
Fourth National Climate Assessment: *Process & Progress on the Public Draft*

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Director, National Climate Assessment

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U.S. Global Change
Research Program

Roughly a year ago...

Fourth National Climate Assessment

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Director, National Climate Assessment

15 November 2016



U.S. Global Change Research Program

- USGCRP began as a Presidential Initiative in 1989
- Mandated by Congress in the Global Change Research Act of 1990 (P.L. 101-606), "to assist the Nation and the world to understand, assess, predict and respond to human-induced and natural process of global change"



National Climate Assessment: GCRA (1990), Section 106

...not less frequently than every 4 years, the Council... shall prepare... an assessment which -

- integrates, evaluates, and interprets the findings of the Program (USGCRP) 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.

Sustaining Assessments Topical Reports and Special Assessments

- Climate Science Special Report (underway)
- Second State of the Carbon Cycle Report (underway)
- Climate and Health Assessment (April 2016)
- Food Security Assessment (December 2015)



Moving Forward with NCA4 – What's New?

Process

- Planned release in late 2018
- Led by a Federal Steering Committee
- Authorship model developed with NOAA (as administrative agency), with each chapter having a Federal Coordinating Lead Author (CLA) and either a Fed or non-Fed Chapter Lead

Substance

- Sustained Assessment framework and process
 - Climate Science Special Report underway to provide scientific foundation
- Regional chapters will be given more in-depth treatment in NCA4
- Sectoral chapters (water, energy, forests, etc.) will draw upon information in the regional chapters and provide brief national overviews

NCA4 Chapters

- I. Overview
- II. Our Changing Climate
 - Water
 - Energy
 - Land Cover and Land Use Change
 - Forests
 - Ecosystems, Ecosystem Services, and Biodiversity
 - Coastal Effects
 - Oceans and Marine Resources
 - Agriculture and Rural Communities
 - Built Environment, Urban Systems, and Cities
 - Transportation
 - Air Quality **NEW**
 - Human Health
 - Tribal and Indigenous Communities
 - North American and Other International Effects **NEW**
 - Emerging Multi-Sectoral Interactions
- III. National Analyses
 - Southeast
 - US Caribbean **NEW!**
 - Midwest
 - Southern Plains | **EXPANDED**
 - Northwest
 - Southwest
 - Alaska
 - Hawaii and Pacific Islands
- V. Response
 - Near-term Adaptation Needs and Increased Resilience
 - Mitigation: Avoiding and Reducing Long-term Risks
- IV. Regional Analyses

National-level Overview Chapters



- Sectoral chapters (~6 pages each)
 - Draws upon region-specific issues/examples, using risk-based framing
 - Encouraged to link out to agency resources and existing work
 - Led by one or more agencies, who have flexibility in the chapter's development
 - Non-Fed participation is encouraged under the FACA authorities of the lead agency
- Response chapters (~10 pages each)
 - Adaptation: provide a national-level overview of options, challenges and opportunities associated with building resilience
 - Mitigation: focus will be on the risks avoided by taking mitigation action

Regional Chapters

- The "main course" of NCA4 (~20 pages each)
 - Structured around 4-6 Key Messages / Region
 - Focus on the things of value to the region that are at risk due to climate change
 - Highlight Options, Challenges, Opportunities and Success Stories for minimizing risk



Chapter Leadership Roles

- Federal Coordinating Lead Authors (CLA) coordinate with each other to ensure consistent treatment of their chapter issues throughout the assessment and liaise one-on-one with Chapter Leads
- CLAs serve as "horizontal integrators"

- Northwest CLA
 - Dr. Charlie Luce
U.S. Forest Service
- Northwest RCL
 - Dr. Phil Mote
Oregon State University
- Northwest Point of Contact
 - Dr. David Reidmiller
Director, National Climate Assessment

- Regional Chapter Leads (RCL) are non-Federal employees who select and direct regional authorship teams and are responsible for the development of each regional chapter
- RCLs serve as "vertical integrators"

2016

Sep: Call for Authors
Sep: Regional Informational Webinars
Sep: Fed CLAs Selected
Oct: Chapter Leads Selected, CLA Meeting
Oct-Dec: Chapter Authors Named (teams in place) and Outline Prep, Informal Regional Engagement

2017

Jan: Release Chapter Outlines and Technical Inputs are Due
Jan-Mar: Regional Engagement Workshops and Author Team Meetings
Jan-Jun: Drafting and Internal Reviews, Informal Engagement continues
Jul-Sep: Report Aggregation and Reviews (SGCR and SC) and Author Responses
Sep-Jan 2018: Public and National Academies Reviews

2018

Jan: Responses to Public Review
Jan-Feb: Revisions to National Academies comments
Mar-Aug: Reviews and Responses (SC, Agency, Review Editor, LRM)
Sep-Dec: Layout and Final Production
Dec: Release and Engagement

Continuous public engagement (both formal and informal) will be a critical part of the entire NCA4 process
Dates are subject to change

How to Contribute to NCA4

- Interested in Being an Author?
 - Chapter teams are still being formed. Please contact our NCA4 team for more information.
- Submit Technical Inputs
 - Deadline: January 15, 2017. Inputs can be submitted at contribute.globalchange.gov
- Be a Reviewer
 - Look for other opportunities to contribute along the way at globalchange.gov/notices
- Join / Follow NCAnet
 - NCAnet participants extend the NCA to a broad audience through the development of assessment-related capacities and products. More information at ncanet.usgcrp.gov

