

EMODnet Secretariat progress update – 1st quarter 2020

This update is based on the quarterly progress reports of the different EMODnet projects (Thematic Portals, Data Ingestion Portal) supplemented with updates from the Secretariat. This is the thirteenth Secretariat progress report since the start of the EMODnet Development Phase III (2017-2021) and covers activities developed within EMODnet in the period January-February-March 2020.

EMODnet progress overview

Common progress highlights

The EMODnet Secretariat carried out a major update on one of its most important communication products, namely the [EMODnet Data and Data Product Portfolio](#) version March 2020. The entries of a number of portals have been updated with new information and/or maps, and it showcases the newest product of Human Activities: the Route Density maps produced by EMSA.

Continued efforts are done to further automate the collection of user statistics. A dashboard is being created that displays all user statistics based on data from Matomo. The Dashboard is currently in test phase and once validated and available online will be a big step forward in the usage, progress and performance monitoring of all major EMODnet services.

Preparations focused on the 12th EMODnet Steering Committee and 7th Technical Working Group meetings, which will take place from 21-24 April 2020. Due to the COVID-19 pandemic, both meetings will be held virtually through WebEX. Furthermore, the Secretariat continues planning the 2nd EMODnet Open Conference and Jamboree, which is likely to be postponed to May 2021 (final decision will be announced in May 2020).

During the reporting period, DG-MARE announced new objectives for the next phase of EMODnet indicating that in the future, all data and data products should be findable, visible and downloadable directly through the [EMODnet Central portal](#). Individual thematic groups will maintain their servers but not their web-sites. Instead they will ensure that their application programming interfaces are compliant and participate in the management of content of the central portal. This decision is based on user feedback, including through the recent [OpenSeaLab hackathon](#) and the understanding that EMODnet, as an essential tool for scientists, engineers, managers and policy-makers who are analysing the state and dynamics of Europe's seas, requires continual development to ensure that it meets the needs of users. (see also <https://webgate.ec.europa.eu/maritimeforum/en/node/4494>).

Specific progress and achievements of thematic groups

- **EMODnet Bathymetry** has generated and provided gridded bathymetric datasets to the corresponding basin coordinator. The latter will analyse, process and merge selected contributions using the newest version of the GLOBE software which was released in parallel. Increases were reported in the number of entries of survey data sets (CDI), Composite DTMs and High Resolution DTMs, as well as in the number of data providing organisations. The CDI import service, part of the upgraded CDI Discovery & Access service, is being heavily used by the data providers. This service facilitates the latter to undertake import activities more autonomously with less support from the CDI Support desk. A number of conference calls were held to start preparing for the integration of the user interface of the EMODnet thematic assembly group to the EMODnet Central Portal.
- **EMODnet Biology** welcomed seventeen new associated data partners, which will contribute a total of new 85 datasets to EMODnet Biology. In this reporting period, the portal's harvest accounted for



39 datasets (of which two were updates). The portal will consider increasing the number of data harvests per year (which is now four), and will more frequently communicate about the new harvested datasets on social media. A new methodology is being tested where metadata information (information on presence but also absence of a certain species), in combination with expert judgement and trait information in WoRMS, allows the construction of a system where trait data inform the analysis of datasets thereby improving the accuracy of produced occurrence maps. In reverse, the datasets can bring back information into WoRMS.

- **EMODnet Chemistry** is undertaking actions to make their web portal more user-friendly. Actions include simplifying the homepage, placing more centrally the products and services provided by the portal, and further integration of the different services for viewing, accessing and downloading aggregated data collections and maps. Regarding data, activities were dedicated to exploring options for handling marine micro litter in a comparable way and to investigating how to enrich metadata with additional information on project type, platform and regions. Furthermore, the latest eutrophication data collection was loaded in the EMODnet Chemistry database, and the integration with the OceanBrowser was improved in order to optimise the viewing and access functionalities.
- **EMODnet Geology** continues improving their web portal in collaboration with among others partner GeoERA, which contributes to the behind-the-scenes management features of the web portal. Partners and subcontractors are now in the process of collecting new data and metadata. Partner VSEGEI started the collection of Russian data, and is preparing for the input of data from other Caspian Sea countries (taking into account possible delays due to the CoViD-19 situation). Further efforts were done by the portal on improving INSPIRE compliancy on metadata descriptions and services.
- A number of new datasets are expected to be published by **EMODnet Human Activities** in a couple of weeks on the portal: JRC submitted a dataset on Algae production facilities which is being georeferenced, and currently being tested on the web portal are a revised dataset on Fishing effort (comments were received from the JRC) and a shapefile on Fishing intensity (created by ICES). At a first meeting of the MSP Data Expert Group, Human Activities will put forward a proposal for harmonization of maritime spatial plans for the experts to review. The portal received AIS data for 2019 from the data provider, enabling the former to update the data products on vessel density maps.
- **EMODnet Physics** is working on a common method to access and make available valuable data from commercial fishing vessels. The latter are beginning to be used as oceanographic data collectors, which can collect parameters at depth and at higher frequency than is possible with research vessels. The data of the Antarctic Circumnavigation Expedition (AVE) are now available on the web portal. New near real-time data on global runoff are available, and the portal works on updating the River Runoff products based on the update from the Global Runoff Data Center. Furthermore, the Physics portal is expanding its Sea Surface Current related data products as the number of HFR (High Frequency Radar) in the HFR European Node has been extended.
- **EMODnet Seabed Habitats** published six new habitat maps from surveys (four in France, one in Ireland, one in Italy) and new survey sample points from four datasets from Estonia. The portal worked on the development of an online [Validation Tool](#), which enables checking the conformity of a polygon habitat map with the standards required by EMODnet Seabed Habitats. Project partners will be required using this tool before uploading their habitat maps on the portal. Discussions have taken place with the [Archipelagos Institute](#) about the creation of a coralligenous habitat data product for the Mediterranean. Initial discussions with EMODnet Geology took place on the integration of their Seabed Substrate product in EUSeaMap.
- The **EMODnet Data Ingestion** has reported an addition of 69 submissions, bringing the total from 638 to 707. This increase is partly due to the exchange between the SeaDataNet SEANOE data citing service (facilitating European scientists to publish their scientific papers and associated data collections in return for a DOI) and EMODnet Ingestion. The number of submissions that have been



