

# The National Climate Assessment



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# The “New” National Climate Assessment

## Goal

- Enhance the ability of the United States to **anticipate, mitigate, and adapt** to changes in the global environment.

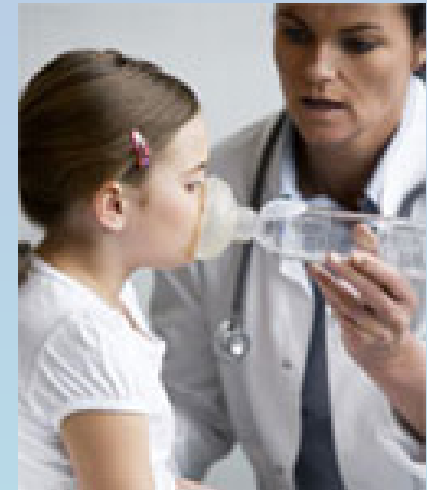
## Vision

- Advance an **inclusive, broad-based, and sustained process** for assessing and communicating scientific knowledge of the impacts, risks, and vulnerabilities associated with a changing global climate in support of decision-making across the United States.



# Goals for the NCA

- A **sustained process for informing an integrated research program**
- A scientific foundation for decision support, including **scenarios and other tools at multiple scales**
- **Evaluation** of the implications of alternative **adaptation and mitigation options**
- **Community building** within regions and sectors that can lead to enhanced resilience



# Outcomes of the NCA

- **Ongoing, relevant, highly credible analysis** of scientific understanding of climate change impacts, risk, and vulnerability
- Enhanced timely **access to Assessment-related data** from multiple sources useful for decision making
- **National indicators** of change and the capacity to respond
- **Risk framing**



# Status of Report

- Draft Released January 14
- Comments due April 12
- Responses due June 4
- Review editors responses due July 7
- CENRS briefing July 19
- Next draft due August 7 (to NRC, agencies and NCADAC)
- Responses due Sept 9
- Next NCADAC in-person Oct 1
- Next draft due Oct 7
- Final report release March, 2014

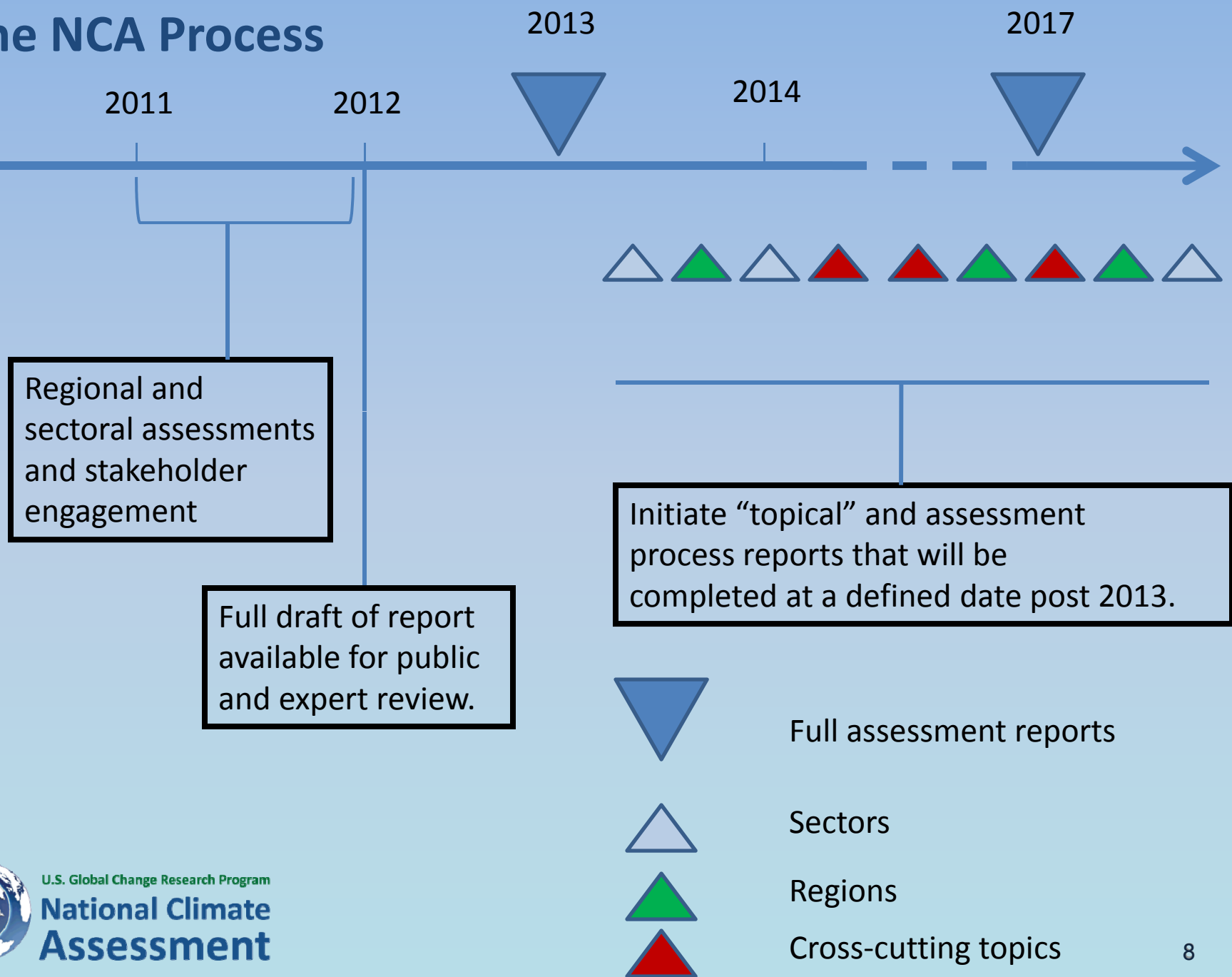
# What's New about Process?