Engage with USGCRP

- AGU Fall Meeting
San Francisco, CA | Dec 12-16, 2016
 - JUST ANNOUNCED: NCA4 Listening Session
Wednesday, December 14, 2016
2:00-3:30 PM
Marriott Margulis - Foothill E
- AAAS 2017 Annual Meeting
Boston, MA | Feb 16-20, 2017
- National Adaptation Forum
Saint Paul, MN | May 9-11, 2017

- STAY TUNED!
- Northwest Regional Engagement Workshop
Early 2017



U.S. Global Change Research Program

National Climate Assessment (NCA)

GCRA (1990), Section 106:

Not less frequently than every 4 years ... shall prepare and submit to the President and Congress an assessment which:

- **Integrates, evaluates, and interprets** the findingsand 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
- Analyzes current trends in global change, both human- induced and natural, and **projects major trends for the subsequent 25 to 100 years.**



NCA4: A two-volume effort

Congressional Mandate	4 th National Climate Assessment	
	Vol. I: Climate Science Special Report	Vol. II: Climate Change Impacts, Risks, and Adaptation in the U.S.
integrates, evaluates, and interprets the findings of the Program (USGCRP) 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	✓	✓
analyzes current trends in global change, both human- induced and natural, and projects major trends for the subsequent 25 to 100 years.	✓	✓



NCA4 Vol. I: *Climate Science Special Report*

- Scheduled for final release in early November
- Underwent six rounds of review, including by the public and an expert panel of the National Academies of Sciences, Engineering, and Medicine
- Provides an updated, detailed analysis of the findings of how climate change is affecting the weather and climate across the United States
 - Written for those with strong technical awareness
 - Executive summary written for the informed public
- Provides foundational information and projections for climate change, including extremes, to improve end-to-end consistency in sectoral, regional, and resilience analyses for NCA4 Volume II
 - Risk-based framing when possible
 - Provide scenarios and datasets for use in impacts analyses

NCA4 Vol. II: *Climate Change Impacts, Risks, and Adaptation in the U.S.*

- Analyzes the effects of global change, described in NCA4 Vol. I (*Climate Science Special Report*), on sectors and regions of the United States
- Policy relevant, but not policy prescriptive

NCA4 Vol. II:

- Is a technical, scientific assessment of climate change-related impacts, risks, and adaptation
- Assesses a range of potential impacts, helping decision makers better identify risks that could be avoided or reduced
- Places a strong emphasis on regional information
- Uses case studies to provide additional context and opportunities to showcase community success stories



2016

Processes and guidance developed by the Steering Committee

Chapter leadership recruited

Full Chapter Author teams named

Author teams selected and chapter outlines

2017

Feb-Mar: Engagement activities and author team teleconferences

Apr: Author meeting

Jan-Jun: Drafting and public engagement

Jun-Aug: NOAA / SU review of First Order Draft and author response

Aug-Oct: Interagency review of Second Order Draft and author response

Nov-Mar 2018: Public comment period and National Academies review of Third Order Draft and author response

2018

Mar: Author meeting

Apr-May: Interagency review of Fourth Order Draft and author response

Jun-Aug: Final interagency reviews of Fifth Order Draft

Sep-Dec: Layout and production of Final Report

Dec+ : Release and public engagement

We remain on schedule!

Schedule is subject to change



NCA4 Vol. II: Public engagement

- Public feedback on the **draft prospectus** helped shape overall content and direction of NCA4
- A call for **author nominations** helped ensure a range of expertise was included in the writing process
- **Technical inputs** were solicited through a public call, giving individuals an opportunity to include relevant literature (peer reviewed and grey)
- A series of **Regional Engagement Workshops** and **sector-specific webinars** reached more than 1000 stakeholders, ensuring more relevant, useable chapter content
- A call for **Review Editors** provides an important layer of external, independent validation that authors responded to external comments
- In Fall 2017, stakeholders will have an opportunity to provide **public comment** on the Third Order Draft of NCA4



COMING SOON: Public Comment

The screenshot shows the GlobalChange.gov website interface. At the top left is the logo for GlobalChange.gov, U.S. Global Change Research Program. To the right is a row of thirteen agency logos with the tagline "Thirteen Agencies, One Vision: Empower the Nation with Global Change Science". Below the logos is a navigation bar with "Home" and "Help" buttons. The main content area is divided into two columns. The left column contains a "User login" section with fields for "Username or e-mail" and "Password", a "Log in" button, and links for "Terms of Use", "Create new account", and "Request new password". The right column features a "Welcome to the USGCRP Review and Comment System" heading, followed by a paragraph explaining the system's purpose. Below this are three lines of instructional text: "Please login into the system or if you do not have an account, please click on Create New Account (left).", "If there are no documents for public review available below, the Create New Account link may not be shown.", and "Please click on the 'Help' tab above for additional information about how to create an account and login." At the bottom of the right column is a section titled "Documents Available for Public Review" with the text "There are no documents available for review at this time."

- Scheduled to begin in **early November** and run **through January**
- Visit <https://review.globalchange.gov/>
- Authors are **required to provide a written response** to every submitted comment
 - Chapter-specific Review Editors to serve as quality control

Thank you!

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www.globalchange.gov/nca4



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