elaborated to phase II, implying uptake in European marine data infrastructures feeding into EMODnet, increased with 31 (from 207 to 238).

EMODnet data portals usage

User visit statistics

The collection of user statistics (*i.e.* number of (unique) page views and average visit duration) has been further automated for the following progress/monitoring indicators: Visibility & Analytics for web pages; Visibility & Analytics for web sections; and Average visit duration for web pages. An important difference with the previous quarters is the way of reporting: where previously the user statistics were reported as total visits/page views per quarter, they are now reported as average daily visits/page views per quarter. The resulting graphs for each EMODnet portal as well as the Central portal can be viewed in the gallery below.

As with regard to the **EMODnet Data Ingestion**, over 17,000 unique visitors were reported in January, which decreased to under 3,000 in March which is more than five times less unique visitors.

The most visited webpage on the **EMODnet Central Portal** is the Bathymetry entry page (average daily of 25 page views), closely followed by those of Human Activities and Seabed Habitats (both around 12). Chemistry's entry page is the least visited, with an average daily page views of four. Increasing as well as decreasing average daily visit durations were noted for the entry pages of the different portals (varying between 2.21 and 1.28 minutes).

For **EMODnet Bathymetry**, the Viewing and Download service (*i.e.* map viewer) remains the most viewed page: a daily average of around 100 page views was recorded for this reporting period. All other web pages, such as Web services and standards and the Homepage, received five or less average daily page views. The average number of daily unique visitors decreased to 74.

The number of average daily page views for **EMODnet Biology** stayed stable compared to the previous quarter. The Homepage is the most viewed webpage (average daily of 12 page views), followed by the webpages Map Viewer, Atlas of Marine Life (Product stories) and the Download Toolbox all with an average of six daily page views. The average daily visit duration increased a little for the webpages Atlas of Marine Life (Product Gallery) (to almost 3 minutes) and How to contribute (almost two minutes), and remained stable for their other webpages (between 1.2 minutes and 30 seconds). The average number of daily unique visitors remained stable at 23.

Compared to the previous quarter, the average daily page views remained stable for the different **EMODnet Chemistry** web pages, while the average number of daily unique visitors has slightly increased (about 53 daily unique visitors for this reporting period). The average daily visit duration also increased for most of the webpages with a maximum up to 2.6 minutes for the Search Data web page. Less time is spent on the Homepage compared to the previous quarter (almost one minute).

Most of the user statistics for **EMODnet Geology**, *i.e.* the average daily unique visitors (about 24) and average daily page views, remained stable compared to the previous quarter. The most viewed webpage is the Homepage on which on average 35 seconds is spent during a visit, followed by the Map viewer (average visit duration of 1 minute) and Data products (43 seconds). The average daily time spent on different webpages on average increased since the last reporting period. The longest time was spent on the Services webpage, with an average daily time duration of almost two minutes.

In **EMODnet Human Activities**, the average number of daily unique visitors (about 50) and average daily page views went up in Q1 2020 with View Data being the most viewed webpage (average daily of 43). No major variations were reported regarding average visit duration for web pages (between 1.7 minutes for View Data webpage and 32 seconds for the Search Data webpage).

Average daily page views as well as average daily visit duration in **EMODnet Physics** have decreased since the previous quarter except for the Map viewer (with an average of 21 daily page views). The average daily page views for the other webpages (*e.g.* Homepage, Videos and Catalogue) decreased to one or two page views. It is currently being investigated if this is due to an error in the tracking instance or if it reflects the

reality. The average daily number of unique visitors stayed stable (around 25). In Q1 2020, there was a peak in average visit duration for the webpage of the Map Viewer until over five minutes, followed by the Homepage (about 1.15 minutes). The average visit duration decreased for the other pages.

EMODnet Seabed Habitats' average daily visit duration for web pages increased compared to the previous reporting period. With an average daily visit duration of almost three minutes, the Data Submission Process webpage is the longest visited webpage followed by the webpages on Data exchange format (2.34 minutes) and Download data (2.14 minutes). The least time was spent on the Homepage (31 seconds). The average daily page views decreased for most of the webpages, yet the Map Viewer remains the most visited webpage (average daily of 20 page views). The average number of daily unique visitors decreased to 22.

