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FIRMS WEB TRENDS STATISTICS OVER THE PERIOD 2007-2020
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1. Web measurement basics

The current analysis of the FIRMS Web site is based on the Web traffic analysis generated by Google Analytics. Google Analytics is a free service provided by Google, it is browser based (a JavaScript counting events in a browser) and helps to analyse the way people access and use web sites. The following definitions have been extracted from Google Analytics help pages.

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. If a user clicks reload after reaching the page, this is counted as an additional pageview, whereas if a user navigates to a different page and then returns to the original page, a second pageview is recorded.

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 Sessions

Sessions represent the number of individual time periods initiated by all the users to a website, app, etc. It is used for measuring the amount of traffic a web site gets. All usage data (Screen Views, Events, Ecommerce, etc.) is associated with a session.
If a user is inactive for 30 minutes or more, any future activity is attributed to a new session. Users that leave the website and return within 30 minutes are counted as part of the original session.

The notion of Session evolved from the concept of Visit which was counted when a unique visitor created 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.

1.3. Bounce rate

The percentage of single-page sessions in which there was no interaction with the page. A bounced session has a duration of 0 seconds.

A bounce is a single-page session on your site. In Analytics, a bounce is calculated specifically as a session that triggers only a single request to the Analytics server, such as when a user opens a single page on your site and then exits without triggering any other requests to the Analytics server during that session.

Bounce rate is single-page sessions divided by all sessions, or the percentage of all sessions on your site in which users viewed only a single page and triggered only a single request to the Analytics server.

These single-page sessions have a session duration of 0 seconds since there are no subsequent hits after the first one that would let Analytics calculate the length of the session.

1.4 Geographic location

How it is 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.

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.

However, 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.

2. FIRMS Web trends (2007 - 2020)

2.1 Analysis of general trends

The analysis below is based on web traffic data provided by Google Analytics. This software was used to calculate various indicators from January 2007 to December 2020.
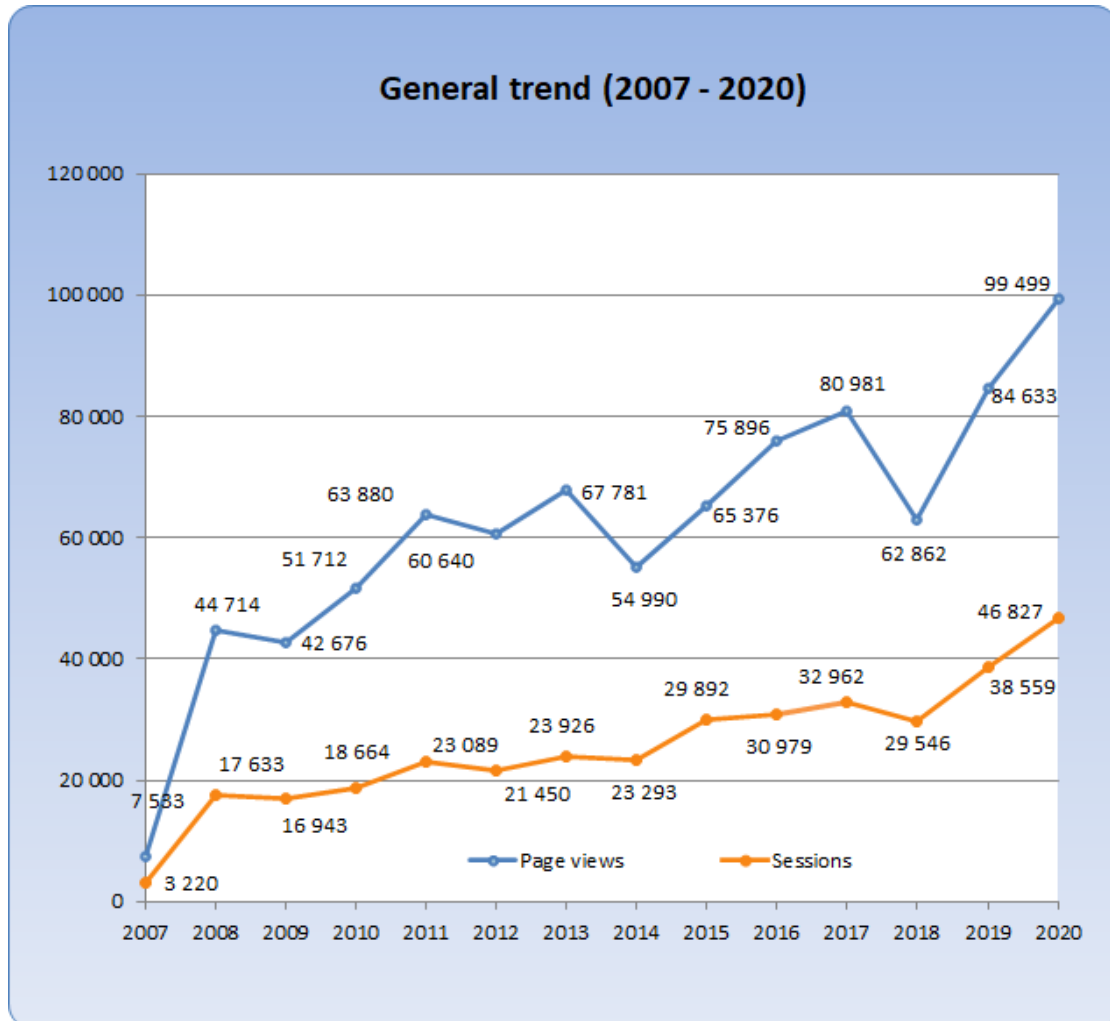

