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NFDI4Earth

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NFDI4Earth (www.nfdi4earth.de) is proposed as the consortium of the German NFDI (National Research Data Infrastructure) to address the digital needs of researchers in Earth System Sciences (ESS). The NFDI4Earth consortium has been created in a bottom-up process and comprises currently 58 members from German universities, research institutions, infrastructure providers, public authorities and different research organizations.

The large number and diversity of observational, analytical, and model data sets in very high spatial, temporal and thematic resolution, confronts the ESS with a strongly increasing amount of data in great heterogeneity and of inherent complexity. Earth system processes constantly change on various time scales and strongly influence each other. Describing and evaluating these processes urgently requires efficient workflows and extremely powerful data analytic frameworks like datacubes as well as appropriate levels of harmonizing related data services and their underlying standards. Research data are currently managed by an unstructured plethora of services that are scattered, heterogeneous and often only project-based without a long-term perspective. A variety of measures and services become bundled under the umbrella of NFDI4Earth in a one-stop service framework. With a common approach to openness and FAIRness, they form a united, sustainable and coherent solution.

In addition to existing links between German and international partners in ESS, NFDI4Earth will establish itself as a single point of contact and the voice for German Earth system scientists in both existing and emerging networks and alliances. NFDI4Earth is for example already striving to establish linkages with federative e-infrastructures like the European Open Science Cloud (EOSC) at an early stage.