

Summary of Responses

Public Input on the Sustained Assessment Process of the U.S. National Climate Assessment

Request for Information: <https://federalregister.gov/a/2015-10352>

Respondents: 38 total, including individuals and representatives of federal agencies and regional government programs, tribal communities, professional societies, public and private universities and research institutes, international programs, the private sector, and non-profits.

Responses: Approximately 70 pages across three questions (including text box submissions and uploaded files).

Other files uploaded: 22 reports, papers, and other documents.

Summary of main themes in comments

- **Social sciences and policy-relevant issues:** Improve integration of social, behavioral, economic, and engineering disciplines. Use recent vulnerability assessments. Include topics like national security and adaptation/mitigation nexus among other suggestions.
- **Assessment scale and purpose:** Increase focus on regional, state, metropolitan, and local/municipal scales – decision makers need relevant scales. If the NCA cannot provide all of the information, then it can help evaluate different sources.
- **Information types and formats:** Develop more case studies, stories, visualizations, and videos. Focus on variables of concern to users and consider ways to relate results more directly to weather. A range of outreach materials (print to digital tools) is good. NCA3 web format was good, make strategic improvements.
- **External stakeholders and engagement:** Expand engagement and scope of content with particular communities, e.g., infrastructure, education, indigenous, and others. Continue to build NCAnet participation and utility. Focus on clear and timely communications and guidance. Enable more ways for two-way engagement and participation throughout the entire NCA process.
- **The NCA as an organization:** Active and accessible leadership is critical. Evaluation can be utilized to improve NCA process and products. Clear purpose and expectations are important. Networking is a major component of the NCA effort. Additional resources could help expand current efforts.

Summary of responses to individual questions

Question 1: What scientific information on climate change, impacts, and responses would be of most value to inform future assessment activities?

- **Appropriate geographic and temporal information; linking different scales**
 - Regional, state, and local scales
 - Variables of concern and risk
 - Monitoring and projections
 - Case studies
 - Community-based citizen science
 - Shorter-term forecasts and comparing the last 30 years to the prior 30 years
 - Link local and regional up to national/continental

- **Social and behavioral science integration**
 - Mitigation-adaptation nexus
 - Economic and non-economic valuation
 - Education community collaboration from the start
 - Behavioral changes of individuals, businesses, and local governments in response to climate change
 - Legal and programmatic constraints in coordination among agencies, resource users, and mitigation and adaptation efforts.
- **Topics of interest**
 - Climate science
 - Scenario information
 - Model capabilities and limitations for particular sectors
 - Differences in confidence between temp and precipitation; physics explanation
 - Sea level rise
 - Geographic
 - Regional and sub-regional; state-level
 - Antarctic, urban areas, coastal
 - Oceans' impacts on climate change
 - Public lands
 - Sectors
 - Biological impacts
 - Infrastructure and engineering
 - Renewable energy analysis at state-level
 - National security
 - World's food system
 - Outdoor recreation
 - Indigenous-related issues
 - Decision support
 - Adaptation, mitigation, and nexus of these
 - Land management and natural resource
 - Emergency management resources and coordination across scales
 - Education
 - Regulations: policy, financial, and legal issues related to adaptation and mitigation
 - Federal agency needs
 - Indicators information
 - Evaluation of how individuals, communities, and organizations are interpreting and using climate science
 - Framing
 - Risk
 - International context
 - Economic valuation
 - Resilience and sustainability
 - Vulnerability

Question 2: How can climate change assessment information be most effectively communicated?

- **Timeliness and effectiveness of engagement**
 - Begin high visibility public engagement as soon as possible for NCA4 process
 - Use NCA3 authors, NCADAC members, and NCAnet
 - Social media by USGCRP and agencies
 - Prepare USGCRP and WH websites for high level of engagement
 - Improve access to NCA docs and processes
 - Increase transparency
 - As instantaneous and recent information as possible
 - Accessible and active leadership with experience inside and outside of government
- **Relevant information and activities**
 - Continuity in major content across assessments
 - Localization through state and metropolitan level engagement
 - Regional, state, and local variables of concern and risk
 - Neighborhood-scale climate change projections to inform policy and planning decisions and improve communication with public
 - Examples of more local level impacts within regions
 - Diverse input and advice in the assessment process, particularly for decision-support related issues and topics
 - Involve educators and climate communicators early on in the process
 - A broader scope could include more topics of relevance
 - Effective engagement with indigenous and tribal groups like the National Congress of American Indians
 - Connect with education communities and youth
 - Accessible, interactive, and timely information
 - Tools so those seeking climate information can ask questions and get answers at anytime in the assessment cycle
 - Ability to explore, connect, and comment on all levels of information
 - Flexibility, fluidity, transparency, and interactivity of results
 - Ability for users to engage with the information and ask immediate questions, not just receive information about the findings
 - Framing
 - Around weather with easy access to assemblages of the future weather
 - Risk-based
 - Use a common, international approach to facilitate effective communication of climate impacts at country-levels
- **Communication mechanisms**
 - Text
 - Email newsletters and blogs for engaged audience
 - Social media: twitter
 - Short versions of reports: highlights, summaries, overviews, and pamphlets
 - Use analogies and simple cartoons
 - Multimedia
 - User-friendly website; linked on more federal and state agency sites
 - Visualizations

