
The Fourth National Climate Assessment (NCA4)

Status and Plans for Completion

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USAID Adaptation Community Meeting

September 15, 2016

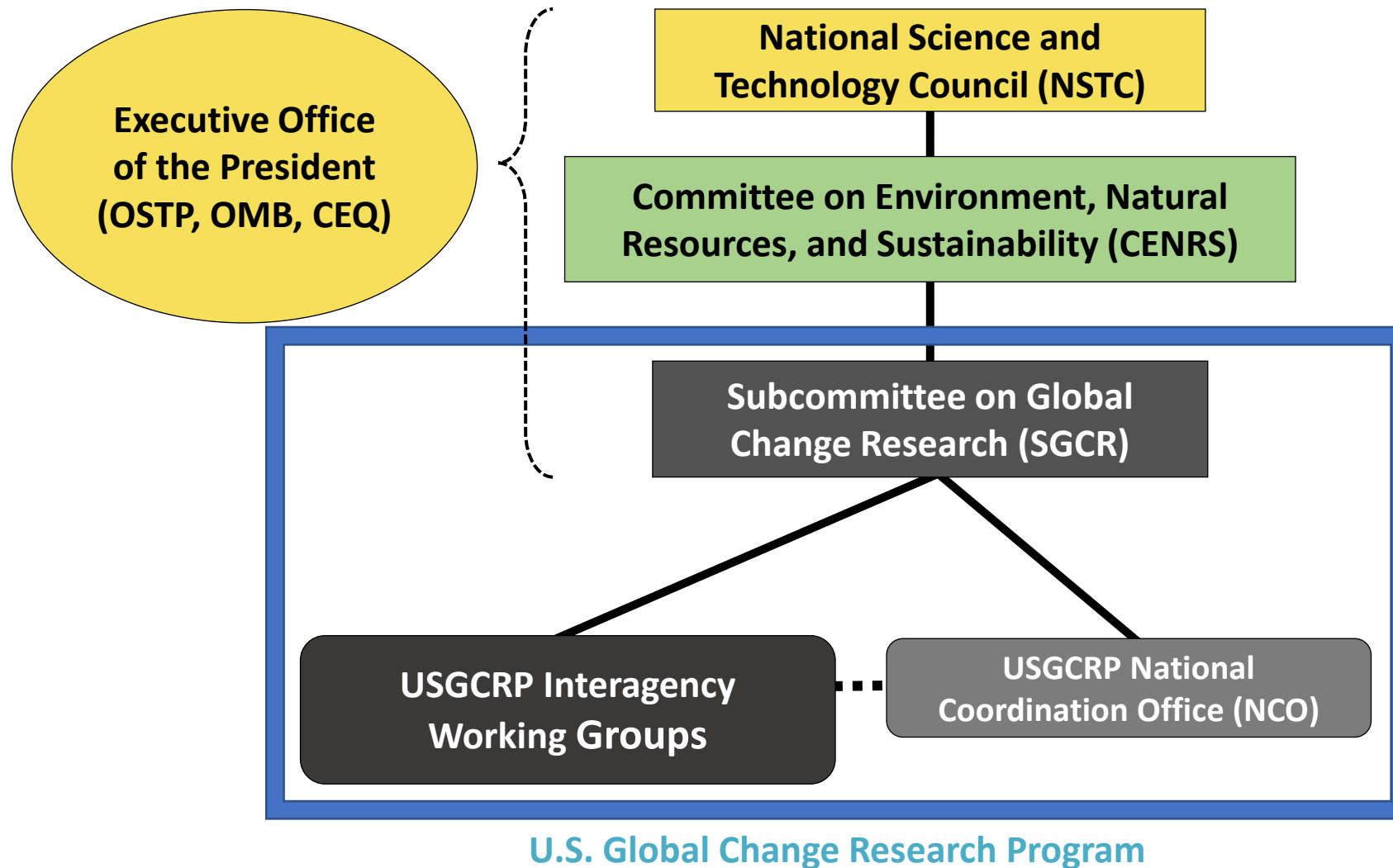


U.S. Global Change
Research Program

U.S. Global Change Research Program

- USGCRP began as a Presidential Initiative in 1989
- Mandated by Congress in the Global Change Research Act (GCRA) of 1990 (P.L. 101 – 606) “to assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change”
- Consists of the science arms of 13 agencies with responsibilities in global change
- FY 2015 budget crosscut \$2.459 billion
- Major coordination through Interagency Working Groups (IWGs), supported by the National Coordination Office (NCO)
- Interagency “Distributed Cost Budget” supports the NCO and activities of the organization





