National Climate Assessment

U.S. Global Change Research Program

Northwest Regional Climate Assessment

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http://assessment.globalchange.gov

Objectives

...to establish a continuing, inclusive National process that:

1) **synthesizes relevant science** and information
2) **increases understanding of what is known & not known**
3) **identifies information needs** related to preparing for climate variability and change, and reducing climate impacts and vulnerability
4) **evaluates progress of adaptation & mitigation activities**
5) **informs science priorities**
6) **builds assessment capacity** in regions and sectors
7) **builds understanding** & skilled use of findings

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The Next National Climate Assessment (NCA)

- **Sustainable process** with multiple products over time
- Central coordination, multiple **partners**
- New topics, **cross-sectoral studies**
- Consistent national matrix of **indicators**
- Regional and sectoral **networks** building assessment **capacity**
- Recognizes **international context**
- Alternative **adaptation and mitigation policy options**
- Web-based data and **tools for decision support**
- Process workshops to establish **methodologies**

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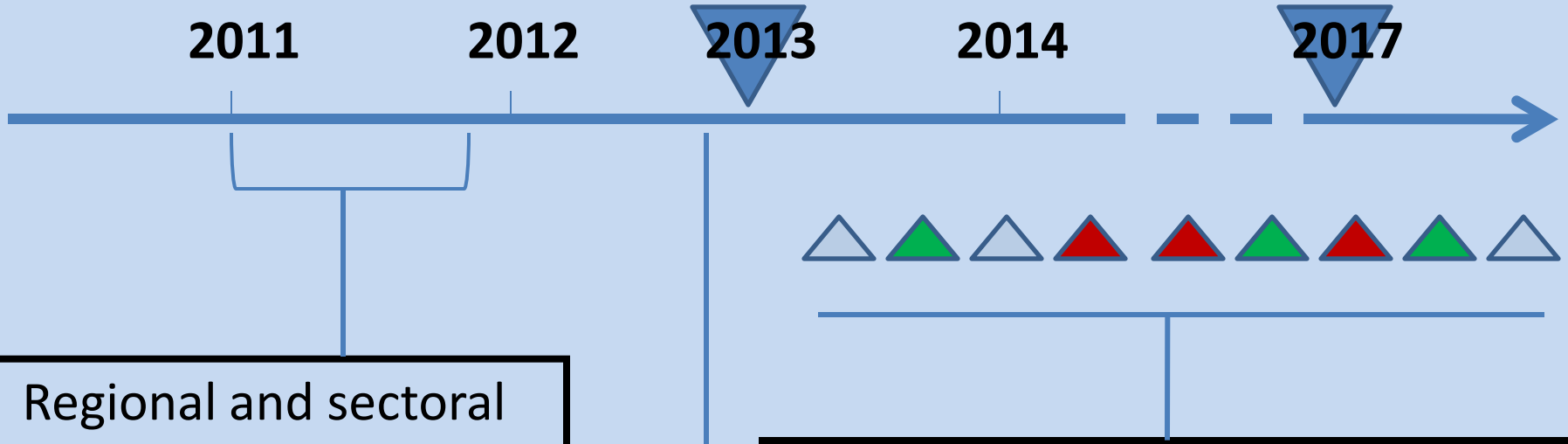
The SUSTAINED NCA Process



Regional and sectoral assessments and stakeholder engagement

Full draft of report available for public review

Initiate "topical" and assessment process reports that will be completed at a defined date post-2013

Full assessment reports

Sectors

Regions

Cross-cutting topics

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Long-term Products of the Sustained NCA Process

- Scenarios

Climate (climatologies and projections)

Socioeconomic (short and long term projections of population and economic activity)

Sea level rise (general guidance that can be translated for regional applications)

Land Use (will use existing work from USGS and USFS)

- Place-based scenario planning exercises
- Topical Products
- Climate Portal
- Regional Coordination of Climate Science & Services

