

Science for Climate Action Network (SCAN) Comments on NCA5

Thank you for the opportunity to submit these comments on the overall scope of NCA5. We realize that this is just the first step of the process. Our comments are intended to recommend points that should be included in subsequent descriptions of the assessment's contents and process.

Comments and recommendations

Importance of NCA5 and transparency in developing detailed plans for the assessment

- We applaud the USGCRP agencies for their commitment to producing NCA5 and the opportunity to provide public input to ensure the report provides credible and actionable information. Credible science is a critical foundation for resilience as well as for democracy.
 - Recommendation: The USGCRP should provide feedback to the community about its responses to comments by summarizing groups of similar comments and indicating how they were incorporated, or if they weren't, to briefly explain why not. This need not cover every comment but will be useful in maintaining dialogue with the assessment community.

Justice, equity, diversity, and inclusion

- It is more important than ever that authors reflect the diversity of society with respect to gender, race, ethnicity, geography, perspective, and other attributes. This includes Tribes and other communities that have been historically under-represented and underserved.
 - Recommendation: We recommend that the USGCRP develop and announce a transparent strategy with metrics to monitor progress for improving equity and diversity throughout the process. More attention should be directed to ensuring historically-underrepresented groups are included in framing the process and as authors, reviewers, and communicators. The assessment should aspire to anti-racism and support access to information and resources for adaptation to overcome the impacts of systemic racism and injustice. Other important issues include ensuring equitable access to information, accommodations for people with challenges (e.g., vision and hearing loss), respectful acknowledgement of the history of land ownership, and practical support for participation of communities whose circumstances prevent their participation.

Sustained assessment

- The next iteration of the proposal for NCA5 needs to describe how the process will contribute to continued evolution of a sustained national climate assessment. Insights in social science research on actionability of scientific information and input from past and current users of the NCA indicate the importance of sustained collaboration and engagement that goes beyond producing and disseminating reports to help the nation prepare for change.
 - Recommendation: Given the urgency of advancing a sustained assessment to help the nation prepare for change, we suggest that the USGCRP issue and fund a call for proposals to non-federal groups (NGOs, universities, private-sector firms) to encourage innovation in implementation of the sustained assessment as part of plans for NCA5. Alternatively, the USGCRP could itself describe its approach to engaging non-federal communities and building a sustained assessment in a manner consistent with the report on this topic produced by the [Independent Advisory Committee](#).

Advisory mechanism and lead author process

- The next iteration of the plans for NCA5 should detail the role of groups and individuals outside the federal government in the assessment process. Before NCA4, civil society played a much greater role in the overall framing, production, and communication of the assessment. We understand that the current plan, as it was for NCA4, emphasizes federal leadership, including the use of a single federal author to lead each chapter with other input channeled through a single external co-author. This is not an effective method for representing diverse perspectives, including people with on-the-ground knowledge of climate impacts and management experience. Previous assessments established precedence for broadly engaging civil society in advisory roles while still adhering to FACA rules and intent.
 - Recommendation: We recommend that the assessment process for NCA5 should include an advisory mechanism that provides civil society organizations a greater role in the assessment (this includes Tribal, state and local governments as well as the private sector and academia). A different lead author model, one that enables multiple lead authors to communicate and deliberate on an equal footing, should also be adopted. Finally, we recommend that NCA5 consider more widespread use of “community science” (professional organizations and existing networks) to collect observations and data on experience of climate change impacts, in conjunction with machine learning and other methods.

Virtual engagement methods

- It is now two years into the four year NCA5 timeline and COVID is impairing some approaches to engagement.

- Recommendation: it is critical that a virtual approach to engagement be ramped up by reaching out to known networks that are connected to each of the chapter topics to obtain input on critical questions about information needs, observed impacts, economics, evolution of adaptation strategies, etc. The USGCRP has experience with virtual engagement through regional outreach sessions for NCA4. It should evaluate this experience to identify strengths and weaknesses and develop a revised strategy for virtual engagement until such time that in-person engagements can again be incorporated into the assessment process.

Engagement with “vulnerable” groups

- It is good that NCA5 seeks to identify vulnerable populations and the sources of their challenges, but this work needs to be done with an inclusive, respectful approach.
 - Recommendation: The NCA5 process should include enhanced mechanisms to directly engage with vulnerable populations rather than depending solely on the academic literature to describe the needs, challenges, and sources of resilience of these populations. The authors should carefully frame this work to avoid stigmatizing groups who lack capacity as “victims”, and should seek to learn how in some cases they have employed more limited resources and still built resilience.

