

# National Research Council Review of the *Strategic Plan* for the Climate Change Science Program

## Chapter 13 – Data Management and Information

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# Data Management and Information Challenge

To provide seamless, platform-independent, timely, and open access to integrated data, products, information, and tools with sufficient accuracy and precision to address climate and associated global changes.

# Guiding principles for CCSP Data Management plan

- The measure of success will be the ability of scientists and decisionmakers to access “integrated” data and information in a consistent and easily accessed format
- The value added will be *integration*—many types of climate data from different suppliers will be available in a manner consistent with user requirements.
- The methods used by data suppliers to deliver data to their “customers” will evolve with new technology.
- It will be easy for users to discover and access data.
- The system will be responsive to user feedback.
- The system will preserve irreplaceable data.
- There will be an open design and open standards process.
- Operations will be reliable, sustained, and efficient

# Goals for Data Management and Information

Goal 1: Collect and manage data in multiple locations.

Goal 2: Enable users to discover and access data and information via the internet.

Goal 3: Develop integrated information data products for scientists and decisionmakers.

Goal 4: Preserve data.

# Main Revisions to Draft Plan

Major revisions to Data Management plan, based on about 12 NRC comments, and over 50 public comments, are:

- Integration of CCRI and USGCRP Data Management and Information
- Recognition of data management as an issue which requires its own chapter
- Clearly stated challenge, goals, and objectives
- Links to data and information products from research chapters
- Management structure

# NRC Comments on Data Management

Comments on Individual Chapters

Chapter 3 – Climate Quality Observations, Monitoring, and Data Management

***Are the expected results and deliverables realistic give the available resources?***

- “To be realistic ... there must be a ... workable information system to make these observations available to decision makers as information in a form they can use on a regular and reliable basis”, (pg 44)

# NRC Comments on Data Management

## Comments on Individual Chapters

### Chapter 12 – Grand Challenges in Modeling, Observations, and Information Systems

#### ***General comments***

- **“Chapter 12 does not articulate such an overarching vision for the CCSP’s modeling, observations, and information systems”, (pg 58)**

#### ***Does the plan reflect current scientific and technical understanding?***

- “For Theme 3 (data and information management) the challenge of integrating the large amounts of relevant data are well laid out. Receiving less attention, perhaps because they are addressed in Chapter 3, are the important issues of data quality assurance, data archiving, and data dissemination. The research needs are clearly described, and the inclusion of socio-economic data is particularly welcome”, (pg 59)

# NRC Comments on Data Management

## Comments on Individual Chapters

### Chapter 12 – Grand Challenges in Modeling, Observations, and Information Systems

#### ***Are the specific objectives clear and appropriate?***

- “For Theme 3, the objectives are quite diffuse and address only a portion of the challenges of this activity”, (pg 60)

#### ***Are the expected results and deliverables realistic given the available resources?***

- “For Theme 3 the generation and maintenance of integrated datasets is extremely important, difficult to accomplish, and historically under funded. It will take major long-term commitment to achieve the “seamless access to information” expressed in the CCSP”, (pg 60).



# Public Comments – Main Topics

## Comments on Chapters 3 and 12

- Solutions to data management are NOT research needs
- Community building
- Expand on need for better interoperability
- Data management should be a separate chapter
- Need a more flexible data management system
- Accessibility of climate record
- Standard metadata requirements
- Need goals and a plan