

EMODnet Secretariat progress update – 3rd Quarter 2021

This report provides an update of EMODnet progress accumulated over the third quarter of 2021, and is based on the quarterly progress reports of the different EMODnet projects currently running (i.e. seven Thematic lots, and one Data Ingestion Portal) supplemented with updates from the EMODnet Secretariat. The summary below constitutes the nineteenth update since the start of the EMODnet Development Phase III (2017-2021), and refers to all activities developed within EMODnet for the period July-August-September 2021.

EMODnet progress overview

Common progress highlights

Following the EMODnet Conference and Jamboree in June 2021, for legacy purposes, the B2match platform and Virtual Exhibition remain live until November 2021. For future reference, links to key Conference resources will be added to the EMODnet Central Portal. The EMODnet Open Conference Report will be made available via the EMODnet Central Portal website.

Adding to the series of videos illustrating the fundamental role of EMODnet in society, the Secretariat is finalizing two more videos: EMODnet for civil society and EMODnet for tourism. They will be made available on the EMODnet website under the menu “Communication” in the [Video Gallery](#).

After the repatriation of the Central Portal to the EU domain (emodnet.ec.europa.eu) in July 2021, further efforts went to the centralisation process. This means that in the future, EMODnet data and data products from all thematic portals will be accessible through one single point of access on the EU domain emodnet.ec.europa.eu.

At the end of August, the EMODnet monthly News Digest moved from MailChimp to News Room as required under the EU repatriation rules. Because MailChimp will not be continued further, everyone, including those who were subscribed before, are advised to confirm their subscription or subscribe again to News Room at “[Subscribe to our monthly newsletter](#)”.

During this quarter, the 15th Steering Committee (SC), 10th Technical Working Group (TWG) and 6th Marine Knowledge Expert Group (MKEG) meetings of EMODnet took place from the 8th to the 10th of September 2021. The meetings were hybrid with members both at the InnovOcean site in Ostend (Belgium) and online. The minutes, actions lists and presentations are available on the Maritime Forum: [15th Steering Committee](#), [10th Technical Working Group](#) and [6th Marine Knowledge Expert Group](#).

Specific progress and achievements of the thematic data assembly groups

- A number of new datasets have been added to **EMODnet Bathymetry** due to the contribution of 19 data providers. As well, the number of Composite DTM has increased from 207 to 343, thanks to the contribution of 7 data providers. EMODnet Bathymetry started to communicate and exchange information with the Caribbean Sea region. Thanks to this, some of the new CDTMs concern the Caribbean Sea region which was recently added to the EMODnet catalogue. In the meantime, a new version of the GLOBE software, used by the data providers and regional coordinators for the processing of data, has been released (new version 1.18.5). A dedicated training workshop on the use of GLOBE for data contributors took place in September. The EMODnet Bathymetry technical

team and EMODnet Central Portal team meet regularly to discuss the migration of the Bathymetry thematic lot to the Central Portal as part of the centralisation.

- **EMODnet Biology** initiated, over the Summer, an inventory of historical data resources of potential interest. After this, a selection of these historical datasets will be used to test online citizen science platforms, where the datasets can potentially be digitized. EMODnet Biology has expanded its collaborations, outside of the current consortium, and made agreements with the Germany-based *Data Publisher for Earth and Environmental Science PANGAEA* for sharing their data in EMODnet. PANGAEA is now in the process of compiling an inventory of their marine biological data to be shared. First steps have also been initiated with European Seabirds At Sea (ESAS) into making ESAS data compatible with the DarwinCore standard. A new data harvest was carried out in July, which added 36 new datasets and updated 24 existing ones. The total number of available occurrence records is now 26.5 million, originating from 1.143 datasets. The following products have been developed, or are under development: “Presence and absence of benthic species” for the Mediterranean and Black Sea, products combining biological data with environmental noise and ship densities and seabed habitats. The zooplankton products have been updated. The tools allowing access to data from multiple EMODnet lots have been improved (see [GitHub for more information](#)). The EMODnet Biology technical team and EMODnet Central Portal team meet regularly to discuss the migration of the Biology thematic lot website and its data access and retrieval services to the Central Portal.
- During this quarter, **EMODnet Chemistry** registered, on average, an increase of circa 16.000 new datasets per month. The guidelines of “[EMODnet Visualization products for Sea Floor Litter data](#)” were published on the portal website, and the video *EMODnet Chemistry: the treasure box for marine strategies* has been released on YouTube with subtitles for nine different languages (EN, FR, RU, ZH, ES, IT, NL & DE). EMODnet Chemistry is going to act as a data platform for marine litter data within HELCOM. EMODnet Chemistry has also established contacts, during the IOC-UNESCO Ocean Best Practices System workshop, to evaluate how EMODnet can contribute to the Global Partnership on Marine Litter Digital Platform (GPML). An interesting use case has been shared via the DOI interface: “Artistic/musical creation based on oceanographic data”.
- **EMODnet Data Ingestion** recorded 130 new submissions during this quarter, bringing the total number of submissions to 1.063. Additionally, 101 submissions were processed and published “as is” and 36 submissions were processed for uptake in European marine data infrastructures which feed into EMODnet. Progress was made, in cooperation with EMODnet Physics, towards identifying and convincing more Near Real Time (NRT) operational oceanography sources to get connected to the European ocean data exchanged (e.g. dialogue has started with SBM Offshore, the NAUTILOS project and the Italian Arctic Data Center (IADC)). Also, the current Viewing Service of Data Ingestion has been upgraded to provide more visibility to the NRT platforms/sites. During the plenary meeting of EMODnet Data Ingestion, two interesting developments were discussed: (i) EMODnet Human Activities proposed to offer Member States the option to submit their completed MSPs (Marine Spatial Plans) through Data Ingestion for uptake by EMODnet Human Activities, a solution which was welcomed and adopted by the EU MSP committee; and (ii) EMODnet Chemistry has promoted a similar approach for Marine Litter reporting by the Member States, a proposal which was supported by EU JRC and TG ML (Technical Group on Marine Litter).
- During the reporting period, **EMODnet Geology** updated all of its data products (Seabed substrate information, Pre-Quaternary seafloor geology, Geomorphology, Multiscale Quaternary, Marine minerals, etc.) and released a few new ones (Coastal vulnerability map, Landslide susceptibility map, etc.). Data of the new sea area, the Caspian Sea, was included to all the products, except the ones on submerged landscapes, which will happen at a later stage. Geology delivered a new case-study “*Exploring the sustainability of historic datasets to produce robust quantitative sediment maps*”.

- **EMODnet Human Activities** updated seven datasets: Dredging, Natura 2000 areas, State of bathing waters, Fish sales, Finfish aquaculture, Ocean energy projects and test sites, Urban water waste discharge points. The Route density maps were also updated this quarter, including data up until September 2021. The EMODnet Human Activities team is now also fully available to assist Member States in preparation of their MSP datasets as confirmed by DG MARE and the EU MSP platform.
- **EMODnet Physics** has published updates for 20 of its products covering the following parameters: Salinity, Temperature, Wind, Wave, Sea level, River flow, Current and Carbon dioxide. One of the other ongoing activities is the ingestion of data from the [ARICE](#) project and the [Eurofleets+](#) project. During this quarter EMODnet physics has also guided partner organisation OGS to set up and deploy an [ERDDAP instance](#) which is now available for use.
- In this quarter, **EMODnet Seabed Habitats** has added 2.941 survey sample points and 30 individual habitat maps from surveys. This represented an increase of 0.62% in sample points and a 3% increase in individual habitat maps. In terms of products, a new version of the EUSeaMap, EUSeaMap 2021, was developed and also six new composite products were released: Biogenic substrate in Europe, Live hard coral cover in Europe, Seagrass cover in Europe, Macroalgal canopy cover in Europe, EUNIS v2007 habitats in the northeast Atlantic and Coralligenous and other calcareous bioconcretions in the Mediterranean. Also noteworthy is that HELCOM will use EMODnet Seabed Habitats' EUSeaMap for the spatial pressure and impact assessment of the next "*State of the Baltic Sea*" report. Seabed Habitats has also worked closely with OSPAR assessment leaders on the extent of physical damage to the seabed for their next status report.

EMODnet data portals usage

User visit statistics

User statistics (*i.e.* number of 'unique' page views and average visit duration) are collected through an EMODnet Matomo instance managed by VLIZ and is automated for the following progress/monitoring indicators: Visibility & Analytics for web pages; Visibility & Analytics for web sections; and Average visit duration for web pages (note that Matomo will gradually be replaced by 'Europa Analytics' as thematic portals are integrated in the Central Portal). The resulting graphs for each EMODnet thematic lot as well as the Central Portal can be viewed in the gallery at the end of this report. Statistics for the Data Ingestion portal are now also available. Unless stated otherwise, page views are average per day and trends are compared to the previous quarter.

- A decrease in the page view trends was noted for **EMODnet Central Portal**. The Homepage was the most visited one with, on average, 44 daily pageviews, followed by the Thematic lot entry-pages (between 10 and 1 pageviews). The other pages (Reports, Portfolio and News) received between 1 and 2 pageviews on average per day. Timewise, users have spent more time on the Reports section (45 seconds), followed by the Portfolio (41 seconds) and the Thematic entry pages (between 22 and 42 seconds, on average around 33 seconds).
- For **EMODnet Data Ingestion**, an average of 10 daily pageviews for the Homepage was observed, which is slightly less than the previous quarter. On average, the users spent 22 seconds on the Homepage.
- **EMODnet Bathymetry** recorded a slight decrease in the average daily pageviews, with the most visited page still being the Viewing and Download service webpage (274 instead of 352 of previous quarter). On average, the users spent between 6 seconds (Homepage) and 1min48sec (Viewing and Download Service) on the respective webpages.
- Globally, **EMODnet Biology** had, this quarter, stable trends with small decreases in the daily average pageviews. The Homepage was the most visited one (12) followed by the Map viewer (6). On average

users spent between 1min6sec (Map viewer) and 8min48sec (Selection and Download Toolbox) on the various website pages.

- This quarter, **EMODnet Chemistry** recorded a decrease in the average daily views on the portal. The most visited page was the Homepage (37), followed by the Data (8) and Products (7) pages. Users spent, on average, less than 1minute on the pages. The Data and Products pages were the ones visited the longest, with, respectively 37 and 35 seconds.
- The trends for most of the **EMODnet Geology** pages, in terms of average pageviews, was in decline, except for the Contribution page which saw an increase (from 1 last quarter, to 3 this quarter). The most visited page was the Homepage with an average of 18 daily pageviews. Time spent on the pages by the users ranged from 6 seconds (Contribute page) to 40 seconds (Homepage).
- In this quarter, **EMODnet Human Activities'** most viewed pages were the View Data page, with 64 daily average pageviews, and the Homepage with 25 pageviews on average. The users spent on average between 20 seconds (Search Data Page) and 1.6minutes (View Data Page) on the webportal.
- **EMODnet Physics** recorded a decrease in the pageviews of their portal. The most viewed pages were the Map Viewer (7) and Catalogue (4). Users spent most of their time on the Mapviewer (11 seconds) and the catalogue (17 seconds) webpages.
- During the third quarter of 2021, the **EMODnet Seabed Habitats** portal recorded stable trends with a slight increase for some pages in the daily pageviews. The Map Viewer and Homepage were the most visited pages, with respectively 26 and 14 daily pageviews. The Data Submission Process page recorded a major increase in its daily pageviews, going from 1 to 6 daily page views. On average users spent between 22seconds and 1.6minutes. The page on which users spent the most time was the Web Services page (1.6minutes), followed by the Documents and Data Submission Process pages (1.4 minutes).

Statistics on usage of EMODnet portals¹

a. *Number of data downloads*²:

- **EMODnet Bathymetry** recorded a slight decrease in the number of downloaded CDIs (from 435 to 348, i.e. -20%) compared to the previous quarter, while the number of users was almost the same (30 now compared to 32 in the previous quarter).
- The number of data download requests for **EMODnet Biology** was almost the same as the previous quarter (from 106 to 100).
- **EMODnet Chemistry** recorded a huge decrease in the number of CDI data files requested compared to the previous quarter (from 87.419 to 39.536, i.e. -54,77%). The number of users also lowered considerably from 27 (previous quarter) to 16 (this quarter).
- **EMODnet Data Ingestion** recorded 382 data download transactions during this quarter, which, compared to the second quarter of 2021, represents a decrease of 69%.
- **EMODnet Human Activities** recorded the usual summer decrease in usage. The downloads and WMS requests went down, whereas the WFS requests went up. Users were more interested in the Wind Farms datasets (277 downloads).

¹ Disclaimer: please note that percentages given can reflect small as well as large changes in the number of data and data product downloads. Note: Most thematic groups assigned reported decreases in the number of downloads to the COVID-19 situation and summer period. In most cases however it is difficult to provide an actual explanation for the downloading behaviour of users.

² For portals which provided this information.

- **EMODnet Physics** recorded both increases and decreases in the number of manual downloads. The increase of interest was mostly noted for the Salinity data (5.697 this quarter compared to 1.593 last quarter, i.e. increase of 258%) and the Temperature data (increase of 153% with 9.792 downloads this quarter compared to 3.876 downloads last quarter).
- **EMODnet Seabed Habitats** recorded relatively stable trends in the data downloads with, however, a noticeable decrease in WFS requests.

b. Number of data product downloads³:

- The number of **EMODnet Bathymetry**'s downloaded data products slightly decreased this quarter in numbers (-34.35% decrease for the DTM tiles and -8.53% in HR-DTMs). The number of WMS requests is almost the same as the previous quarter.
- **EMODnet Biology** recorded a significant decrease in the downloaded data products this quarter (from 6 to 2 this quarter, i.e. -67%).
- A significant decrease was recorded by **EMODnet Chemistry** for the map visualisations (ranging from -68% to -97%). This decrease was also registered for the file download of a number of data products (from -28% to -44%). However, the download trend for the marine litter products is very positive with an increase of 85.37%.
- **EMODnet Geology** recorded a slight increase in usage per quarter except for this quarter.
- **EMODnet Human Activities** recorded their usual decrease in activities this summer. The Route Densities were downloaded only 400 times compared to 545 of last quarter (decrease of 27%). Whereas the Vessel Density products recorded a decrease of 37% in downloads (2.203 previous quarter to 1.385 this quarter).
- **EMODnet Physics** recorded a decrease in the number of map visualisations for all products, except for the Temperature and Salinity products which recorded a small increase compared to the previous quarter (increase of respectively 12% and 45%).
- **EMODnet Seabed Habitats** experienced substantial decreases in downloads, although the core products downloads, such as EUSeaMap, remained stable. The most downloaded data products were the Individual habitat maps from surveys (68.886 downloads, i.e. 14 decrease to last quarter).

