

# CCSP and Workshop Overview



# Guiding Vision for the CCSP

A nation and the global community empowered with the science-based knowledge to manage the risks and opportunities of change in the climate and related environmental systems.

# CCSP Mission

Facilitate the creation and application of knowledge of the Earth's global environment through:

-  research
-  observations
-  decision support
-  communication

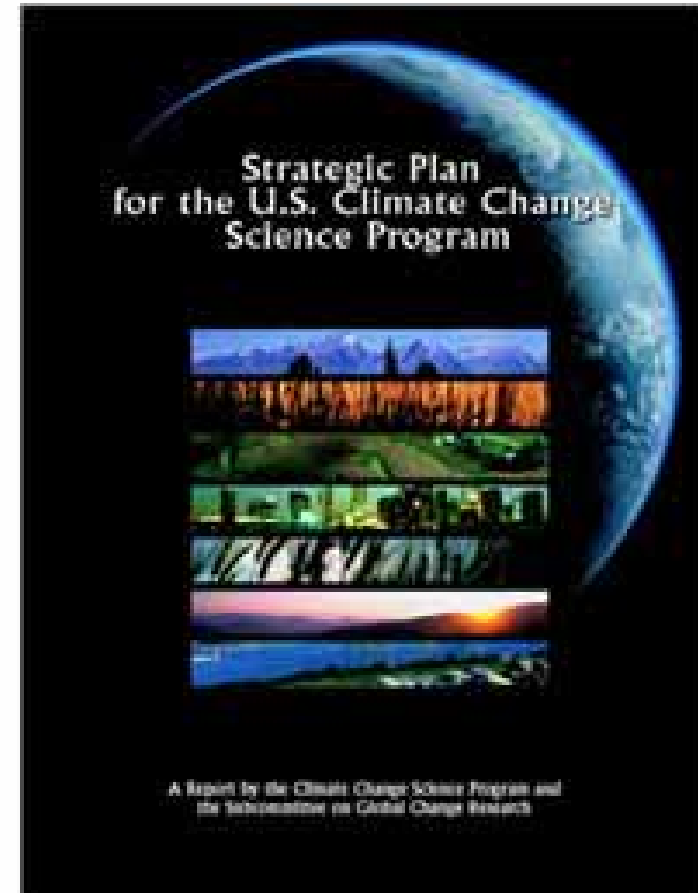
# CCSP Strategic Plan

## U.S. Climate Change Science Program

- 🌐 An Ambitious Program of Research
- 🌐 \$2 Billion / Year

## Climate Science Goals

1. Improve Knowledge of Climate and Environment
2. Improve Quantification of Forces Driving Changes to Climate
3. Reduce Uncertainty in Projections of Future Climate Changes
4. Understand Sensitivity and Adaptability of Natural and Manmade Ecosystems
5. Explore Uses and Limits of Managing Risks and Opportunities



[www.climatescience.gov](http://www.climatescience.gov)

# Strategic Plan Elements

Climate Variability and Change

Water Cycle

Land Use / Land Cover Change

Carbon Cycle

Ecosystems

Human Contributions and Responses

Modeling Strategy

Decision Support Resources Development

Observations and Monitoring

Data Management and Information

Communication

International Research and Cooperation

Program Management



# Current and Near Term CCSP Activities

## Synthesis and Assessment Products

- 🌐 Total of 21 products to be completed between 2006 and 2008
- 🌐 6 products directly responsive to the assessment requirements of the 1990 GCRA to be completed by the end of 2007
- 🌐 Information Quality Act, OMB Peer Review Guidelines, and Federal Advisory Committee Act (FACA) requirements
- 🌐 Product 1.1 (Temperature Trends) to be released for public comment within 30 days

# Current and Near Term CCSP Activities (continued)

*Our Changing Planet* – November 2005 release of FY06 edition, and process underway to prepare FY07 edition

Priority setting and budget alignment – FY07 process complete and process for FY08 underway

National Research Council (NRC) - renewed engagement for program development

# Renewed CCSP Engagement with the NRC

3-year advisory agreement using NRC's new CCSP Advisory Committee

A comparative analysis of other relevant assessments – development of lessons learned

Continuing dialog with the climate science and user communities engaging two existing committees: CRC and CHDGC



# CCSP Commitment to Capacity Building

CCSP aims to build capacity that:

- 🌐 Advances science, including observations
- 🌐 Is a sentinel for detecting change
- 🌐 Applies knowledge to support action

“Capacity” includes:

- 🌐 Individuals and institutions
- 🌐 Analytical methods and tools
- 🌐 Observations and networks
- 🌐 Data/information systems
- 🌐 Training for use of climate information in decision support