Fig. 2.1 FIRMS general trend (2007 - 2020)

Table 1 FIRMS general trend (2007 - 2020)

Year	No. Sessions	No. Page views	No. Pages/Months	Pages/Session
2020	46827	99499	8292	2,12
2019	38559	84633	7053	2,19
2018	29546	62862	5239	2,13
2017	32962	80981	6748	2,46
2016	30979	75896	6325	2,45
2015	29892	65376	5448	2,19
2014	23293	54990	4583	2,36
2013	23926	67781	5648	2,83
2012	21450	60640	5053	2,83
2011	23089	63880	5323	2,77
2010	18664	51712	4309	2,77
2009	16943	42676	3556	2,52
2008	17633	44714	3726	2,54
2007	3220	7533	628	2,34

Figure 2.1 and Table 1 show that the overall number of page views and sessions mainly increased through time.

There is a substantial increase in overall FIRMS usage, indicated by an upward trend in 2019-2020, compared with the previous increase in 2015-2017. This follows the drop in 2018, whereby the negative trend reflected in 2018 was most likely due to a deficient availability of the FAO web server with frequent downtimes (as described in the previous FSC11 report).

The average bounce rate (the percentage of visitors who enter the site and leave it rather than continue viewing other pages) is about 79%. However, the bounce rate spans from 60% for the map viewer, to less than 50% for the home page and for the search interfaces, and down to around 30% for the fisheries browser. The bounce rate is more variable for fact sheets with higher and lower values. In general, a bounce rate less than 50% is considered good for further interactions with other pages of the web site, but in case of fact sheets for which single-page sessions are expected, then a high bounce rate should be normal.