Recent meetings and events

Due to the CoViD-19 pandemic, most meetings and events in the third quarter of 2021 continued to be organised online and/or attended remotely. A number of key meetings included the following:

- **EMODnet Bathymetry** organised an internal GLOBAL (software) training workshop (6 September) and they gave a general presentation on EMODnet at the IHO Baltic Sea Hydrographic Commission meeting.
- **EMODnet Biology**: BRIDGES-BS kick-off meeting (12 July), ODIN Black Sea (IODE) SG (14 July), and the UNEP/MAP meeting (2 September) on the 2023 Mediterranean Quality Status Report.
- **EMODnet Chemistry**: HarmoNIA Network meeting (1 July), Sulitest SDG 14 Working group (9 July), Meeting with UNEP/MAP (2 September) on the 2023 Mediterranean Quality Status Report, Workshop for SDG14.3.1 Data Portal and federated data system (7 September).

³ For portals which provided this information.

- **EMODnet Data Ingestion:** discussions with EO4SIBS (July and September 2021) for ADCP data submissions, meetings with various potential data submitters such as Oceana (6 July) and SBM Offshore (5 July) and CSIC (July and September).
- **EMODnet Geology** co-organised an external workshop with the Italian Geological Society (13 September) where a fluid emission database in the Italian Seas was presented.
- **EMODnet Human Activities** meeting with EMODnet Physics (2 July), and with DG MARE (16 July) with whom they discussed the support Human Activities could provide in the MSFD process on oil spills.
- **EMODnet Physics:** ARICE project data (6 July), SHAREMED WS and REMTECH meeting (24 September) and Polar Data Forum (22-24 September).
- **EMODnet Seabed Habitats:** meetings with Tehran convention (7 July), Mission Atlantic and One Ocean Hub projects (12 July), attended the SGEM 2021 (June and July) conference.

Upcoming EMODnet meetings and events

The main EMODnet meetings planned for the coming period are:

- One-on-One meetings between the Central Portal team and each of the Thematic lots of EMODnet to explain, plan and move forward with the Centralisation process of EMODnet.

More information

More information about EMODnet's resources are available at the following links:

- EMODnet Data and Data product portfolio: <https://emodnet.ec.europa.eu/en/data-portfolio>
- EMODnet for Business brochure: <https://emodnet.ec.europa.eu/en/emodnet-business-brochure>

Thematic portals

- EMODnet Bathymetry - www.emodnet-bathymetry.eu
- EMODnet Geology - www.emodnet-geology.eu
- EMODnet Seabed habitats - www.emodnet-seabedhabitats.eu
- EMODnet Physics - www.emodnet-physics.eu
- EMODnet Chemistry - www.emodnet-chemistry.eu
- EMODnet Biology - www.emodnet-biology.eu
- EMODnet Human Activities - www.emodnet-humanactivities.eu

Sea-basin Checkpoint portals

For an overview of and access to each of the Sea-basin Checkpoint portals, visit:

<https://emodnet.ec.europa.eu/en/checkpoints>

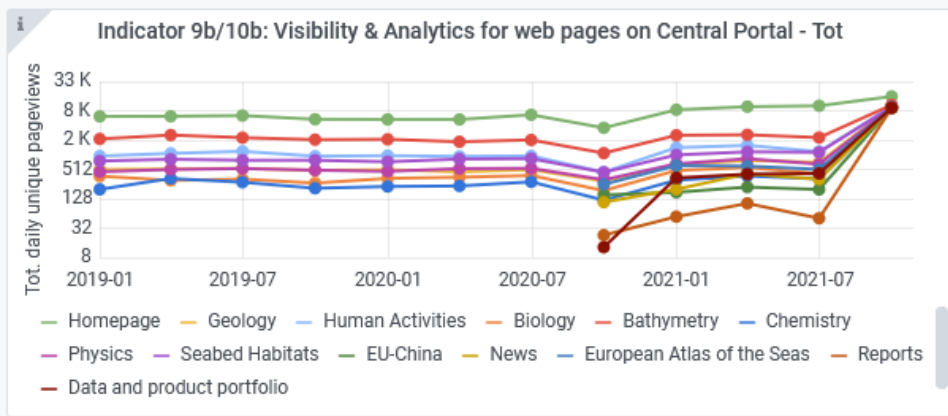
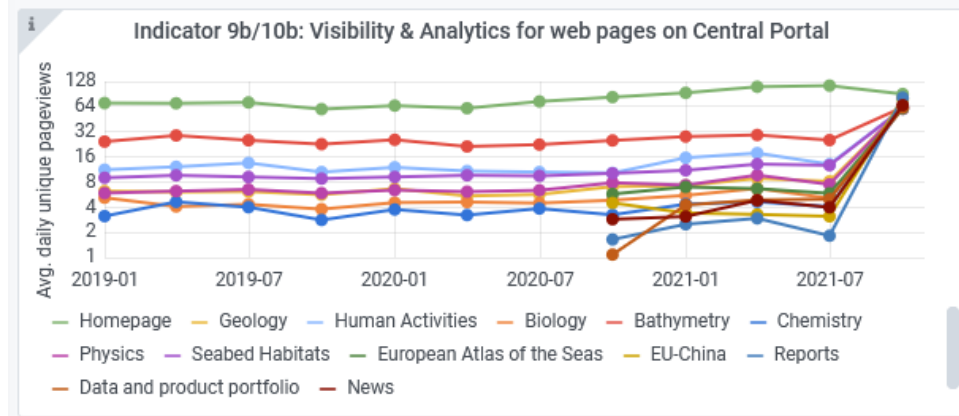
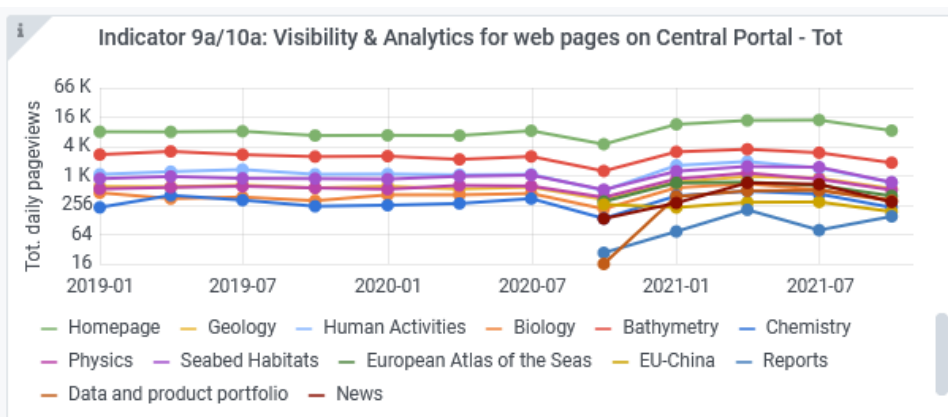
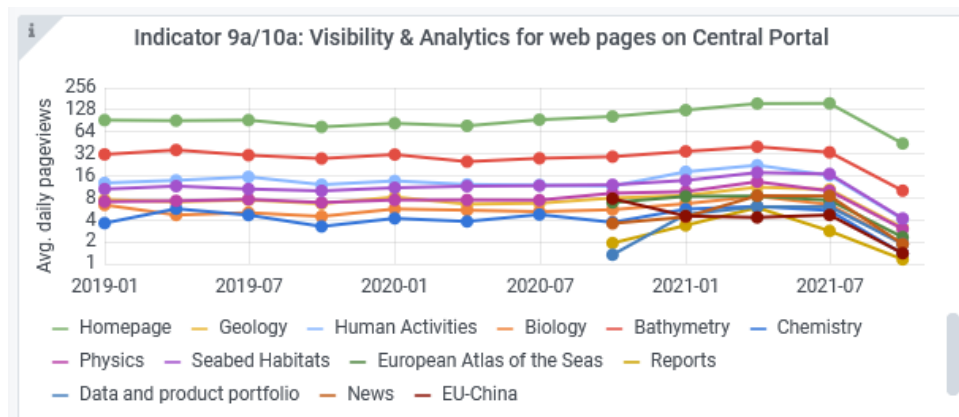
- North Sea checkpoint - <https://emodnet.ec.europa.eu/en/checkpoint/north-sea>
- Mediterranean checkpoint - <https://emodnet.ec.europa.eu/en/checkpoint/medsea>
- Arctic checkpoint - <https://emodnet.ec.europa.eu/en/checkpoint/arctic>
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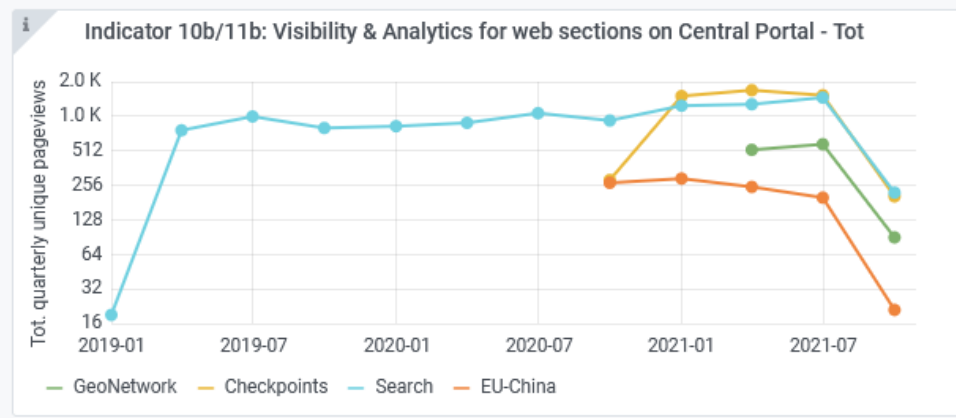
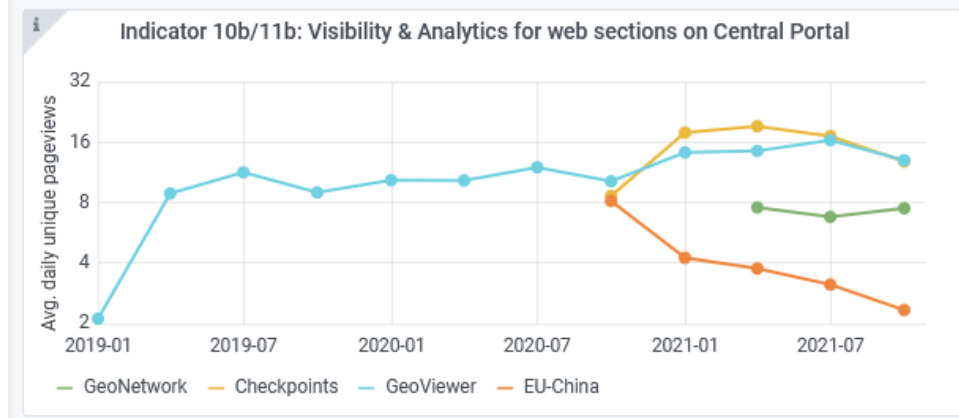
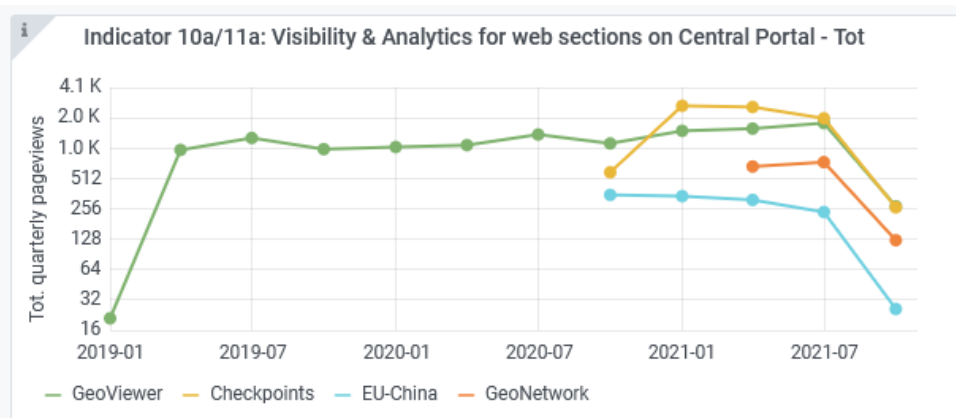
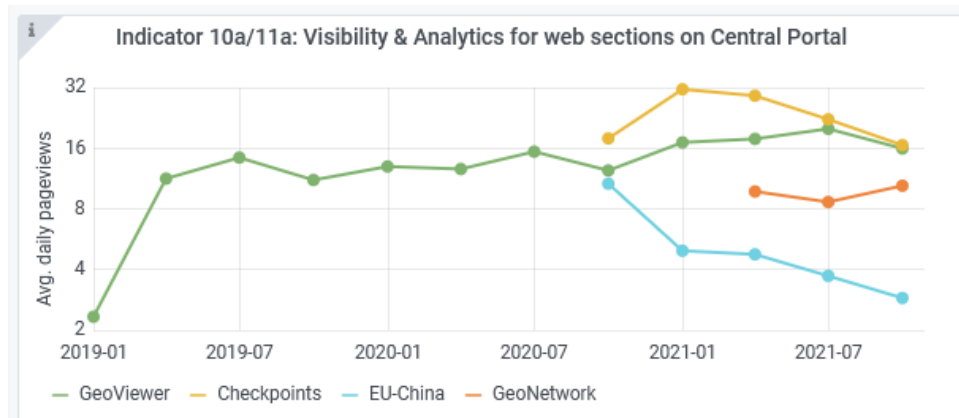
Data Ingestion Service