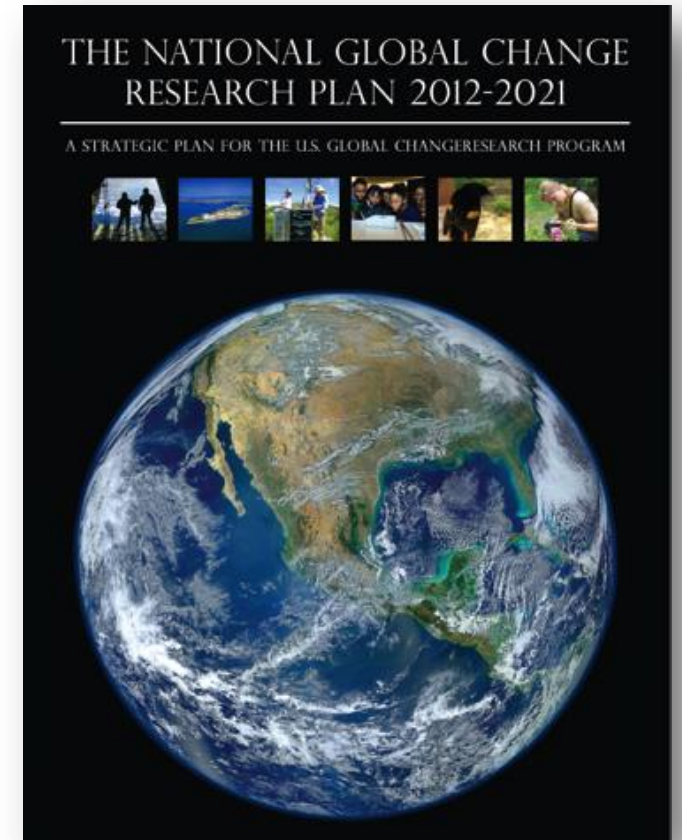
USGCRP Decadal Strategic Plan

Overview: <http://globalchange.gov/what-we-do/strategic-planning>

Document: <http://library.globalchange.gov/u-s-global-change-research-program-strategic-plan-2012-2021>

2012-2021 Strategic Plan Goals

- **Goal 1 - Advance Science:** Advance scientific knowledge of the integrated, natural, and human components of the Earth system.
- **Goal 2 - Inform Decisions:** Provide the scientific basis to inform and enable timely decisions on adaptation and mitigation.
- **Goal 3 - Conduct Sustained Assessments:** Build sustained assessment capacity that improves the Nation's ability to understand, anticipate, and respond to global change impacts and vulnerabilities.
- **Goal 4 - Communicate & Educate:** Advance communications and education to broaden public understanding of global change and develop the scientific workforce of the future.



National Climate Assessment: GCRA (1990), Section 106

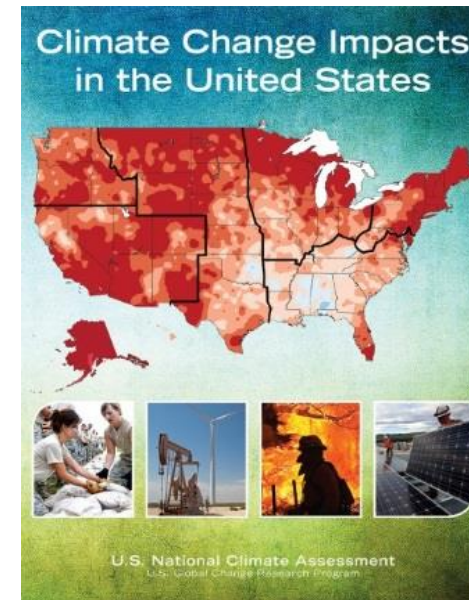
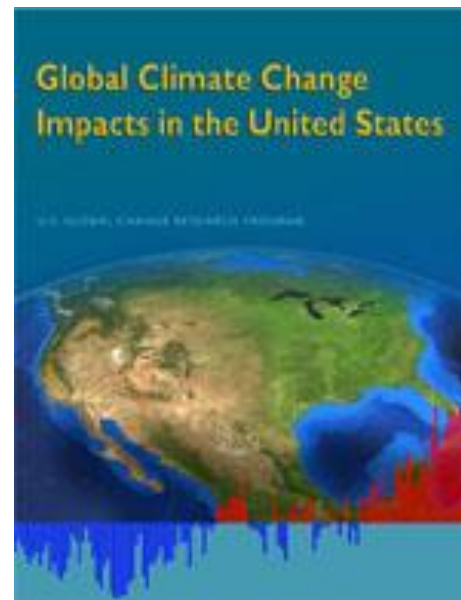
...**not less frequently than every 4 years**, the Council... shall prepare... an assessment which...