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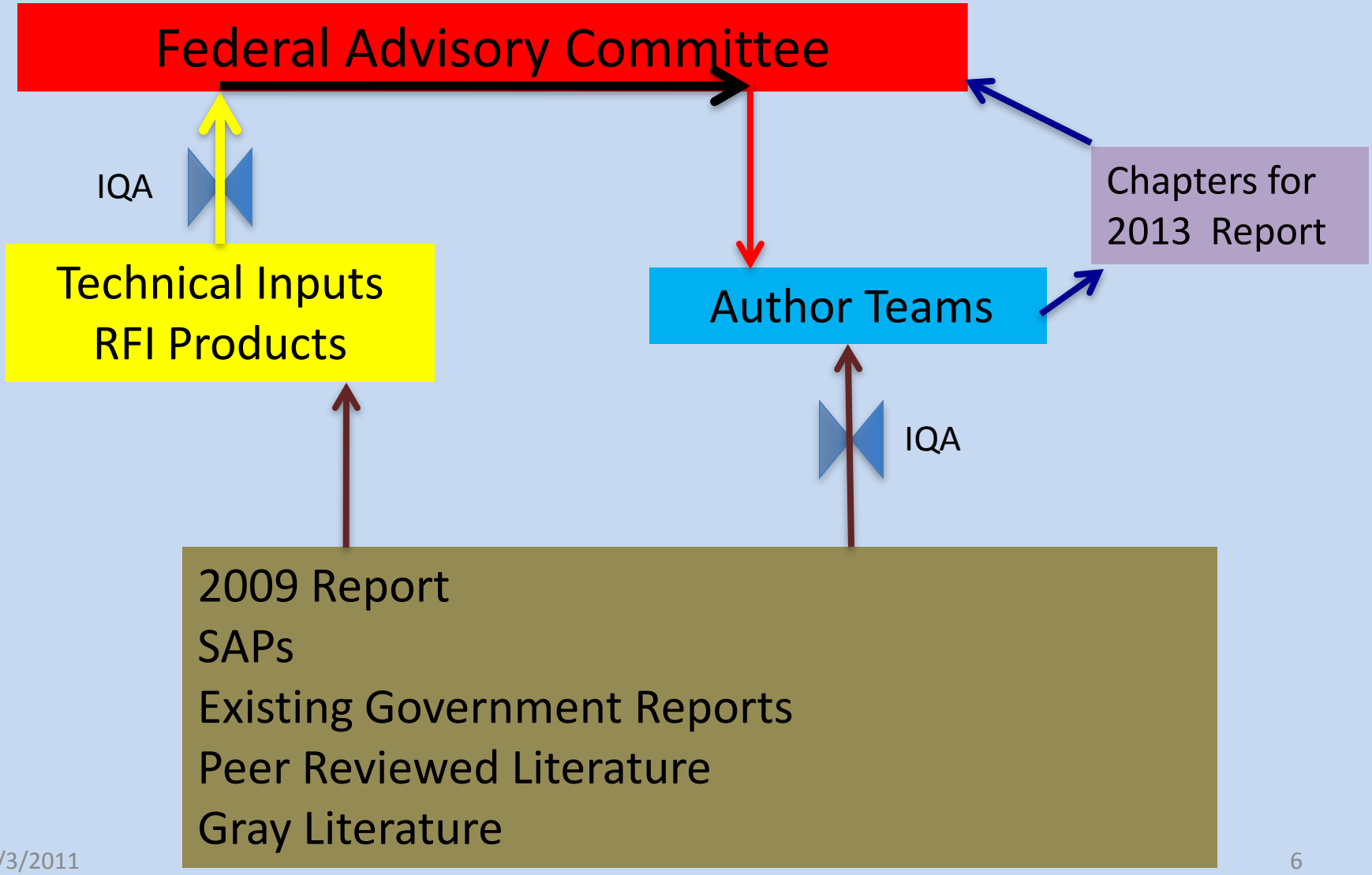
Information flow



Outline for 2013 Report

- The scientific basis for climate change
- Sectors and sectoral cross-cuts
- **Regions** and biogeographical cross-cuts
- Mitigation and adaptation
- Agenda for climate change science
- The NCA long-term process

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Sectors

- Water resources
- Energy supply and use
- Transportation
- Agriculture
- Forestry
- Ecosystems and biodiversity (with links to ecosystems services)
- Human health

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Suggested Cross-Cutting Topics

- Water, energy, and land use
- Urban/infrastructure/vulnerability
- Impacts of climate change on tribal, indigenous, and native lands and resources
- Land use and land cover change
- Rural communities, agriculture, and development
- Impacts on biogeochemical cycles