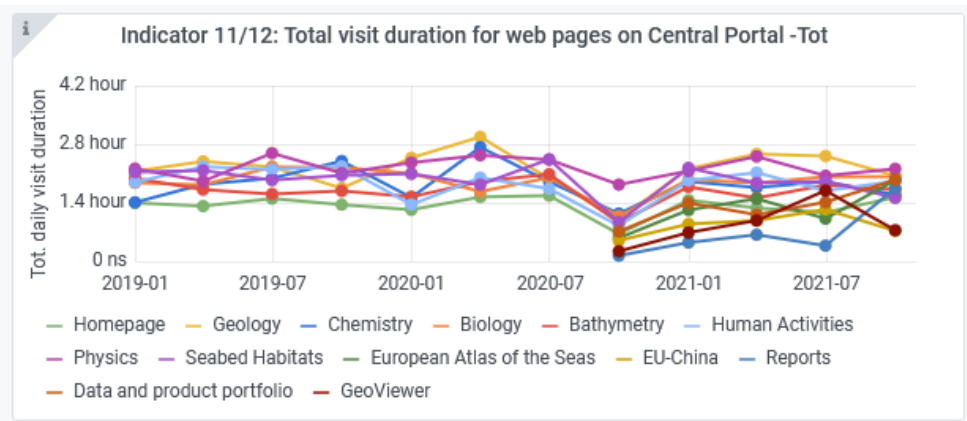
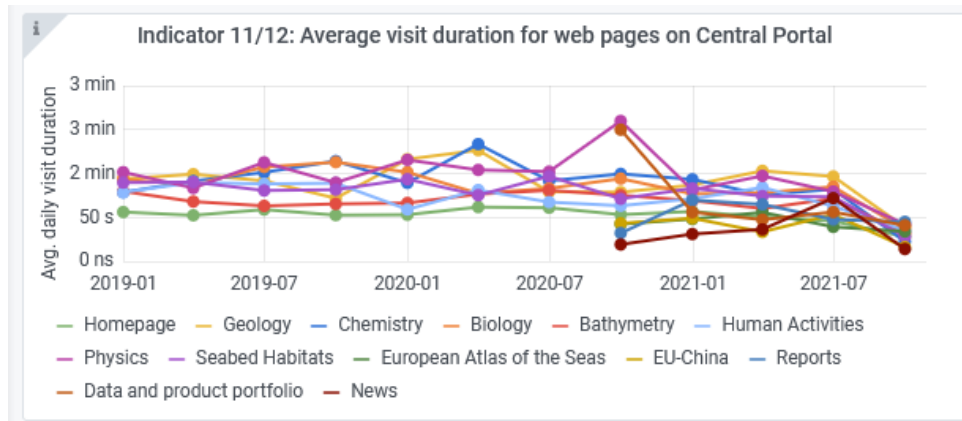
- Ingestion and safe-keeping of marine data - www.emodnet-ingestion.eu

Gallery

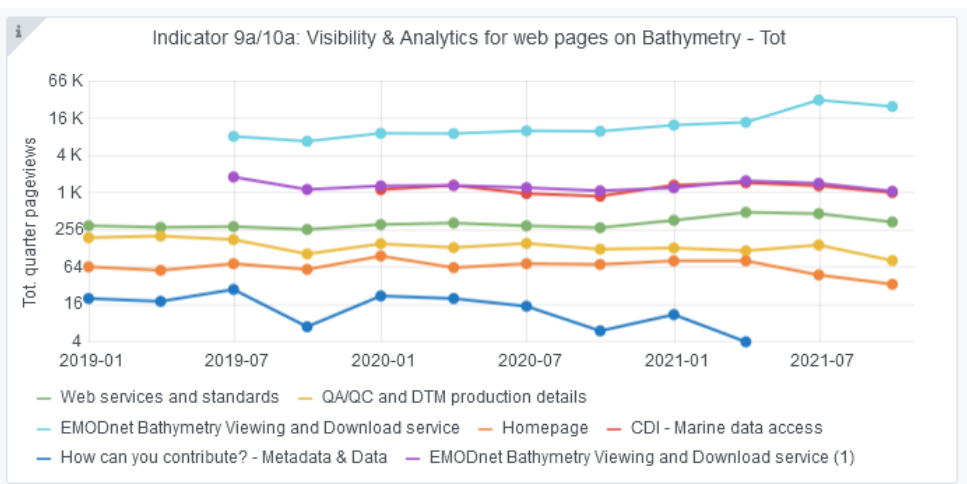
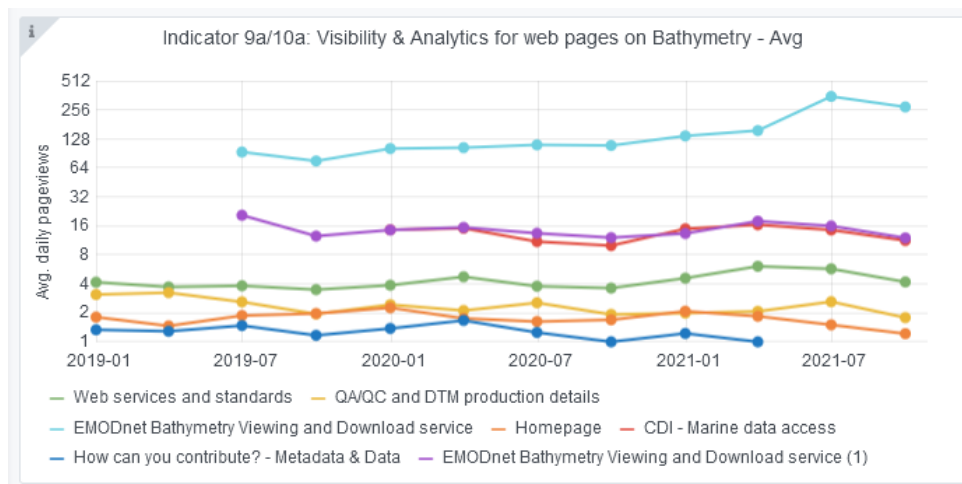
Central Portal

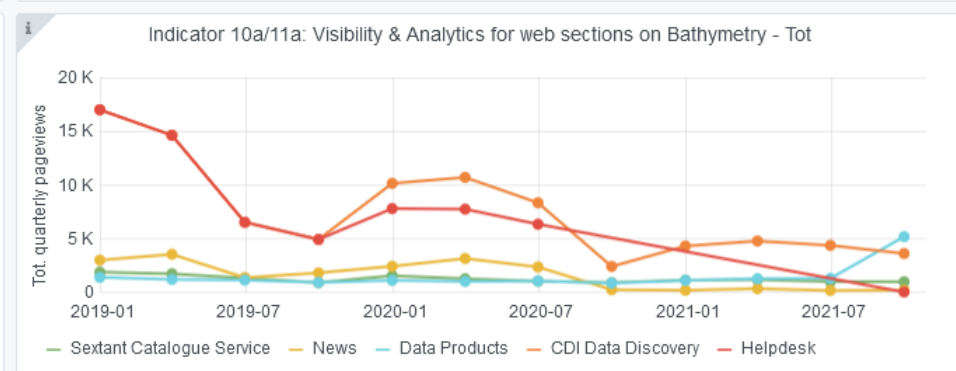
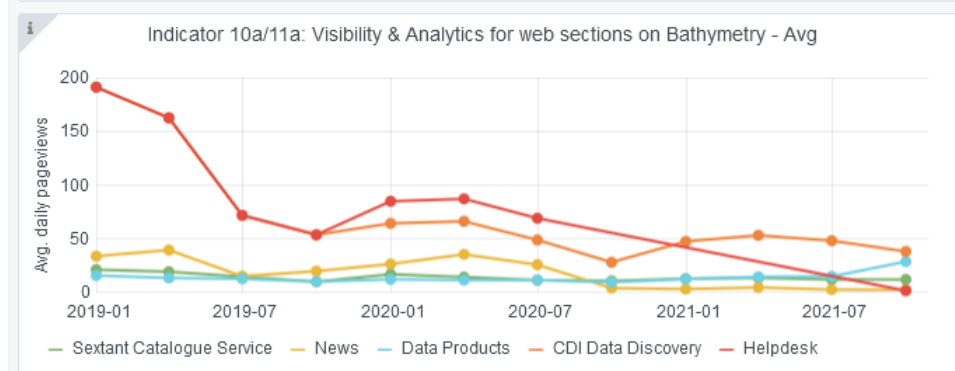
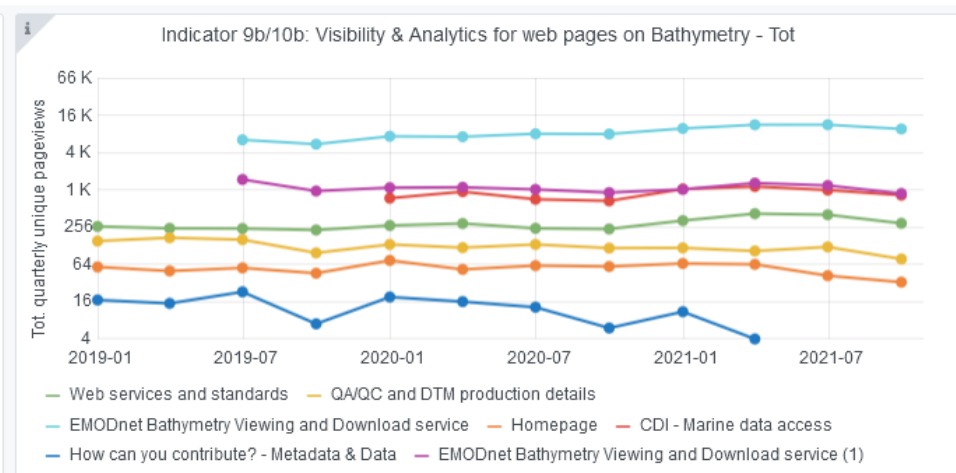
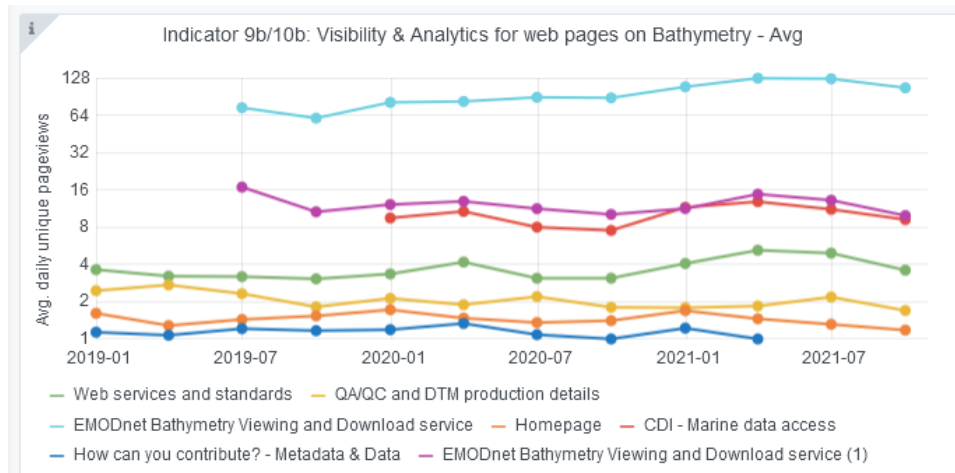


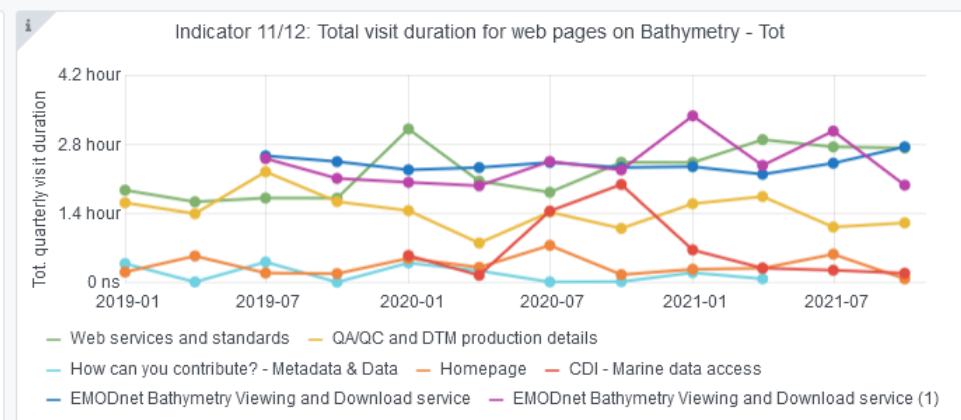
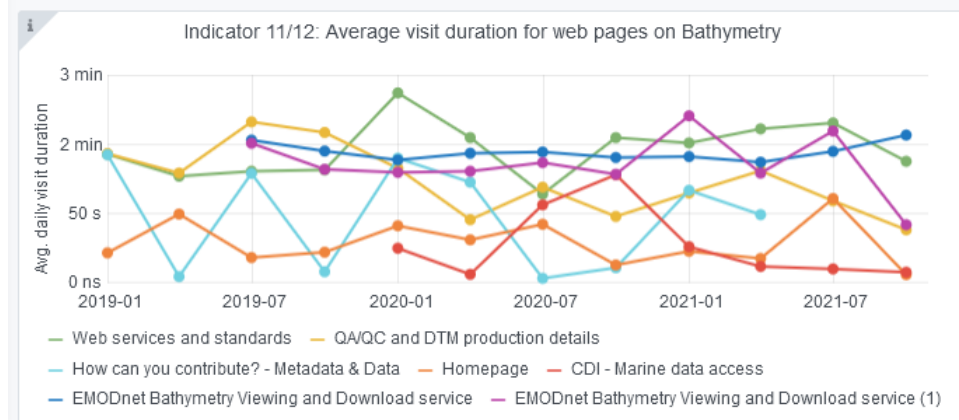
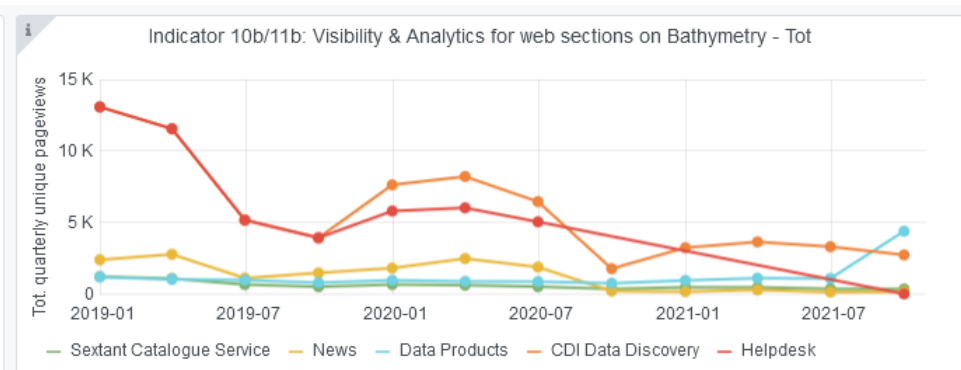
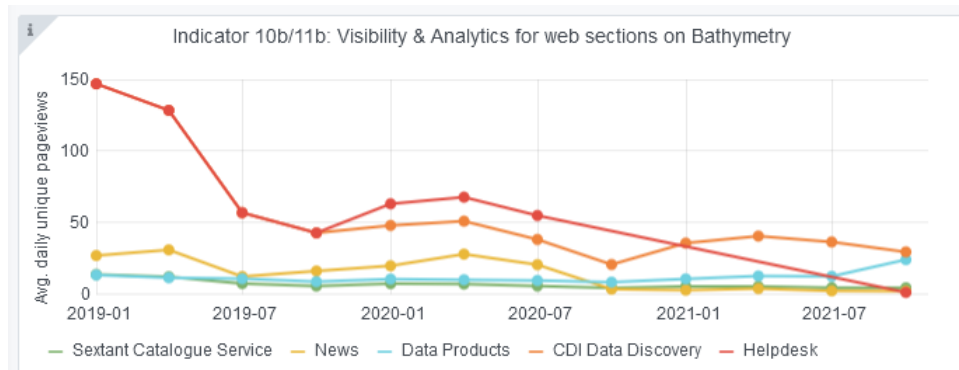




