



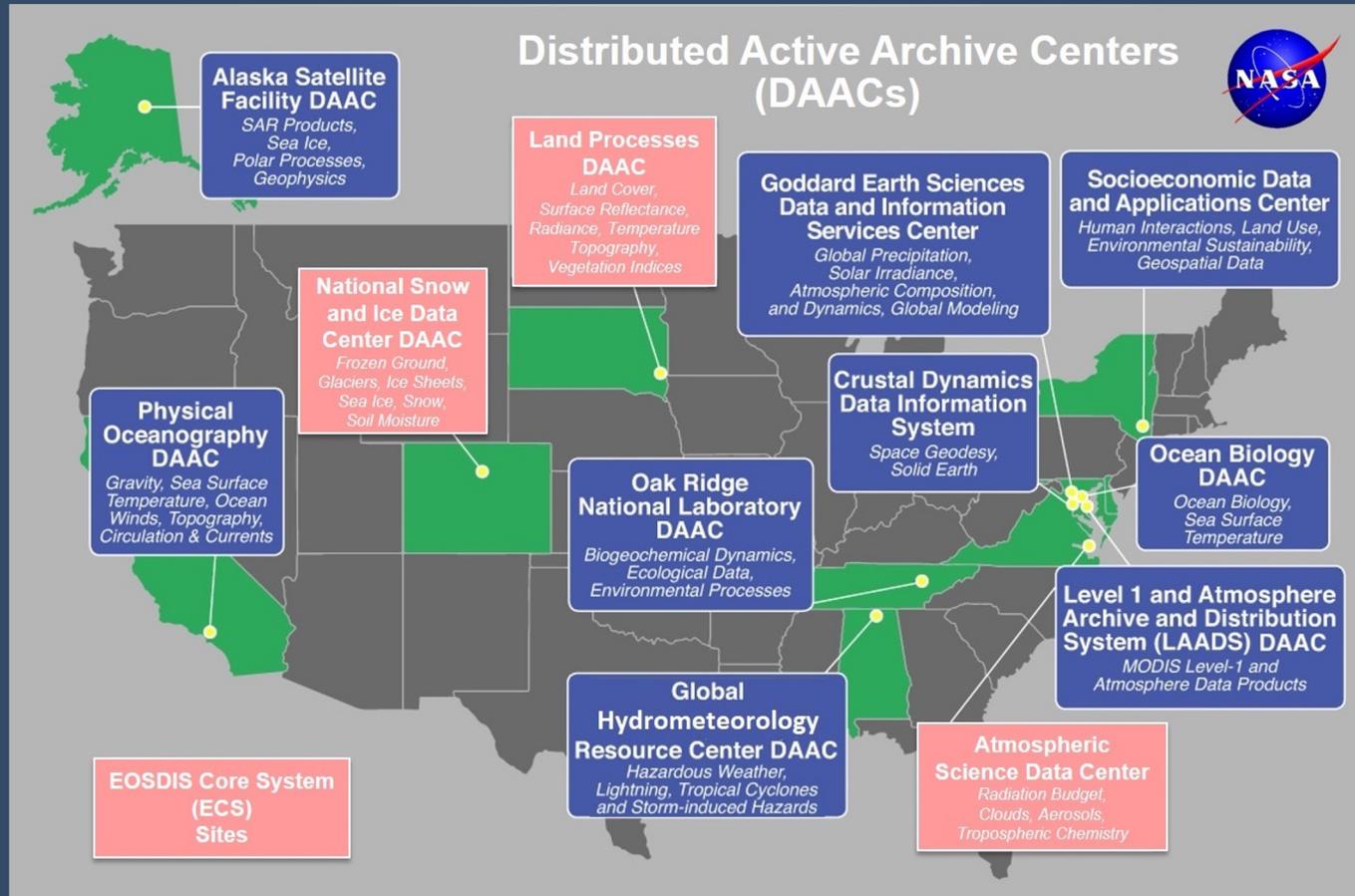
DAACs and Data Producers: in an Earthdata Cloud World

