

United States
Global Change
Research Program



United States Global Change Research Program (USGCRP) Strategic Plan

WCRP Town Hall
October 27, 2011



Agenda

- About the USGCRP
- New Decadal Strategic Plan
- Hearing from You



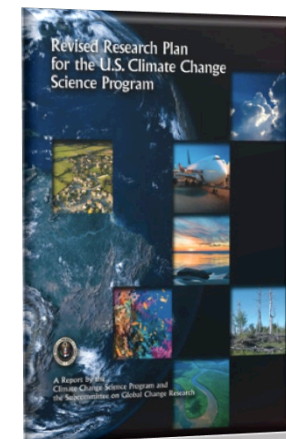
History of USGCRP

- USGCRP began as a U.S. Presidential Initiative in 1989
- The initiative was mandated by Congress in the Global Change Research Act (GCRA) of 1990 (P.L. 101-606)
- USGCRP includes 13 Federal Agencies/Departments
- GCRA Mandate States:

“To provide for development and coordination of a comprehensive and integrated United States Research Program which will assist the Nation and the world to **understand, assess, predict, and respond** to human-induced and natural processes of global change.”

USGCRP Vision and Mission

- **Vision** – “A nation, globally engaged and guided by science, meeting the challenges of climate and global change.”
- **Mission** – “To build a knowledge base that informs human responses to climate and global change through coordinated and integrated federal programs of research, education, communication, and decision support.”



United States
Global Change
Research Program



USGCRP and Global Change Science

The Program:

- *Coordinates Federal research to better understand and prepare the nation for global change*
- *Prioritizes and supports cutting edge scientific work in global change*
- *Assesses the state of scientific knowledge and the Nation's readiness to respond to global change*
- *Communicates research findings to inform, educate, and engage the global community*
- *Fosters the integration of global change knowledge across 13 Agencies/Departments*

USGCRP Agencies and Departments



Department of Agriculture



Department of Commerce



Department of Defense



Department of Energy



Department of Health and Human Services



Department of the Interior



Department of State



Department of Transportation



Environmental Protection Agency



National Aeronautics and Space Administration



National Science Foundation



Smithsonian Institution



United States Agency for International Development



How USGCRP Functions

Governance Structure of USGCRP



Coordinated through →



NCO Website

<http://www.globalchange.gov/about/coordination-office>



How USGCRP Functions

- National Coordination Office (NCO) supports the Interagency Working Groups (IWGs)
- IWGs are comprised of experts from the Federal government engaged in programmatic activities
- Each IWG has representatives from multiple agencies, making them truly collaborative efforts



United States
Global Change
Research Program



Agenda

- About the USGCRP
- New Decadal Strategic Plan
- Hearing from You



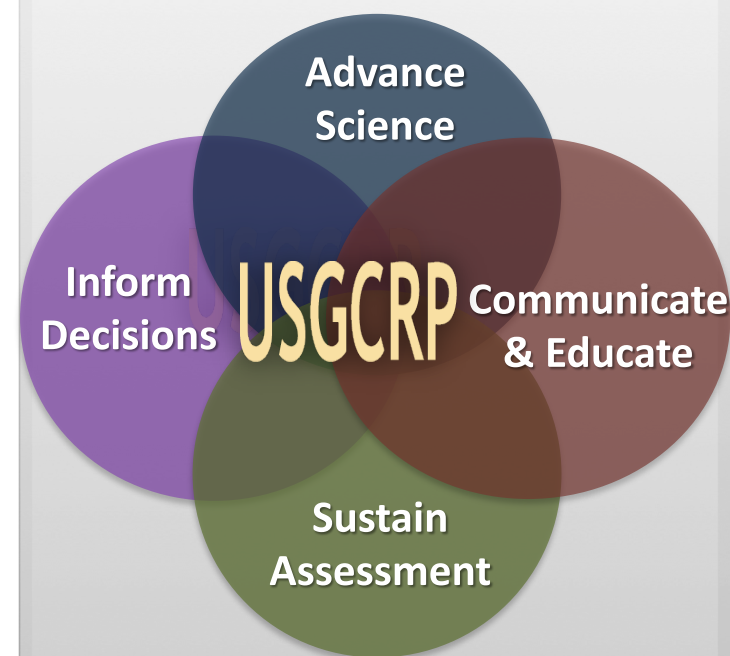
USGCRP Decadal Strategic Plan

- USGCRP has developed a draft Decadal Strategic Plan to:
 - Outline how the program will advance fundamental, use-inspired research to address the present and future challenges of climate and global change
- The Strategic Plan provides:
 - *Direction for USGCRP for the next ten years*
 - *Guidance for USGCRP to be an integrated “end-to-end” program: from fundamental global change research to societal decision support*
 - *Links the Program’s vision and mission to its goals and outcomes*
- The Strategic Plan speaks to various global change stakeholders



