Meeting Document 3. Tasks and priorities for the EMODnet ad hoc technical working group

This is a dynamic document set to be the basis of a workplan for the technical working group

1 Tasks

Actions from the Steering Committee meeting December 2013

1.1 Implementation of interoperability rating system for layers used in case study.

VLIZ proposed to implement a system to rate the level of interoperability/ compliance to OGC standard of each of the layers to be used in the use case studies.

This is necessary due to currently EMODnet's links not being standardised, as different lots have different servers and different parameters. This is not a problem per se, as the links can be stored in a structured way (standardising the links) but there are some fundamental parameters that should be in place.

Action: The technical group will need to outline a strategy to ensure the highest level of service can be attained across the thematic lots.

Star Rating	Level of service attained	Technical and service parameters to be met	EMODnet products
One star	Basic Web Map Service (WMS)	Web Map Service (WMS) supporting "GetCapabilities" and "GetMap" requests to deliver map images.	•
Two star	Upgraded Web Map Service (WMS)	▪ One Star requirements met. ▪ Map legend provided. ▪ Minimum metadata available (contact information, abstract, access constraints, cataloguing keywords).	▪
Three star	Enhanced Web Map Service (WMS)	▪ Two Star requirements met. ▪ "GetFeatureInfo" (at least text/html format) request supported. ▪ Web Map Service (WMS) v. 1.3.0 supported. ▪ Additional keywords to make GetCapabilities response ISO19115 core compliant ▪ Clear statement of use relating to data, including licence and charging details (where appropriate). ▪ Access to data must be transparent, simple and fair to all.	▪
Four star	Web Feature Service (WFS)	▪ Three Star requirements met. ▪ "MetadataURL" for each WMS layer and WFS feature type should point to a metadata record conforming at least to the metadata profile. ▪ Web Feature Service (WFS) at a minimum v. 1.1.0.	▪

1.2 Provide recommendations and options for the single sign on procedure

1.2.1 In terms of access to databases

Due to the different proprietary nature of the data held and the databases accessed by the certain thematic lots, an initial registration by the users is required to be able to access the data. Currently this means that a user has to register for each service individually (eg. MyOcean or SeaDataNet), despite these authentication services operating on a similar system.

Action: The technical group will need to look into options to be able to minimise the needs for users to register on more than one occasion to access different services

1.2.2 In terms of monitoring of user experience

Feedback from users is key to DG MARE's understanding of the needs and future requirements for the EMODnet service. Indicators have been proposed that will collate web analytics of users for each of the thematic lots. But due to the nature of the data being provided to the portal (WFS or via external databases) these analytics do not fully reflect or provide sufficient specific information to identify the type of users.

Action: The technical group will need to outline options or recommendation on how to obtain user specific information on the thematic portals (pop up box/ forms ? initial sign in ?)

1.3 News RSS Feed

As part of the outreach activities, several thematic lots post news and information about their activities on their individual portals. To ensure the widest dissemination possible it is proposed to have a centralized aggregated news feed.

Action: The technical group will need to work with the thematic lots to implement a newsfeed on the entry portal which aggregates news from the thematic lots

ANNEX 1. Update on first year activities of the Technical Working Group

From: Francisco Souza Dias [mailto:francisco.souzadias@vliz.be]
Sent: woensdag 5 november 2014 14:45
To: antonio.novellino@ettsolutions.com; Natalie.askew@jncc.gov.uk; Helen.ellwood@jncc.gov.uk; Eleonora.manca@jncc.gov.uk; a.barth@ulg.ac.be; simon.claus@vliz.be; wil.adnams@lovelljohns.com; dick@maris.nl; jplo@bgs.ac.uk; keiran.millard@seazone.com; frederique
Cc: Liesbeth Renders; 'Jan Bart Calewaert'
Subject: EMODnet Technical Working Group updates

Dear members of the Technical Working Group,

The first use case (Query Tool) has been implemented on the EMODnet Central Portal and is now available at www.emodnet.eu/dataservices. I would like to thank you all and acknowledge your efforts in attaining this first achievement.