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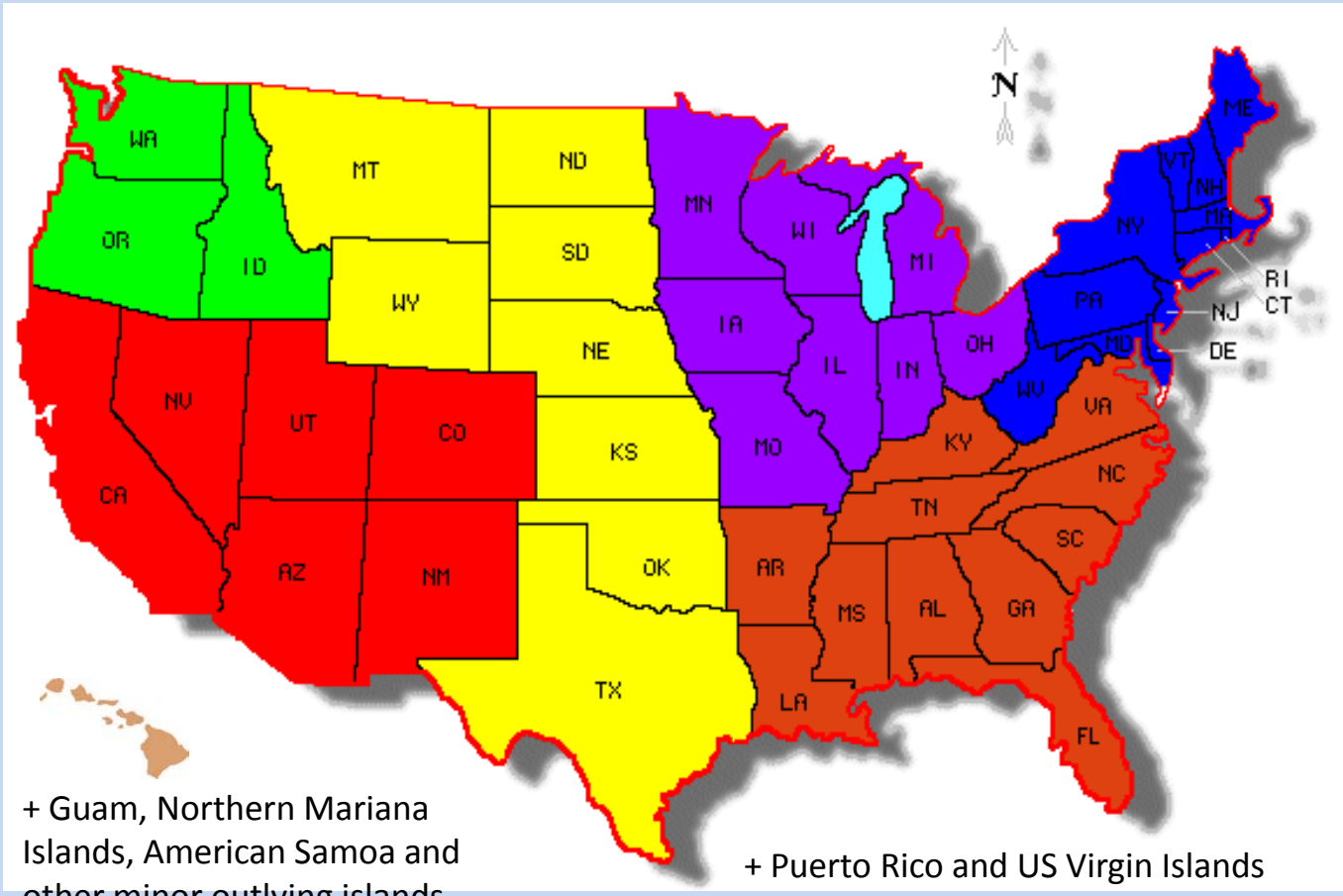
Regions

- Northeast
- Southeast and Caribbean
- Midwest
- Great Plains
- Northwest
- Southwest
- Alaska and Arctic
- Hawaii and Pacific Islands



+ Guam, Northern Mariana Islands, American Samoa and other minor outlying islands

+ Puerto Rico and US Virgin Islands

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Biogeographical Cross-Cuts

- Oceans and marine resources
- Coastal zone, development, and ecosystems, with case studies including
  - SF Bay Delta
  - Chesapeake
  - Gulf Coast
- Watersheds, with case studies including
  - Great Lakes
  - Colorado River
  - Columbia River

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Opportunities for Participation

- "Request for information" FRN for technical inputs e.g.,
    - Literature reviews and discussion papers
    - Case studies
    - Modeling results, interpretation of data, and topical reports
- Participating in assessment activities, e.g.,
  - Meetings and workshops
  - Supporting indicator systems
- Network partners that help link the assessment activities to their constituents

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Join us for lunch* and more discussion about the NCA and opportunities for participation 12:30-1:30

The Climate Impacts Research Consortium, under the guidance of Phil Mote and his team, is taking a leadership role for the NorthWest Regional Climate Assessment.

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*lunch is in Parrington Hall (the Forum Room) - grab your boxed lunch in the foyer of Kane and head NW past the war memorial.

Risk-Based Framing: A Point of Departure

"Responding to climate change involves an *iterative risk management* process that includes both adaptation and mitigation and takes into account climate change damages, *co-benefits, sustainability, equity* and attitudes to risk."