- Stories and narratives, case studies – but focus on actionable information
 - Webinars for partners at all scales
 - Traditional television news media
 - Apps
 - Networking
 - Public speaking events
 - NCAnet
 - Professional and trade associations
 - Improve connections between users and producers of information systems
 - Host a climate summit or workshop for state and local orgs
 - Send USGCRP staff and NCA affiliates to more local and state meetings
 - Tools
 - Interactive access to data; ongoing updates and traceable
 - Central database for observations and models with robust search
 - USGCRP’s Global Change Information System (GCIS) should be dramatically enhanced to become the central communication point for global change information; nationally recognized website for data and results; create regional GCIS nodes?
 - Indicators
 - Create a nationwide geospatial database of community preparedness
 - Example: ESRI Story Map platform
 - Decision support for mitigation, adaptation, and resilience
 - Mechanism to integrate data across scales and sectors
 - Analytic tools to use data and economic analysis
 - Data formats immediately compatible with Geographic Information System (GIS) tools for use in planning and natural resource communities
- Evaluation
 - Evaluate knowledge about decision support processes and systems to assess the quality and effectiveness of the types of systems being offered to users rather than trying to meet the myriad demands for information directly.
 - Look at research literature about the psychology of climate denial and evaluate effectiveness of communication so far.
 - Review the results of an upcoming NRC communication study.

Question 3: What mechanisms could be used to more effectively connect to other assessment-related efforts?

- **Leadership**
 - Strong NCA leadership: active and accessible
 - Strong role for an advisory committee
 - Deal with stakeholder/contributor fatigue with the process
 - Ensuring that engaged, informed, and skilled-at-networking individuals continue to be involved in the NCA process at all levels
- **Networking**
 - Continue the momentum and development of communities of current and potential users of assessment-related information
 - Direct involvement by a greater variety of organizations

- Engage outdoor recreation professionals
 - Continuing the efforts of NCAnet
 - Tools and methodologies available and used by other sectors to plan and make decisions—how could be applied to climate change
 - Utilize citizens’ deliberation forums
 - Connecting to regional networks and effective scaling of information
 - USDA Hubs’ vulnerability assessments
 - NOAA RISAs, DOI CSCs, NSF LTER
 - Link national, regional, and local impacts to put local results in broader context
 - Methodology workshop for state-level assessments
 - Connecting with other types of assessments
 - Vulnerability assessments
 - Assessments of adaptive capacity and resilience
 - Collaboration with sustainability and resilience rating systems for infrastructure and communities
 - Food system assessments
 - Engineers and engineering assessments
 - Link with indicators systems across scales and uses
 - Sustained integration of indigenous perspectives and traditional knowledge; permanent and formalized structure for participation
- **Communication**
 - Focused website improvements
 - Clear guidance to external partners who are ready to engage and contribute; when/what/how to produce assessments for usability and consistency
 - Establish TIR process for special reports and synthesis products; utilize NCAnet
 - Develop and offer templates or limited funding or facilitator training to host events to prepare groups for submitting input into the NCA process
- **Purpose and expectations**
 - Transition the sustained assessment process away from something that produces reports to something that facilitates ongoing exchange of information among scientists, boundary organizations/processes, and end users.
 - Ensure sufficient information about expectations, documentation, and resources
- **Resourcing**
 - Data collection
 - Resources and coordination for municipalities to be involved in tracking metrics and data management planning and implementation.
 - Increasing support for and expanding NCAnet to discover, incorporate, and use information from a wide variety of expertise, data, other information resources, and reports.
 - Technical expertise and assistance for collection and reporting of local data and for vulnerability assessments
 - Research
 - Support for research and development for improved consideration of mitigation and adaptation in assessment methodologies and systems

- Increased support for assessment and improvement of regional modeling techniques
- Grants for participatory research at schools, community colleges, and universities
- Decision Support
 - Increased support for the integration of decision support tools into earth system model frameworks
 - Invest in a technical report on decision-support
- Events
 - Expand NCAnet ability to convene events.

Other Recommendations and Suggestions:

- Suggestion to follow the recommendations from the NCADAC Sustained Assessment Special Report
- Recommendations from the American Sociological Association report, Climate Change and Society: Sociological Perspectives, Chapters 1 and 13 critique USGCRP