The average session duration for landing pages (the average length of a session) is 00:02:24 but with greater peaks in selected pages. In the previous analysis (2007-2018, reported in FSC11), the average session duration was similar (00:02:34).
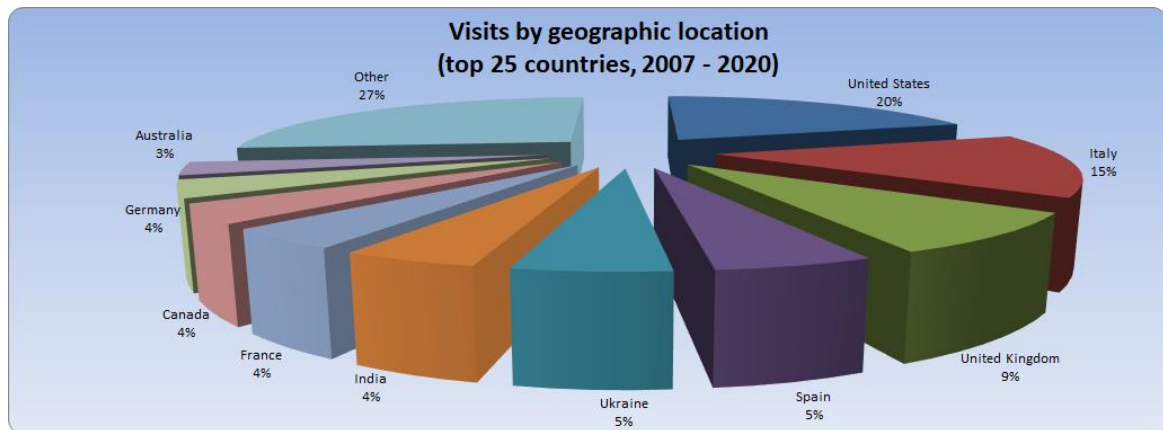
Fig. 2.3 Visits by geographic location (top 25 countries, 2007 - 2020)

Figure 2.3 describes the geographic location of the visits; the percentage is calculated upon a sample of 25 countries. The highest percentages of visits are originated by United States, Italy and UK. It should be noted that the figure for Italy and South Africa may be inflated by the activity of the Secretariat, which is regularly monitoring and updating the FIRMS site. The category "Other" includes (listed in decreasing order of importance): China, Malaysia Philippines, Indonesia, Japan, Portugal, Netherlands, Thailand, Russia, South Africa, Norway, Belgium, Mexico, South Korea and Brazil.
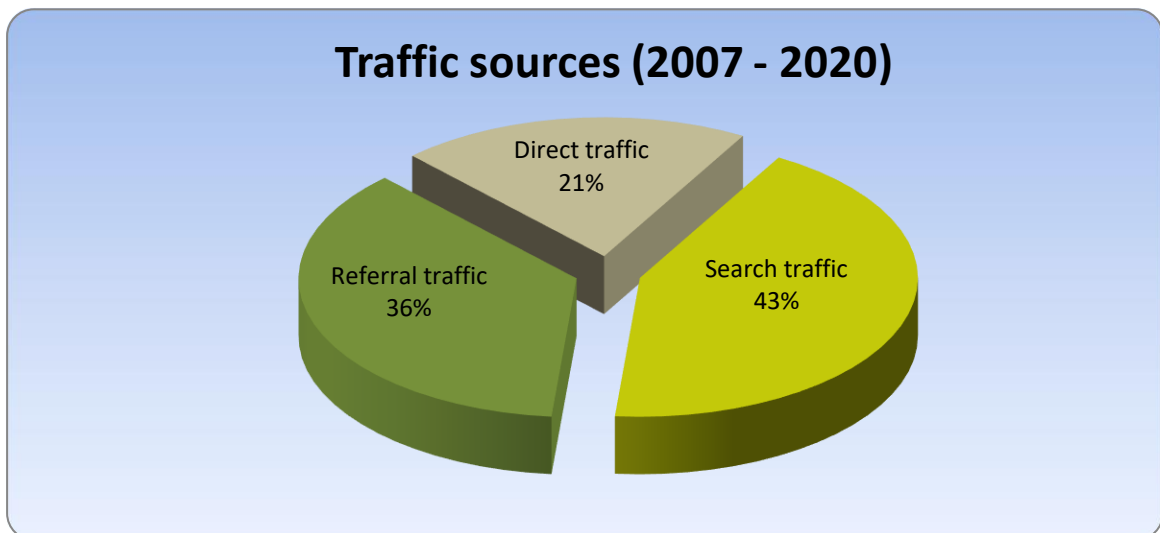

Fig. 2.4 Traffic sources (2007 – 2020)

Figure 2.4 shows that traffic sources for the FIRMS web site are generated mostly by search engines and by referral sites.

