CLIMATE CHANGE IN THE ARCTIC

Data Sharing in Arctic Climate research

The arctic is an interesting, special and fragile region that poses its own unique needs, opportunities and challenges when it comes to data: Geopolitically many nations pursue their own interests, research and exploration in the arctic and its resources. Climatologically the arctic is a key place to study climate change: Due to increased melting of the snow and ice covers in the arctic, temperature increase and its effects accelerates faster here than the global warming average. Interdisciplinary research and pan-arctic collaboration is key to both efficient data collection and field campaigns, as well as for monitoring and understanding the effects of climate change. There are a number of international organisations and committees encouraging collaboration in this research area, as well as emerging discipline-specific repositories to support the access, reuse, and deposit of arctic and ocean data.

Where can I find resources and tools for...

Data and Processing

- Barcelona Dust Regional Center (BRDC)
- Climadjust
- Cos4Bio
- Earthcube GeoCODES
- EcoPortal
- INTERACT Data Portal
- ICOS Data Portal
- Polar Data Discovery Enhancement Research (POLDER)
- SIOS
- openLCA platform

EOSC Portal

The EOSC Portal is a gateway to many of the innovative services, tools, publications and data listed here, and it is constantly growing with additions from the community of Arctic Climate Change researchers and research-supporting organisations. Do you have a resource that you want to share with others? Consider onboarding into EOSC.

Methods and Documentation

- CIMPAL
- ENES Data Space
- Lifecycle Initiative
- Ocean Best Practices (OBPS)
- QGreenland

Depositing Data

- Arctic Data Center
- Biological & Chemical Oceanography Data Management Office (BCO-DMO)
- CESNET DataCare
- ICES/CIEM
- PANGAEA
- Sea Scientific Open Data Publication (SEANOE)

Community and Professional Supports

- Arctic Council
- Arctic Data Committee
- EMODnet for Arctic Stakeholders
- International Arctic Science Committee
- International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT)
- International Union of Pure and Applied Chemistry (IUPAC)
- United Nations Disaster Risk Reduction (UNDRR)
- PreventionWeb
- Standing Committee on Antarctic Data Management (SCADM)
- Sustaining Arctic Observing Networks (SAON)
- iNaturalist

Learn more about the Research Data Alliance (RDA)

- ESES IG
- Weather, climate and air quality IG
- Marine Data Harmonization IG

How to do FAIR and Open Science

- What is FAIR?
- FAIR Community Support
- What is the goal of Open Science?

RDA RESEARCH DATA ALLIANCE

EOSC Future

What are the challenges for climate change data in Open Science?

"Climate change researchers are working in a diverse landscape of stakeholders and funding comes from a variety of national programmes, EU initiatives, and private foundations. Researchers working in this area have concerns about how fieldwork data may be interpreted; a feeling of responsibility. Field campaigns and results are subject to limited infrastructure support and quick changes in weather, and the data is big—ensuring long-term continuity of data storage can be difficult with project-funded work."

How can EOSC help researchers working with climate change data?

"EU funded initiatives are making it possible for research stations to make their data available, reducing the need for projects to re-collect or carry out additional fieldwork in sensitive locations. The EOSC Portal is becoming an important space for sharing this research across borders, and for accessing tools to manipulate and analyse big data. EOSC is already having an impact on the ability for researchers working with climate change data to develop a common approach."

— Jonas Koefoed Roemer

RDA/EOSC Future Domain Ambassador for Arctic Data Community, Ecosystems and Climate Change