# The National Climate Assessment
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# U.S. Global Change Research Program

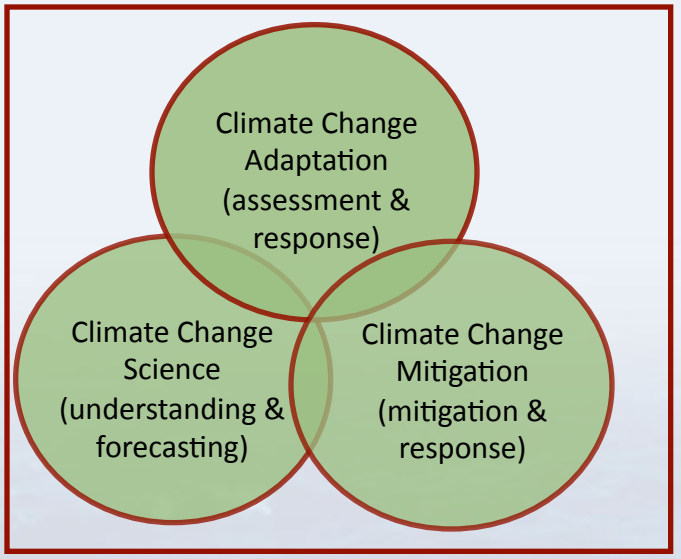
- Mandated by Congress in the Global Change Research Act of 1990
- Goals:

  -To **improve understanding** of uncertainties in climate science

  -To **expand the global observing systems**

  -To develop science-based resources to **support policymaking and resource management**

  -To **communicate findings** among scientific and stakeholder communities

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# The National Climate Assessment

**Section 106: Scientific Assessment**

On a periodic basis (**not less frequently than every 4 years**), the Council, through the Committee, shall prepare and submit to the President and the Congress an assessment which –

- **integrates, evaluates, and interprets the findings of the Program** and **discusses the scientific uncertainties** associated with such findings;
- **analyzes the effects of global change** on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and
- **analyzes current trends in global change, both human-induced and natural**, and projects major trends for the subsequent 25 to 100 years.

# CLIMATE CHANGE IMPACTS ON THE UNITED STATES

## THE PRODUCTS

### NAST OVERSIGHT

**Overview**

- 148 Pages
- Nine Megaregions
- Five Sectors
- NAST Authored

**Foundation Report**

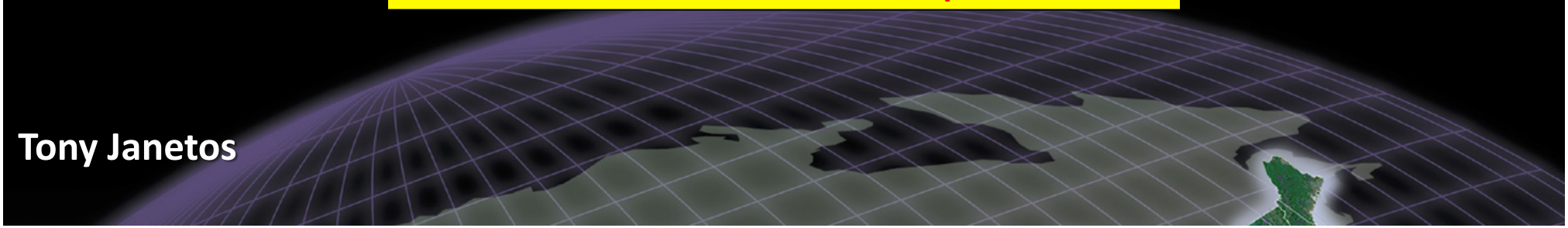
- 600 Pages +
- Nine Megaregions
- Five Sectors
- NAST lead authored chapters

### FEDERAL AGENCY OVERSIGHT

**Regional Studies, Sector Reports**

- 20 Regional Workshops and 16 Assessment Teams (university-based)
- Five Sector Teams (academic-government partnership)
- Extensive stakeholder-scientist interaction
- Each team is publishing independent reports and documents