Statistics on usage of EMODnet portals

Number of data downloads (for portals which provided this information):

- **EMODnet Bathymetry** reported a 45% decrease in the number of CDI downloads since the previous reporting period.
- **EMODnet Chemistry** reported a decrease in the number of CDI downloads by almost 20% (from 25623 to 20767 CDI downloads).
- The number of data downloads in **EMODnet Human Activities** has experienced increases as well as decreases depending on the sub-theme. For example, the Urban Waste Water related datasets, the Monthly first sales EUMOFA (Fisheries) dataset and the Natura 2000 dataset were among the least downloaded datasets, while increases were reported for the Aggregate extractions and Fishery catches FAO statistical area (Fisheries) datasets.
- In general, less data was downloaded in **EMODnet Physics**. Further decreases (between -23% and -91%) were reported for among others Underwater noise and River data. On the other hand, data on Currents and Optical properties have seen a huge increase in number downloads (+264% respectively +560%).

Number of data product downloads (for portals which provided this information):

A decrease was recorded by 16% in the number of downloads of DTM tiles in **EMODnet Bathymetry**. Also, decreases were noted in the number of WMS and WFS requests by -52% and -26% respectively. New since this quarter, are High Resolution DTMs products, which were already downloaded 450 times. A trend will be available from next quarter onwards.

Trends are available for a number of data products sub-themes in **EMODnet Chemistry** such as Chlorophyll, Dissolved gases, Fertilisers and Silicates, indicating that the number of data product file downloads decreased by 80 to 91%.

Both the vessel density and route density maps remain very popular in **EMODnet Human Activities**. The former were downloaded 1087 times (+ 379 %) and the latter 366 times (+ 7220 %) since their release at the end of 2019.

As with the data in **EMODnet Physics**, the data products have seen a decrease in the number of downloads (between -52 and -100%). Only the data products Salinity and Currents were download more times compared to the previous quarter (+33% and +87% respectively).

EMODnet Seabed Habitats reported a decrease in the number of manual data product downloads between 1 and 16%. Only the data product on Dissolved gasses has seen a 17% download increase. While the number of map visualisations and WMS requests have decreased (-35% and -22% respectively), the number of WFS and WCS requests have increased (+215% and +100%).

EMODnet Geology has seen an increase in the number of data product downloads with 3% (from 291 to 299 to product downloads). In parallel, the number of map visualisations and WMS requests also increased by 15% and 4% respectively. These increases could be due to the planning of new projects that require geological knowledge.

Challenges to be addressed

The major challenge to be dealt with by the thematic assembly groups at this moment is the CoViD-19 pandemic.

- **EMODnet Bathymetry** reported the uptake of the upgraded CDI service by data providers being challenging. In the reporting period, MARIS gave support and guidance to the data providers to make new and updated entries in the CDI and Sextant catalogues.
- **EMODnet Biology** and **EMODnet Seabed Habitats** reported that working at home for a lot of their partners means that they need extra time off to take care of their children, and that they do not have access to the IT infrastructure necessary to perform their job well and as if they were in the office.
- A number of challenges identified by **EMODnet Chemistry** refers to: (1) keeping the data providers involved and motivated by means of virtual meetings and the perspective of a full meeting in September 2020; (2) updating the data management tools to format and validate marine litter data; (3) and adding additional metadata for contaminants and eutrophication upon request from the EEA, for which it will be analysed whether these can be retrieved from other SeaDataNet directories.
- Due to the CoViD-19 pandemic, some **EMODnet Geology** partners and subcontractors are virtually closed for an unknown period of time or are hard to contact. The portal postponed the second EMODnet Geology project meeting to September, back-to-back with the EMODnet Jamboree.
- **EMODnet Human Activities** has contacted the data providers of spatial information with regard to military areas, available on online platforms, to obtain formal and written consent to use the information in EMODnet.
- Due to the CoViD-19 pandemic, **EMODnet Physics** is forced to postpone the organisation of the Fishing for Data Workshop, which was planned for 19-21 May 2020, to autumn 2020. Furthermore, the portal recorded some tension in the EMODnet Physics contributors' network because of the Maritime Forum post on the future of EMODnet. The network was informed that their support and involvement is indispensable in the process towards centralising the access to data and products.

Recent meetings and events

Due to the CoViD-19 pandemic, the number of meetings and events during January-February-March 2020 period were drastically reduced. Where possible, meetings were organised or attended virtually. A number of key meetings:

- **EMODnet Bathymetry:** presentation and explanation on EMODnet Bathymetry by consortium partners MARIS, Shom and GGSGC in online meeting for EMODnet thematic coordinators, VLIZ, DG MARE and Secretariat, in light of the centralisation of the EMODnet thematic assembly groups in the EMODnet Central Portal.
- **EMODnet Biology:** internal online meeting with partner ICES on data reformatting (February and March), attending of Open Belgium event on 6 March with a talk on "20 years of marine data management".
- **EMODnet Chemistry:** a couple of remote meetings were organised in February, among others to check the status of eutrophication data products and to plan EMODnet Chemistry technical developments.
- **EMODnet Geology:** products of WP3 (Seabed substrate) were presented at the FINMARI Researcher Day Conference on 10 March 2020 in Finland.
- **EMODnet Human Activities:** meeting with French Directorate for Marine Fisheries and Aquaculture on mapping of shellfish farms and finfish production sites in France.

