



GeoCODES

Find and use geosciences data and tools

Standardize how scientific data is described

- Allow search engines for scientific data to support discoverability AND
- Facilitate the usage of the data

geocodes.earthcube.org

DeCODER

Democratized Cyberinfrastructure for
Open Discovery to Enable Research

Adoption of science-on-schema

The new NSF CSSI Democratized Cyberinfrastructure for Open Discovery to Enable Research (DeCODER) project will expand and extend the successful **EarthCube GeoCODES** framework and community to unify data and tool description and reuse across geoscience domains.

The internet works because of **defined standards and protocols** (e.g. TCP/IP, HTTP, HTML). This allows software, which must be sustained, to change and evolve over time, with better software with new features to emerge (e.g. new browsers, new web servers), while still allowing everything to just work from the user perspective.

That's what we are doing here for research data through the adoption of science-on-schema.

Science applications

To understand and address critical geosciences challenges we must find and leverage data and tools from across national and international facilities and programs. While building a flexible and extensible framework to fit many geosciences domains, the DeCODER project will also work with three specific communities, to ensure a tight connection to real science needs:

- **low-temperature geochemistry**
- **ecological forecasting**
- **deep ocean observing**

DeCODER will build the technological tent under which these communities, and others, can gather to advance their research and inform pressing societal needs.



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