New USGCRP Decadal Strategic Plan

- Past Strategic Plans
 - Focused on natural science and emphasis on understanding, assessing and predicting
- Next Strategic Plan
 - Integrates human-natural systems
 - End-to-end science: from basic research to decision support



United States
Global Change
Research Program



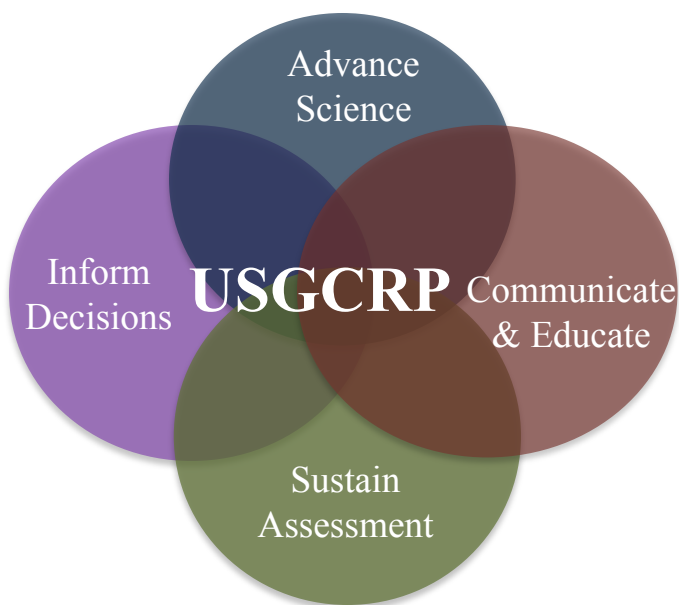
Stakeholder Engagement and Strategic Planning Process

- Strategic Plan developed through a transparent, multiyear process
 - Engagement with IWGs and stakeholders
- In 2009, USGCRP held over 20 listening sessions to hear from stakeholders
- Input through numerous reports from NRC and others



Current Strategic Plan Characteristics

- Strategic Plan “goals” provide the framework to implement USGCRP’s vision and mission
- There are four goals:

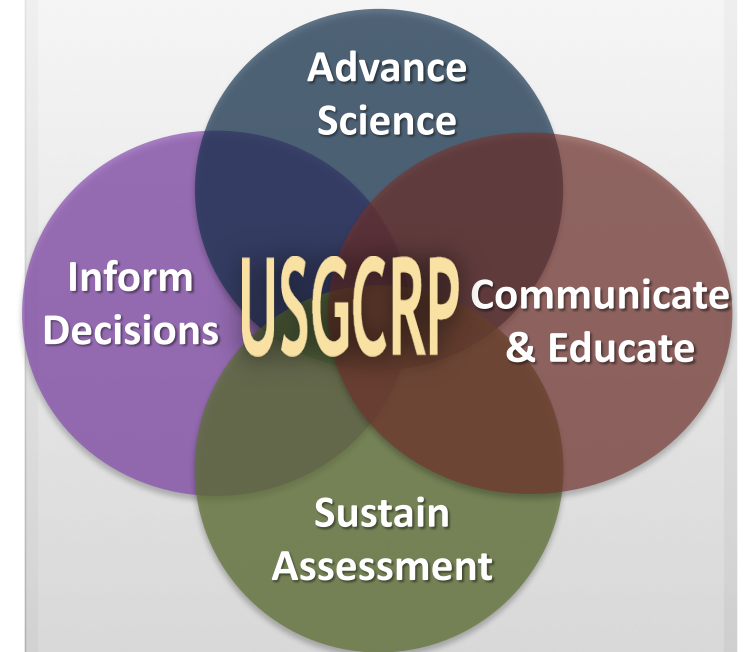


Current Strategic Plan Outline

- I. Introduction
- II. Vision and Mission
- III. Goals and Objectives
 - Goal 1 - Advance Science
 - Goal 2 - Inform Decisions
 - Goal 3 - Sustained Assessments
 - Goal 4 - Communicate and Educate
- IV. Coordinating with Other Nations and International Organizations
- V. Implementation Planning