Airborne and Field Data Workshop
March 30, 2022

Bruce Wilson (ORNL DAAC) and Amanda Leon (NSIDC)



12 DAACs: Science Focus Areas

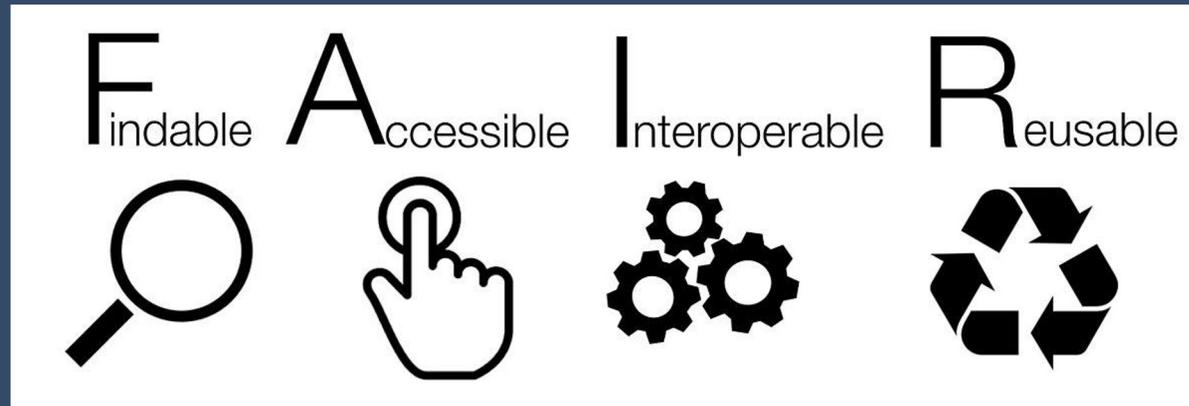




Primary DAAC Responsibilities

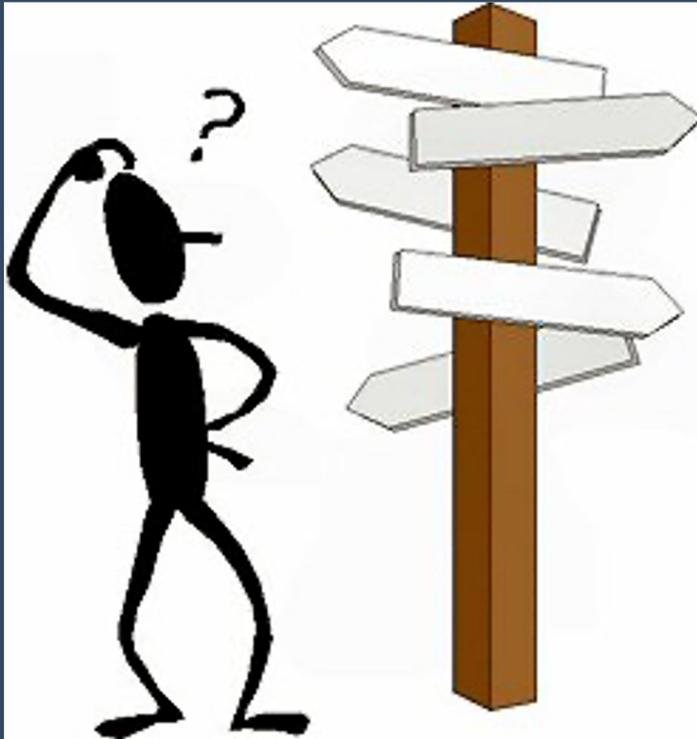
- Data Publication
- Data Access
- User Support

Make NASA Earth Science data as FAIR as practical:



Credit: Sangya Pundir via [Wikimedia Commons](#), CC-SA 4.0

Different DAACs, Different Systems



Having multiple DAACs is a strength:

- Different science communities have different needs
- DAACs are Science Enabling Centers

But differences, particularly unnecessary differences, can be a challenge for both Data Producers and Data Users.