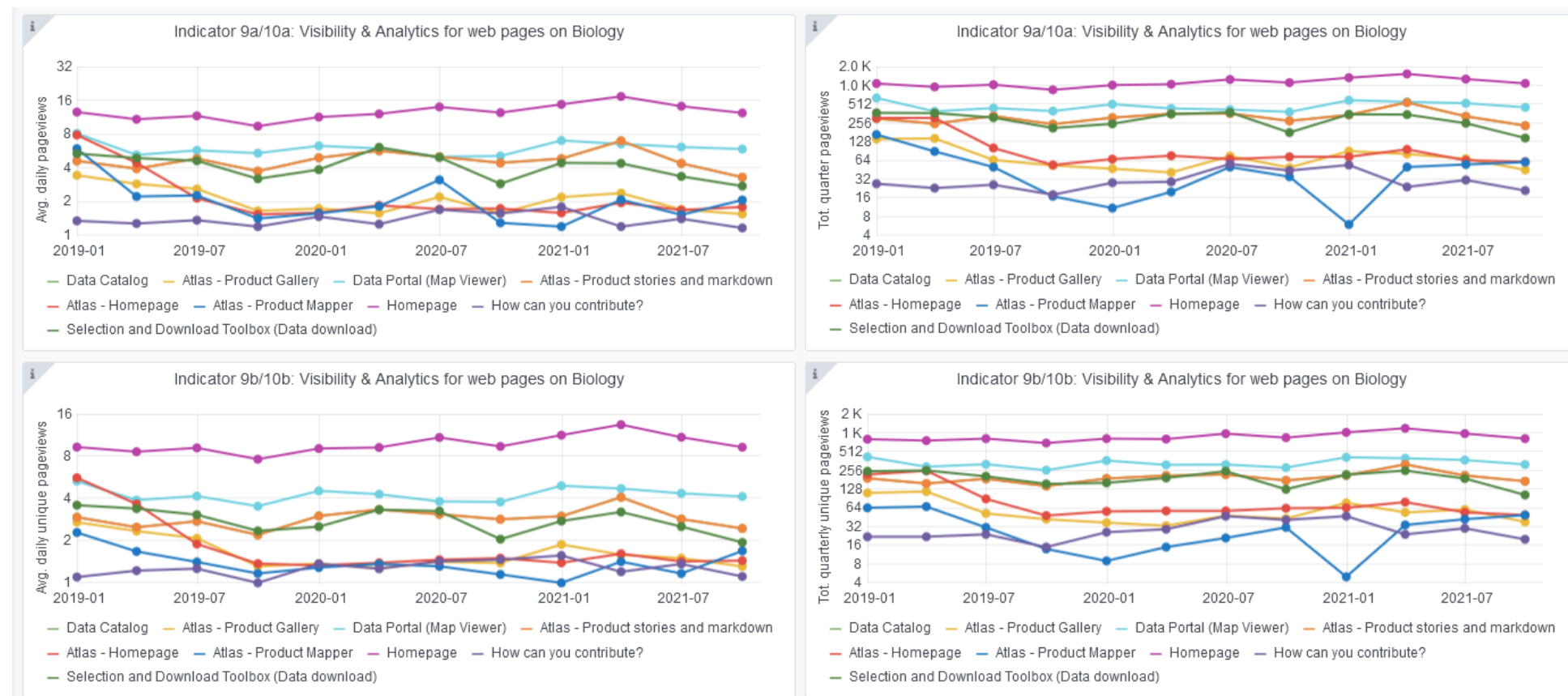
Bathymetry

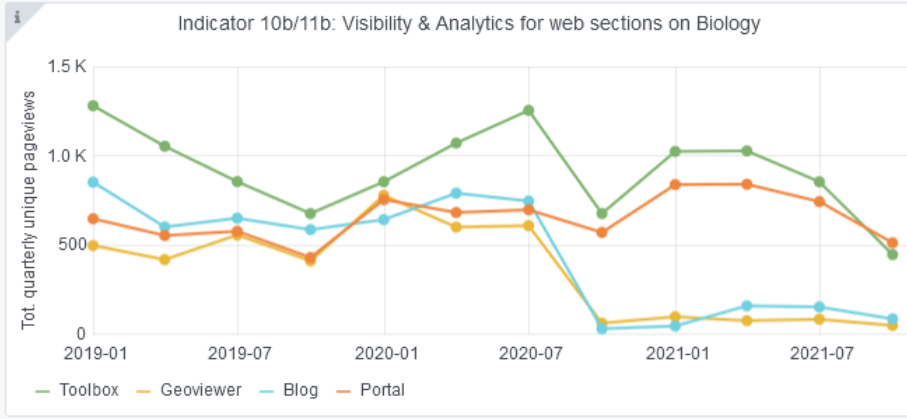
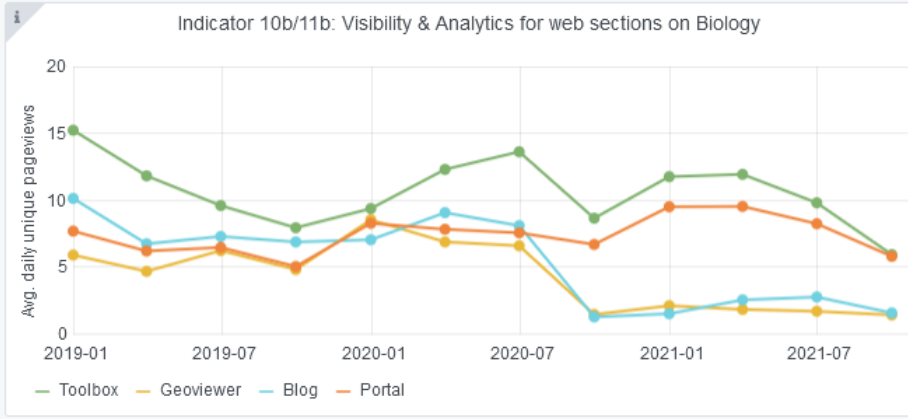
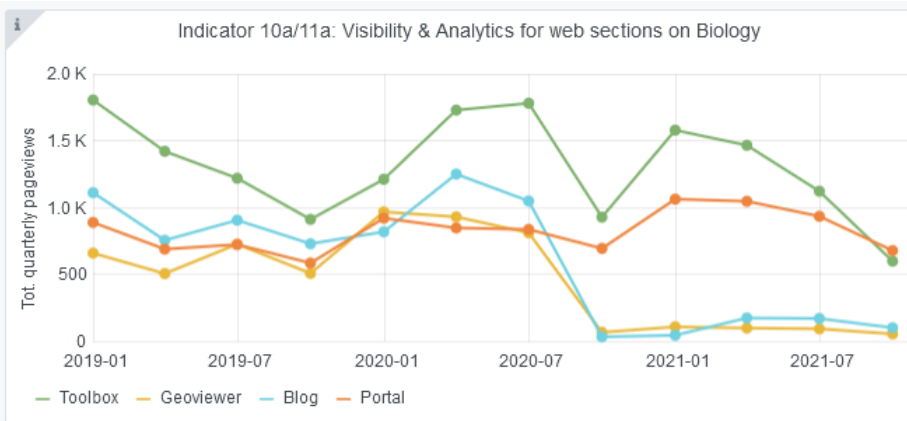
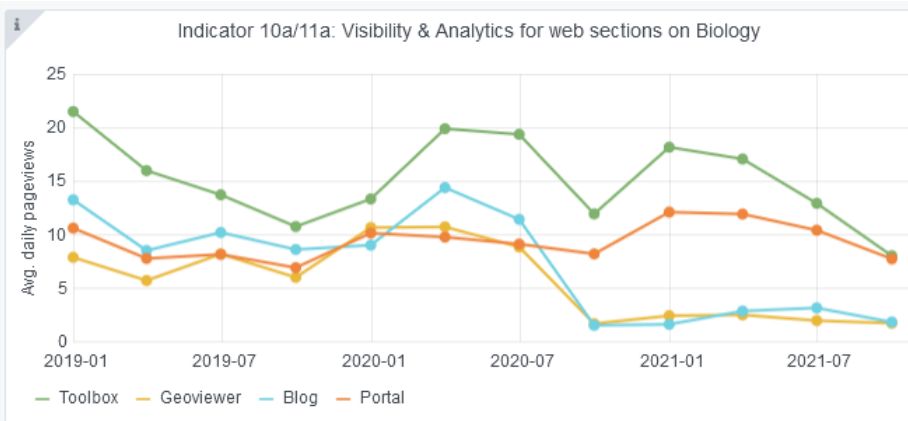


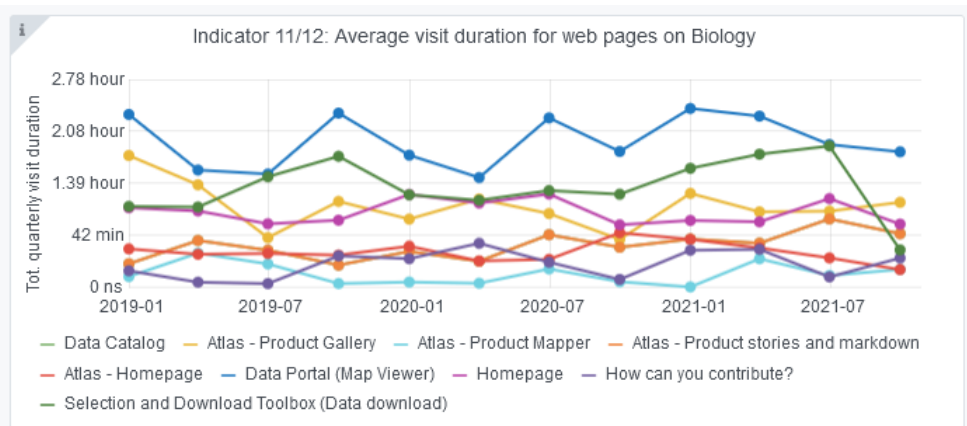
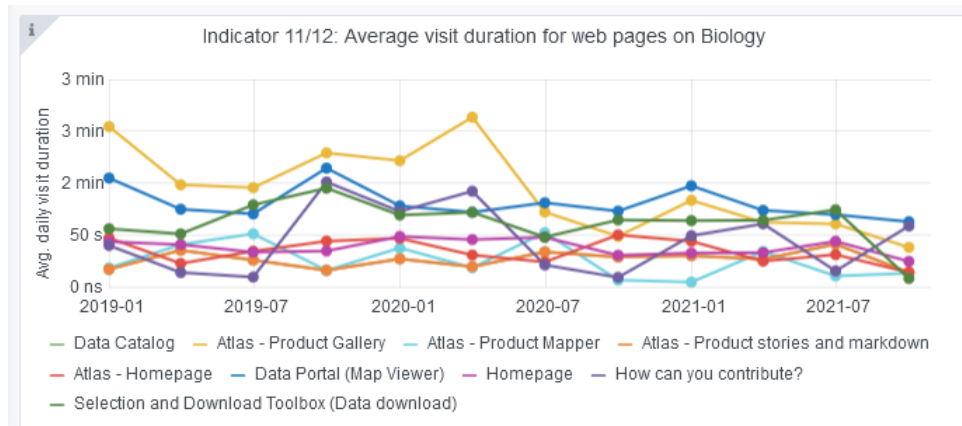




