

Karlsruhe Institute of Technology

The CREATIVE project – customizing a generic repository for domain scientists and creating a data steward network

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CREATIVE goals

- Customizing the repository RADAR4KIT for the requirements of researchers at the KIT Climate and Environment Centre (CEC) with metadata templates -> create blueprint transferable to other systems/disciplines
- Integration in NFDI4Earth and V-FOR-WaTer (VFW)
- Establishing a network of data stewards in the institutes of CEC

KIT CEC – domain scientists

The KIT Climate and Environment Center (CEC) develops basic and applied **knowledge on climate and environmental change**. On this basis, it develops concepts as well as nature-based and technological solutions for safeguarding the natural basis of life and shaping the living environment. It offers a **broad range of expertise** in the natural, technical, and social sciences with about **700 scientists from 30 institutes**.

NFDI4Earth

Domain scientists

CREATIVE

NFDI4Earth is a community-driven process providing researchers with **FAIR**, **coherent**, **and open** access to all relevant Earth System Science data, to innovative research **data management and data science methods**.

CREATIVE methods

Customising RADAR4KIT:

- collaborate with RADAR for ontologies and interfaces
- Interviews & workshops with institutes at KIT CEC: defined metadata requirements, co-developed useful templates, test and feedback

Integration in VFW and NFDI4Earth:

- Metadata standards and formats compatible with VFW scheme (based on ISO19115 and DataCite)
- Ideally interface with VFW for preprocessing of CEC data
- CEC data in RADAR4KIT as a resource in

OneStop4All: the web-based key entry point for all NFDI4Earth contents and resources; developed to fit the needs of a wide range of users; backbone of the portal is the KnowledgeHub where the metadata of the resources are collected and referenced

V FOR Water

NFDI4Earth

Data steward network at CEC:

- Cultural change towards more data publications and open data
 CREATIVE support
- Foster exchange between data stewards to create climate of mutual help and support

RADAR4KIT

Generic research data **repository** at KIT:

- Publication and archiving of data packages
- Web-based interface to upload data and enter metadata
- Also possibility to upload metadata as .xml

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Metadata editor of RADAR4KIT, adaptations to accommodate specific metadata



V-FOR-WaTer

Virtual research environment for hydrologists & environmental scientists:

- Quick and simple access to hydrological data and tools
- Quick pre-processing of data from diverse data sources
- Shared tools and workspace for reproducible data analysis
- Include uncertainty information of data

Web portal with selection options and visualization of Eddy Covariance footprint



FDI4Earth

CREATIVE results

Prototype of metadata editor:

- Web form to enter CEC specific metadata and export in different formats, e.g. xml
- Respective validation file in RADAR4KIT to upload and validate metadata from the editor
- Compatible with VFW and NFDI4Earth KnowledgeHub
- Open source code to enable reuse of tool to customise metadata entries
 Data steward network at CEC:
 - Meetings and workshops to collect metadata requirements
 - ToDo: promote editor by demonstrating the research groups and support data publishing



https://github.com/KIT-HYD/creative_frontend w

www.klima-umwelt.kit.edu

https://radar.kit.edu/radar/de/home

https://nfdi4earth.de/

www.vforwater.de

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