

RDA GWIIG meeting

23/10/2019

Helsinki

Attendees

Matt Fry (chair)

[...]

Attendees introduced themselves. A range of interests and application areas were described including local-scale water quality, drone applications, satellite altimetry for rivers and lakes, research infrastructures for environmental science and services, drought and climate services, water data for informing Sustainable Development Goals.

Presentation (online at <https://www.rd-alliance.org/slides-p14-gwiig-meeting-helsinki>) covering:

- GWIIG background and links to OGC Hydrology Domain Working Group (see http://external.opengis.org/twiki_public/HydrologyDWG/ for details of this group)
- Existing activities within RDA, including implementation / testing of recommendations from Dynamic Data Citation WG, Data Discoverability Paradigms WG, and links to Data Rescue IG.
- Water Data Portals work (see below)
- OGC SELFIE activity

The main focus was on the Water Data Portals work. Standards exist, environmental data sharing is well progressed in many domains, but globally hydrological data (including river levels, flows, water quality, etc.) is not readily available. There are increasing numbers of applications requiring access to regional or global hydrological data, increasingly in real time (regional / global flood and seasonable hydrological forecast, satellite products requiring in situ data for validation / product development, ocean / coastal modelling, etc.). Some regional and global databases have been collated and are available to some extent (this was largely the focus of the Water Data Portals work so far) but not readily discoverable. Increasingly National Hydrological Services are providing some data online, some real time, some historical, sometimes with graphs and maps and sometimes with data accessible via an API. But content and mechanisms for accessing data are not consistent, and the information about these online resources is not readily available. We propose a more detail cataloguing of national (and other) water data portals, capturing information on contents (real time / historic; river levels / flows / lake levels / water quality; data / statistics, etc.) and access mechanism (web pages only / downloadable / API; formats; use of standards, etc.).

A list of potential fields was discussed. A small number of data portals were reviewed to test the suitability of these fields (US, Canada, Rwanda).

The potential output of this work was discussed, and it was thought that a set of best practice guidelines for water / domain data portals would be useful, in particular to encourage movement in an appropriate direction from organisations with the capacity to deliver data over the web to move towards properly standards-based web services.

Addendum

Examples of standards-based services were discussed including:

Theia (Time series of water levels in the river and lakes around the world)

<http://hydroweb.theia-land.fr/>

Altimetry / water level measurements for lakes and river virtual stations from satellites. Makes use of OGC Earth Observation Metadata profile of Observations & Measurements for capturing metadata about products from which these time series were derived, and also makes data available using a SOS (based on the istSOS software):

See 9.4 (SOS service for metadata access) under:

<http://hydroweb.theia-land.fr/hydroweb/guide?lang=en>

Drought Observatory (Climate Services Tuscany Region and Mediterranean)

<http://drought.climateservices.it/>

Drought indicators for Italy and wider Mediterranean region with REST API for querying specific datasets.

Both of these services should be considered within the data portals review and highlighted for good practice.