USGCRP Strategic Plan Goals & Objectives

Goals	Objectives
Advance Science	1.1 Earth System Understanding 1.2 Science for Adaptation and Mitigation 1.3 Integrated Observations 1.4 Integrated Modeling 1.5 Information Management and Sharing
Inform Decisions	2.1 Inform Adaptation Decisions 2.2 Inform Mitigation Decisions 2.3 Enhancing Climate Services 2.4 Enhancing International Partnerships
Sustain Assessment	3.1 Scientific Integration 3.2 Ongoing Capacity 3.3 Inform Responses 3.4 Evaluate Progress
Communicate & Educate	4.1 Strengthen Communication and Education Research 4.2 Reach Diverse Audiences 4.3 Increase Engagement 4.4 Cultivate Workforce



Goal One: Advance Science

Goal Language: Advance scientific knowledge of the integrated natural and human components of the Earth system.

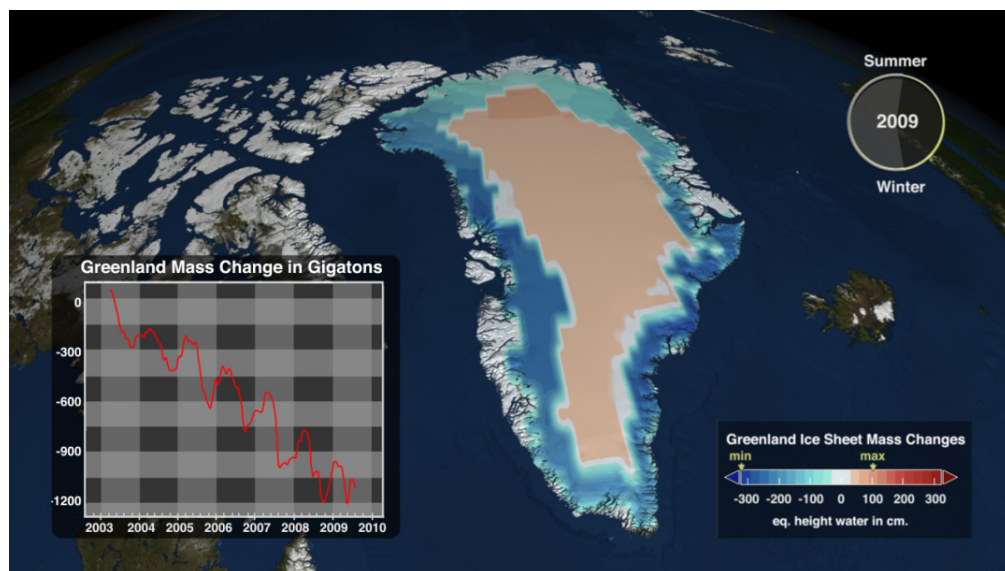
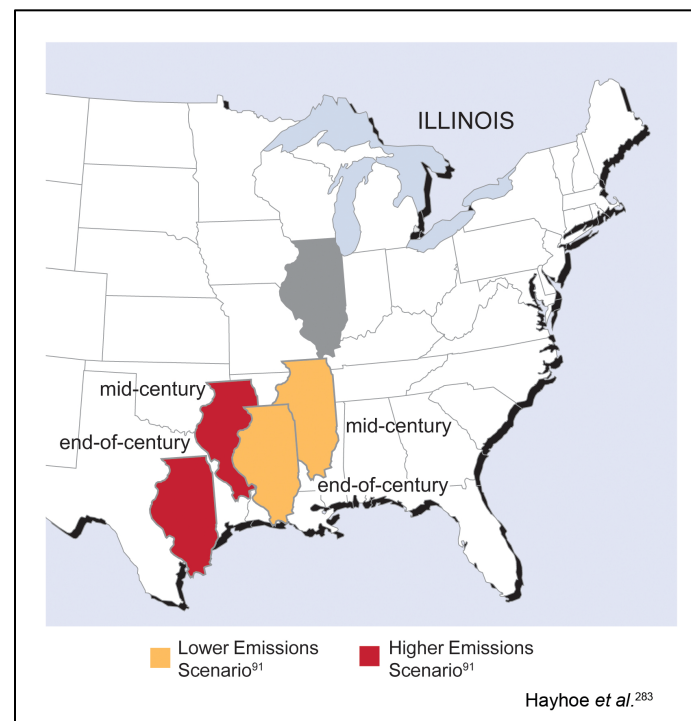