Credit: Author unknown via [Wikimedia Commons](#)
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Earthdata Cloud

- Evolution of the infrastructure for the Earth Observing System Data and Information System (EOSDIS)
- A common platform, using public cloud (Amazon Web Services) for delivering data and services
- A migration that will take years to complete

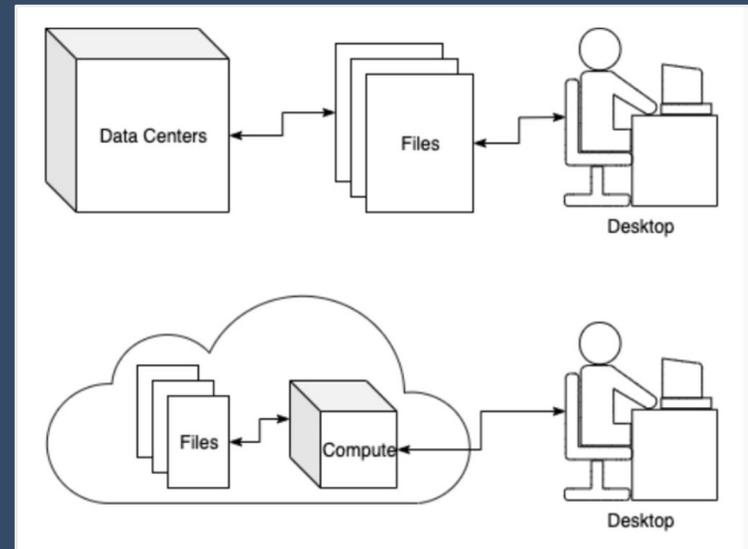
<https://earthdata.nasa.gov/eosdis/cloud-evolution>



Why?

- Enable user access to large volume data
- Remove barriers to cross-DAAC data access and tools
- Enable synergy across the ESDIS elements, particularly the DAACs

□ *Enable the next level of Open Science, including Analysis In Place*



Credit: Matthew Hanson, Element 84



Evolving ESDIS and DAAC Responsibilities

- Enable "Analysis in Place" for data where appropriate
 - Cloud Optimized data formats
 - High quality spatiotemporal and variable metadata
 - Direct S3 Access
 - Spatiotemporal Asset Catalogs (STAC)
- Use common tools where practical (Harmony, OPeNDAP, ...)
- Create & maintain domain-specific tools where necessary



Earthdata Pub

Initiative to improve DAAC interaction with data producers during data publication

- Data publication workflow software hosted in the Earthdata Cloud
- Provides a common interface
- Uses common terminology
 - Terminology intended to be understood by data producers
- Provides central location of data producers resources

Earthdata Pub Overview Beta Dashboard Feedback

Earthdata Pub helps you publish your NASA data

1. Create new requests
2. Provide metadata
3. Track publication status
4. Communicate with DAAC staff

Data Producer Resources New Request Dashboard

What is a NASA DAAC?

NASA's Distributed Active Archive Centers (DAACs) are components of NASA's Earth Observing System Data and Information System (EOSDIS) which provides science data to a wide community of users. The science systems of EOSDIS are managed by NASA's Earth Science Data and Information System (ESDIS) Project, part of NASA's Earth Science Data System (ESDS) Program.

As custodians of NASA Earth Science data, the DAACs provide data publication, data access, and data user support. DAACs are domain-focused data repositories supporting the specific needs of science disciplines, while also enabling cross-disciplinary data usage. Table 1 lists the 12 NASA DAACs and their primary scientific disciplines.



Earthdata Pub

Data publication is a series of activities to make data products discoverable, accessible, and usable by the public user community.



Data publication is a collaborative process between the data producer and the DAAC



Created by agus raharjo



Earthdata Pub

Data Producers can use Earthdata Pub to:

- LEARN: Find instructions on how to publish with a DAAC
- START: Initiate the publication process for their data product
- SUBMIT: Provide information and data to the DAAC needed for publication
- TALK: Communicate with DAAC staff
- MONITOR: Check status of publication request



Earthdata Pub

First release of Earthdata Pub is available for DAAC use

Spring 2022

Additional DAACs to implement

Summer 2022+

Spring/Summer 2022

GHRC and ORNL DAACs first to implement

