



Scenario Planning for Assessment and Adaptation

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<http://scenarios.globalchange.gov>



Scenarios and the National Climate Assessment

- In the development of the 'new' National Climate Assessment, strong emphasis was placed on the need for risk-based, robust and durable scenario processes and output
- Agencies, the Federal Advisory Committee for the NCA (NCADAC), and partners initiated discussions for how to best support the NCA through scenario development



Outcomes of the process include scenarios for use in the NCA, but also of direct benefit to decision-makers (we hope!).

THIS IS AN EVOLVING EFFORT



**National
Climate
Assessment**

U.S. Global Change Research Program

The “New” National Climate Assessment



Goal

- Enhance the ability of the United States to **anticipate, mitigate, and adapt** to changes in the global environment.

Vision

- 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.



**National
Climate
Assessment**

U.S. Global Change Research Program

Goals for the NCA

- **Ongoing, relevant, highly credible analysis** of scientific understanding of climate change impacts, risk, and vulnerability
- Enhanced timely **access to Assessment-related data** from multiple sources useful for decision making
- **Systematic evaluation** of progress towards reducing risk, vulnerability, and impacts
- **National indicators** of change and the capacity to respond



Goals for the NCA

- A **sustained process** for informing an **integrated research program**
- New approaches to development and use of **scenarios at multiple scales**
- **Evaluation** of the implications of alternative **adaptation and mitigation options**
- **Community building** within regions and sectors that can lead to enhanced resilience
- **Building the foundation for adaptation networks** that can support regional applications of science and services



Scenarios of the Future

- Climate
- Sea level change
- Land use
- Socioeconomic



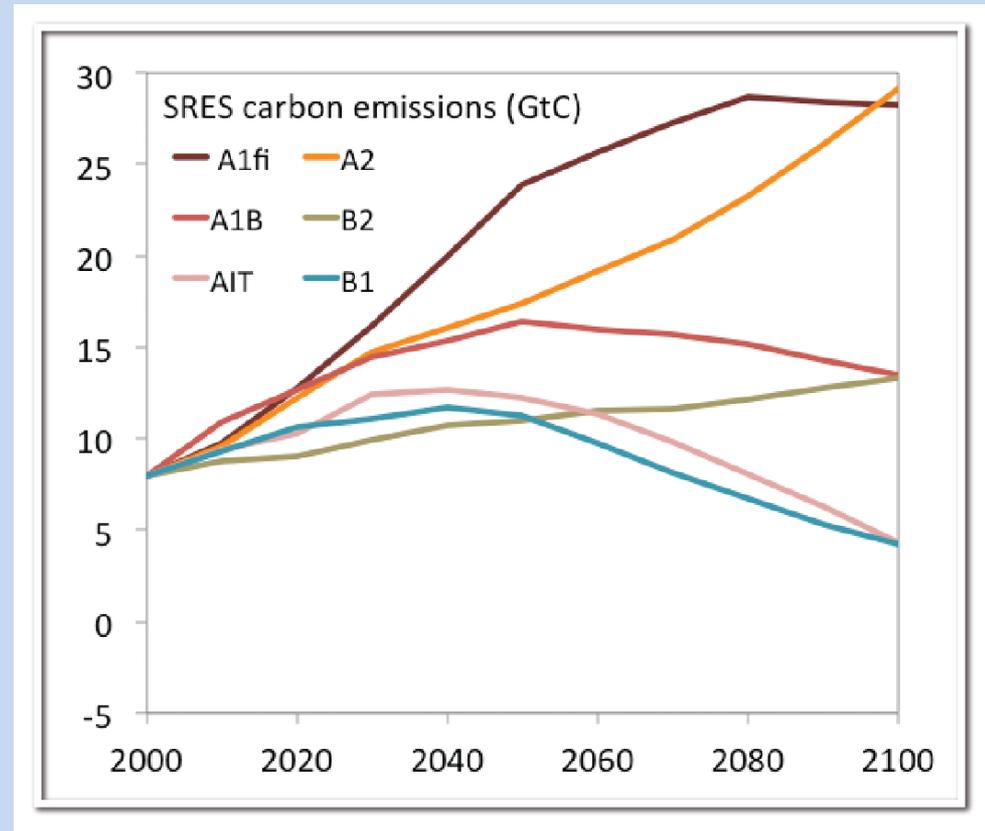
Coming soon:
Participatory Scenario Planning

What are Scenarios?