- **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.**



National Climate Assessment Vision

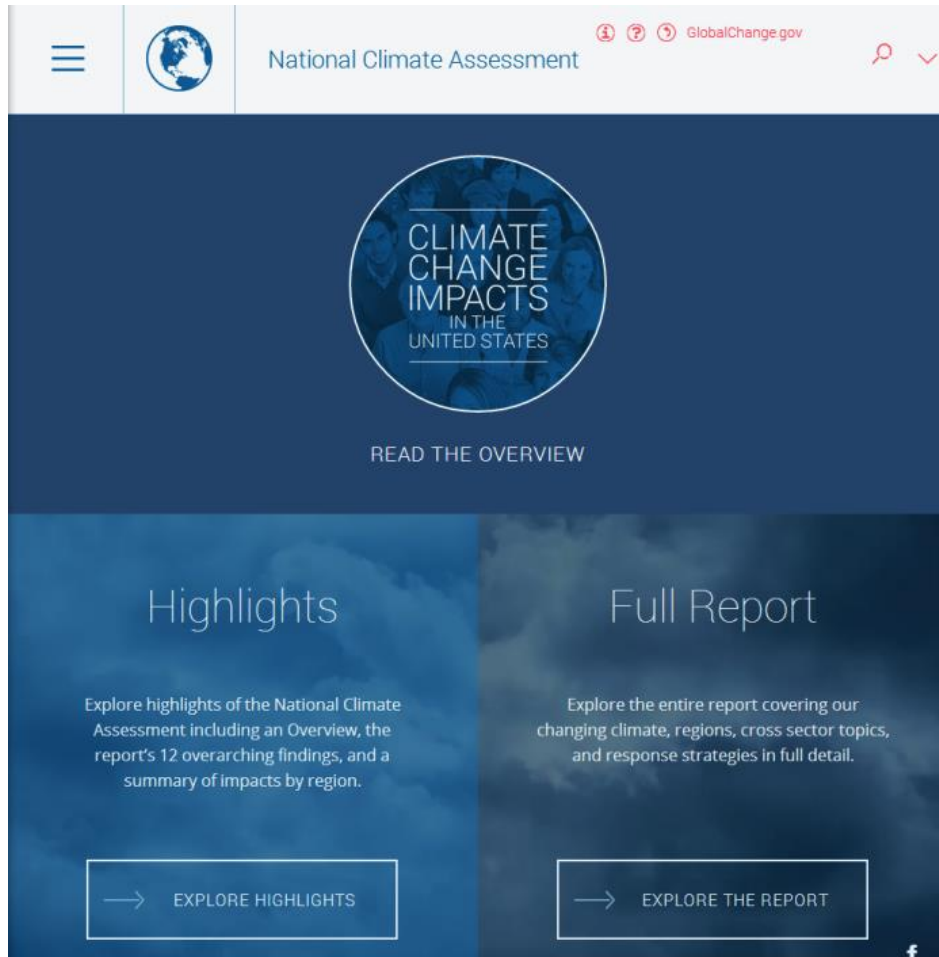
To advance an **inclusive, broad-based, and sustained** process for assessing and communicating scientific knowledge of the impacts, risks, and vulnerabilities associated with a changing global climate in support of decision-making across the United States



Comparing Past & Forthcoming NCAs with IPCC

- NCA traditionally focused heavily on domestic impacts and vulnerability similar to IPCC Working Group II (WGII)
- Response chapters have been smaller in scope than IPCC WGIII, but NCA4 expected to delve deeper into adaptation options and (benefits of) mitigation
- For NCA4, a Climate Science Special Report (an IPCC WG I equivalent) will provide physical science foundation
- NCAs traditionally use same global emissions/climate scenarios as IPCC
 - NCA3 based primarily on SRES; NCA4 will be based on RCPs
- Large overlap in authorship and government reviewers