- Inclusive, broader expertise
  - Over 240 authors
  - 60 member federal advisory committee
- Public engagement, e.g. “Request for Information”
- Focus on a sustained process
  - Supporting quadrennial reports
  - Intermediate products to bolster assessment capacity
- NCAnet

# Background

Chapter Name	No. of Chapter Authors	Range of Public and Private Sector Authors
Adaptation	8	University of Michigan, Chevron, The Nature Conservancy, Stratus Consulting, American Cancer Society, NOAA Southern Regional Climate Center, University of Alaska, City of Seattle
Mitigation	8	Forest Service, University of Arizona, Massachusetts Institute of Technology, National Ecological Observatory Network, DOE Pacific Northwest National Laboratory, Electric Power Research Institute, Boston University
Decision Support	7	NOAA, University of Pennsylvania's Wharton School, The Rand Corporation, Cascadia Law Group, DOE Pacific Northwest National Laboratory, Comcast, DOI - USGS

# The NCA Process



# What's New about Format?

- E-book – the first major government publication of its type to be submitted this way
- Global Change Information System – focused on helping people get electronic access to data, tools and experts associated with NCA who can help with climate-related decisions
- Traceable accounts – the process & rationale the authors used in coming to conclusions and their confidence in those conclusions

# Sustained Assessment

## Why Consider Special Reports and Activities?

- Deepen our understanding of climate change effects on a particular sector or region that are of national importance
- Investigate new issues of concern
- Build capacity to conduct more sophisticated, useful, and credible assessments over time
- Better support decisions that reduce risk and increase opportunities
- Given the national importance of a particular topic, it enables a process to provide a full review (IQA, NRC, public/agency comment and response) and gain credibility in the eyes of decision makers and the public

# Sustained Assessment

## “Foundational Investments”

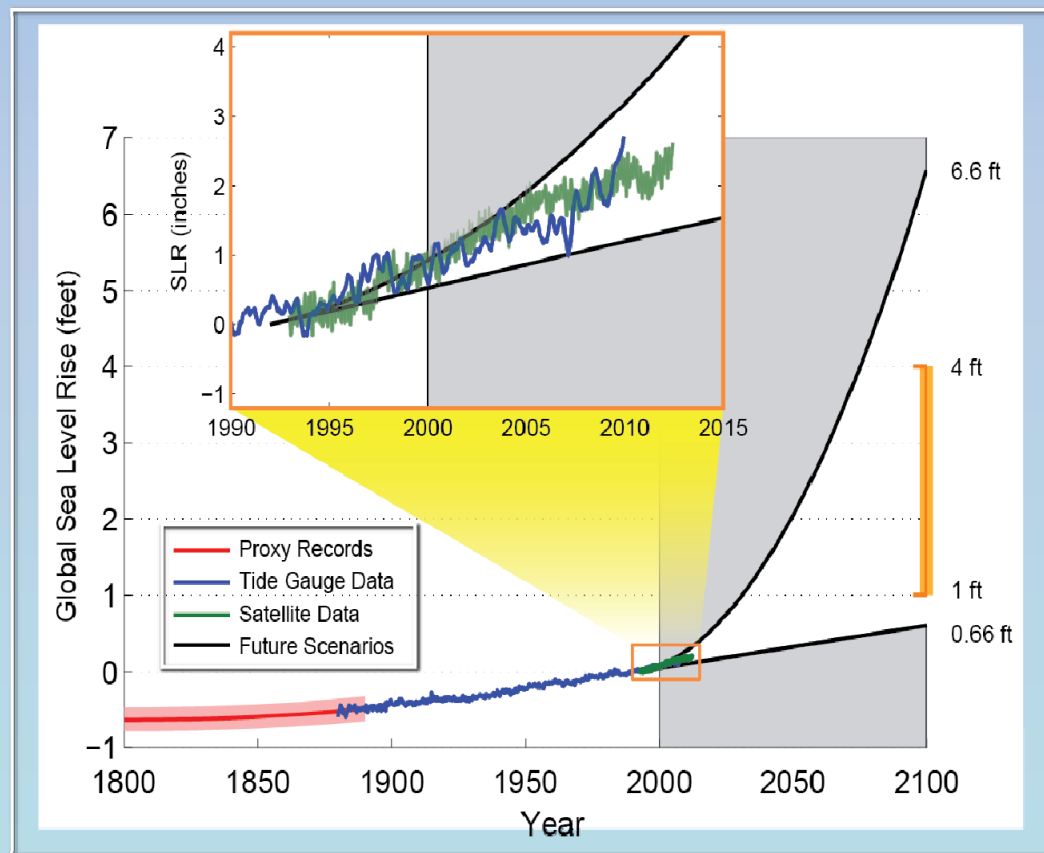
- Scenarios – a way of visualizing potential future conditions in a rigorous and consistent way
  - Regional climate trends and projections products (see [www.scenarios.globalchange.gov](http://www.scenarios.globalchange.gov))
  - Global sea level rise guidance
  - Regional land-use (ICLUS)
- Indicators – keeping track of the rate of change and the capacity to respond
- Global Change Information System
- Partnerships, e.g., NCA Network – a network of public, private and NGO partners who are engaged in the NCA on an ongoing basis (see [www.ncanet.usgrcrp.gov](http://www.ncanet.usgrcrp.gov))