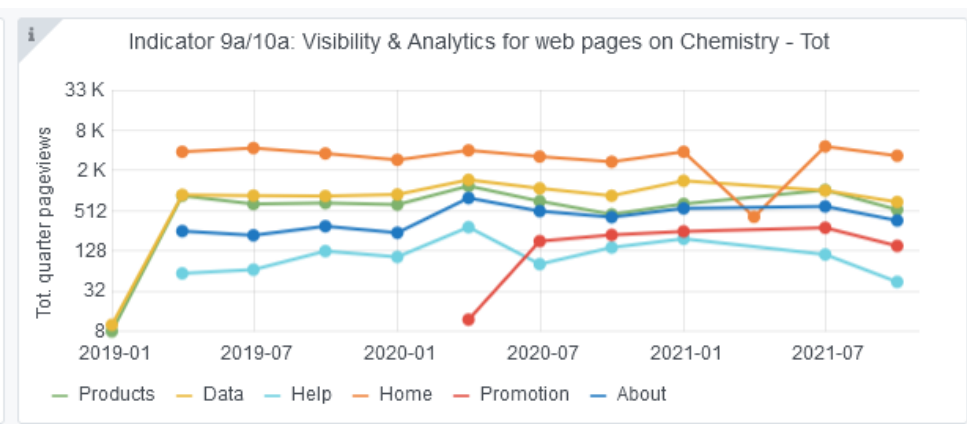
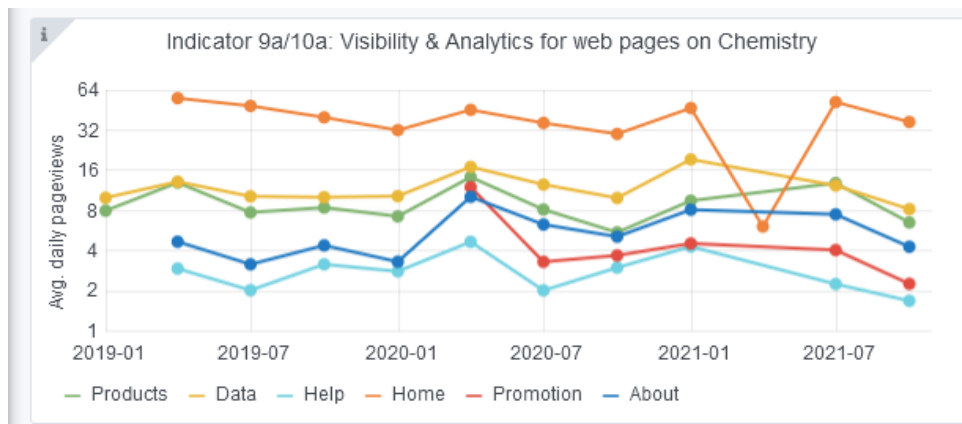
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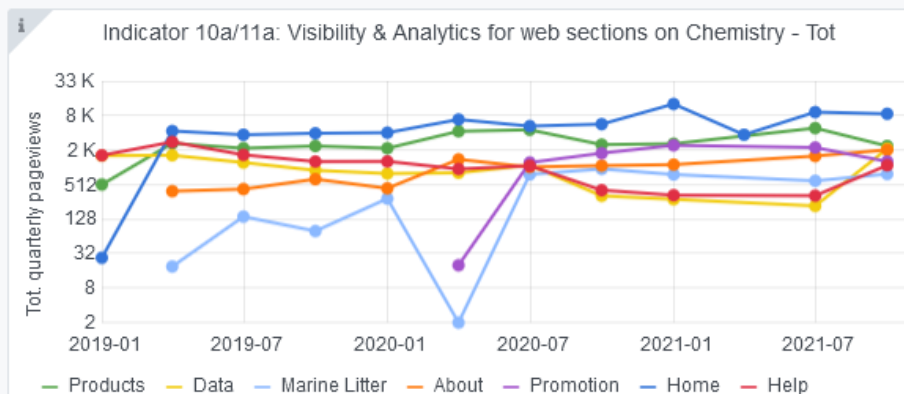
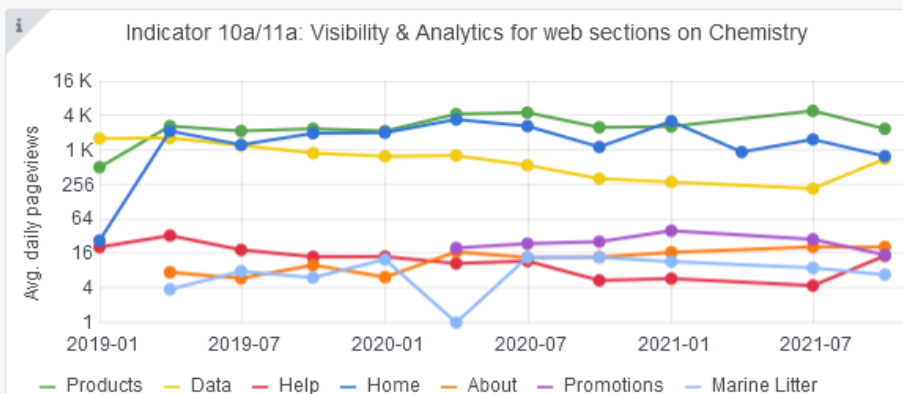
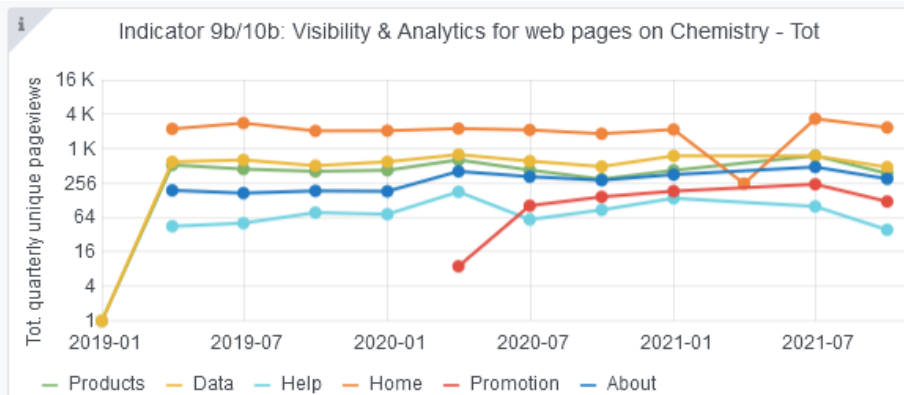


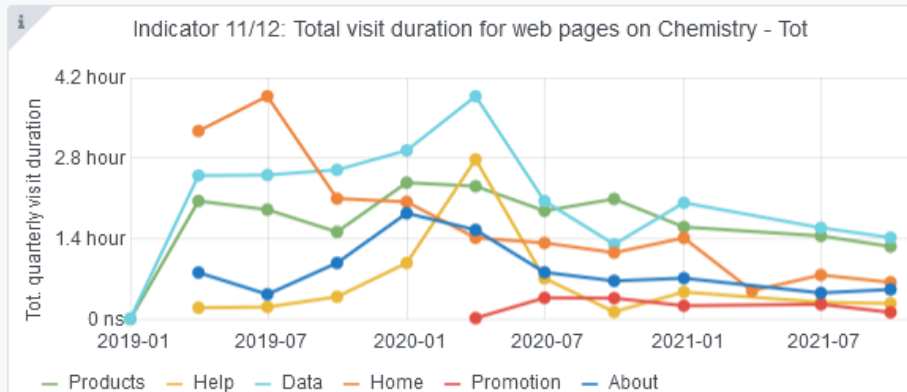
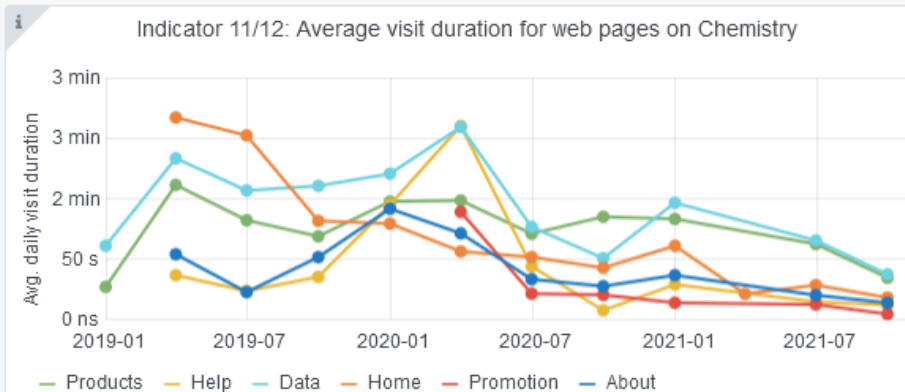
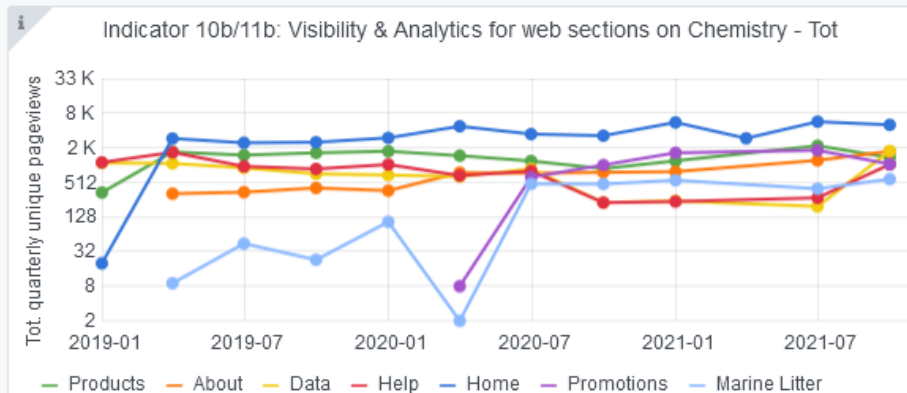
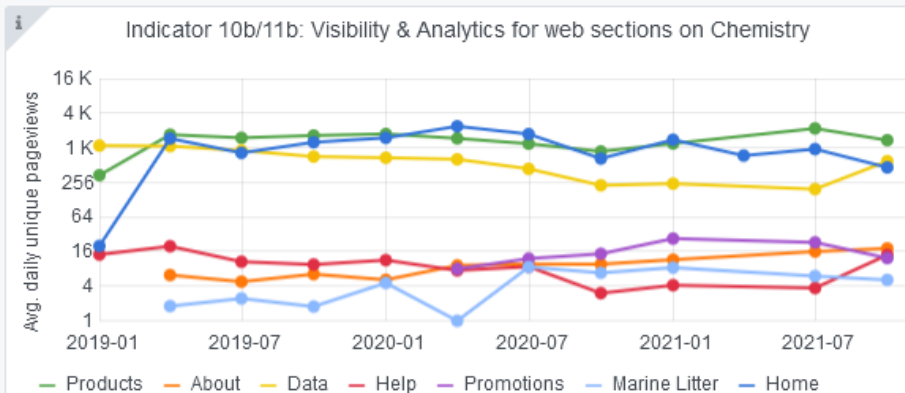




