



The BonaRes data infrastructure: Recommendations of standards for the different life stages of soil and agricultural research data

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Within the research project BonaRes (“Soil as a sustainable resource for the bioeconomy”) an infrastructure is being developed to upload, manage, store, and provide the increasing amount of soil and agricultural research data, raw data, and metadata in Germany.

Large joint research projects such as BonaRes require rules for data handling. The application and designation of standards, standard methods and widely disseminated and accepted data formats for all stages of data life (from acquisition to provision) is accompanied by a number of advantages for data providers, -managers and -users. Standards enable e.g. an easy data exchange and provision for data re-use, communication with other disciplines, and improve the visibility and accessibility of research activities and results. To harmonize national with international data infrastructures, standards used in the scope of BonaRes should either meet international requirements or be transformable by derivation tools.

In the first project phase an overview of standards was compiled including more than 600 relevant norms, directives, exchange formats and code lists. With the collaboration of an international expert consortium we then developed a “Recommendation list Standards” for all project partners and other soil/agricultural data providers. We present and discuss selected recommendations and possible implementations of standards to be used in the BonaRes data infrastructure for data acquisition (e.g. soil description, agronomy), data management (e.g. exchange languages, derivation tools), and data provision (e.g. licenses, geo-data services).