

Breakout Session 2:

DataONE Education Resources:

Current and future materials,
mechanisms for training,
community feedback

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Education Resources

DataONEpedia

Best Practices

Software Tools



Repository Database

Training Modules and Educational Outreach

Data Management Planning



DataONEpedia



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DataONEpedia

A 3-day NSF-funded Informatics Education Planning Workshop was held in Santa Fe, New Mexico June 28-30, 2010. The project was supported through the NSF INTEROP project and the results informed the new NSF DataNet projects, especially DataONE, which focuses on the biological, ecological, and environmental sciences. Two of the activities from this workshop were a Best Practices database that describes to scientists and students how best to perform a certain data or information management function such as naming a file, label columns in a spreadsheet, etc. and a "Tools" database. The Tools database includes a brief description of a particular tool that is recommended for use by scientists and students. [Credits](#)

The goals for these two databases are:

- A place where the data can be collected, managed, and updated by appropriate individuals.
- Ensure that the collected data can be reused to some degree and potentially presented in multiple different ways
 - Best practices and Tools need to be searchable
 - Defined fields and tags that make sense
- Cross-referential Best Practices

Best Practices

Search Best Practices:

Software Tools

Search Software Tools:

Best Practice Categories

Tool Categories

DataONEpedia

Best Practices	Software Tools
<p>Search Best Practices:</p> <input data-bbox="310 544 457 576" type="text"/> <input data-bbox="310 597 403 630" type="button" value="SEARCH"/> <p>Best Practice Categories</p> <p>All Best Practices</p> <ul style="list-style-type: none">Data Files and File Management (14)Data Management Planning (5)Data Preservation and Backup (4)Documenting Data (7)Quality Assurance and Quality Control (3) <p>Featured Best Practice</p> <p>Describe formats for date and time Category: Data Files and File Management</p> <p>For date, always include four digit year and use numbers for months. For example, the date format yyyy-mm-dd would appear as 2011-03-15 (March 15, 2011).</p> <p>If Julian day is used, make sure the year field is also supplied. For example, mmm.yyyy would appear as 122.2011, where mmm is the Julian day.</p> <p>If the date is not completely known (e.g. day not known) separate the columns into parts that do exist (e.g. separate column for year and month). Don't introduce a day because the database date format requires it.</p> <p>For time, use 24-hour notation (13:30 hrs instead of 1:30 p.m. and 04:30 instead of 4:30 a.m.). Report in both local time and Coordinated Universal Time (UTC). Include local time zone in a separate field. As appropriate, both the begin</p>	<p>Search Software Tools:</p> <input data-bbox="1081 544 1228 576" type="text"/> <input data-bbox="1081 597 1173 630" type="button" value="SEARCH"/> <p>Tool Categories</p> <p>All Tools</p> <ul style="list-style-type: none">Data and Metadata Management (21)Discovery Tools (8)Exploration, Visualization, and Analysis (32)Modeling (1)Scientific Workflows (7) <p>Featured Tool</p> <p>DataTurbine Primary Category: Discovery Tools</p> <p>Data Turbine (DT) is middleware for streaming sensor data based at environmental observatories. It provides reliable data transport for a wide range of sensors and a comprehensive suite of services for data management, and real time data visualization. It manages data sources and data sinks, data routing, scheduling, and security.</p> <p>In the simplest application, one or more of DT's configurable 'on-ramps' reads a data stream from one or more sensors (e.g. a file deposited by a data logger or the instrument itself), making the data accessible to other applications by holding them in its memory. The data are then routed to one or more 'off-ramps' for permanent storage, e.g. a database. While the data are in memory, visualization applications may access them in near real time for monitoring, and quality control routines may be applied.</p>

Repository Database



Comprehensive database of data repositories

Designed to aid users determine the most appropriate repository for their data

Includes information on requirements, standards etc. and other background information

Currently 73 repositories listed

Intended as a community edited resource

Training and Outreach

August 2011

ESA Workshop and Special Session:

- How to Manage Ecological Data for Effective Use and Re-use: A Workshop for Early Career Scientists.
- Creating Effective Data Management Plans for Ecological Research.

September 2011

DataONE Implementation Workshop:

