

Support Letter

Helmholtz Research Field Earth & Environment supports the consortium NFDI4Earth

February 2025

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As a major contributor to building a comprehensive research data infrastructure for Earth system sciences in Germany, the Helmholtz Research Field Earth & Environment hereby expresses its continued support for the consortium NFDI4Earth.

In our joint research program *Changing Earth – Sustaining our Future*, the Research Field Earth & Environment (RF E&E) implements its mission to gain a holistic understanding of the changing Earth system, including the dynamics, feedbacks and interactions of its compartments. Our research provides actionable knowledge that can be used for a transformation towards a sustainable management of planet Earth. In our mission and as part of the Helmholtz Association we are committed to strong partnerships with universities in Germany and other relevant partners, including governmental agencies and public stakeholders. Thus, we are proud to be part of outstanding partnerships in developing transformative interdisciplinary infrastructures such as NFDI4Earth.

Research data is the essential basis for our scientific work. Therefore, the RF E&E has established its distributed research infrastructure DataHub to foster research data management towards a joint interoperable virtual information infrastructure for Earth system sciences. This effort is taken by all the seven Helmholtz centers of the RF E&E. We see the DataHub as a substantial contribution to NFDI4Earth, developed closely in a complementary approach. We thus commit our full support for the future, anticipating continued funding for both the Helmholtz DataHub initiative and for NFDI4Earth and NFDI as a whole by the German government and federal states.

Assembled in 2019 and funded since 2021, NFDI4Earth forms a unifying consortium of the National Research Data Infrastructure (NFDI) for the relevant stakeholders in the German Earth system sciences. Today, NFDI4Earth consists of 65 partner institutions from research – including all seven Helmholtz centers in the RF E&E – academia and public administration. We will further support community building by NFDI4Earth through our international network of partners in Earth system sciences, in particular the European Research Infrastructure Consortia (ERIC), such as EPOS, eLTER and ICOS. Furthermore, making research data in Earth system sciences FAIR is an essential goal of projects such as Geo-INQUIRE, bringing all major ERICs together.

With the OneStop4All, NFDI4Earth delivers an entry point for the Earth system science community, providing a collection of resources ranging from research-relevant data sets, information services and practical information to educational resources. DataHub's Earth Data Portal is an essential contribution to OneStop4All, allocating research data repositories, tools and exploration viewers of the RF E&E. Our efforts in developing and harmonizing metadata standards, ontologies and vocabularies compliant to the FAIR data principles, are well embedded within the German Earth science community as well as in the international context, such as the Open Geospatial Consortium (OGC) and the Research Data Alliance (RDA). We highly appreciate the integrative and consolidating approach of NFDI4Earth, which is well aligned with the activities of our centers, as coordinated by the Helmholtz Metadata Collaboration Hub Earth & Environment.

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Fostering research in Earth system sciences, we will intensify our engagement in NFDI4Earth, contributing to the UserSupportNetwork with our expertise and support systems. In particular this includes access to our large-scale research infrastructures, such as satellite missions, research vessels and observatories, and the research data being produced at these infrastructures.

Last but not least, we would like to highlight the importance of training the next generation of scientists in becoming digital natives for Earth system sciences. This includes our engagement in running the NFDI4Earth Academy, as well as contributing to the NFDI4Earth EduTrain Portal.

In summary, the Research Field Earth & Environment has a strong interest in the success and continuation of the activities of NFDI4Earth in shaping NFDI for Earth system sciences and therefore expresses its strong support and commitment for the next funding phase of this consortium.

Research Field Earth and Environment with One Research Program: Changing Earth – Sustaining our Future

The seven centers in the Helmholtz Research Field Earth and Environment work under the umbrella of a joint research program. In a hitherto unique pooling of scientific expertise and resources, more than 4,000 scientists are researching the enormous complexity of the earth system. As climate change, loss of biodiversity, geological risks and environmental destruction are among the greatest challenges of our time they are also addressing central questions for the future of mankind.



Website: <https://earthenvironment.helmholtz.de/changing-earth/program/>

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