Search traffic (43%) is mostly generated by Google search engine (more than 90%), followed by Bing, Yahoo, and others.

The majority of referral traffic (36%) is due to the following web sites (listed in decreasing order of importance): fao.org, fishbase.org, and en.wikipedia.org.

Direct traffic (21%), visitors who clicked a bookmark or entered a URL, are the third way FIRMS is accessed.

In terms of device categories, an analysis for the period 2016-2020 indicated a growing trend for mobiles vs. tablets and desktops, about 17% of the total sessions. In fact, the use of desktop (81%) and tablet (2.5%) devices have slightly decreased in comparison with the previous analysis made for FSC11.
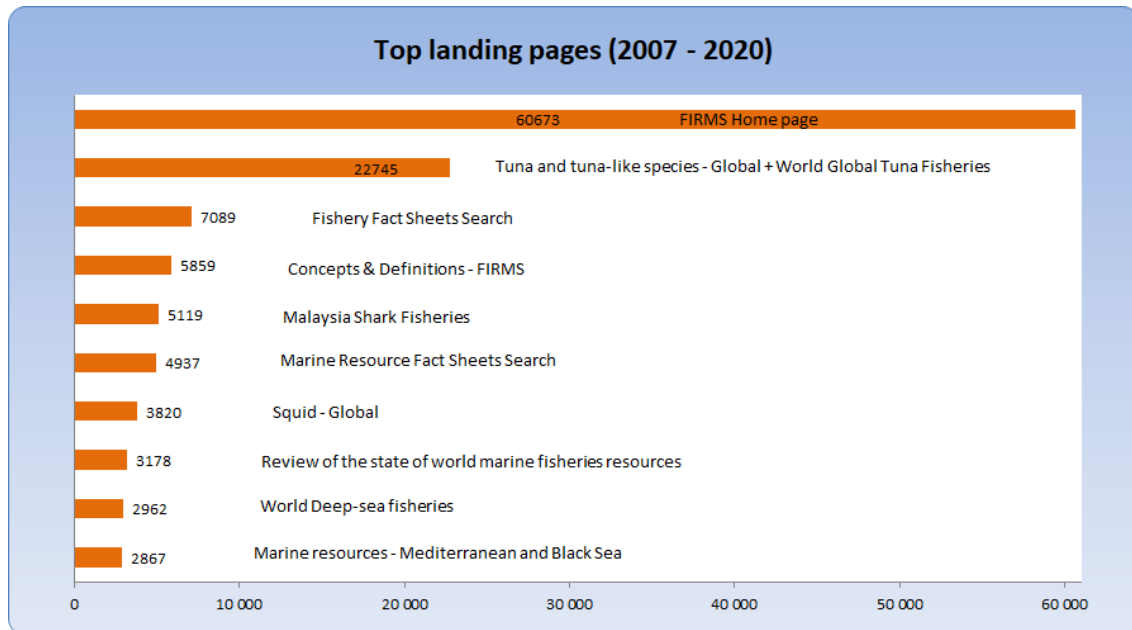
Top landing pages (2007 - 2020)

Page	Sessions
FIRMS Home page	60673
Tuna and tuna-like species - Global + World Global Tuna Fisheries	22745
Fishery Fact Sheets Search	7089
Concepts & Definitions - FIRMS	5859
Malaysia Shark Fisheries	5119
Marine Resource Fact Sheets Search	4937
Squid - Global	3820
Review of the state of world marine fisheries resources	3178
World Deep-sea fisheries	2962
Marine resources - Mediterranean and Black Sea	2867

Fig. 2.5a Top landing pages (2007 – 2020)

Figures 2.5a and 2.5b show the sessions per "landing" page, those pages which are accessed by users through textual links, banners or others references, including search engine results. In Figure 2.5a, the Home page is the main entry point, followed by the Tuna Resources and Fisheries pages, the Fisheries Search, and Concepts and Definitions.