Building on NCA3



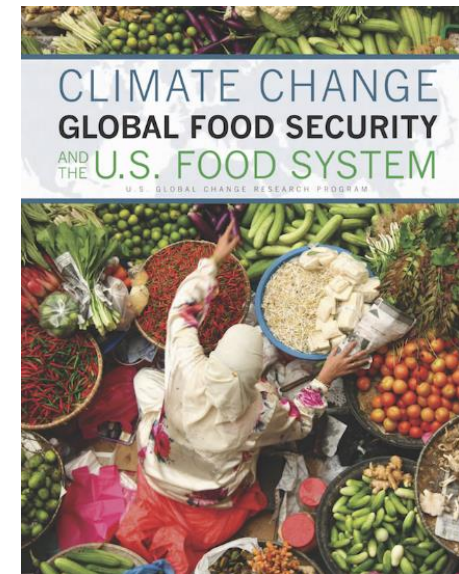
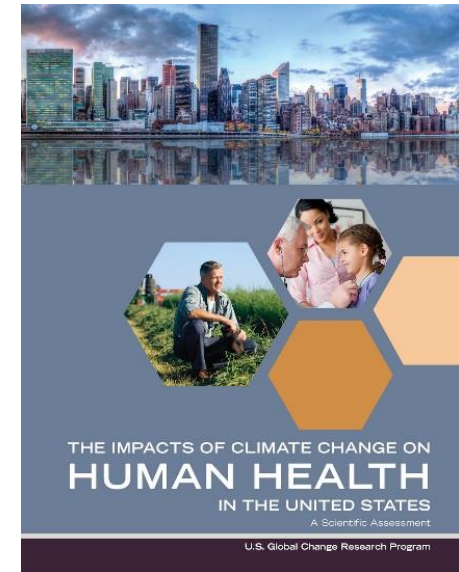
Aspects of NCA3 considered crucial to its success:

- Assessment based on broad scientific and technical inputs
- Stakeholder engagement
- Clear communication principles, accessible web-based report
- Transparent connection between findings and underpinning science (through Global Change Information System)
- Extensive review process



