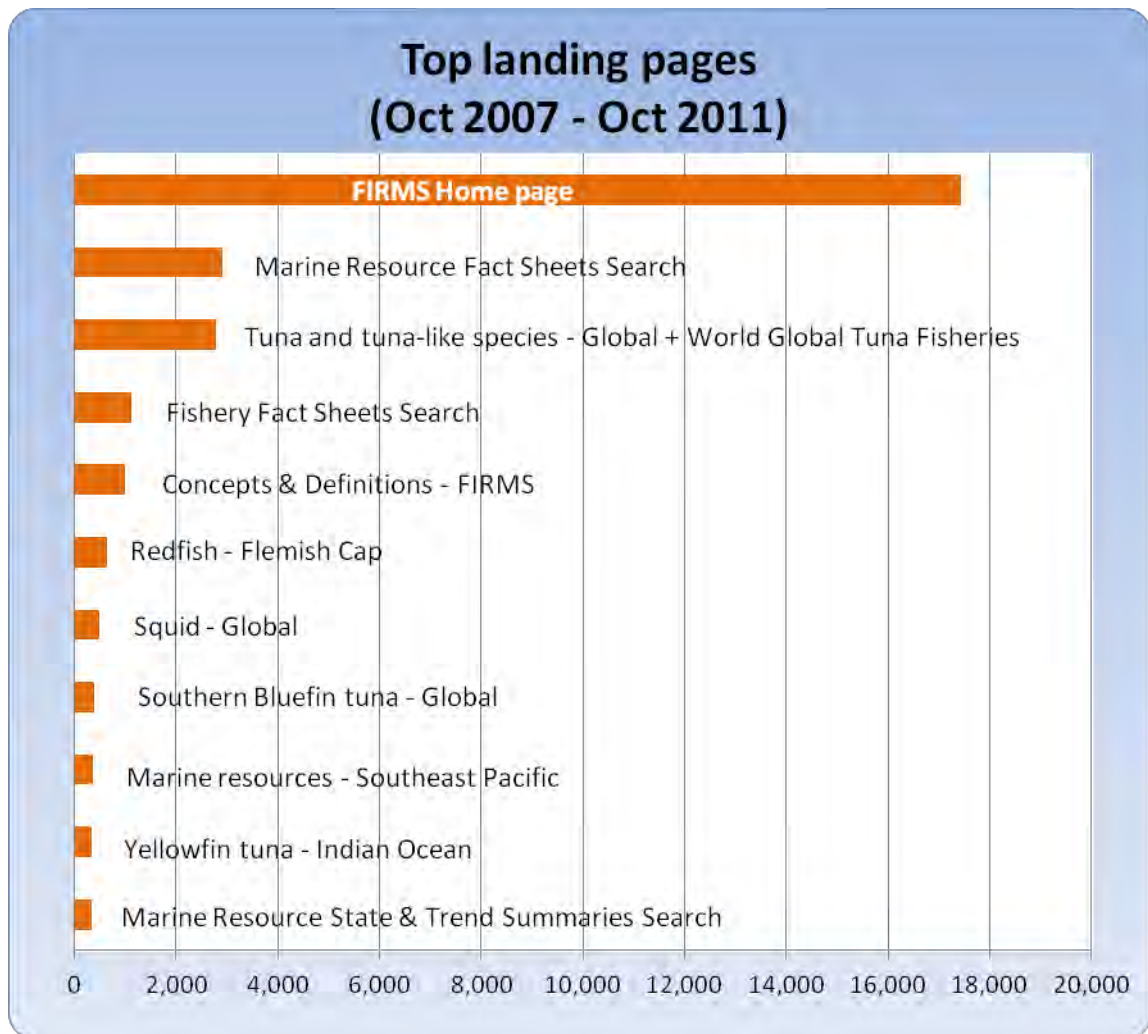


Fig. 2.6 Top landing pages

Figure 2.6 shows the number of visits per “landing” page, those pages which are accessed by users through textual links, banners or others references. The home page is the most viewed, followed by the Marine Resource fact sheets search. Both global information on Marine Resource and Fishery fact sheets on Tuna are highly accessed, this is consistent with the above trends.

The page “Concepts & Definitions” is regularly viewed along the considered period and it ranks higher than the majority of the fact sheets taken singularly.

The web trends for exit pages are sorted in the same way but with lower numbers. The bounce rate is higher for the FIRMS home page and for the fact sheets while it is lower for the search interfaces (including the inventory browser). It indicates that a sub-set of FIRMS users run one or more queries when browsing the search interfaces.

### **3 Comparing FIRMS Web statistics with other FAO Fisheries and Aquaculture Department collections**

FIRMS Web statistics have been compared to other FAO Fisheries and Aquaculture department collections of pages over the Nov.2010-Oct.2011 period of time on the basis of the AWstats figures.

In particular the overall statistics for FIRMS web site were compared with the Fishery and Aquaculture (FI) web site data. Additionally, FIRMS Marine Resource and FIRMS Fishery fact sheets were compared with 3 most popular fact sheet modules of the FI website: "Aquatic Species", "Fishery and Aquaculture Country Profile (FACP)" and "National Aquaculture Sector Overview (NASO)" fact sheets.