Image: This image shows the change in mass of the Greenland Ice Sheet over the period April 2003–July 2009 as measured by GRACE.

Credit: NASA Goddard Space Flight Center/Science Visualization Studio. Blue Marble data are courtesy of Reto Stockli: NASA/GFSC



Model projections of summer average temperature and precipitation changes in Illinois for mid-century (2040-2059), and end-of-century (2080-2099), indicate that summers in this state are expected to feel progressively more like summers currently experienced in states south and west. Illinois is projected to get considerably warmer and have less summer precipitation. Credit: *Global Climate Change Impacts in the U.S.*, USGCRP 2009.



United States
Global Change
Research Program



Goal Two: Inform Decisions

Goal Language: Provide the scientific basis to inform and enable timely decisions on adaptation and mitigation.



Researchers are studying decision making under uncertainty and risk taking (e.g. Why people choose to live in wildfire zones?). Even after seeing images like this one where a wildfire tore through a scenic California neighborhood in 2007, some people will continue to choose to live in high risk areas. Credit: *Andrea Booher (FEMA)*



Every year hundreds of adult female endangered green sea turtles migrate to the beaches of the French Frigate Shoals to lay their eggs. Female sea turtles can live for over 50 years and throughout their mature lives return to the same nesting grounds they were born at to lay their egg clutches. The French Frigate Shoals are amongst the many Northwestern Hawaiian Islands that could be inundated by rising sea levels and thus affect green sea turtle reproduction. Credit: *NOAA*