Topical Reports and Special Assessments Supporting NCA4

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



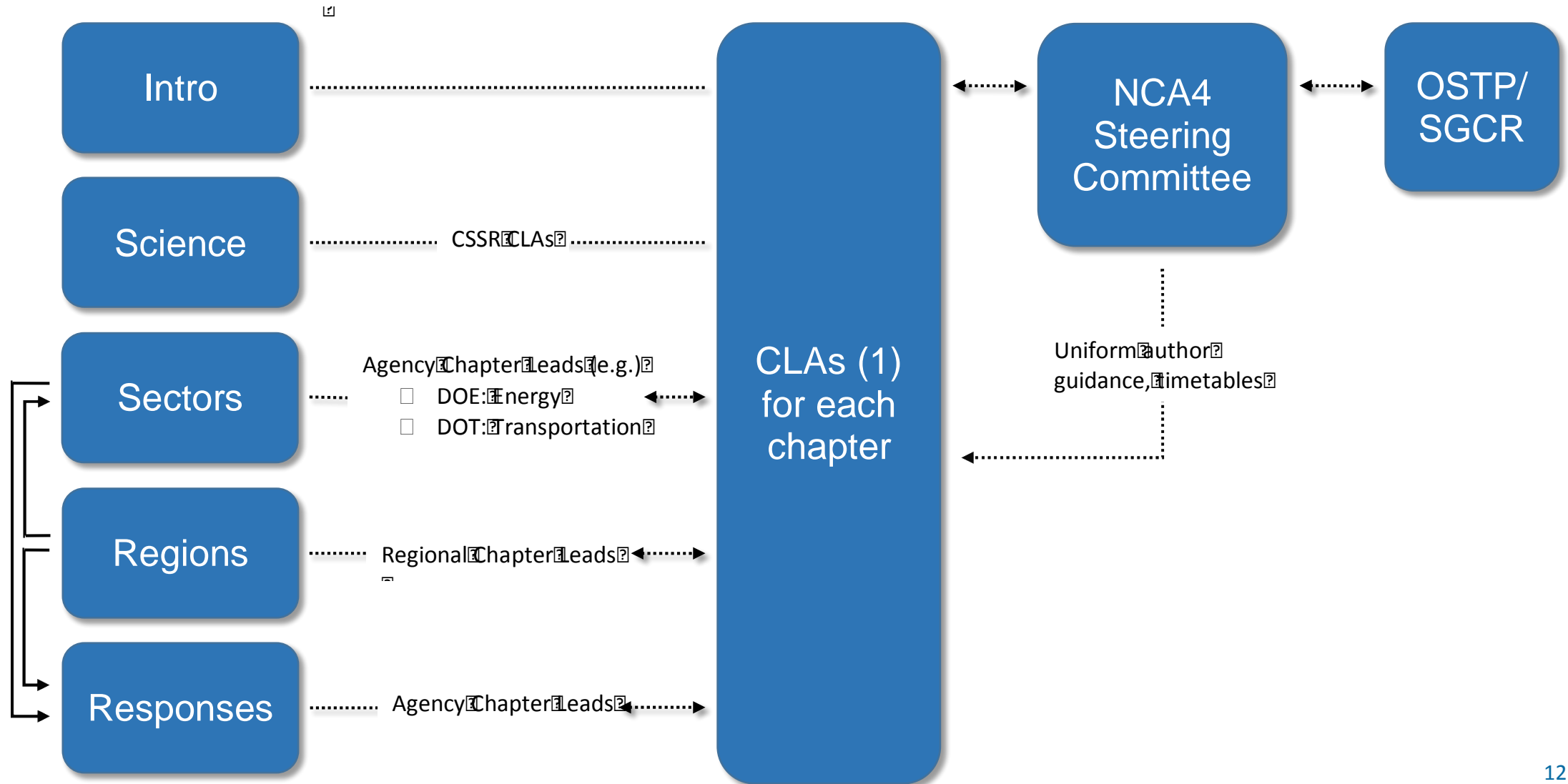
NCA4: Opportunities and Challenges

- Greater detail, specificity, and quantitative analyses at regional scales
- Quantification of risk metrics
- More consistency in underlying assumptions and scenarios across all sectors and regions covered by NCA4
- More information about adaptation needs/opportunities and mitigation implications
- Reflection of changes in frequency/intensity of extreme events into potential impacts and risks
- Implications of climate change impacts in other parts of the world
- Engagement with, and addressing (at least some) needs of, multiple user communities

NCA4: Process Snapshot

- Owned and developed under a Federal Steering Committee appointed by Subcommittee on Global Change Research (SGCR)
- Authorship model for Federal and non-Federal participation developed with NOAA (as administrative lead agency)
- Planned release in late 2018
- Climate Science Special Report underway to provide scientific foundation
- Initial public comment on draft prospectus and outline (closed July 29)
- Open call out now for non-Federal regional chapter leads (closes Sept. 30) and technical inputs (closes Jan. 15)