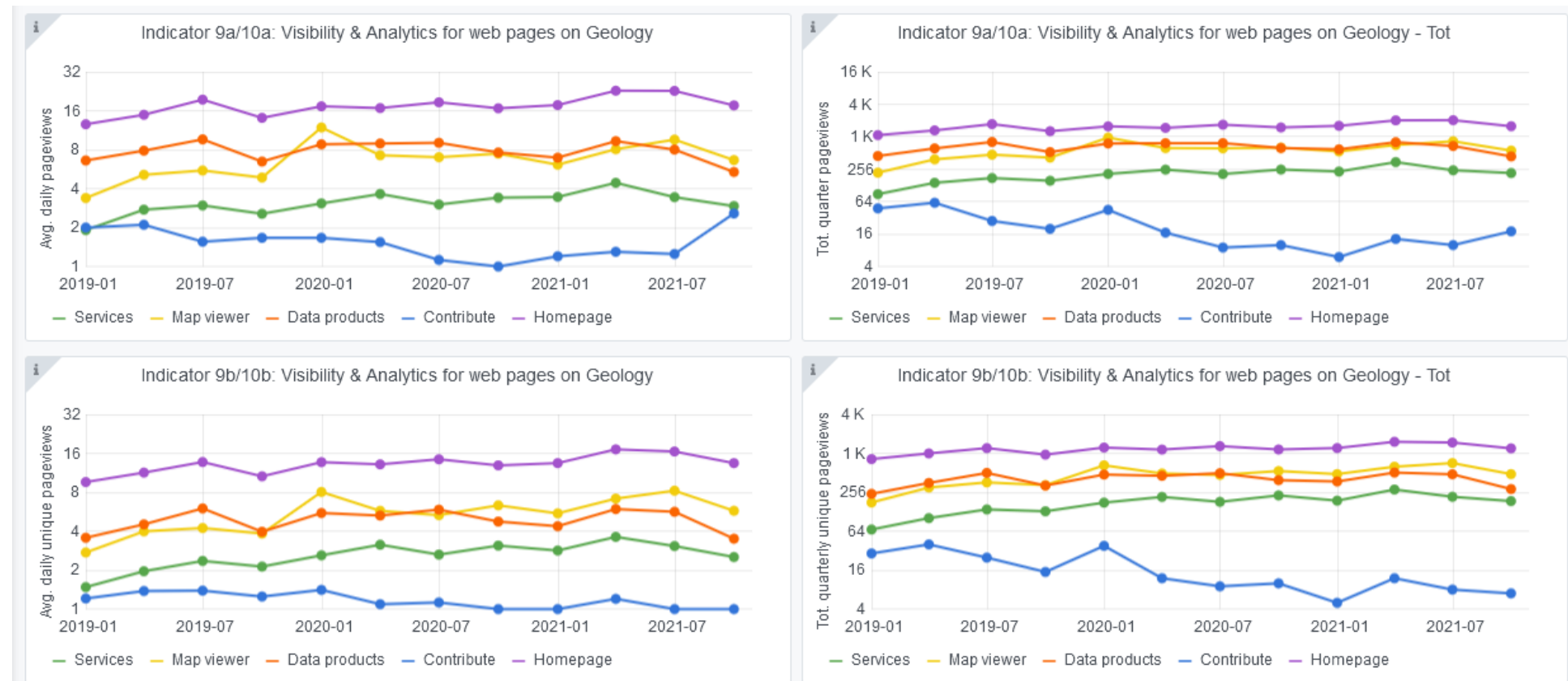
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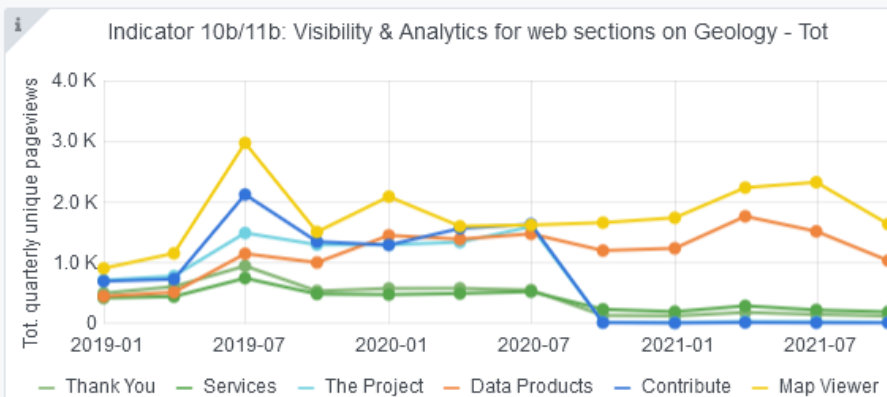
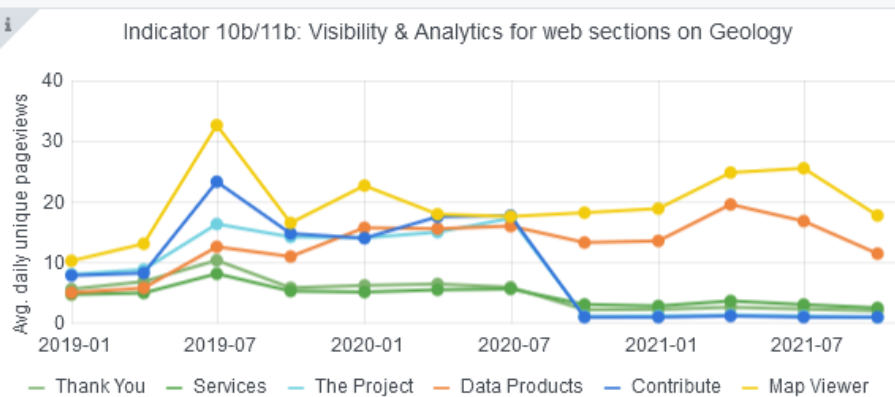
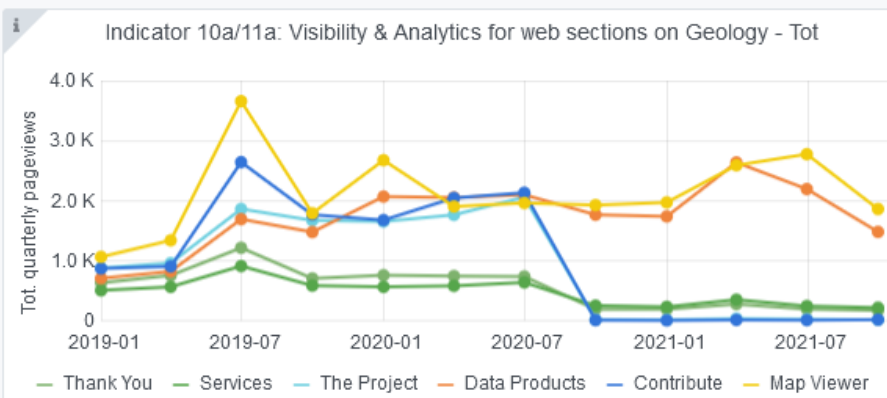
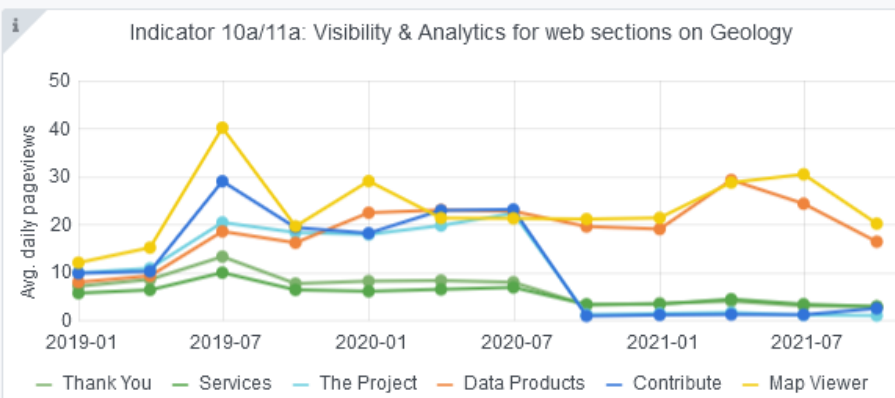


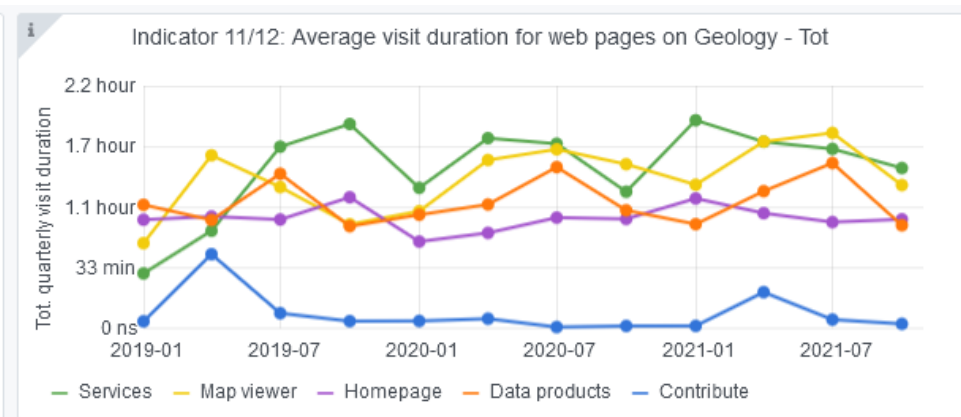
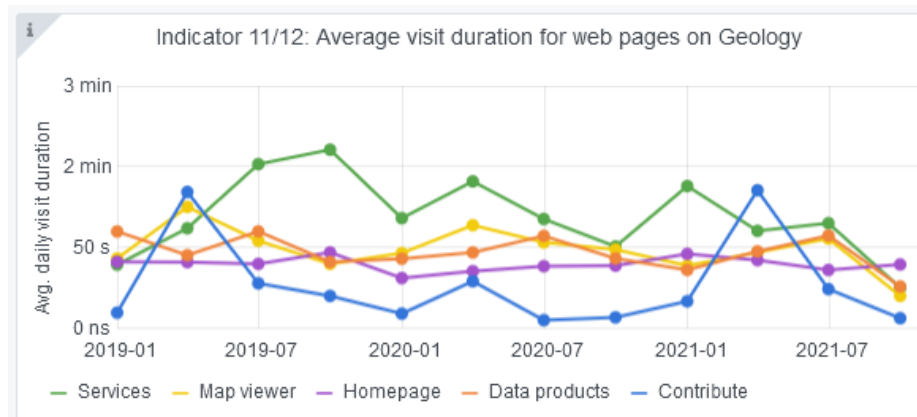




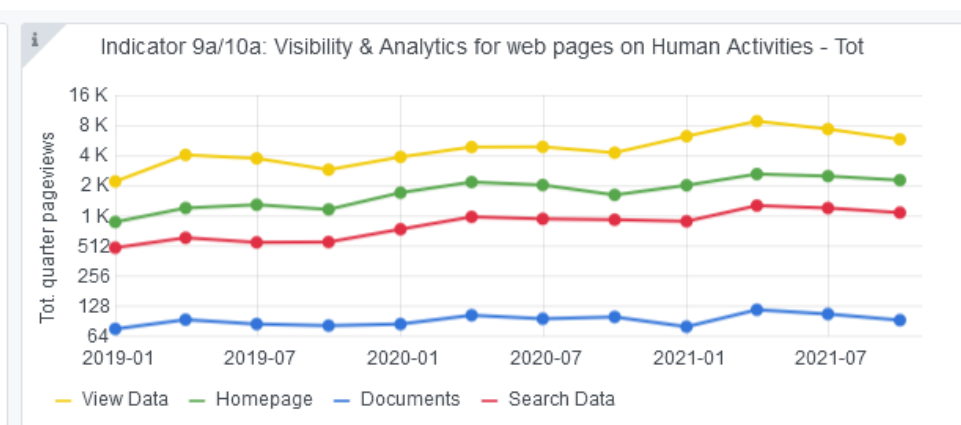
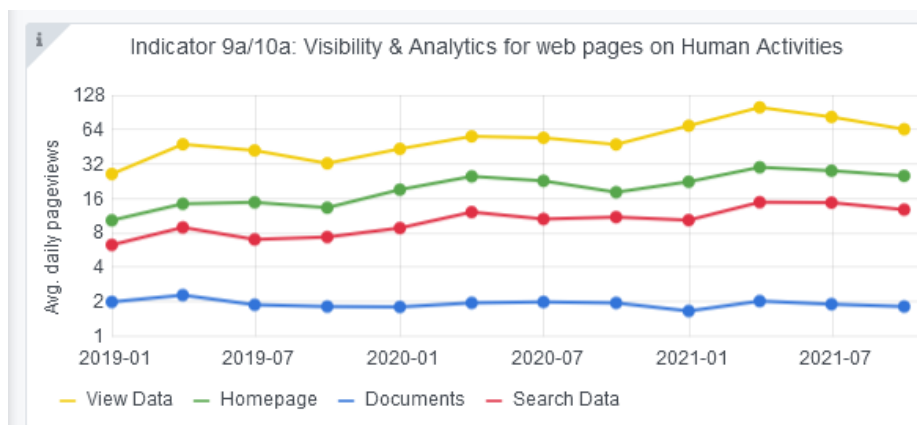
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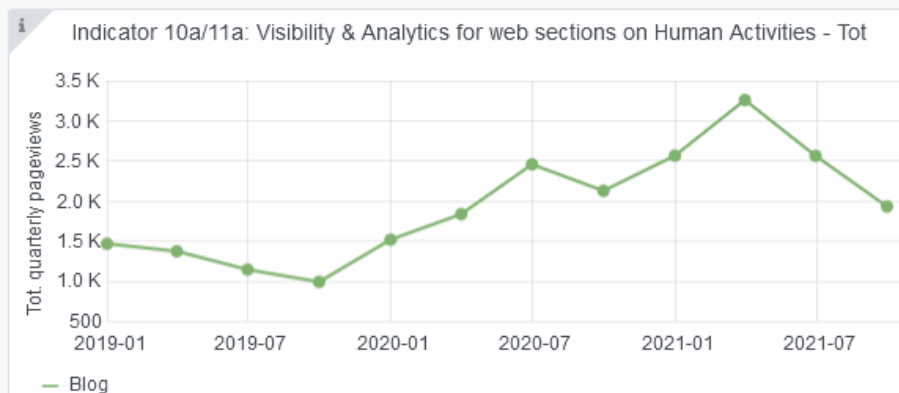
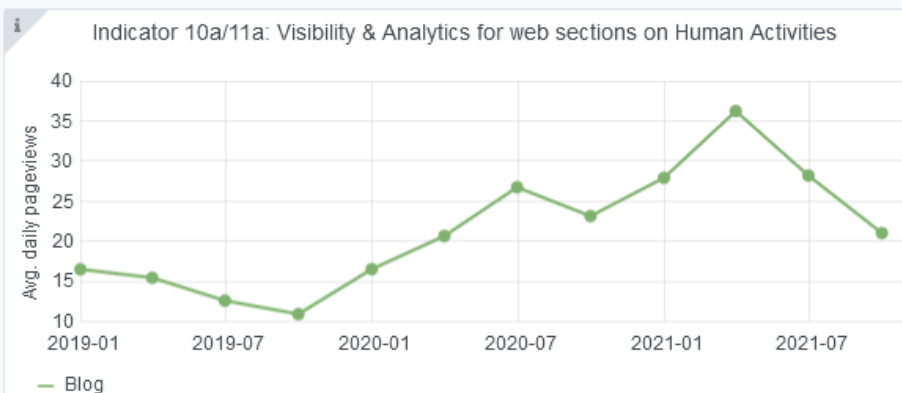
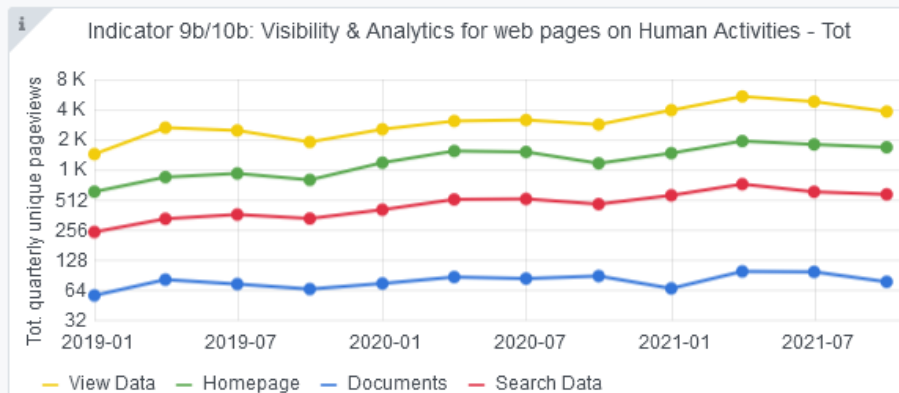
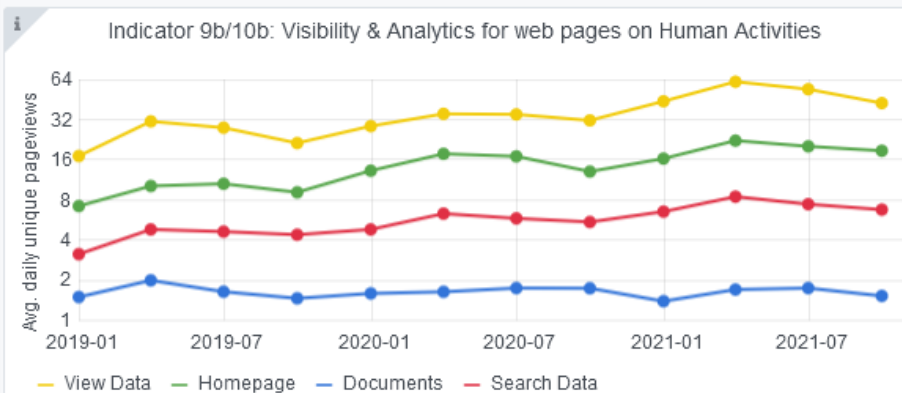