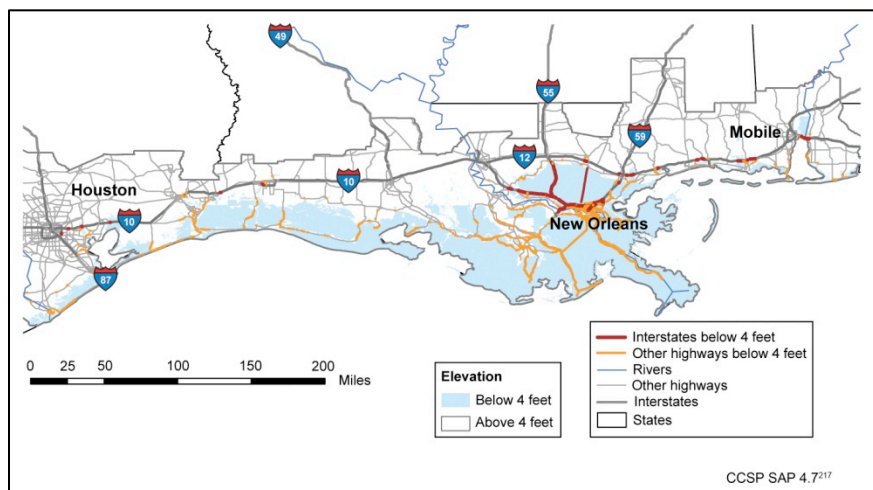


United States
Global Change
Research Program

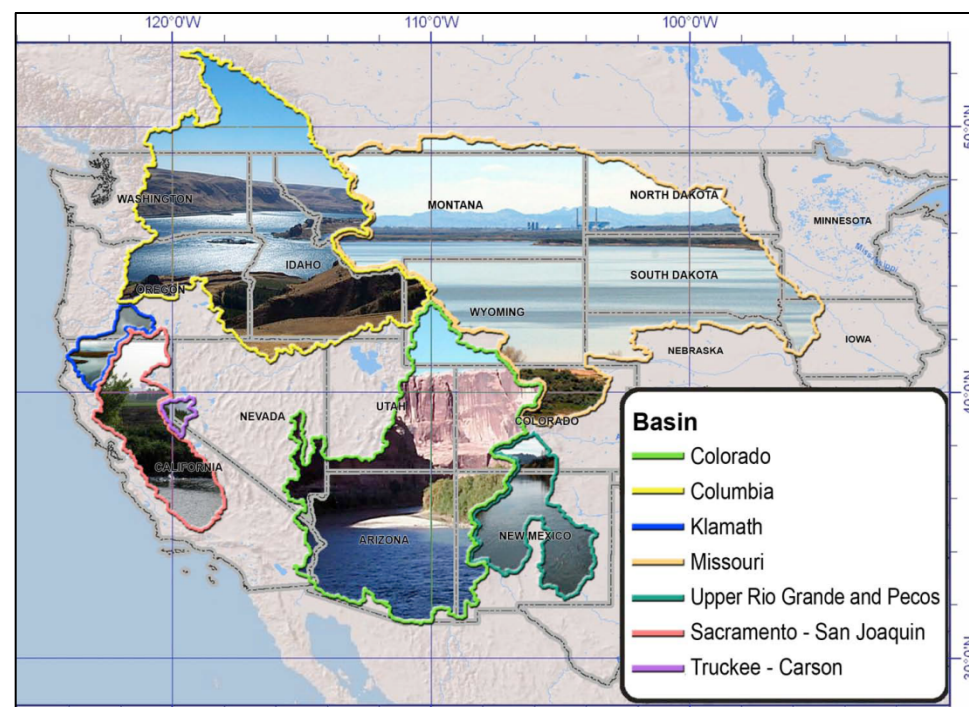


Goal Three: Sustained Assessments

Goal Language: Build sustained assessment capacity that improves the nation's ability to understand, anticipate, and respond to global and climate change impacts and vulnerabilities.



Within 50 to 100 years, 2,400 miles of major roadway are projected to be inundated by sea-level rise in the Gulf region. The map shows roadways at risk in the event of a sea-level rise of about 4 feet, within the range of projections for this region under medium- and high-emissions scenarios. In total, 24 percent of interstate highway miles and 28 percent of secondary road miles in the Gulf Coast region area at elevations below 4 feet. Credit: CCSP SAP 4.7.



Declining volumes of water basins could affect large areas in the western United States through reduced water supplies. Credit: Department of Interior/Bureau of Reclamation, The SECURE Water Act Report from April 2011)

Goal Four: Communicate and Educate

Goal Language: Advance communications and education to broaden public understanding of climate and global change, and empower the workforce of the future.



High school students attending a “Science Careers in Search of Women” conference.
Credit: NSF image.



In partnership with scientific and educational organizations, USGCRP developed Climate Literacy: The Essential Principles of Climate Science (2009). The publication has been and continues to be used as a valuable resource for teachers, students, and community leaders, as a topic for discussion within local communities, and as a guide for the development of informal learning resources and science curriculum content standards around the county.



United States
Global Change
Research Program



International Partnerships

- Recognize the strategic benefits of collaborating with international partners
- Coordinate U.S. activities with other nations and international organizations
 - On global change research projects and activities
- Promote international cooperation and access to scientific data and information
- Participate in international global change research by developing nations
- Effectively leverage existing and future scientific capabilities
 - More effectively use resources to accomplish goals and strategic priorities



ipcc



IGFA



United States
Global Change
Research Program



Implementation Guidelines

- Ensure continuing strength at the scientific foundation of USGCRP
 - Integrated observations, modeling, and process research is used to support all four goals
- Develop a portfolio of essential foundational and new activities that:
 - Promote scientific progress that achieves results having direct societal benefit
 - Build the capacity within USGCRP for interdisciplinary research and related activities
 - Integrate between the natural science and human components of the earth system
 - Translate science for societal benefit and related risk management decision making
 - Enable discoveries through transformational research
- Build connections within and beyond USGCRP member agencies, and with other interagency bodies
 - Leverage federal investments
- Review progress regularly of interagency activities
 - Evaluate priorities and the balance between research and service goals



Agenda

- About the USGCRP
- New Decadal Strategic Plan
- Hearing from You



USGCRP Strategic Plan Public Comment Period

- **Draft plan is available for public comment at <http://strategicplancomments.globalchange.gov/>**
- **Public comment started September 30, 2011**
 - Closes November 29, 2011



United States
Global Change
Research Program