Top landing pages (2015 - 2020)

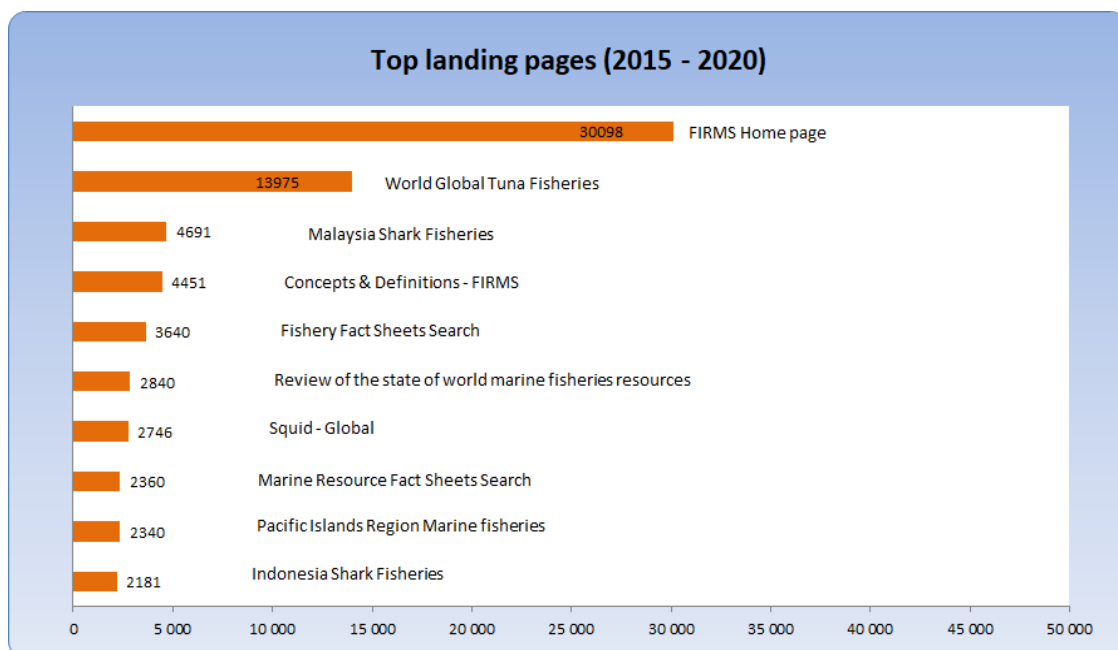| Page	Sessions
FIRMS Home page	30098
World Global Tuna Fisheries	13975
Malaysia Shark Fisheries	4691
Concepts & Definitions - FIRMS	4451
Fishery Fact Sheets Search	3640
Review of the state of world marine fisheries resources	2840
Squid - Global	2746
Marine Resource Fact Sheets Search	2360
Pacific Islands Region Marine fisheries	2340
Indonesia Shark Fisheries	2181

Fig. 2.5b Top landing pages (2015 – 2020)

The order of the top landing pages has changed most recently, as shown in Figure 2.5b summarizing the last 5-year period (2015–2020). "World Global Tuna Fisheries", "Malaysia Shark Fisheries", "Pacific Islands Region Marine Fisheries", "Indonesia Shark Fisheries", and "Squid – Global" have grown, while "Swordfish - Mediterranean Sea" and "Tuna and tuna-like species – Global" decreased.

Regarding the recent release of the FIRMS **Stocks and Fisheries map viewer** (http://firms.fao.org/firms/stocks-fisheries-map-viewer monitored in Google Analytics since February 2017), the following is observed: i) a higher average session duration, ii) a higher ratio of pages per session, and iii) it has become within the top ten landing pages for the period 2017-2020.