
Fourth National Climate Assessment (NCA4)

Lesley-Ann Dupigny-Giroux – Northeast Region Chapter Lead

Ellen Mecray – CLA Northeast Chapter

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U.S. Global Change
Research Program

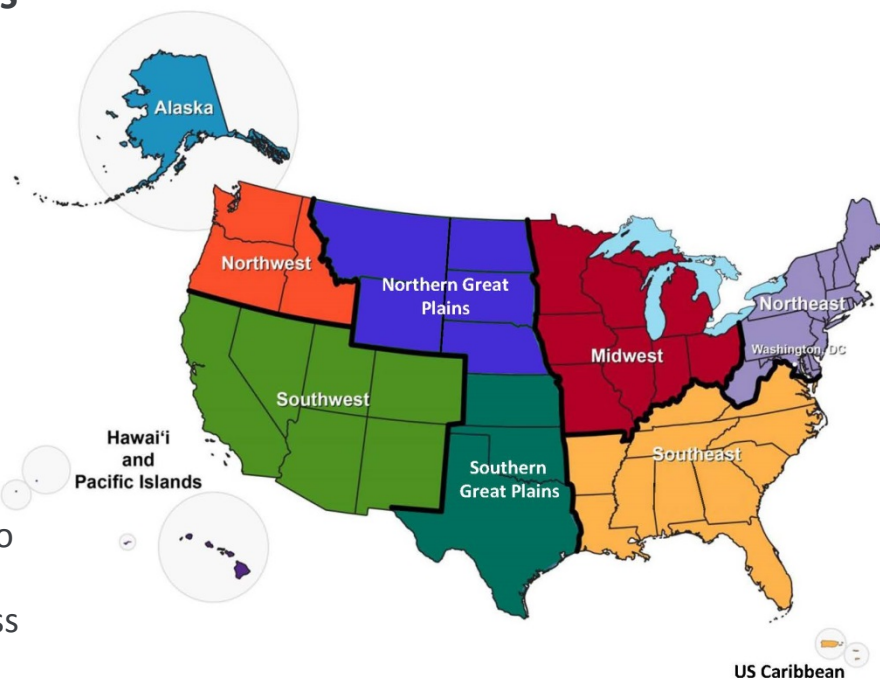
U.S. Global Change Research Program

- 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”



Regional Chapters

- The “main course” of NCA4 (*~20 pages each*)
- Region-specific concerns
- Highlight options, challenges, opportunities, and success stories for minimizing risk
- Chapter Structure:
 - Background
 - 4-6 Key Messages:
 - Linkage between Climate Change and Regional Risks
 - Future Climate Change relevant to Regional Risks
 - Challenges, Opportunities, Success Stories
 - Emerging Issues
- Traceable accounts and references (not part of page limit)



NCA4 Chapters

- **I: Overview**
- **II: Our Changing Climate**
- **III: National Overviews**
 - 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
 - Climate Effects on U.S. International Interests **NEW!**
- Sectoral Interdependencies & Compounding Stressors: The Science of Complex Systems **NEW!**
- **IV: Regional Chapters**
 - **Northeast**
 - Southeast
 - US Caribbean **NEW!**
 - Midwest
 - Northern Great Plains } **EXPANDED!**
 - Southern Great Plains
 - Northwest
 - Southwest
 - Alaska
 - Hawai`i and Pacific Islands
- **V: Response**
 - Near-term Adaptation Needs and Increased Resiliency
 - Mitigation: Avoiding and Reducing Long-term Risks