- **EMODnet Physics:** sharing of experience of the collaboration between CMEMS-EMODnet Physics and discussing potential benefits of a CMEMS-EMODnet Chemistry collaboration at a meeting on 12-13 February 2020; presentation on River Runoff data management at a CMEMS SE LAMBDA project user workshop on 21 January 2020.
- **EMODnet Seabed Habitats:** 3rd Project Management videoconference Team meeting on 27 March 2020 with JNCC and work package leaders from different partners. Videoconference meeting with CMEMS, JNCC and Ifremer to discuss ways to highlight and link to EMODnet products on CMEMS data services.

Upcoming EMODnet meetings and events

The main EMODnet meetings planned for the coming period are:

- From April 21-24 2020, the 12th EMODnet Steering Committee and 7th Technical Working Group meetings will take place. Due to the COVID-19 pandemic, both meetings will be held virtually through WebEX.
- EMODnet 2nd Open Conference and Jamboree with back-to-back partner and portal meetings: 21-25 September 2020, Ostend, Belgium. More information will be released regularly via the central portal here: <https://www.emodnet.eu/conference2020>. A note of caution is to be stated here as it is likely that the Open Conference and Jamboree will be postponed to a later date in spring 2021. This will be communicated shortly.

More detailed information can be found on the EMODnet thematic portals, also accessible through the [EMODnet Central Portal](#).

EMODnet Data and Data product portfolio: <http://www.emodnet.eu/data-portfolio>

EMODnet for Business brochure: <http://www.emodnet.eu/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

- North Sea checkpoint - www.emodnet.eu/northsea/home
- Mediterranean checkpoint - www.emodnet-mediterranean.eu
- Arctic checkpoint - www.emodnet-arctic.eu
- Atlantic checkpoint - www.emodnet-atlantic.eu
- Baltic checkpoint - www.emodnet-baltic.eu
- Black Sea checkpoint - www.emodnet-blacksea.eu

Data Ingestion Service

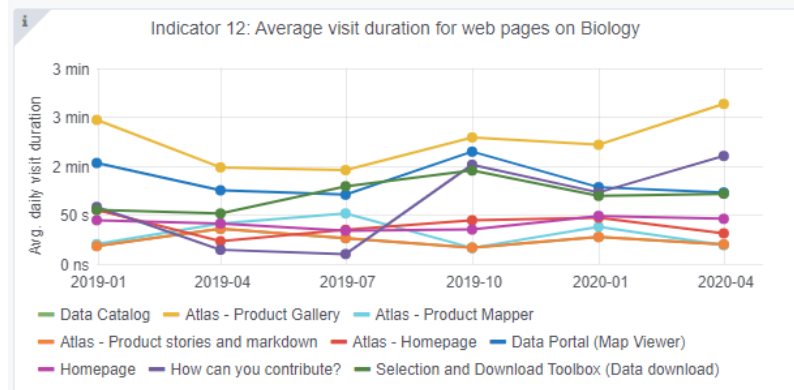
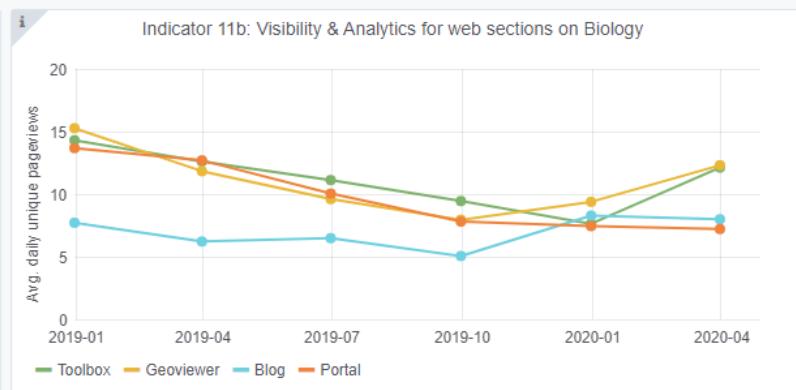
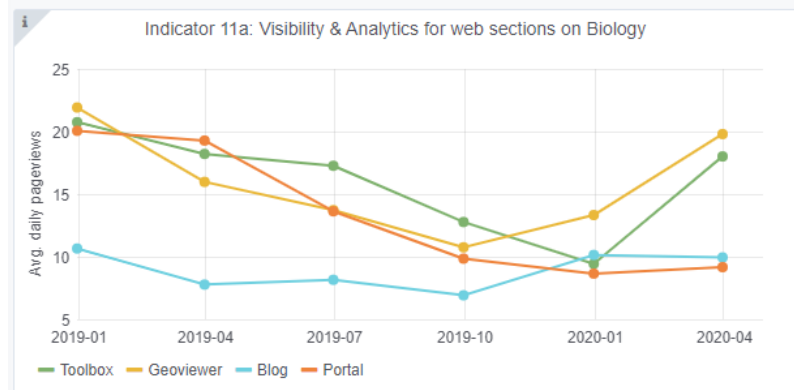
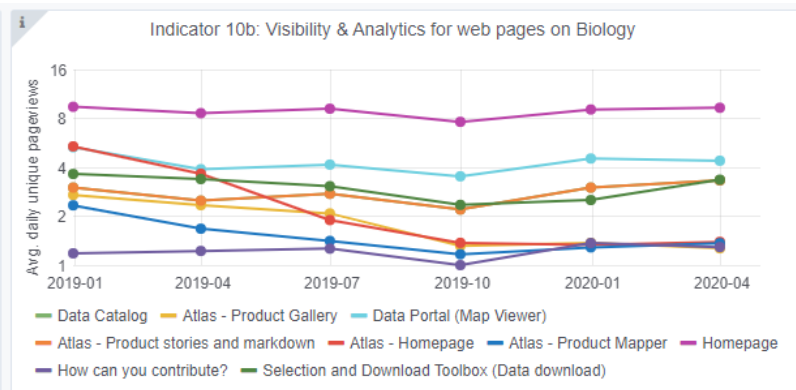
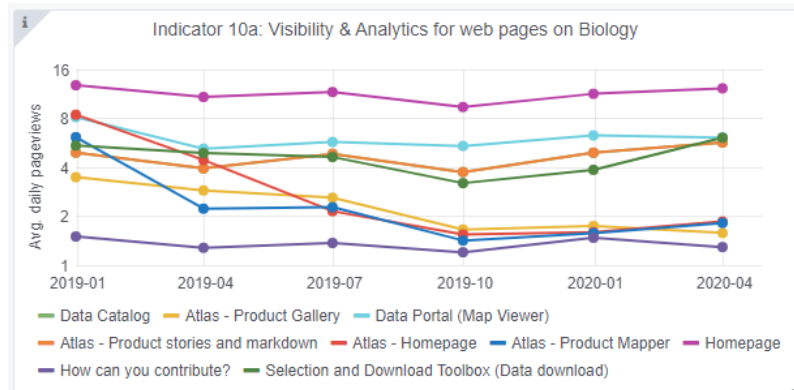
- Ingestion and safe-keeping of marine data - www.emodnet-ingestion.eu

