

UCAR/NCAR Data Management Plan Guidance and Template

The UCAR/NCAR Data Management Plan (DMP) Guidance and Template is intended to assist UCAR/NCAR PIs in describing plans for managing and sharing research data and products in order to meet DMP requirements set forth by UCAR/NCAR's top funding agencies (i.e. NSF, NASA, and NOAA). It is structured on the DMP requirements provided by the National Science Foundation's Proposal & Award Policies & Procedures Guide Chapter II.C.2.j "[Special Information and Supplementary Documentation](#)" with additional emphasis on requirements and guidance provided by the Geosciences Directorate - Atmospheric and Geospace Sciences Division (AGS) and the Computer & Information Sciences & Engineering (CISE) Directorate. However, individual solicitations may have additional or different data management plan specifications, so confirm your DMP adheres to all guidelines mandated by the funding agency before submission.

Use the nine section descriptions and guiding questions in the template below to formulate the text of your DMP. For NSF proposals, the final document should not be more than two pages. It should be titled "Data Management Plan" and must be included as part of the supplementary documents to the proposal, as NSF will not evaluate any proposal that is lacking a DMP. For questions or help, please contact datahelp@ucar.edu.

Additional NSF Resources

- Proposal & Award Policies & Procedures:
https://www.nsf.gov/pubs/policydocs/pappg19_1/index.jsp
- Dissemination and Sharing of Research Results:
<https://www.nsf.gov/bfa/dias/policy/dmp.jsp>
- Directorate for Geosciences--Data Policies:
<https://www.nsf.gov/geo/geo-data-policies/index.jsp>
- Data Management Guidance for CISE Proposals and Awards:
https://www.nsf.gov/cise/cise_dmp.jsp
- Frequently Asked Questions (FAQs) for Public Access:
<https://www.nsf.gov/pubs/2017/nsf17060/nsf17060.jsp>

Data Management Plan Template

1. Products of the Research (Type of Data Produced)

Description: Describe the types of data and/or products that will be generated. Examples include, but are not limited to: observations, model outputs, data generated from previous observations or models, texts, reports, spreadsheets, audio/video files, etc.

Questions to Consider:

What data types will you be creating or capturing (e.g. experimental outputs, observations, model simulations)?

How will you capture or create the data?

How will the data be processed?

What quality assurance and quality control measures will you employ?

If you will be using existing data, how and where will you obtain them?

What is the relationship between the data you are creating/collecting and the existing data?

2. Data Format (Data Organization and File Format)

Description: Describe the format in which the data or products are/will be stored (e.g. hardcopy logs and/or instrument outputs, ASCII, XML files, HDF5, CDF, NASA ICARTT, etc).

Questions to Consider:

Which file formats/types/structures will you use for your data, and why?

What is the organizing structure that will be used, including the naming convention for the data files and the final products?

Approximately how many files will there be or what will the total file size for your data?

3. Metadata

Description: Describe the format and standard in which the data/products will be described and documented. Metadata may include descriptions of research details such as experiments, apparatuses, computational codes, etc. Those associated with the data should conform to community standards and the requirements of the host repository.

Questions to Consider:

If you are using a metadata standard (e.g. ISO19115, Dublin Core, EML, etc.), which are you using and why?

What is the essential information needed to understand, interpret, and use the data from this research/project?

What contextual details are needed to make the data meaningful?

How will you create or capture these metadata?

4. Access to Data and Data Sharing Practices and Policies

Description: Describe your plans for providing public access to data, including websites maintained by your research group and contributions to public archives/repositories. If maintenance of a website is the direct responsibility of your group, provide information about the period of time the website is expected to be maintained. Also describe your practice or policies regarding the release of data (e.g., whether data are available before or after formal publication, the approximate duration of time the data will be kept private). Where applicable, specify your policies for protection of proprietary data, privacy and confidentiality, intellectual property, or other rights or requirements.

Questions to Consider:

What are your plans for providing access to your data/products, including those used in publications? If there is an embargo period for sharing the data, provide detailed explanations.