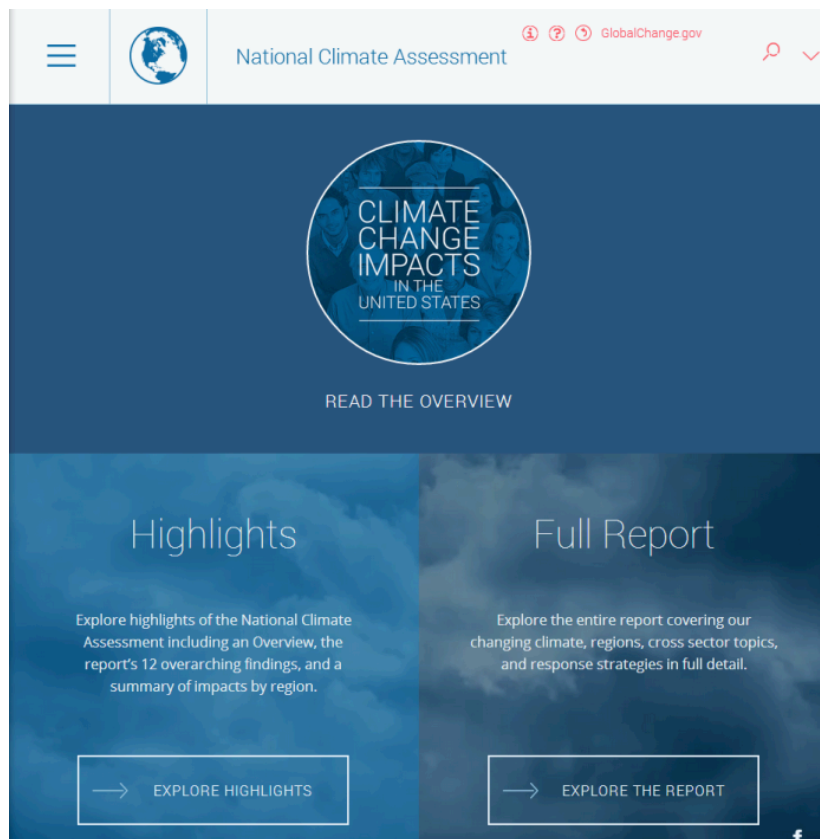


NCA4 Northeast region authors

- Chapter Lead:
Lesley-Ann Dupigny-Giroux (University of Vermont/ VT SC)
- Coordinating Lead Author:
Ellen Mccray (NOAA/Regional Climate Services)
- Chapter Authors:
 - Water: **Glenn Hodgkins** (USGS) and **Mary Stampone** (UNH/ NH SC)
 - Oceans: **Kathy Mills** (Gulf of Maine Research Institute)
 - Health: **Perry Sheffield** (Mt Sinai Medical) and **Greg Wellenius** (Brown University)
 - Ag/rural/forests/land-use: **David Hollinger** and **Erin Lane** (USFS)
 - Coastal: **Erica Lentz** (USGS) and **Tony MacDonald** (Monmouth U)
 - Built environment/transportation: **Bill Solecki** (Hunter College) and **Rawlings Miller** (USDOT/Volpe)
 - Tribal: **Chris Caldwell** (College of Menominee Nation/DOI-NE CSC)



Building on the Success of NCA3



Five aspects of NCA3 (2014) were crucial to its success:

- Assessment based on broad scientific and technical inputs
- Stakeholder engagement
- Clear communication principles
- Transparency of process and information
- An extensive review process



NCA4...building upon NCA3

- shift from impacts to a risk-based framing
 - sources of uncertainty
 - bounded probabilities – “tail risks”
- climate variability & climate change
 - observed (impacts) and projected (scenarios – RCPs 4.5 & 8.5)
 - adaptation success stories – case studies
- advancements since NCA3
- climate change science in the Climate Science Special Report



How is or has climate change affected _____ (i.e., observed change)? Case studies?

How is climate change projected to affect _____ in the next 20-30 years and at the end of the century (i.e., projected change)? Case studies?

What challenges, opportunities and success stories for addressing risk can be highlighted? Case studies?

What are the emerging issues and/or research gaps in _____? Case studies?

Other issues?



Setting the Northeast context

- geographic & demographic diversity
- coastal and inland heterogeneity
- length of settlement
- socioeconomic and political importance to the Nation
- cultural and historical fabric
- physical geography



Northeast chapter format

- 20 page limit
- 4-6 key messages
 - communities (urban, rural, other)
 - human health (air quality, disease, heat)
 - cities
 - economy
 - recreation and natural resources
- case studies, call-out boxes, figures



Supporting frameworks

- public input - listening sessions, Regional Engagement Wksp
- Climate Resilience Toolkit
- Climate Explorer (county level)
- LOCA dataset
- EPA Indicators
- NOAA NCEI State Climate Summaries
- Technical Support Unit
 - Traceable accounts
 - Figure creation
 - Regionalized data/visualizations (SLR, population estimates)
 - GIS-based visualizations



Anticipated timeline





2016

~~Processes and guidance developed by the Steering Committee~~

~~Chapter leadership recruited~~

~~Many author teams are complete; some are still recruiting authors~~

~~Author teams are scoping out their chapters and developing chapter outlines~~



2017

~~Jan 15: Technical Inputs are due~~

~~Jan-Mar: Regional Engagement Workshops and Author Team Meetings~~

~~Apr: Author Meeting~~

~~Jan-Jun: Drafting and Internal Reviews~~

~~Jul-Sep: Report Aggregation and Reviews and Author Responses~~

~~Sep-Jan 2018: Public and National Academies Reviews~~



2018

Jan: Responses to Public Review

Jan-Feb: Revisions in response to National Academies comments

Mar-Aug: Reviews and Responses

Sep-Dec: Layout and Final Production

Dec+ : Release and Engagement

Dates are subject to change



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