FAIR access to soil and agricultural research data: The BonaRes Data Repository

Carsten Hoffmann, Xenia Specka, Nikolai Svoboda, and Uwe Heinrich
Leibniz Centre for Agricultural Landscape Research ZALF, Research Platform Data, Müncheberg, Germany
(hoffmann@zalf.de)

In the frame of the joint research project BonaRes (“Soil as a sustainable resource for the bioeconomy”, bonares.de) a data repository was set-up to upload, manage, and provide soil-, agricultural- and accompanying environmental research data. Research data are stored consistent and based on open and widely used standards within the repository over the long-term. Data visibility as well as its accessibility, reusability, and interoperability with international data infrastructures is fostered by rich description with standardized metadata and DOI allocation.

The specially developed metadata schema combines all elements from DataCite and INSPIRE. Metadata are entered by an online metadata editor and include thesauri (AGROVOC, GEMET), use licenses (Creative Commons: CC-BY for research data, CC-0 for metadata), lineage elements and data access points (geodata portal with OGC services). The repository meets thus the needs of the FAIR principles for research data.

In this paper we present and discuss functionalities and elements of the BonaRes Data Repository, show a typical data workflow from data owner to data (re-)user, demonstrate data accessibility and citeability, and introduce to central data policy elements, e.g. embargo times and licenses. Finally we provide an outlook of the planned integration and linkage with other soil-agricultural repositories within a government-funded comprehensive national research data infrastructure NFDI (NFDI4Agri, Germany).