NCA4 Authorship Model



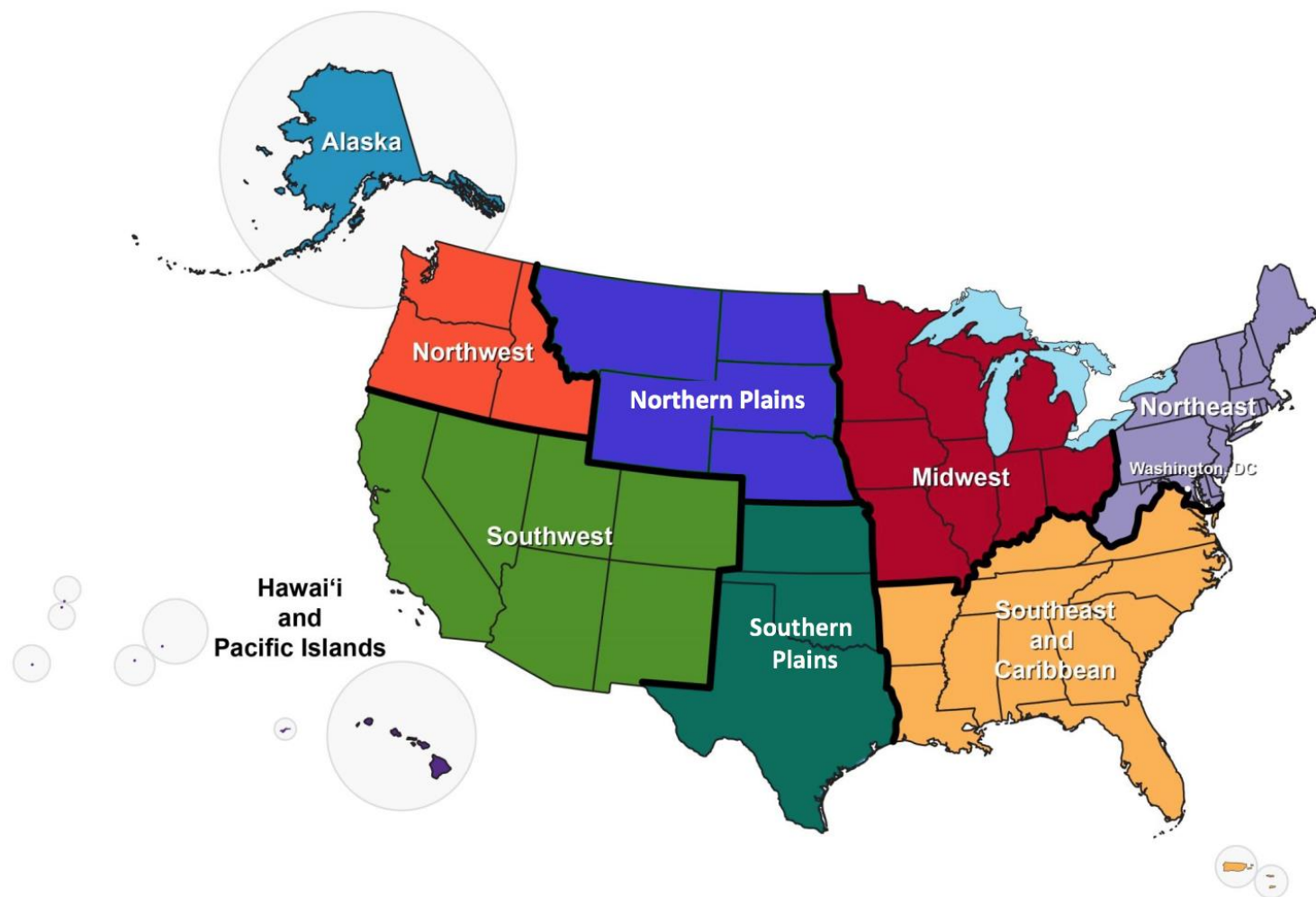
NCA4 Chapters: working outline

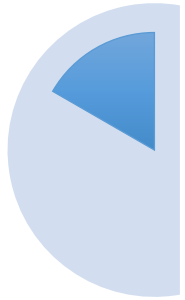
- **I: Overview**
- **II: Our Changing Climate**
- **III: National Analyses**
 - Water
 - Energy
 - Ecosystems, Ecosystem Services, and Biodiversity
 - Oceans and Marine Resources
 - Coastal Effects
 - Agriculture and Food Production
 - Forests
 - Land Cover and Land Use Change
 - Transportation
 - Built Environment, Urban Systems, and Cities
 - Human Health
 - Air Quality
 - Energy, Water, Land Nexus
 - Tribal and Indigenous Communities
 - North American and Other International Effects
- **IV: Regional Analyses**
 - Northeast
 - Southeast and Caribbean
 - Midwest
 - Northern Plains
 - Southern Plains
 - Northwest
 - Southwest
 - Alaska
 - Hawai'i and Pacific Islands
- **V: Responses**
 - Near-term Adaptation Needs and Increased Resiliency
 - Mitigation Pathways: Avoiding and Reducing Long-Term Risks



Planned Regional Chapters of NCA4

- Where much of the detail is expected
 - Region-specific sectoral focus areas, with case studies
- Driven by non-fed Regional Chapter Leads
 - They choose author teams with suggestions from steering committee via nomination process
 - Will operate with author guidance from steering committee and interact with assigned Federal CLA





2016

Sep: Call for Authors

Sep: Regional
Informational
Webinars

Sep: Fed CLAs
Selected, CLA Meeting

Oct: Regional Chapter
Leads Selected

Oct-Dec: Author
Meetings/Drafting



2017

Jan: Release Chapter
Outlines

Jan: Technical Inputs
are Due

Jan-Mar: Regional
Engagement
Workshops

Jan-Jun: Drafting and
Internal Reviews

Jul-Dec: Report
Aggregation and
Cohesion, Internal
Reviews



2018

Public and
National
Academies
Reviews and
Response

Layout and
Production

Release and
Engagement



Federal Register Notice

- Call for Authors and Technical Inputs
- Author nominations open until September 30
- Regional Chapter Leads must come from call
 - Other nominations will be suggested to chapter leads
- Technical inputs accepted until January 15
 - For best consideration, submit by November 1
- **SHARE WIDELY**

- <https://federalregister.gov/a/2016-20982>
- <http://www.globalchange.gov/notices>
- <https://contribute.globalchange.gov/>



FEDERAL REGISTER
The Daily Journal of the United States Government

United States Global Change Research Program (USGCRP)

A Notice by the [National Oceanic and Atmospheric Administration](#) on 08/31/2016

Thank you!

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