# Workshop Objectives

Evaluate CCSP and community-wide decision support resources development

Develop “lessons learned” based on current decision support activities

Develop future CCSP priorities for research, observations, and decision support

# Workshop Structure

Session 1 – Climate Information Needs for Decision Making

Session 2 – Evaluating Assessments (3 concurrent sessions)

Poster Session and Reception

Session 3 – Climate Information for Adaptive Management

Session 4 – Applications of Climate Science

Session 5 – Setting Priorities: Research, Observations, and Decision Support

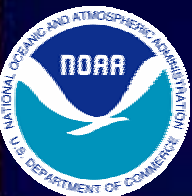
# Desired Workshop Outcomes

Community dialog

Capacity building

Establishing priorities for research, observations, and decision support

# Backup Slides





Time Frame	Topic	Lead (L) / Supporting (S) Agencies
<b>CCSP Goal 1 <i>Improve knowledge of the Earth's past and present climate and environment, including its natural variability, and improve understanding of the causes of observed variability and change</i></b>		
within 2 years	Temperature trends in the lower atmosphere—steps for understanding and reconciling differences.	NOAA (L) NASA (S)
within 2 years	Past climate variability and change in the Arctic and at high latitudes.	USGS (L) NSF/NOAA/NASA (S)
2-4 years	Re-analyses of historical climate data for key atmospheric features. Implications for attribution of causes of observed change.	NOAA/NASA (L) DOE (S)
<b>CCSP Goal 2 <i>Improve quantification of the forces bringing about changes in the Earth's climate and related systems</i></b>		
within 2 years	Updating scenarios of greenhouse gas emissions and concentrations, in collaboration with the CCTP. Review of integrated scenario development and application.	DOE (L) NOAA/NASA (S)
2-4 years	North American carbon budget and implications for the global carbon cycle.	DOE/NOAA/NASA (L) USDA/USGS (S)
2-4 years	Aerosol properties and their impacts on climate.	NOAA/NASA (L)
2-4 years	Trends in emissions of ozone-depleting substances, ozone layer recovery, and implications for ultraviolet radiation exposure and climate change.	NOAA/NASA (L)



Time Frame	Topic	Lead (L) / Supporting (S) Agencies
<b>CCSP Goal 3 <i>Reduce uncertainty in projections of how the Earth's climate and environmental systems may change in the future</i></b>		
within 2 years	Climate models and their uses and limitations, including sensitivity, feedbacks, and uncertainty analysis.	DOE (L) NOAA/NASA/NSF (S)
2-4 years	Climate projections for research and assessment based on emissions scenarios developed through the CCTP.	NOAA (L) NSF/DOE (S)
2-4 years	Climate extremes including documentation of current extremes. Prospects for improving projections.	NOAA (L) NASA/USGS (S)
2-4 years	Risks of abrupt changes in global climate.	NSF (L) NOAA/USGS/EPA (S)
<b>CCSP Goal 4 <i>Understand the sensitivity and adaptability of different natural and managed ecosystems and human systems to climate and related global changes</i></b>		
within 2 years	Coastal elevation and sensitivity to sea level rise.	USGS/EPA/NOAA (L) NASA (S)
2-4 years	State-of-knowledge of thresholds of change that could lead to discontinuities (sudden changes) in some ecosystems and climate-sensitive resources.	NSF (L) EPA/NOAA/USGS (S)
2-4 years	Relationship between observed ecosystem changes and climate change.	USGS/USDA (L) EPA/NOAA/NASA/NSF/ USGS/ USAID (S)
2-4 years	Preliminary review of adaptation options for climate-sensitive ecosystems and resources.	USDA/EPA (L) NOAA/NASA/USGS/ USAID (S)

Time Frame	Topic	Lead (L) / Supporting (S) Agencies
<b>CCSP Goal 4 continued</b>		
2-4 years	Scenario-based analysis of the climatological, environmental, resource, technological, and economic implications of different atmospheric concentrations of greenhouse gases.	Special CCSP mgmt. structure; topical leads among agencies NASA/USGS/EPA (S)
2-4 years	State-of-the-science of socioeconomic and environmental impacts of climate variability.	EPA (L) NOAA/NASA/USAID (S)
2-4 years	Within the transportation sector, a summary of climate change and variability sensitivities, potential impacts, and response options.	DOT (L)
<b>CCSP Goal 5 Explore the uses and identify the limits of evolving knowledge to manage risks and opportunities related to climate variability and change</b>		
within 2 years	Uses and limitations of observations, data, forecasts, and other projections in decision support for selected sectors and regions.	NASA (L) EPA/NOAA/USGS (S)
within 2 years	Best practice approaches for characterizing, communicating, and incorporating scientific uncertainty in decisionmaking.	NSF/NASA (L) EPA/NOAA/USGS (S)
within 2 years	Decision support experiments and evaluations using seasonal to interannual forecasts and observational data.	NOAA (L) NASA/EPA/USAID (S)