# Scenarios

[www.scenarios.globalchange.gov](http://www.scenarios.globalchange.gov)

- Regional climatologies and projections
- Global Sea level rise scenarios

Sea Level Rise: Past, Present, Future

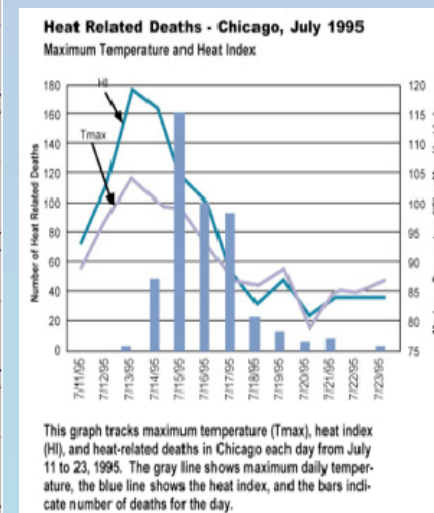
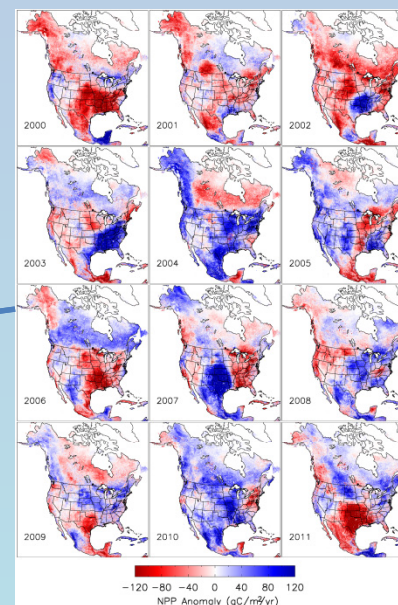
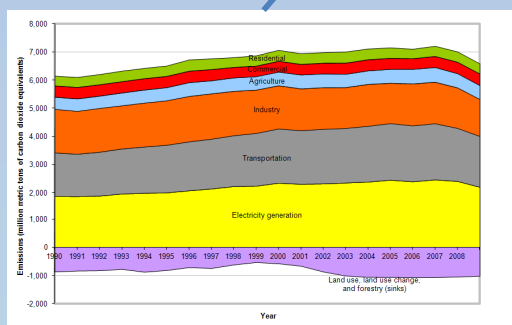
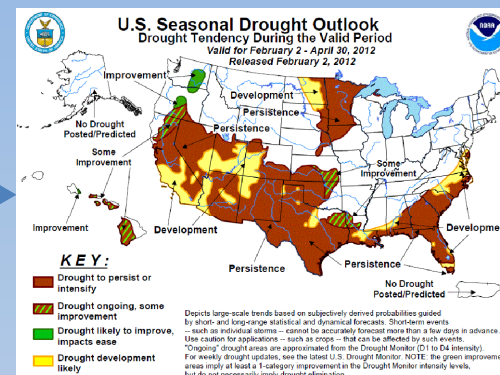
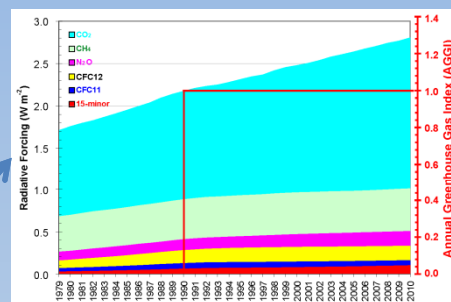