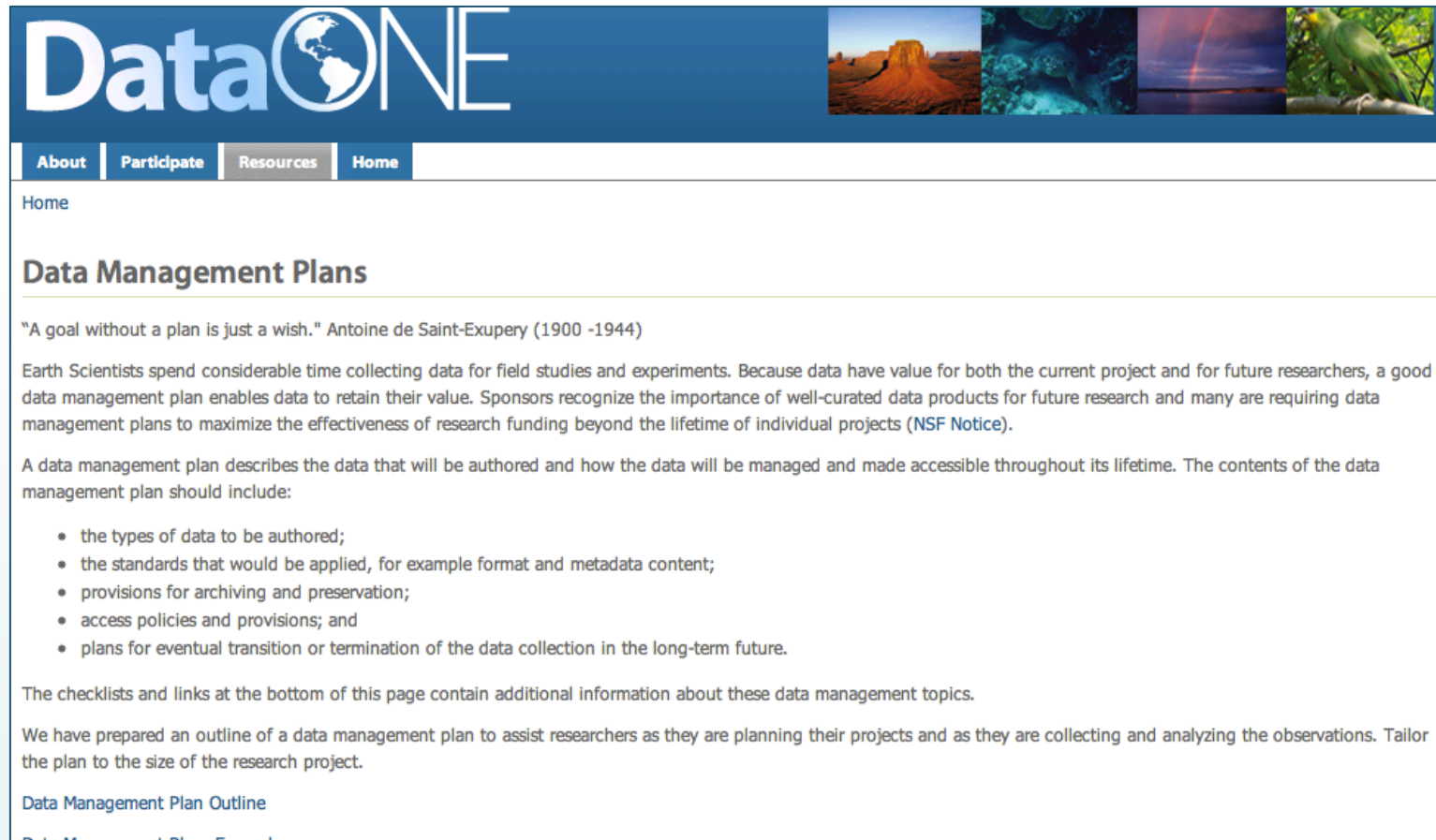
- How to publish data as a Member Node within DataONE

November 2011

Super Computing Workshop:

- Big Data Means Your Metadata MUST Work

Data Management Planning



The screenshot shows the DataONE website interface. At the top left is the DataONE logo, which includes a globe icon. To the right of the logo is a horizontal strip of four small images: a desert landscape with a rock formation, an underwater scene with coral, a sunset over water, and a green parrot. Below the logo and images is a navigation menu with four items: 'About', 'Participate', 'Resources', and 'Home'. The 'Home' item is highlighted. The main content area has a heading 'Data Management Plans' and a quote: "A goal without a plan is just a wish." Antoine de Saint-Exupery (1900 -1944). The text explains that Earth Scientists spend considerable time collecting data for field studies and experiments, and that a good data management plan enables data to retain their value. It lists four items that a data management plan should include: the types of data to be authored; the standards that would be applied, for example format and metadata content; provisions for archiving and preservation; access policies and provisions; and plans for eventual transition or termination of the data collection in the long-term future. The page also mentions checklists and links at the bottom for additional information and an outline of a data management plan.

DataONE

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Data Management Plans

"A goal without a plan is just a wish." Antoine de Saint-Exupery (1900 -1944)

Earth Scientists spend considerable time collecting data for field studies and experiments. Because data have value for both the current project and for future researchers, a good data management plan enables data to retain their value. Sponsors recognize the importance of well-curated data products for future research and many are requiring data management plans to maximize the effectiveness of research funding beyond the lifetime of individual projects ([NSF Notice](#)).

A data management plan describes the data that will be authored and how the data will be managed and made accessible throughout its lifetime. The contents of the data management plan should include:

- the types of data to be authored;
- the standards that would be applied, for example format and metadata content;
- provisions for archiving and preservation;
- access policies and provisions; and
- plans for eventual transition or termination of the data collection in the long-term future.

The checklists and links at the bottom of this page contain additional information about these data management topics.

We have prepared an outline of a data management plan to assist researchers as they are planning their projects and as they are collecting and analyzing the observations. Tailor the plan to the size of the research project.

[Data Management Plan Outline](#)

[Data Management Plan Example](#)

Data Management Planning




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LIBRARY



DMP Tool

Guidance and resources for writing data management plans

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2: Standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies)

Progress		Resources
Sections marked with a check are complete. You can navigate to a section and edit at any time.	<p>B I U [bullets] [list]</p> <div style="border: 1px solid gray; height: 200px;"></div>	<p>University of Virginia Documentation & Metadata Guidance from UVa</p> <p>File Format Guidance from UVa</p> <p>SciDaC Web Page</p> <p>General NSF Data Management Plan FAQ</p> <p>NSF Data Management Plan Requirements</p> <p>Sample Plan: NSF - General Data Management</p>