The above comparisons were conducted across the most recent twelve months for which data of the two web sites are fully comparable. The initial intention was to compare trends among these modules over a period of time, unfortunately problems in the backup of the FIRMS logs resulted in several gaps in the time series making this comparative trends analysis unreliable.

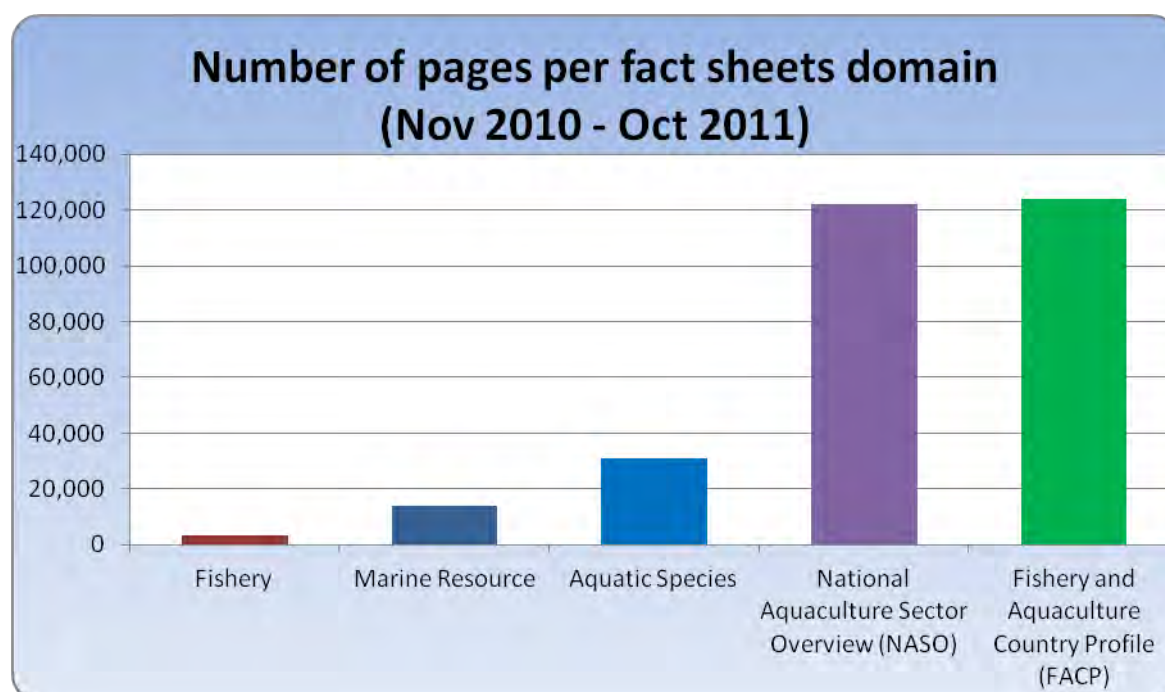
*Table 2 Number of pages per web site (Nov.2010 – Oct.2011)*

<b>Web site</b>	<b>Visits</b>	<b>No. Pages</b>
FIRMS	54,089	680,792
FI	1,841,643	19,149,709
Ratio	3%	4%

The table above allows quantifying the magnitude of the overall web traffic (visits and pages) of the FIRMS web site as amounting to about 3-4% in comparison to the entire FI web site. Undoubtedly, the FIRMS web site has been published online much more recently than FI, is composed of an incomparably smaller number of pages, and treats only a limited set of topics in comparison to the variety covered by the FI web site (about 35 modules).

**Table 3: Number of pages per fact sheets domain (Nov 2010 - Oct 2011)**

Fact sheets domain	No. Pages
Marine Resource	13,955
Fishery	3,403
Aquatic Species	30,957
Fishery and Aquaculture Country Profile (FACP)	123,954
National Aquaculture Sector Overview (NASO)	122,015



**Fig.3.1 Number of pages per fact sheets domain (Nov 2010 - Oct 2011)**

The graph and tables above suggest that the FIRMS website cannot be quantitatively compared with the overall FI website. Instead, the FIRMS fact sheets compare reasonably well with selected FI domains: FIRMS Marine Resource fact sheets correspond to 45% of Aquatic Species (a very popular source of information), and about 11% of NASO and FACP (most consulted domains on the FI website). Furthermore, when aggregating Fishery and Marine Resource fact sheets the ratio raises to 56% and 14%, respectively.

**Table 4 - Criteria: the number of pages was calculated by filtering the full list of concerning URLs in order to consider exclusively the fact sheet visualizations (i.e. omitting URLs of search page interfaces).**

Fact sheets domain	Filtered URLs
Marine Resource	<a href="http://firms.fao.org/firms/resource/">firms.fao.org/firms/resource/</a> *
Fishery	<a href="http://firms.fao.org/firms/fishery/">firms.fao.org/firms/fishery/</a> *
Aquatic Species	<a href="http://www.fao.org/fishery/species/">www.fao.org/fishery/species/</a> *
Fishery and Aquaculture Country Profile (FACP)	<a href="http://www.fao.org/fishery/countrysector/fi-cp">www.fao.org/fishery/countrysector/fi-cp</a> *
National Aquaculture Sector Overview (NASO)	<a href="http://www.fao.org/fishery/countrysector/naso">www.fao.org/fishery/countrysector/naso</a> *