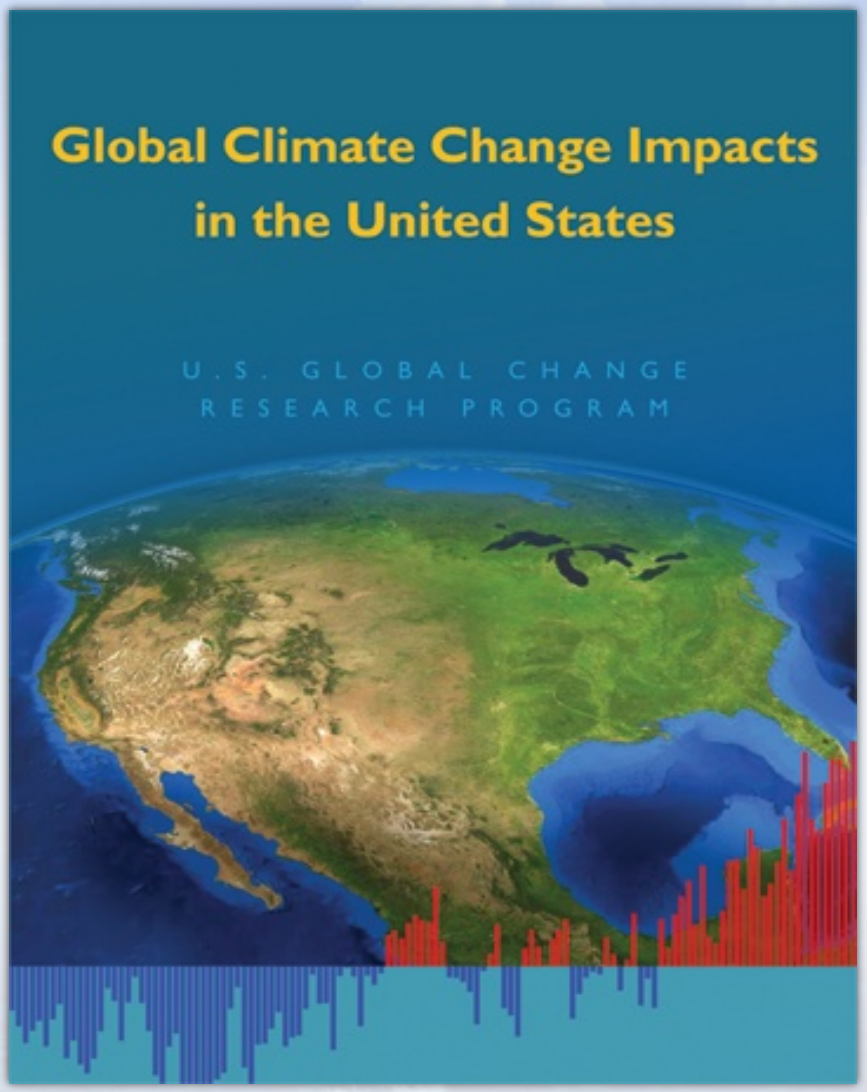
**The First National Assessment Completed in 2000**



Tony Janetos

# The 2nd National Assessment

1. Improve knowledge of climate and environment.
2. Improve quantification of forces driving changes to climate.
3. Reduce uncertainty in projections of future climate change.
4. Understand sensitivity and adaptability of natural and manmade systems.
5. Explore uses and limits of managing risks and opportunities.




2009

http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts

# The New National Climate Assessment

- Sustainable process with multiple products over time
- New topics, cross-sectoral studies
- Consistent national matrix of indicators
- Central coordination, multiple partners
- Regional and sectoral networks; building assessment capacity
- Recognizes international context
- Education and communications focus
- Web-based data and tools
- Process workshops to establish methodologies