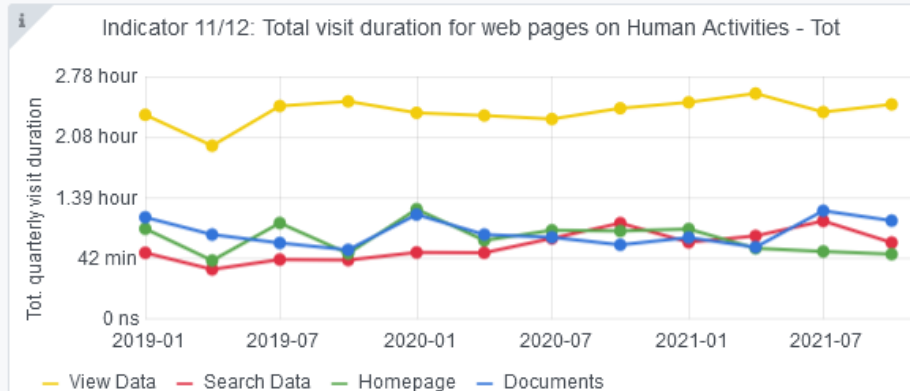
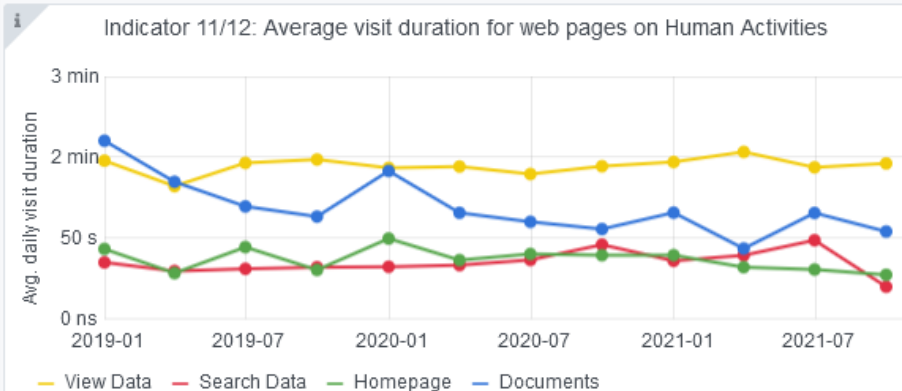
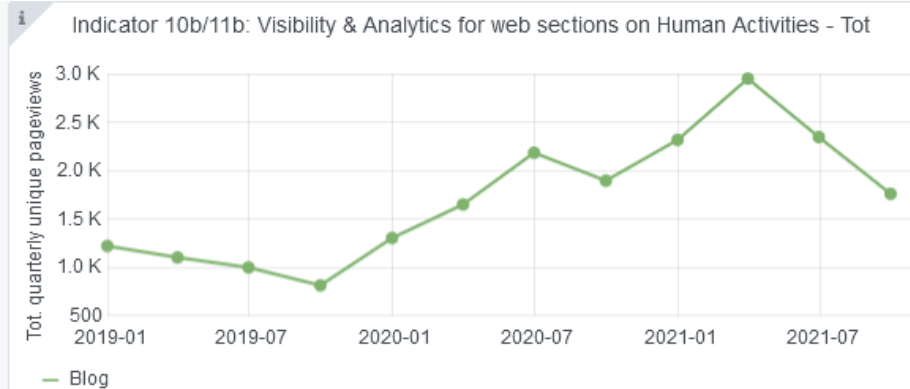
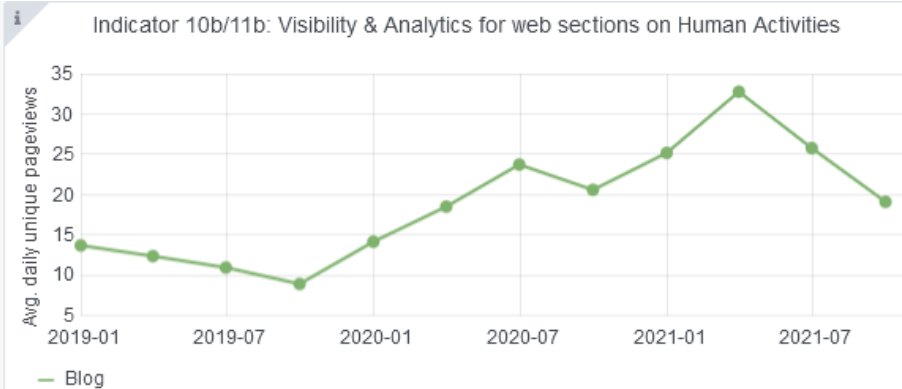




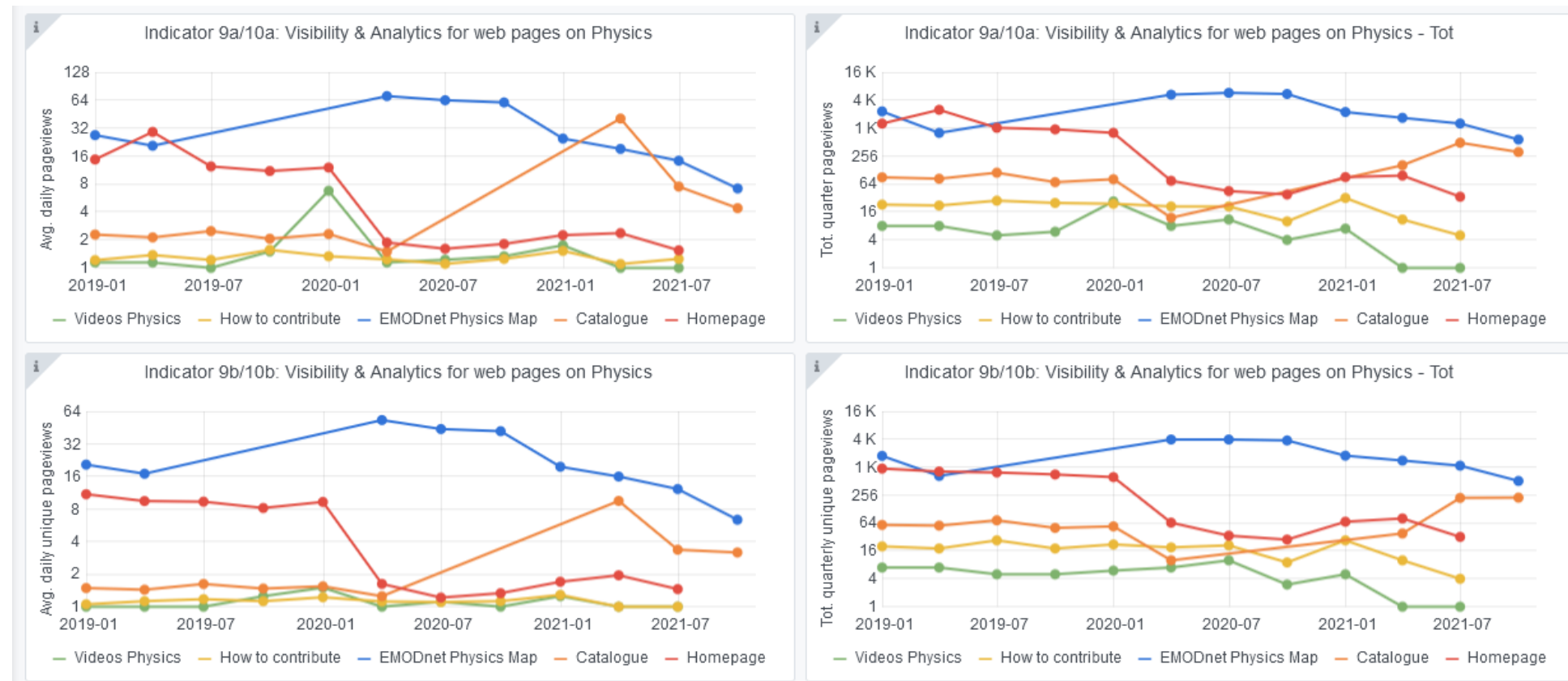
Human Activities

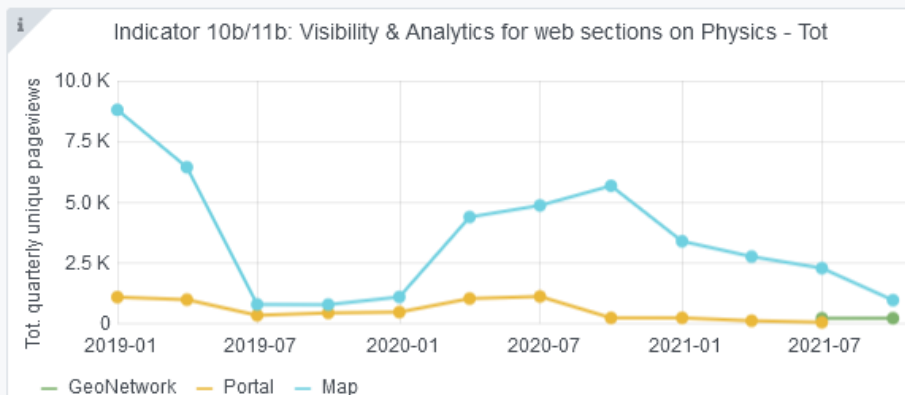
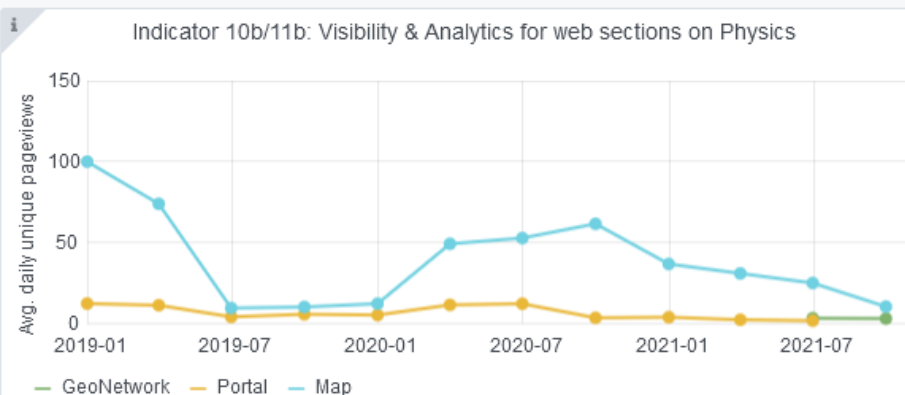
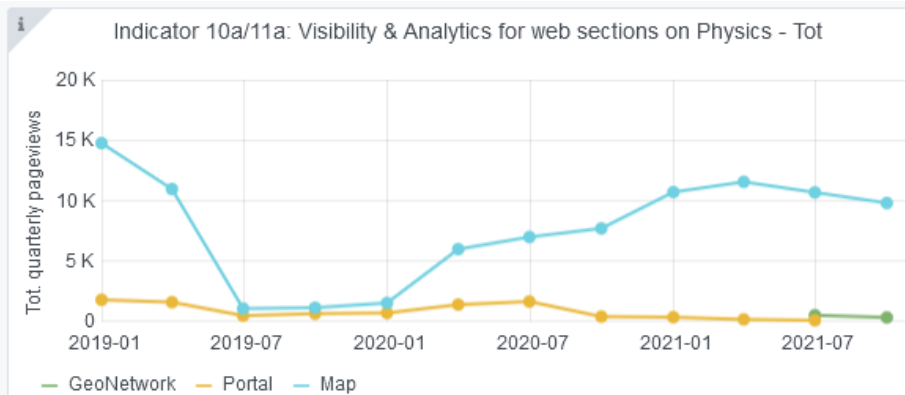
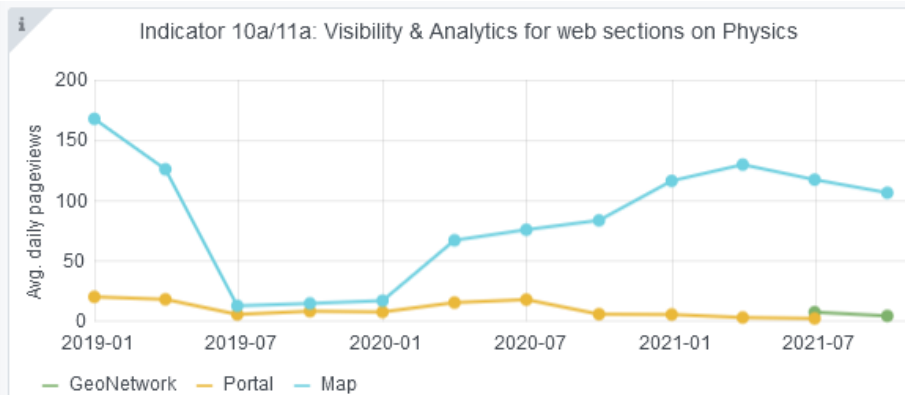


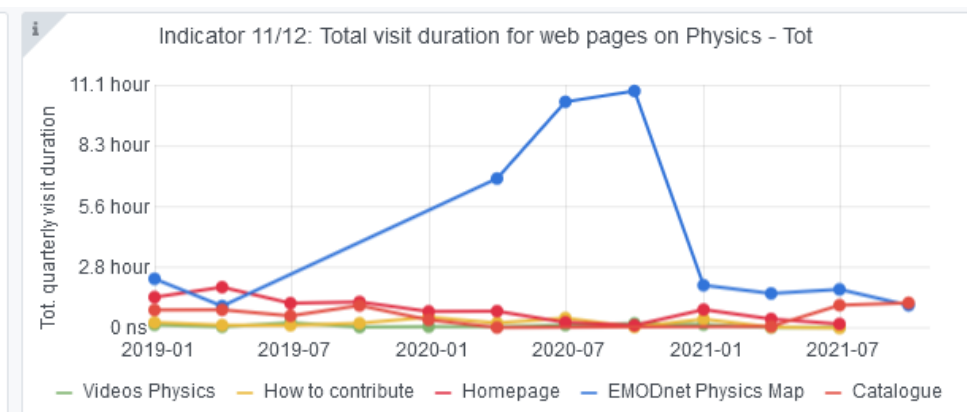
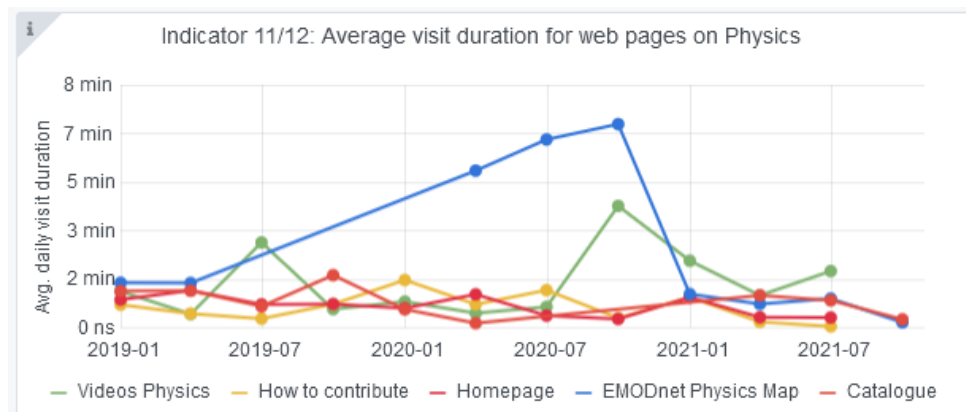