The Technical Working Group (TWG) was established in January 2014 with its Tasks and ToR (attached), since then, all communications have been establish on a bilateral basis with the developers/coordinators from each Lot. The present email is to inform you of the content of those communications and how they led to the development of the first use case. As detailed in the introductory text of the Query Tool, this is a work in progress and the following comments serve as a discussion starting point for the future developments of the Query Tools and its services. Among the tasks described in the attached document, the rating system has been deprecated (at least for now) and the focus was put on the interoperability of the services itself.

Bathymetry

The first WMS made available by bathymetry returned depth in RGB colour code (eg R245 G44 B234) instead of meters. Upon request, Dick Schaap, MARIS changed the service to ReST until the new OGC compliant service is operational again. Bathymetry ReST services are operational and performant.

Geology

OGC WMS services used in EMODnet Query Tool (Substrate, Stratigraphy, Lithology) are only a part of all services made available by Geology. These services are made available by 2 different servers which means that a dedicated script had to be coded to "call" each service. It was requested to both server administrators (GTK and BGR) to enable their WMS output to GML/XML which was already in use by BGR and was enabled by GTK shortly after.

Seabed Habitats

Seabed Habitats layers are divided by regions. To be able to provide a unique output regardless of the region, the query tool has to call the services for every region and then concatenate the result. Again, to simplify interoperability it was asked to Helen Ellwood, JNCC to enable GML output, once this was done, the query tool started by using only the Phase 1 Simplified Classification. Seabed Habitats have since developed a few more layers which will be implemented after this first release.

Chemistry

The structure Chemistry services are complex. Layers are divided by European Sea, then by sub-sea, then by parameter averages integrated over decades, and then by season resulting in 500+ layers. The chemistry services initially available were not working. Alexander Barth, ULg adapted the services and their output to enable some level of interoperability. For the query tool we have selected one parameter for all sea basins and then concatenated it in one output. Still, the temporal integration is not consistent and for some regions results are shown as the 1970-2009 monthly average (12 values per coordinate), and for other regions the results are shown as the seasonal average (4 values per coordinate) for the same period.

WMS needs to be structured to reduce to number of layers and allow the implementation of filters. Layers per parameter instead of layers per regions with subsequent partition. WCS or others that enable the querying of multidimensional data are in order if Chemistry is to enable access to temporal and depth filters.

Out of the WMS layers provided by EMODnet chemistry, this query tool currently uses only the average concentration of PO_4^{3-} in surface water of each regional sea and concatenates it into one single output without temporal filter. As provided by the EMODnet Chemistry WMS, for the North Sea, English Channel, Kattegat, Skaggerak, Black Sea, and Sea of Azov, the results are integrated over seasonal averages. All the other seas are integrated over monthly averages.

Biology

Biology runs on the EurOBIS/OBIS databases for the services in use at the moment. This 2 services were developed especially for the Query Tool. Earlier services required the input of species name to retrieve number of observations. With the new services, Biology is able to return data using the same input file as all the other services, i.e., latitude and longitude.

1. OBIS observations around a 1000m radius from the given coordinate. The output file is given as follows:

2. OBIS observations within the 6 minute grid cell (1 minute aprox. 1852 meters) where the given coordinate is located.

Physics

Physics layers are completely different from the remaining services in the way that they provide discrete data. The earliest service made available by Physics included only the locations of the mooring stations. Upon request, Antonio Novellino, ETT created a new WMS containing the monthly averages of 3 parameters. The query tool implemented the new layer presenting all the data made available by physics and adding the distance from given coordinate to mooring station. In the future, Physics may also benefit from a multidimensional querying system to enable temporal filters.

Human Activities

Human Activities has launched their portal and will eventually have data products available as web services as well. Alessandro Pititto, COGEA reported that the web services were pending the setting up of their server.

Next steps:

- Steering Committee meeting (SCM) 9-10 December will discuss the next priorities of the technical working group.
- After the SCM we will report on the activities/issues every 3 months.
- Implementation of the Single Sign-On

I will have the opportunity to demonstrate the Query Tool during the next SCM, should you have any comments or suggestions, please do send me an email and I will include them in my presentation for further discussion when we meet in December.

Kind regards,

Francisco

Met vriendelijke groeten

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