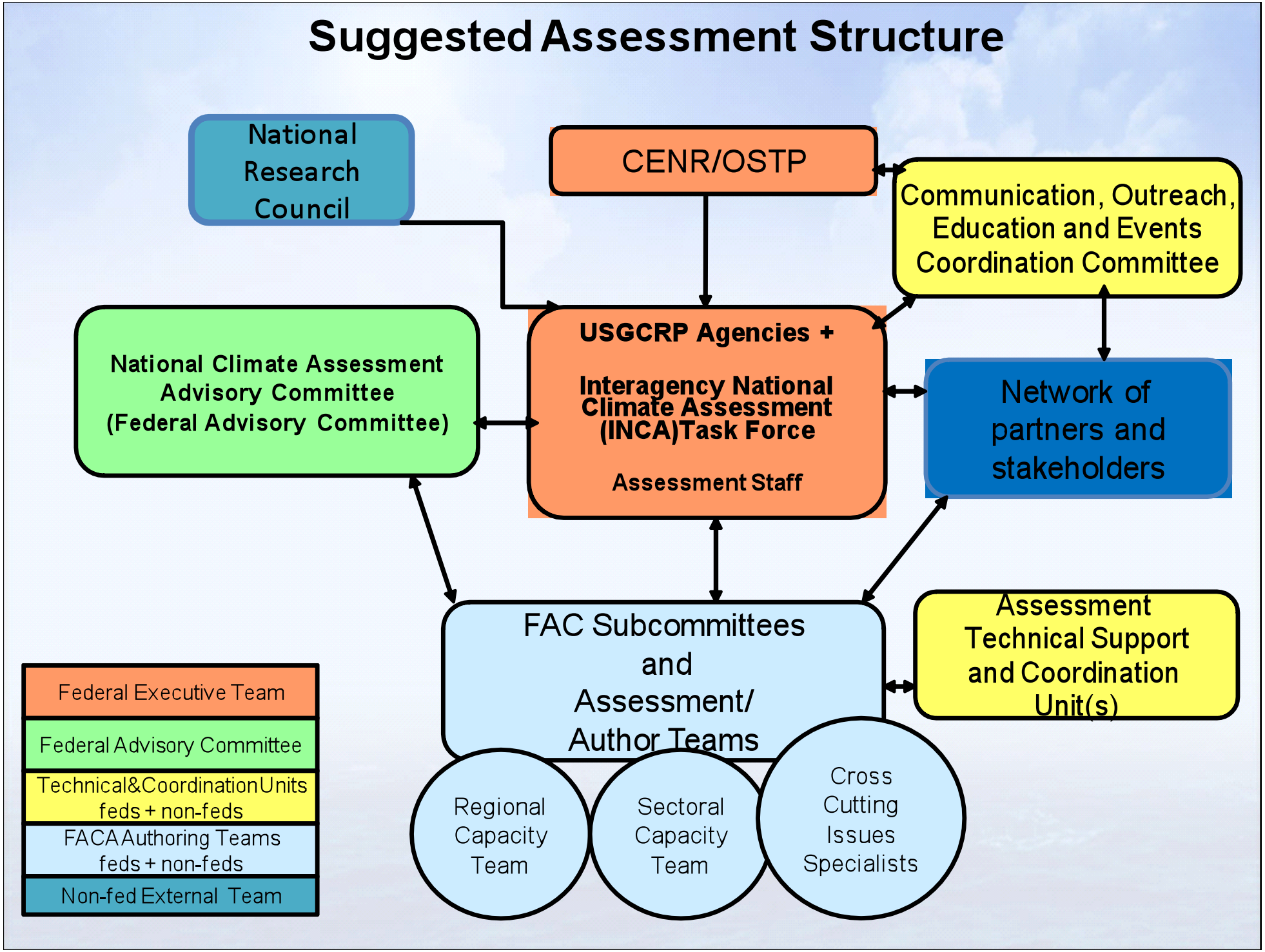
# Mission

...to establish a continuing, inclusive National process that:

1) synthesizes relevant science and information
2) increases understanding of what is known and not known
3) identifies information needs related to preparing for climate variability and change, and reducing climate impacts and vulnerability
4) evaluates progress of adaptation and mitigation activities
5) informs science priorities
6) builds assessment capacity in regions and sectors.

