U.S. Climate Change Science Program Update

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

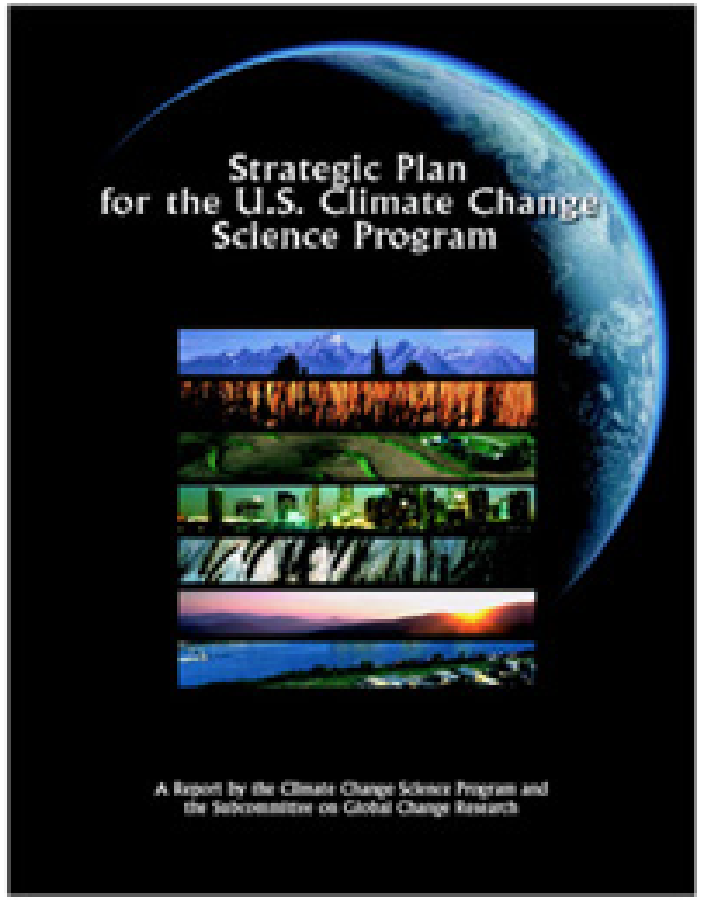
CCSP Strategic Plan

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

CCSP Key Priority Areas

Reduce Scientific Uncertainties of Aerosols;

Reduce Scientific Uncertainties of Carbon Sources and Sinks;

Reduce Scientific Uncertainties of the Water Cycle;

Analyze Climate Feedbacks and Sensitivity to Natural and Human-Induced Forcing;

Improve Understanding of Ecosystem Responses to Climate Change;

Enhance Global Climate Observations;

Enhance Climate Modeling Systems;

Improve Decision Support Capabilities; and

Improve Communications between Scientists and Information Users

Scientific Progress Since 2001

Climate observations and trends

Aerosol effects on climate

Global and large regional scale projections from recent climate model studies

Inventorying and modeling the carbon cycle

Energy and carbon uptake by the oceans

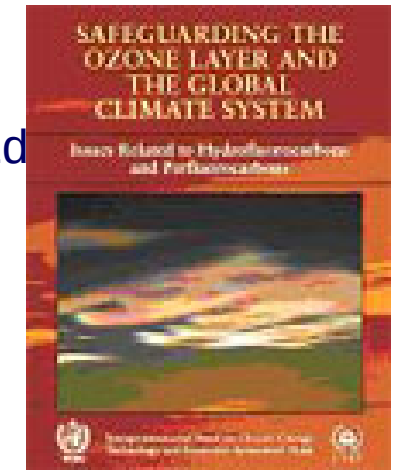
Decision support resources development

Improved analysis and forecasting skill related to quasi-periodic phenomena (seasonal, interannual, decadal)

Current Assessment Activities

CCSP agencies/scientists participate in a range of international assessments

- IPCC
  - ~120 U.S. scientists are IPCC authors; 15 Review Ed
  - US Co-Chairs and Hosts IPCC WG I
- WMO/UNEP Ozone assessments
- Arctic Climate Impacts Assessment
- Millennium Ecosystem Assessment



21 CCSP Synthesis and Assessment Products related to the CCSP goals

- Total of 21 products to be completed between 2006 and 2008
- Product 1.1 -- Reconciling Temperature Trends in the Lower Atmosphere -- released for public comment through January 4, 2006

Other Current and Near Term CCSP Activities

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

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

- 3-year advisory committee with the NRC
- A comparative analysis of other relevant assessments – development of lessons learned
- Continuing dialog with the climate science and user communities engaging two existing committees: CPC and CHDGC

NATIONAL ACADEMY OF SCIENCES
THE NATIONAL ACADEMIES

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

U.S. Climate Change Science Program

Climate Science in Support of Decision Making

CCSP Workshop | **14-16 November 2005 Arlington, Virginia**

700+ participants from the federal, state, and local governments, academia, and private sector

Keynotes from Ministers, National Academy of Sciences President, VP of Cinergy, and U.S. Congress

260 abstracts received

More information at www.climatescience.gov

CCSP Workshop Structure

Session 1 – Climate Information Needs for Decision Making

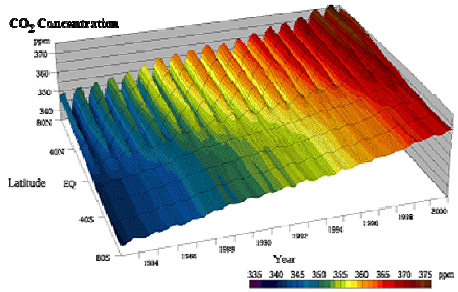
Session 2 – Evaluating Assessments (Climate Forcing, Climate Variability and Change, and Climate Sensitivity and Adaptive Management**)**

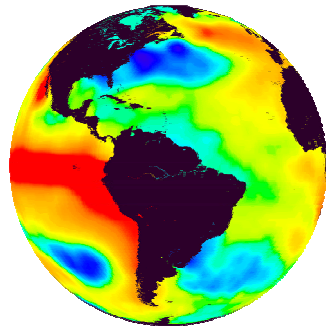
Poster Session and Reception

Session 3 – Climate Information for Adaptive Management

Session 4 – Applications of Climate Science (Water, Ecosystems, Coastal, Air Quality, and Energy)

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





International Activities

APN

ICSU
International Council for Science

IGFA
International Group of Funding Agencies for Global Change Research

DIVERSITAS
an international programme of biodiversity science

WCRP

Earth System Science Partnership

GLOBAL CHANGE
IGBP