Gallery

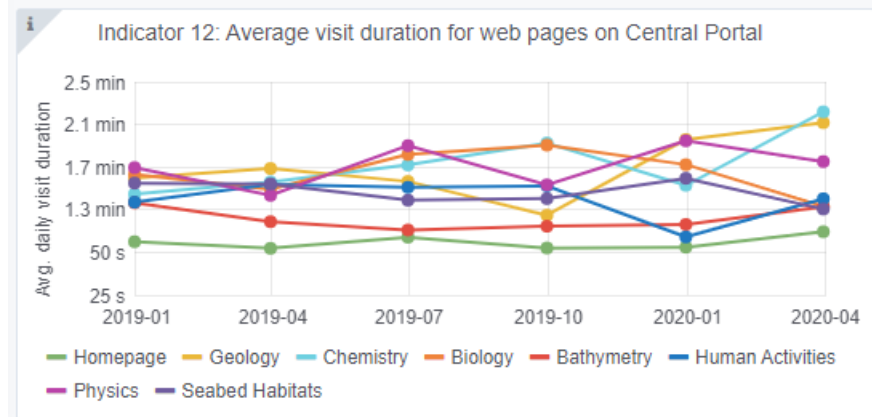
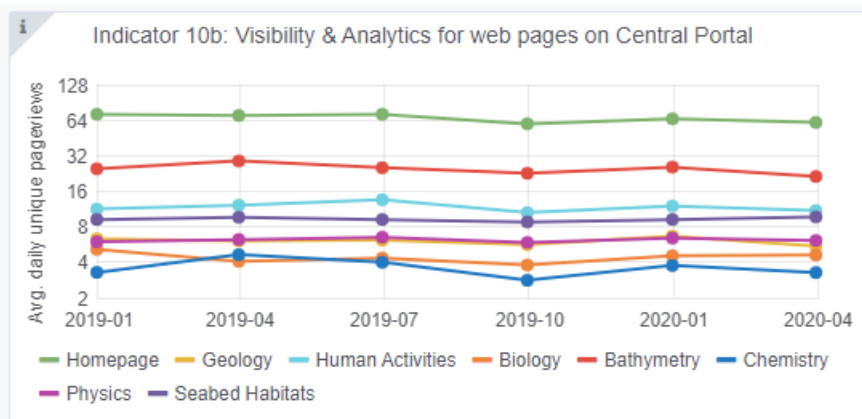
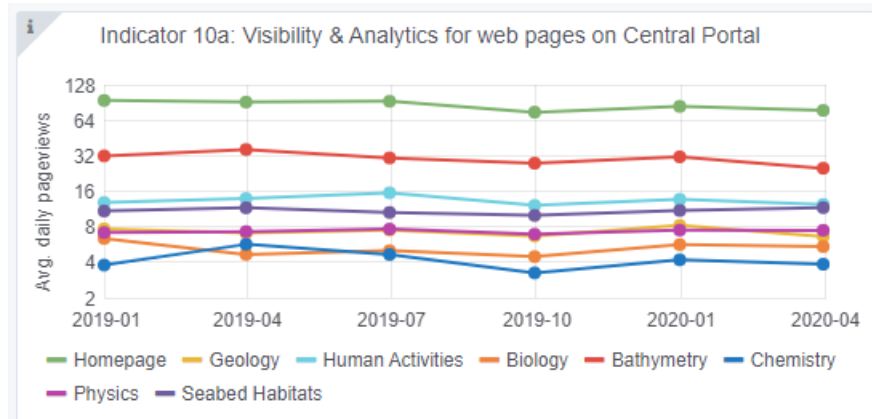
Bathymetry



