Implementing FAIR principles for dissemination of data from the French OZCAR Critical Observatory network: the Theia/OZCAR information system

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OZCAR-RI, the French Critical Zone Research Infrastructure gathers 20 observatories sampling various compartments of the Critical Zone, and having historically developed their own data management and distribution systems. However, these efforts have generally been conducted independently. This has led to a very heterogeneous situation, with different levels of development and maturity of the systems and a general lack of visibility of data from the entire OZCAR-RI community. To overcome this difficulty, a common Information System (Theia/OZCAR IS) was built to make these in situ observation FAIR (Findable, Accessible, Interoperable, Reusable). The IS will allow the data to be visible in the European eLTER-RI (European Long Term Ecosystem Research) Research Infrastructure to which OZCAR-RI contributes.

The IS architecture was designed after consultation of the users, data producers and IT teams involved in data management. A common data model including all the requested information and based on several metadata standards was defined to set up information fluxes between observatories IS and the Theia/OZCAR IS. Controlled vocabularies were defined to develop a data discovery web portal offering a faceted search with various criteria, including variables names and categories that were harmonized in a thesaurus published on the web. The communication will describe the IS architecture, the pivot data model and open source solutions used to implement the data portal that allows data discovery. The communication will also present future steps to implement data downloading and interoperability services that will allow a full implementation of these FAIR principles.