Building the common data portal of the OZCAR French Critical Zone Observatories network: principles and first prototype

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OZCAR, the French Critical Zone Research Infrastructure (RI) gathers around 20 observatories sampling various compartments of the Critical Zone, in France and in southern countries. Given their long history, most of them have developed their own data/metadata portals. There is however a need to gather all the data in a common Information System (Theia-OZCAR IS) to make the data visible, findable and easy to explore; allow their preservation and their citation; favor their reuse and sharing; be interoperable with European infrastructures by adopting international standards (controlled vocabularies and OGC compliant webservice). To build the portal, the project team visited the existing data centers and future users to understand current practices and collect future users’ needs. This revealed the heterogeneous levels of data management maturity, variable names nomenclature and data exposition; and that finding data by variables was the point of interest of future users. The starting postulate when building the Theia-OZCAR IS is that databases stay next to data producers, which ensures the best data quality. A continuous information flow between observatories IS and the Theia-OZCAR IS will keep information up to date. Suppliers push data and metadata to the Theia-OZCAR IS, through a common data model, using an extraction script maintained locally and the data portal will provide an advanced search interface to explore the data as well as standardized services that can be harvested by other portals. The paper presents the approach and the first portal prototype, based on principles that can be reused by other disciplines/data portals.