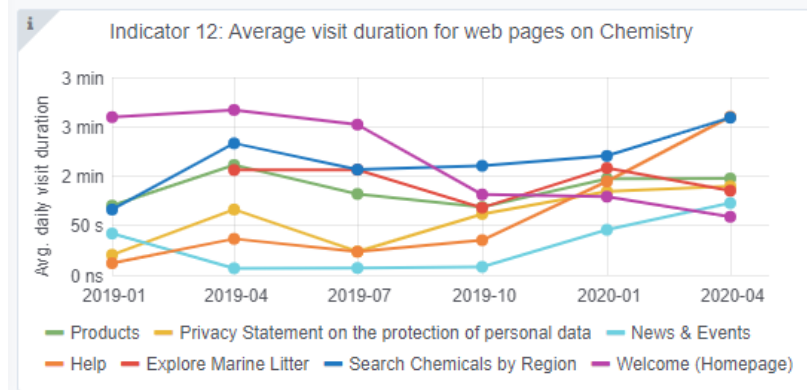
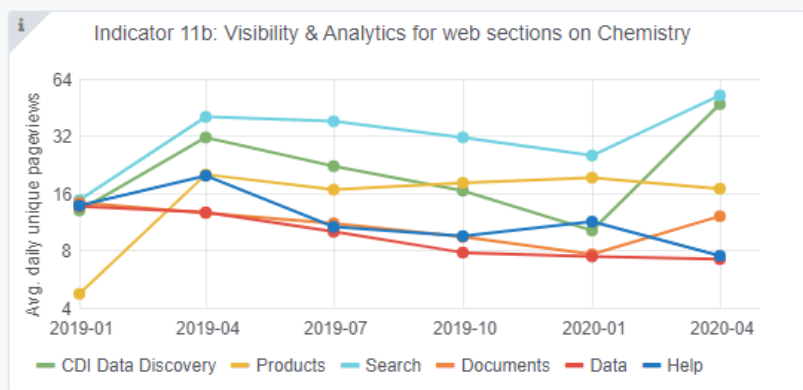
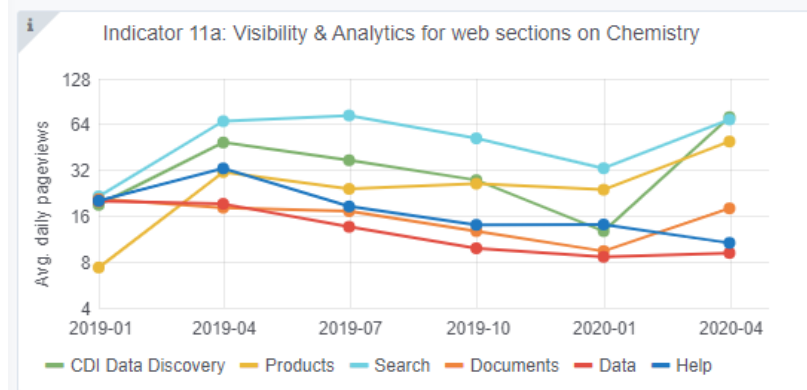
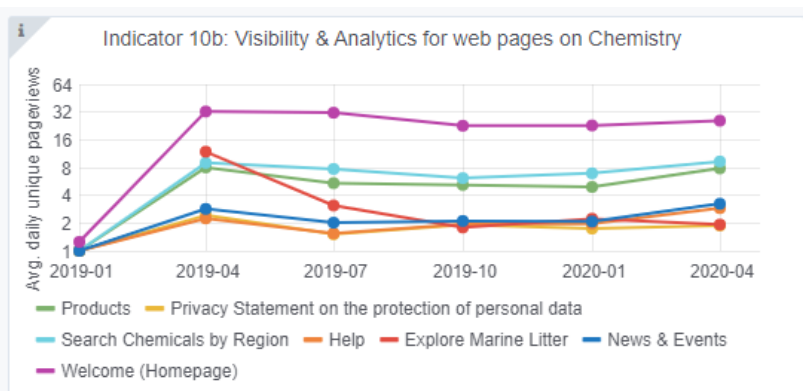
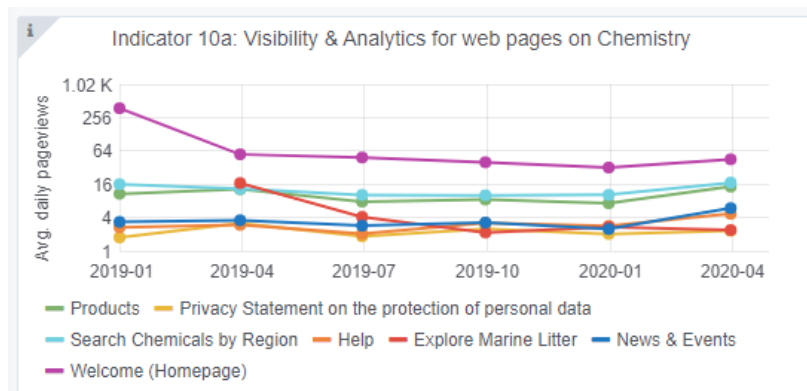