# National Climate Assessment Indicators

The goals for the NCA indicators are to:

- Provide meaningful, authoritative climate-relevant measures about the status, rates, and trends of key physical, ecological, and societal variables and values
- Inform decisions on management, research, and education at regional to national scales
- Identify climate-related conditions and impacts to help develop effective mitigation and adaptation measures
- Provide analytical tools through which user communities can derive their own indicators for particular purposes

# Indicators Examples



Adaptation and Mitigation Responses

# NCAnet: Partners in Assessment

- 80+ organizations extend the NCA process and products beyond the federal government and are active partners in the sustained assessment process
- Professional societies, Academic institutions and consortia, Non-governmental organizations, Local and state government departments, Private sector

Online at

<http://ncanet.usgcrp.gov>

- List of partners' NCA-related activities
- Monthly conversations among existing partners
- “Affinity groups” model for collaboration on activities



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# Sustained Assessment

## INCA Proposed Foundational and Special Topics

- Foundational Topics (supportive of 2017 synthesis report and beyond)
  - **Sustained assessment (due September, 2013)**
  - Scenario development
    - Integration with CMIP5 outputs
    - Land cover/use cover updates
    - Guidance on use of model data
  - **Indicators**
  - Valuation
- Special topics “experiments”
  - **Food security**
  - International context
  - Health and climate change
  - Water, drought and climate change
  - Large biophysical regions (e.g., Arctic)

# Proposed Success Metrics for the NCA (from INCA)

- Use by decision-makers on an ongoing basis
- Advancing knowledge or understanding on topics of scientific or societal interest
- Improved coordination of federal activities/ added value from the interagency process
- Engagement of stakeholders
- Achievement of objectives from the NCA strategy documents (including sustaining the NCA process)
- Achievement of agency strategic mission objectives
- Increased awareness and accessibility of agency data
- Ability to produce credible and actionable climate-related information
- Potential for high-quality USGCRP-branded products
- Communication metrics (for example, utility in communications documents or potential for citations or publications)
- Adaptive management/learning process

# **Sustained Assessment Special Report Working Group**

## **Convening Lead Authors:**

- James L. Buizer, University of Arizona
- Paul Fleming, Seattle Public Utilities
- Sharon L. Hays, Computer Sciences Corp.

## **Lead Authors**

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## **NCA Staff Coordinators**

- Katharine Jacobs, USGCRP
- Bryce Golden-Chen, USGCRP

# **Report Outline**

- **Executive Summary**
- **Introduction**
- **Vision for a Sustained Assessment in a dynamic landscape**
- **Goal 1: Build the scientific foundation for managing the risks of climate change**
- **Goal 2: Establish enduring collaborative partnerships with civil society**
- **Goal 3: Provide infrastructure to support the sustained assessment**
- **Goal 4: Diversify the resource base and set priorities**
- **Appendices**

# Major Recommendations

## Goal 1: Establish enduring collaborative partnerships with civil society

- *Launch and support a sustained assessment **advisory committee***
- *Establish **partnerships** to build assessment capacity*
- *Encourage and support **communication and engagement** networks*
- *Build **International engagement***



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# Major Recommendations

## Goal 2: Build the scientific foundation for managing the risks of climate change

- Build capacity for *vulnerability assessment*
- Develop *indicators* of climate changes, impacts, vulnerabilities, and preparedness
- Establish scenario methods and products for framing *uncertainties* and developing robust responses
- Develop *valuation methods* for measuring the consequences of change and the benefits of adaptation/mitigation responses
- Build capacity to document and incorporate consequences of *international stresses*
- Develop Methods for assessing *confidence and uncertainty* in scientific information for decision-making
- Foster adaptive learning through the establishment of an assessment *evaluation strategy*
- Establish mechanisms to identify *risk management* information needs for consideration in USGCRP research priorities

# Major Recommendations

## Goal 3: Provide infrastructure to support the sustained assessment

- *Fund a **coordination office** to provide needed leadership*
- *Strengthen mechanisms to support **interagency coordination***
- *Establish and resource an ongoing process to produce **quadrennial synthesis reports***
- *Produce periodic **Special Reports** (Foundational and Topical)*
- ***Manage data** to maximize utility and transparency*
- *Build and maintain **engagement with regional science institutions***

# Major Recommendations

## Goal 4: Diversify the resource base and set priorities

- *Diversify the resource base for assessment*
- *Adopt criteria for prioritization and clear priorities for the next phase of development of the NCA process*



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# Draft Report Access

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