

Physical, Ecological, and Societal Indicators for the National Climate Assessment

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The National Climate Assessment (NCA) is being conducted under the auspices of the U.S. Global Change Research Program (USGCRP), pursuant to the Global Change Research Act of 1990, Section 106, which requires a report to Congress every 4 years. The current NCA (<http://globalchange.gov/what-we-do/assessment/>) differs in multiple ways from previous U.S. climate assessment efforts, being: (1) more focused on supporting the Nation's activities in adaptation and mitigation and on evaluating the current state of scientific knowledge relative to climate impacts and trends; (2) a long-term, consistent process for evaluation of climate risks and opportunities and providing information to support decision-making processes within regions and sectors; and (3) establishing a permanent assessment capacity both inside and outside of the federal government.

As a part of ongoing, long-term assessment activities, the NCA intends to develop an integrated strategic framework and deploy climate-relevant physical, ecological, and societal indicators. The NCA indicators framework is underdevelopment by the NCA Development and Advisory Committee Indicators Working Group and are envisioned as a relatively small number of policy-relevant integrated indicators designed to provide a consistent, objective, and transparent overview of major variations in climate impacts, vulnerabilities, adaptation, and mitigation activities across sectors, regions, and timeframes. The potential questions that could be addressed by these indicators include:

- How do we know that there is a **changing climate** and how is it expected to change in the future?
- Are important **climate impacts and opportunities** occurring or predicted to occur in the future?
- Are we **adapting successfully**?
- What are the **vulnerabilities and resiliencies** given a changing climate?
- Are we **preparing adequately** for extreme events?

It is not expected that the NCA societal indicators would be linked directly to a single decision or portfolio of decisions, but subsets of indicators, or the data supporting the indicator, might be used to inform decision-making processes such as the development and implementation of climate adaptation strategies in a particular sector or region.