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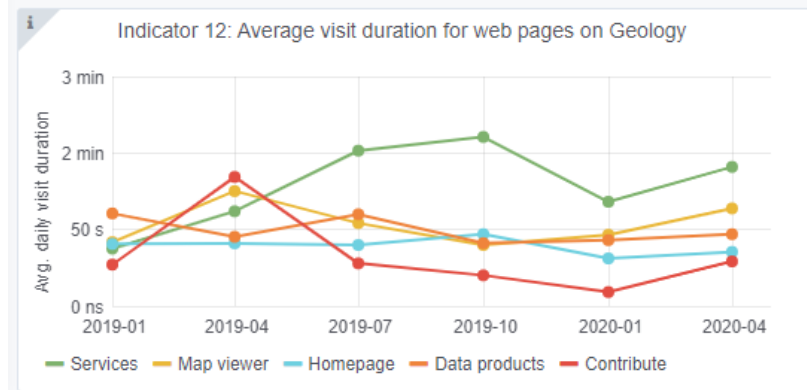
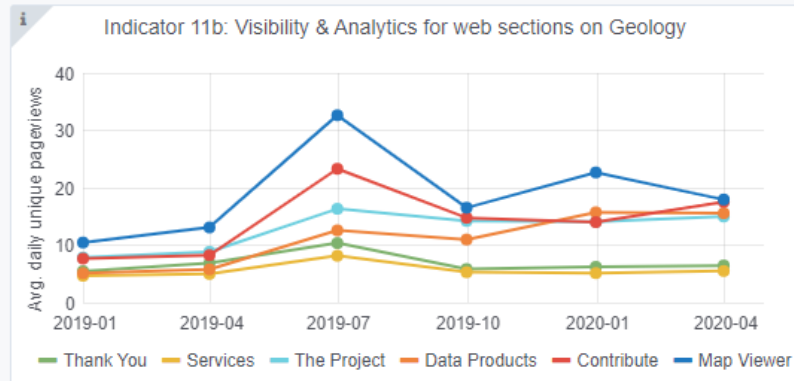
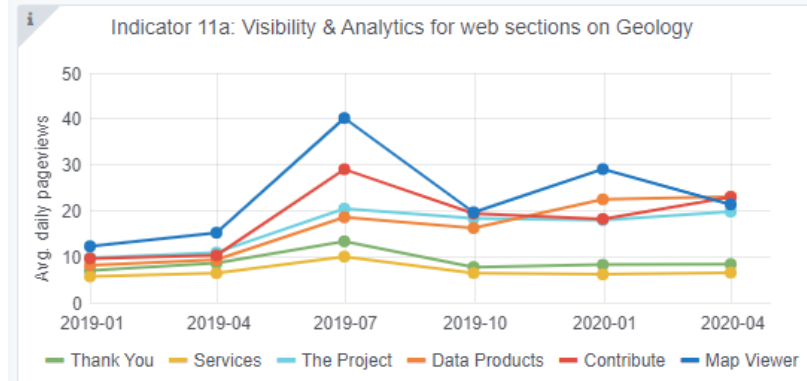
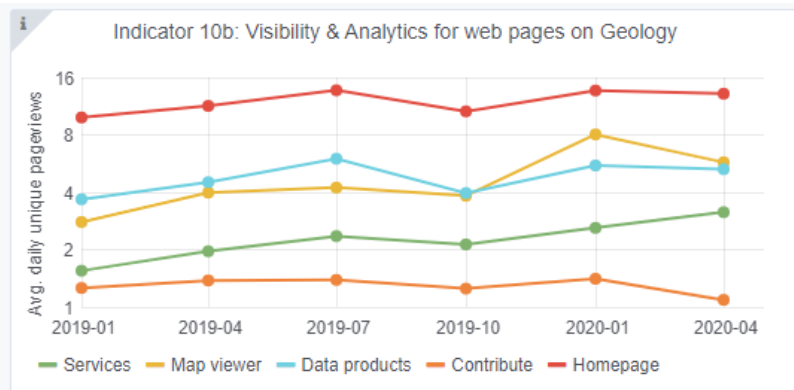
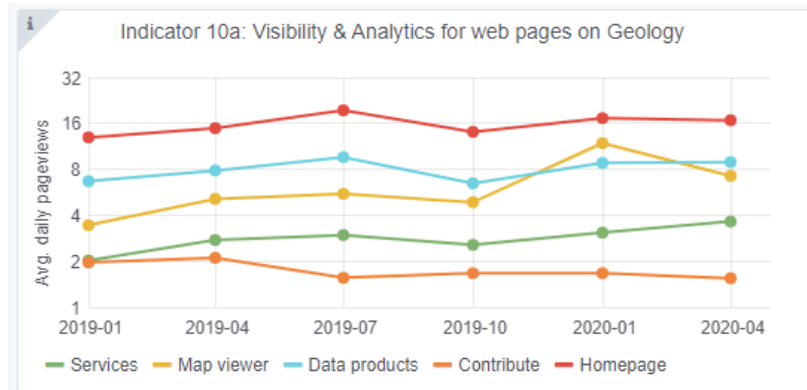
Central Portal