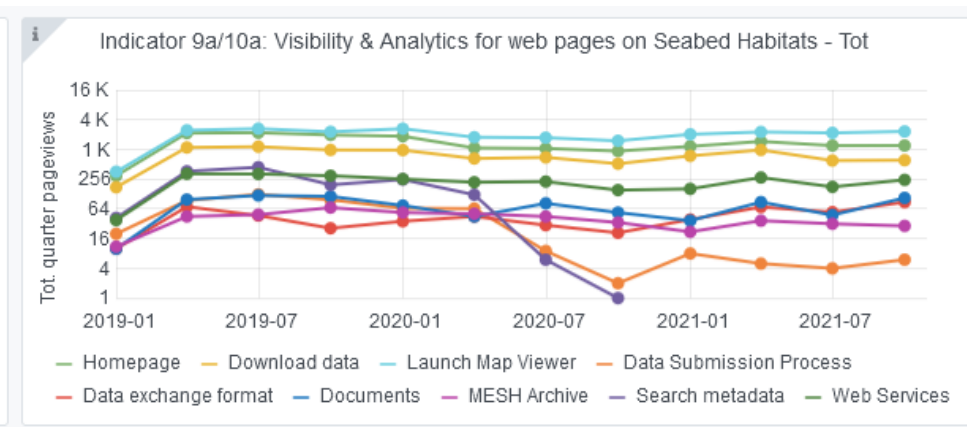
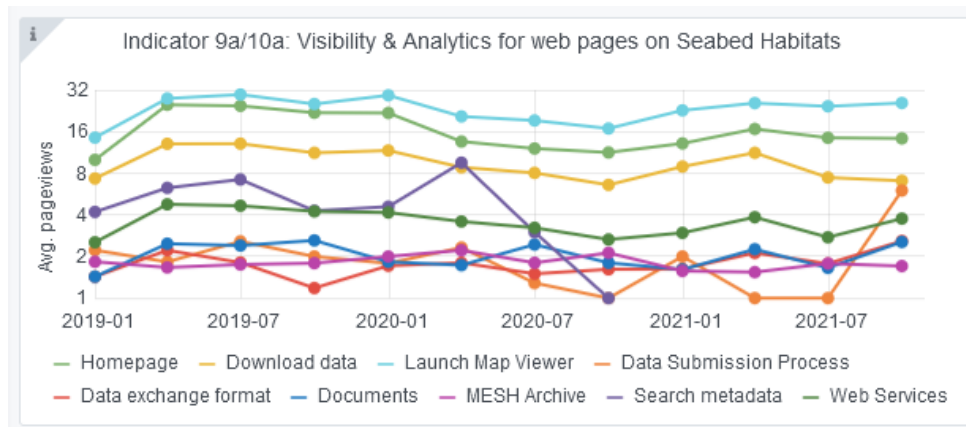
Physics

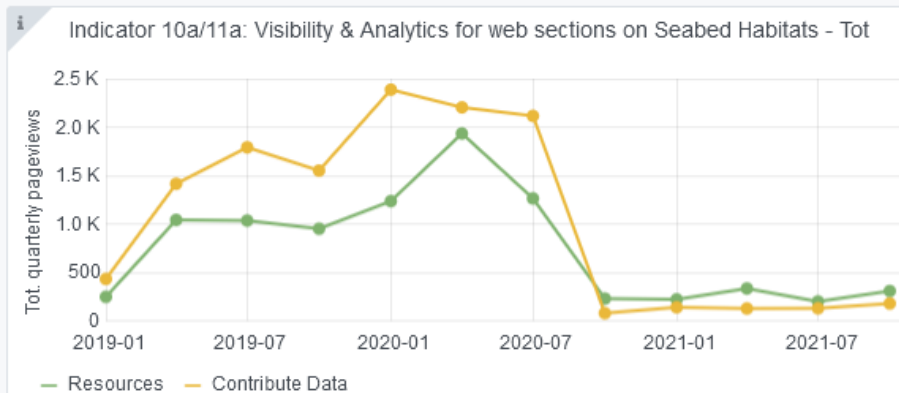
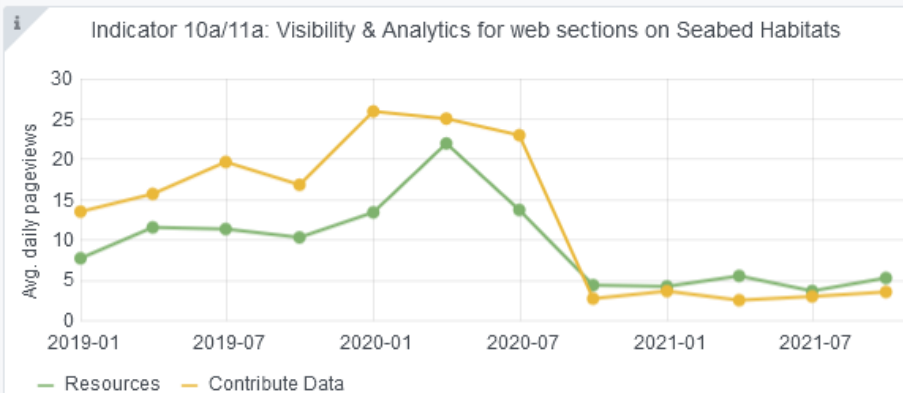
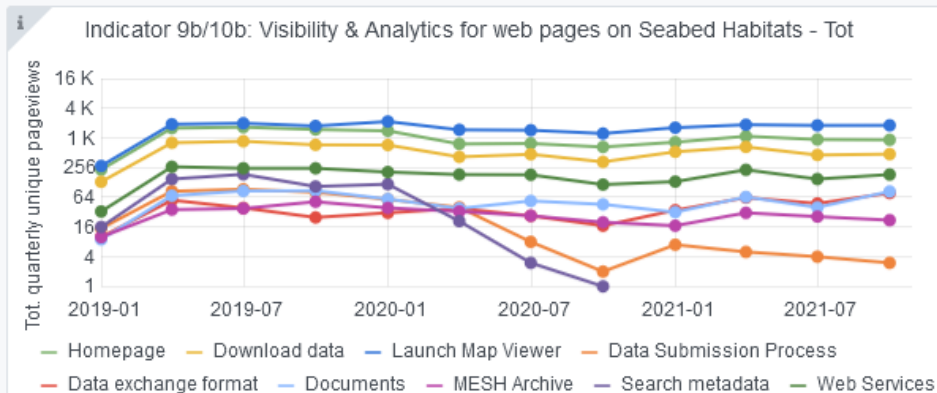
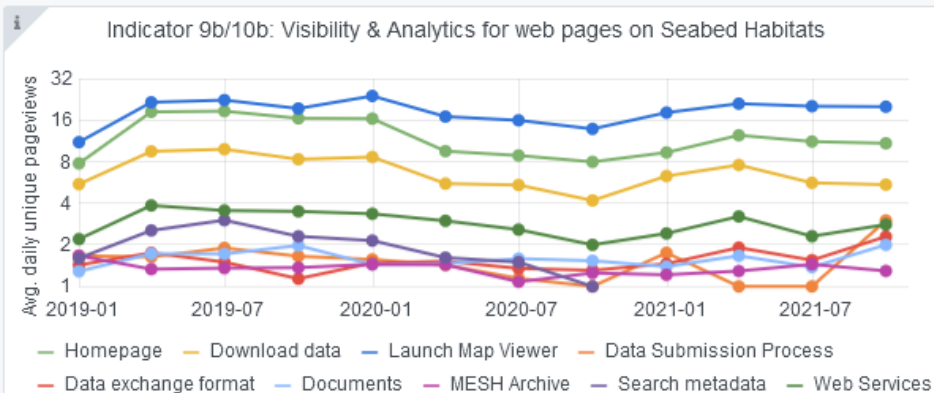


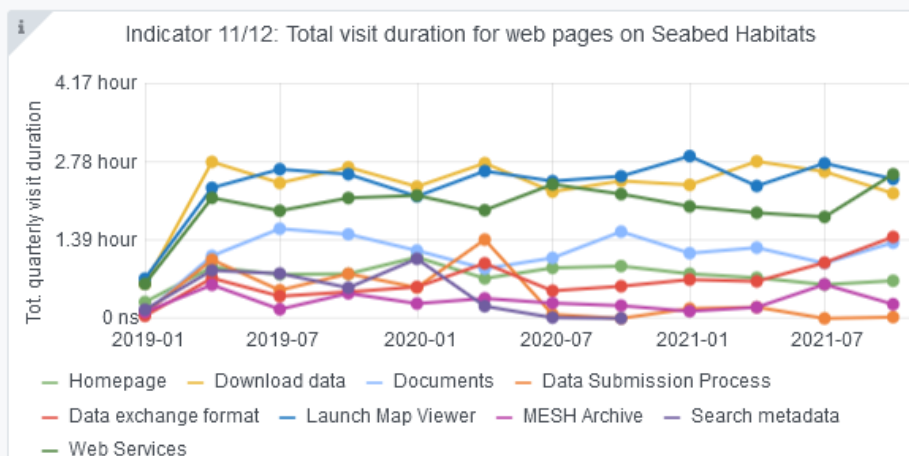
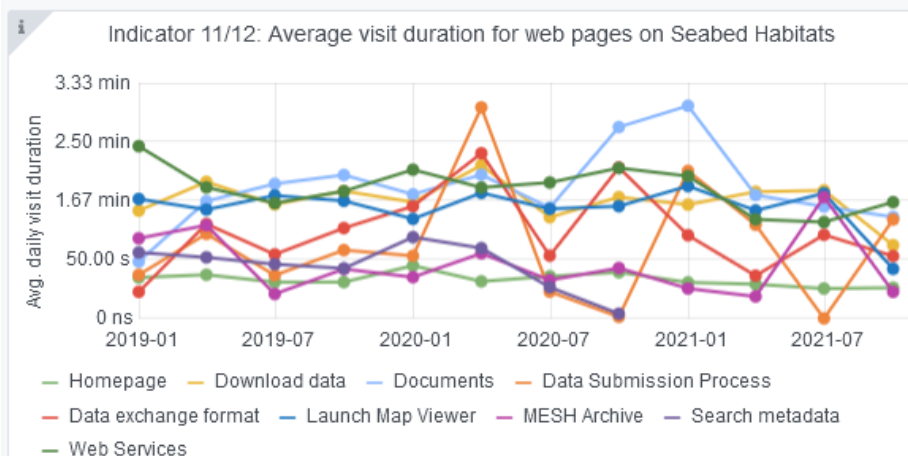
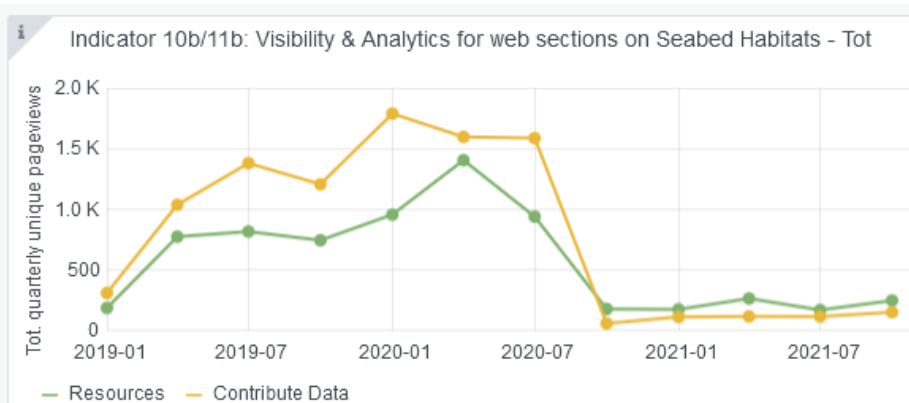
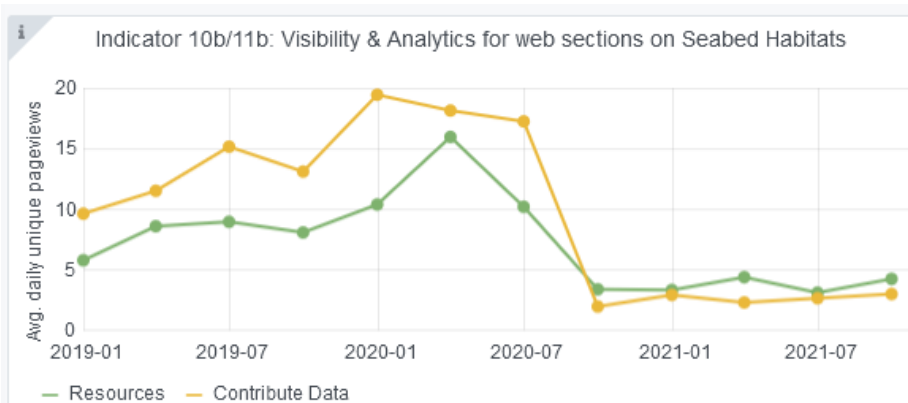




Seabed Habitats







Data Ingestion

