Mission of EOSDIS

- Process, archive, and distribute Earth science satellite, suborbital, field campaign and other data
- Implement NASA’s free and open data and information policy
- Ensure access to data to enable the study of Earth from space to advance Earth system science to meet the challenges of climate and environmental change.
- Promote interdisciplinary use of EOSDIS, including data products, data services, and data handling tools by a broad range of existing and potential user communities

EOSDIS Distributed Active Archive Centers (DAACs) are World Class Data Centers

- Discipline Oriented (e.g., Atmospheric Composition, Cryosphere, Ocean Biology)
- Co-located with science facilities and mission instrument teams at NASA centers, other government agencies, and universities according to their expertise
- Store Earth science mission data as well as field campaign data, and socioeconimic data - in a variety of measurements, resolutions, and formats
- Provide reliable, robust services to users whose needs may cross the traditional boundaries of a science discipline, while continuing to support the particular needs of users within the discipline communities.
- Communicate frequently through wikis, telecons, meetings
- Provide mechanisms for community involvement
- Coordinate specific data and services

Successes

- Serving a large (>2.5 Million), diverse, world-wide community of users
- Managing 12 DAACs and 12 Science Investigator-led Processing Systems (SIPS) (Established 5 new SIPS in 2015 to process EOS-continuity products from Suomi National Polar Partnership (SNPP) satellite data)
- Earthdata website (http://earthdata.nasa.gov)
- Comprehensive, sustainable, and evolvable
- Unified view of NASA’s Earth science data system resources
- Links to various ways to access data, related content and external sites
- Common User Registration System across DAACs
- Consistently high customer satisfaction
- Well-established process for DOI assignments
- GIIS/Worldview – Open Source Software; averaging >100k views/month

Challenges

- Big data – volume, variety, velocity, veracity
- Serving diverse user community
- Accommodating diverse data providers
- Encouraging the use of standards
- Preservation and stewardship for missions that age
- Resource control across diverse organization
- Responding to changing technology landscape

Best Practices

- Annual user surveys – American Customer Satisfaction Index
- DAAC User Working Groups
- Clear interface specifications and configuration management process
- Earth Science Data System Working Groups provide community inputs to EOSDIS evolution (10 WG’s active during 2016-2017)
- Commercial Cloud Prototyping
- Cross-DAAC collaborative projects, weekly telecons, technical interchange meetings (e.g., User Needs, System Engineering)
- EOSIS Standards Office – assess standards; maintained approved list for use in NASA Earth Science Data Systems
- Preservation Content Specification adopted as requirement for new missions
- Data Citations and Acknowledgements – guidance to DAACs and users - https://earthdata.nasa.gov/earth-observation-data/data-citations-acknowledgements
- Collection of Data Recipes for helping users - https://earthdata.nasa.gov/user-resources/data-recipes

NASA ESDIS Project Active in National and International Data System Communities

World Data System Members’ Forum – Sept. 11, 2016, Denver, CO

Find out More

ESDIS Website: https://earthdata.nasa.gov

World-wide Distribution – Free & Open

Data Transformations to Suit End-User Application Needs

Global Imagery Browse System (GIBS)/WorldView – Full Resolution Browse

High Customer Satisfaction

World Data System Members’ Forum – Sept. 11, 2016, Denver, CO