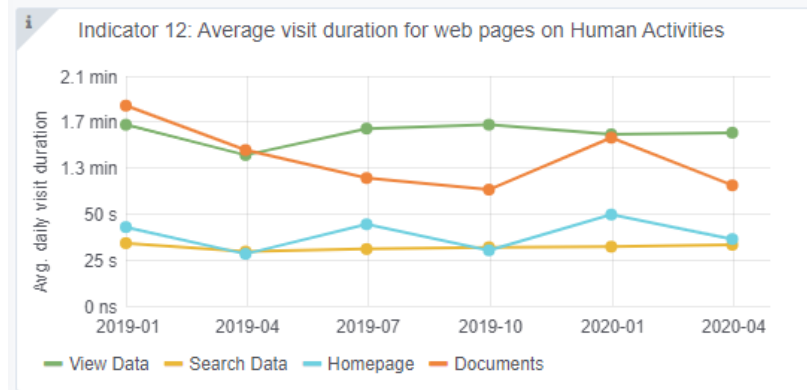
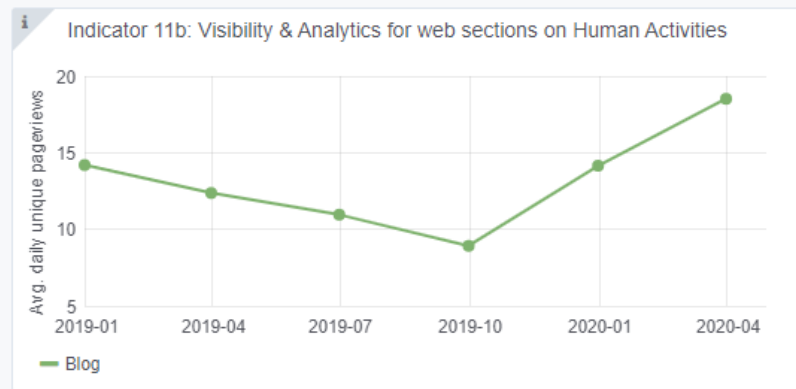
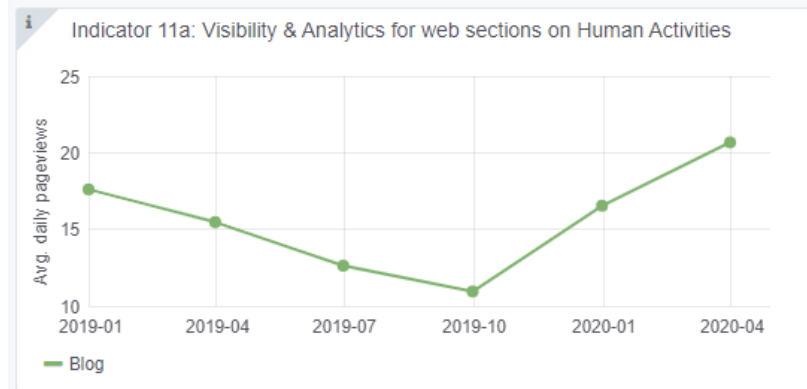
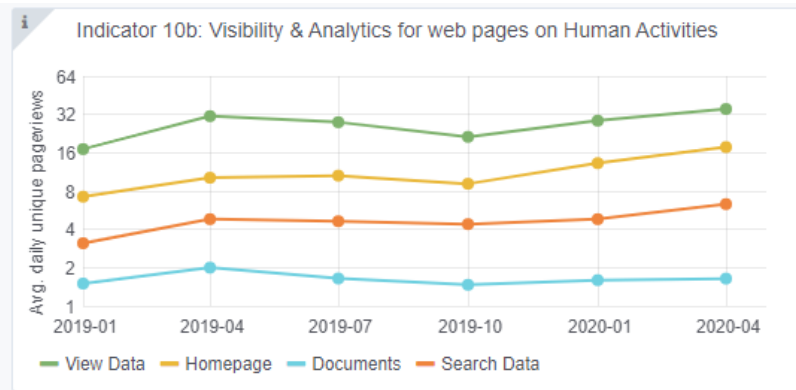
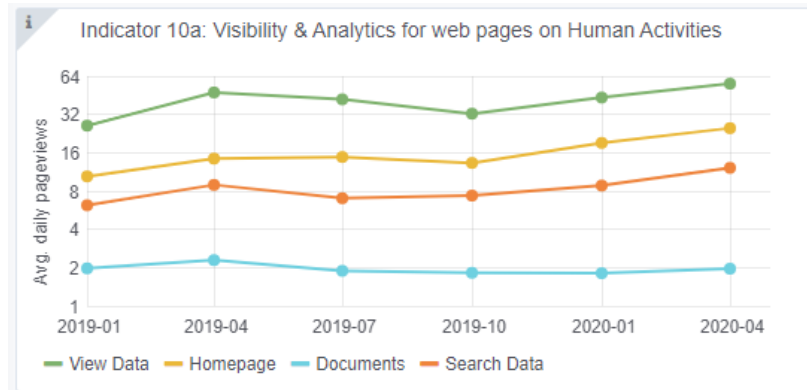
Chemistry



Geology



Human Activities



Physics



Seabed Habitats

