Introduction

The ORNL DAAC archives and publishes data and information relevant to biogeochemical, ecological, and environmental processes. The ORNL DAAC primarily archives data produced by NASA's Terrestrial Ecosystem Program; however, any data that are pertinent to the biogeochemical and ecological community are of interest.

The data set submission process at the ORNL DAAC has been recently updated and semi-automated to provide a consistent data provider experience and to create a uniform data product. The data archived at the ORNL DAAC database is consistently formatted, self-described, and documented, as well as referenced in a peer-reviewed publication. If the ORNL DAAC is the appropriate archive for a data set, the data provider will be sent an email with several URL links to guide them through the submission process.

Work flow

Formalized work flow makes data set submission easier for data providers and faster for the ORNL DAAC staff.

1. Data set identified
   - NASA, investigator, User Working Group, or ORNL DAAC staff

2. Email sent to data provider
   - Includes links to secure FTP upload area, data upload confirmation, and data provider questions

3. Monitor data upload and questions
   - Reminders sent to investigator

4. Data and data upload checked

5. Reminder email if not completed in 30 days

6. Confirmation email upon completion

7. Data set identified
   - ORNL DAAC staff

8. Email sent to data provider

9. Questions grouped into four headings
   - Answers to data provider questions
   - Answers are the basis for metadata record

10. Data set description
    - Questions gathered from ORNL DAAC staff
    - ORNL DAAC staff

11. Data preparation and delivery
    - ORNL DAAC staff

12. Data preparation and delivery
    - Questions gathered from ORNL DAAC staff

13. Data set description
    - Questions gathered from ORNL DAAC staff

14. Data set description
    - Questions gathered from ORNL DAAC staff

15. Data set submission
    - Questions gathered from ORNL DAAC staff

16. Data set submission
    - Questions gathered from ORNL DAAC staff

Data set submission

The process has been semi-automated for a consistent data provider experience and to provide uniform data products and metadata.

Data provider questions

Questionnaire gathers preliminary metadata on data sets

- Easy to answer
- Answers should be readily available
- Should take about 20 minutes

Questions grouped into four headings

1. Information About Data Set
2. Data Set Description
3. Temporal and Spatial Characteristics
4. Data Preparation and Delivery

Data Set Description

- Provide a title for your data set
- What type of data does your data set contain?
- What does the data set describe?
- What purposes did you measure, derive, or generate?
- How do you anticipate thesworth of your data?
- What are the following best practices for files and metadata?

Data Preparation and Delivery

- What data range does your data cover?
- What is a representative sampling frequency or temporal resolution for your data?
- What is a representative spatial resolution for these data?
- Where were the data collected/generated?

Temporal and Spatial Characteristics

- How many data files does your product contain?
- What does the data set describe?
- What is a representative sampling frequency or temporal resolution for your data?
- Will the uncertainty estimates be included with your data set?
- Provide a bounding box around your data.

Secure data upload area

Facilitates secure and easy data set upload by the data provider while allowing data assessment by the ORNL DAAC staff.

- For submission purposes, a data set includes:
  - Data files
  - Document(s) describing data
  - Supplemental files
  - Metadata record(s)
  - Online form

- Secure FTP write area
  - Requires user account
  - Multiple users can upload data
  - Reminder email if no data uploaded in 30 days

- Confirmation of data upload completion
  - Email summary of data uploaded

- Data set description
  - Questions gathered from ORNL DAAC staff

- Data set submission
  - Questions gathered from ORNL DAAC staff

Data management for data providers

Visit http://daac.ornl.gov

- If you are interested in data set archival at the ORNL DAAC
- If you are interested in our data set submission work flow
- To find our data management best practices for data management

How to submit your data set

If you are interested in archiving your data set with the ORNL DAAC, email our User’s Services Office: uso@daac.ornl.gov. Consider best practices for data management (see lower left panel) while preparing your data set for archival.

Future work

The archival process can be semi-automated and formalized into a standardized work flow. Efforts are underway to update:

- Quality Assurance
- Metadata editing
- Data set documentation

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