**First major Assessment report by June, 2013**

# Suggested Assessment Structure



# Report Outline

*I. Background and Context for the Process*

*II. The Scientific Basis for Climate Change*

*III. Sectors*

*IV. Regions*

*V. Climate change impacts in specific, integrated issue areas*

*VI. Human Responses to Climate Change*

*VII. Future Scientific and Societal Needs*

*VIII. Appendices*

# Assessment Activities to date

- Strategic planning and regional workshops in Chicago
- Established Interagency National Climate Assessment (INCA) team – 18 agencies; held 9 meetings to date
- Developed strategic plan draft and discussed with four Academy panels: Climate Research Committee, Human Dimensions of Global Change, America's Climate Choices and BASC
- Presented/discussed strategic plan with multiple departments and agencies: NASA, NOAA, EPA, NSF, DOT, USGS, USFWS, USAID, DOE, AG, DHS, DOI, OMB, DOD
- Received approval for NOAA sponsored external FACA Committee
- Developed the outline and workplan for the 2013 document
- Conducted workshops on scoping the International components and Communications program

# Next Steps

- Process workshops: (* = workshop proposal has been developed)
  - *Data management, documentation and peer review, September;
  - *Approach to regional and sectoral assessments, November;
  - *Ecological components of the long-term assessment matrix, November
  - *Scenario methodologies, development and selection, December;
  - *Modeling/*Downscaling (“right-scaling”) strategy for the Assessment, December;
  - *Social and economic valuation techniques, January;
  - *Vulnerability and risk assessment techniques, January;
  - Monitoring Climate Change and its Impacts: Indicators, Detection, Attribution and Impacts (2 workshops) January – March;

# Next Steps

- Budget discussions
- Establish FACA
- Detailees/hires in place for the following positions:
  - Regional coordinator (NASA?)
  - Sectoral coordinator (?)
  * Database/web manager (NOAA-Asheville)
  * Network/engagement manager (USGCRP)
  - Administrator/Events coordinator (pending)
  - Science integration/assessment coordinator (?)
- Implementation of engagement and communications strategies
- Deployment of networks
- Regional and sectoral workshops

## Time Line

- FAC in place November 2010
- Process Workshops completed March 2011
- Regional and Sectoral Workshops completed December of 2011
- First Draft Report June 2012
- Final Report June 2013

# Objectives

The assessment process will:

- Allow for the development of **multiple authoritative and credible products** over time that respond to GCRA requirements, and also support other ongoing and/or targeted climate assessment needs (e.g. regional, sectoral, cross-sectoral).
- **Evaluate the state of climate impacts** on regions and sectors, support adaptation and mitigation activities, **and identify information needs and opportunities**
- **Evaluate changes in trends, vulnerabilities and risks** related to climate in the context of other stressors

# Objectives (cont)

- Efficiently **coordinate** national assessment efforts **across regions and sectors at multiple scales**
- **Build a sustained, collaborative network** of partners and stakeholders inside and outside of the government who are engaged in the process, maximizing integration with related public and private sector efforts and institutions
- **Develop effective and efficient communications, outreach and engagement processes**, including alternative media (social networking, web-based tools, etc)
- **Integrate Assessment activities with educational efforts** related to climate change, mitigation, adaptation and sustainability

# Objectives (cont)

- **Maximize engagement of federal agencies** and assist in interagency coordination of federal climate science activities
- **Support and enhance the "boundary function"** for climate science, allowing for expanded applications and utility of climate program investments for decision support.
- Make the best use of learning from prior assessments, including NRC reports, and **develop an adaptive approach that responds to new information** over time
- **Include consideration of economic implications** of both action and inaction in responding to impacts

# Objectives (cont)

- **Provide equitable access to information** that supports adaptation and mitigation, **especially in the regions, ecosystems, populations and systems (transportation, energy, etc.) that are identified as most vulnerable**,
- **Support evaluations of the interactions between adaptation and mitigation activities**
- **Develop scenarios and model output that can be used for multiple purposes**

# Products

- **A report or reports to Congress that meet the requirements of the GCRA in a timely fashion**
- **Web-based data and products** that have been vetted through Assessment procedures
- Regional, sectoral and institutional **assessment and science translation capacity at multiple scales**
- **Ongoing national evaluations of changes in climate trends, impacts, risks and vulnerability** based on selected indicators and standard assessment methods
- **Process documentation**, including guidelines, metadata, quality assurance and review procedures
- **Communications and education products** that facilitate broader understanding of climate issues and impacts