- They are images of the future, or of alternative futures
- They depict a range of plausible future conditions against which risks, vulnerability, and opportunities can be assessed at regional and national scale.
- Scenarios are NOT: predictions nor forecasts
- Can be quantitative or narrative – here we have a mix
- Based on a wide range of assumptions that give rise to different patterns of energy production and use, agriculture, and other activities that change land use, which in turn lead to different levels of the greenhouse gas emissions that cause the human component of climate change.

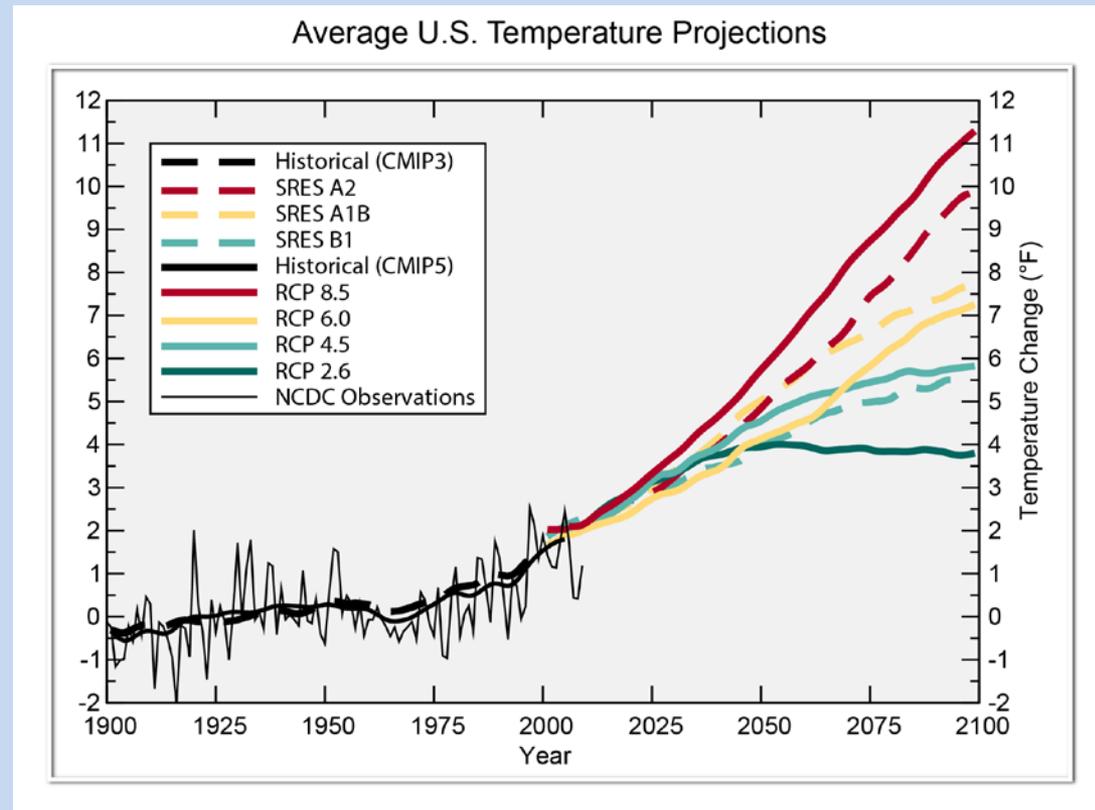
NCA Scenario Development

- NCADAC Scenarios Working Group established in 2011
- Decided to work with two main future greenhouse gas emission scenarios: B1 and A2 (IPCC)
- Note – these are NOT upper and lower bounds of possible futures, but reasonable or plausible futures



NCA Scenario Development

- In the NCA draft, we also include NEW emissions scenarios (Representative Concentration Pathways; RCP)
- Worked with agencies and partners to produce sea level rise and climate scenarios with these emission pathways in mind, and providing access to land-use and land-cover scenarios



Scenario Resources

- Where can you find this information?!

<http://scenarios.globalchange.gov>

- Important note: evolving resource, but a first effort at providing more information, graphics and traceability behind the science
- Intent is to provide access to data behind the scenarios, GIS layers and more metadata.



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