What is the process for gaining access to the data/products?

Is there a cost associated with gaining access?

What resources (e.g. software, equipment) are needed to access or use the data?

If different communities, such as other researchers and the public, will be provided with different access methods and file format(s), please provide the rationale and describe the methods/formats separately.

How long will the data be kept available and accessible beyond the life of the project?

Are there legal or ethical issues related to the data? If so, how will these be resolved?

If the data are of a sensitive nature such that public access is inappropriate (e.g. human subject concerns, potential patentability, species/ecological endangerment concerns), what have you done to comply with your obligations to your Institutional Review Board (IRB) Protocol? Also, address the means by which granular control and access will be achieved (e.g. formal consent agreements; anonymizing data; restricted access, only available within a secure network).

Who will hold the intellectual property rights to the data and how might this affect access?

5. Policies for Re-Use, Re-Distribution, and Production of Derivatives

Description: Describe your policies regarding the use of data provided via general access or sharing. If you plan to provide data on a website, detail any disclaimers or conditions regarding the use of the data in other publications or products. If the data are copyrighted, specify how this will be noted on the website.

Questions to Consider:

How can the policies outlined above be applied to the re-use and re-distribution of your data?

Who is likely to be interested in the data?

What are the intended or foreseeable uses of the data?

Who will be allowed to use your data and in what manner?

Will they be allowed to disseminate your data?

If you will apply permission-granting processes or place restrictions on data access, use, or dissemination, how you will codify and communicate these processes or restrictions?

6. Archiving of Data (Data Storage and Preservation of Access)

Description: Describe whether and how data will be archived and how preservation of access will be handled.

Questions to Consider:

What data will be preserved for the long-term?

On what basis will data be selected for long-term preservation?

How long do you expect the data to be available after the research/project has ended?

What is your long-term strategy for maintaining, archiving, curating, and preserving the data that the research/project will create?

Which archive/repository have you identified to deposit the data?

What procedures does your intended long-term data storage facility have in place for preservation and backup?

What transformations or migrations will be necessary to prepare the data for preservation and future sharing?

What related information will be deposited?

7. Cost of Implementing the DMP

Description: Describe any additional costs required to implement the DMP (e.g., the cost of setting up and maintaining a website). Details of the costs must be included in the budget justification in the budget section of the proposal.

Questions to Consider:

Who will be responsible for funding the management of your data?

What are the key cost components (e.g., database building/maintenance, personnel training, archives/repositories fees)?

8. Roles and Responsibilities

Description: Describe the staff/organizational roles and responsibilities for implementing this DMP. This should include time allocations, project management of technical aspects, and training requirements, and contributions of non-project staff/individuals should be named where possible. You may also want to reiterate who will be responsible for funding the management of your data.

Questions to Consider:

Who will be responsible for data management and for monitoring the data management plan?

How will adherence to this data management plan be checked or demonstrated?

What process is in place for transferring responsibility for the data, including when key personnel departures from the project?

Who will have responsibility over time for decisions about the data once the original personnel are no longer available?

9. Additional Comments

Description: Describe here any additional program-specific data management requirements. If none exist you may leave this section blank.

Questions to Consider:

Are there identifiers (ex: DOIs, PURLs, ARKs) that are or will be associated with the data of the research/project?

Do you have prior experience in publishing research data? If so, list citations here (including the website or persistent identifier).

Data Management Plan

[Enter the Name of the Funding/Award Agency]

[Enter the Proposal Solicitation Number]

Products of the Research (Type of Data Produced)

[Insert your response here]

Data Format (Data Organization and File Format)

[Insert your response here]

Metadata

[Insert your response here]

Access to Data and Data Sharing Practices and Policies

[Insert your response here]

Policies for Re-Use, Re-Distribution, and Production of Derivatives

[Insert your response here]

Archiving of Data (Data Storage and Preservation of Access)

[Insert your response here]

Cost of Implementing the DMP

[Insert your response here]

Roles and Responsibilities

[Insert your response here]

Additional Comments

[Insert your response here]