Role for professional societies and professional expertise

- If the nation is to improve resilience and preparedness, climate and impacts information must be “baked in” to different areas of professional practice such as architecture, engineering, planning, natural resources, public health, finance, and other fields. Many professional associations and groups are seeking more active engagement with climate and related sciences (e.g., hydrology). The assessment could help inform standards for use of projections for a range of decisions at multiple resolutions, time frames, and geographies considering confidence and uncertainties associated with these estimates.
 - Recommendation: One aspect of sustained interactions that NCA5 could foster is sustained dialogues among groups of professionals and relevant scientific experts. This sustained engagement would identify information needs/uses, identify and evaluate different methods and data sources, and identify technical characteristics of scientifically robust and practically relevant methods.

Role of state/local governments

- Tribal, state and local governments are responsible for making many decisions that affect the nation’s level of preparedness and resilience for global change. These include decisions about land use, codes and standards, social services, civil infrastructure, incentives for business development, and others. State and local agencies are on the

hook to develop resilience strategies and indicate they need information that is more easily applied to such challenges, including input on measuring and monitoring progress, for example, through indicators.

- Recommendation: The NCA5 process should include an explicit strategy for increasing engagement of representatives of state/local governments to provide input on information needs and objectives, sources of information and expertise, and needs for training and application of the assessment in the context of the decisions needed to prepare the nation for climate change. This is important throughout the chapters of the report, and especially important in the regional component.

Projections and scenarios of climate change

- We are very concerned about statements made by the top leadership of some USGCRP agencies about the utility of long-term modeling projections related to climate change. The fact that there are uncertainties involved does not mean that these models are not useful. The scientific community has worked with global models of climate conditions for more than 3 decades and is experienced in communicating confidence and uncertainties. In addition, there is a legal and moral responsibility to explore the full range of future projections, including high-end scenarios, to help the American public manage risk. Artificially truncating the range and just using "middle of the road" scenarios will not make us better prepared.
 - Recommendation: We strongly recommend that the full range of potential futures be explored by including potential high consequence scenarios associated with high radiative forcing such as RCP8.5 (or equivalent temperature-denominated scenarios) for risk framing purposes. This should also include sea level rise scenarios that reflect potential ice sheet instability and other processes, even if the current state of knowledge does not allow estimation of probabilities.

Policy relevance:

- Though it is obvious that the NCA5 (as with previous assessments) should not be policy prescriptive, it should be policy relevant. Not only is there no need to steer away from objective reviews of the effectiveness of alternative policy responses, it is necessary in order to ascertain future impacts and risk under different climate scenarios with and without the implementation of response options. This is clearly true for both mitigation and adaptation responses.
 - Recommendation: Please include objective assessment of the effectiveness of commonly-considered and/or promising policy options at a variety of scales, including their likely impact on future trajectories and vulnerability.

Specific points on structure and content of the proposed framework:

- Adaptation, Resilience and Risk occurs as Part 5 in the NCA5 framework. Given the inevitable and necessary surge in real-world application of information such as the NCA in resilience planning, this topic could be covered earlier in the framing. While we note that the previous sections will inform this section, it is also the most relevant part of the NCA for many practitioners. There is, of course, a need to massively increase the degree of investment in adaptation and the coordination across agencies to promote adaptation and mitigation both inside and outside of the federal government. The NCA5 should be the foundation of this investment and therefore should be designed to facilitate those outcomes.
 - Recommendation: We suggest covering this topic earlier in the framing of NCA5. This section could lead into the foundational scientific components and help to highlight their relevance.
- Recent evidence illustrates massive acceleration of impacts in the Arctic. This is one of the largest changes in science and impacts from NCA4.
 - Recommendation: Include a more detailed treatment of Arctic changes, especially those of relevance or likely relevance to the U.S. Even though it is the subject of other reports, the implications for the rest of the US are substantial.
- Throughout the framing, the product of the NCA5 is referred to as 'a report'. If the only primary product resulting from NCA5 is a report and associated written summaries of report (even when presented in a nicely-designed website), then it will not be as beneficial nor as accessible as it needs and deserves to be. We understand fully that the NCA5 has to be reviewable and must meet the highest standards of the IQA, yet there are multiple ways of developing findings and information beyond only a report-style product or suite of products.
 - Recommendation: As part of the commitment to a sustained process, we suggest considering multiple media and formats for engaging, developing, and sharing the results of the NCA5, with the goals of being more inclusive, and more usable.

We appreciate this opportunity to comment, and SCAN and its members stand ready to assist in whatever ways we can.

These comments were developed with input from approximately 30 NCA stakeholders who participated in an informal web-based discussion on July 28. Additional review and comments were provided by SCAN Conveners & Staff, who are the co-signatories of these comments, in their individual capacities:

Richard Moss
Kathy Jacobs

Mary Glackin
Lynn Scarlett
Terese (TC) Richmond
Bilal Ayyub
Raj Pandya
Alice Hill
Sherri Goodman
Anne Waple