Source: IPCC AR4 Synthesis Report Summary for Policymakers (2007; pg 22)

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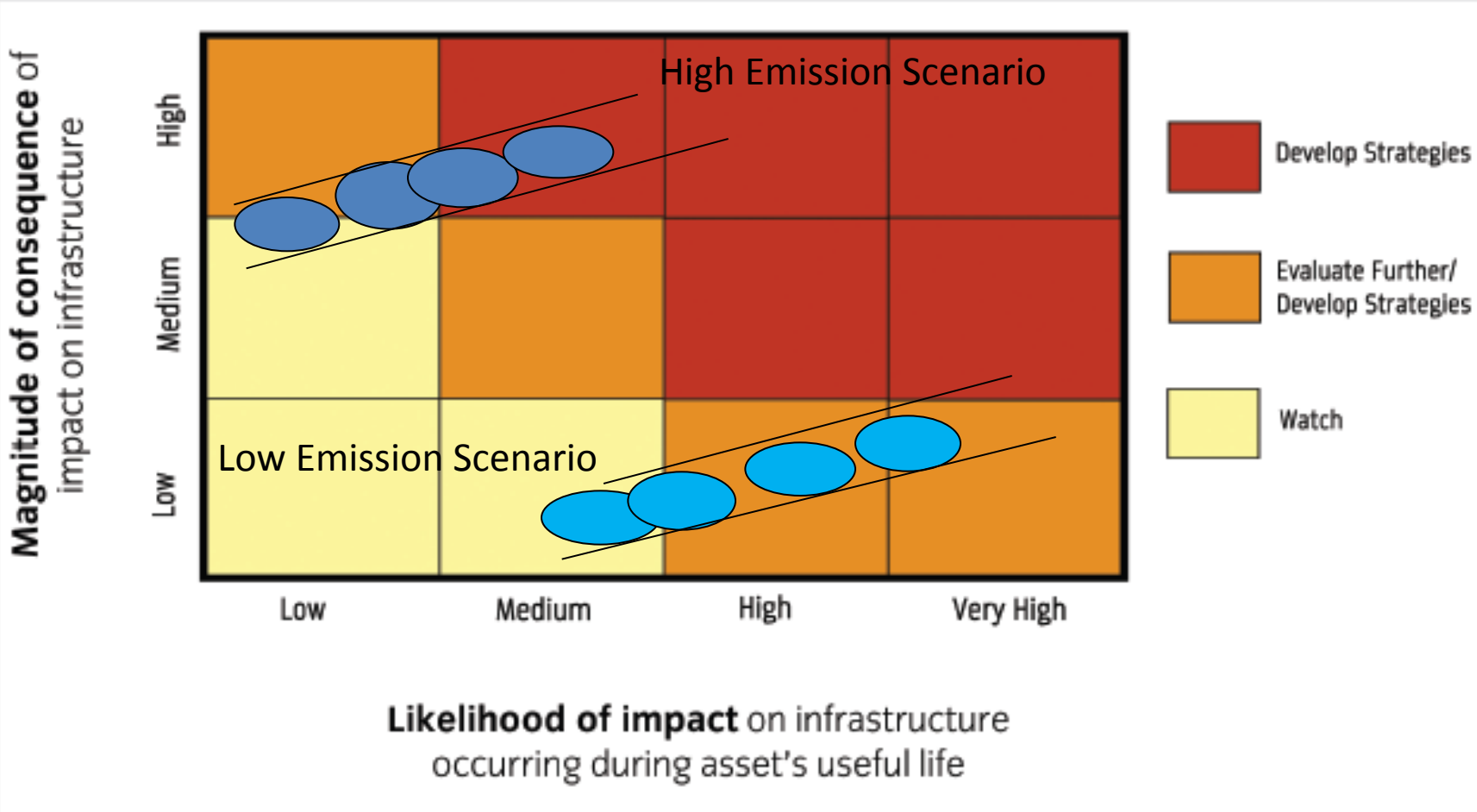
Risk = likelihood * consequence

Tracking Flood Risk over Time



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Key Issues from the 2009 Assessment

- Declining springtime snowpack leads to reduced summer streamflows, straining water supplies
- Increased insect outbreaks, wildfires, and changing species composition in forests will pose challenges for ecosystems and the forest products industry
- Salmon and other coldwater species will experience additional stresses as a result of rising water temperatures and declining summer streamflows
- Sea-level rise along vulnerable coastlines will result in increased erosion and the loss of land

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Key Elements of a Chapter

1. **Introduction/Background: Setting the stage**
2. **Evaluate region's changing climate: past, present, and potential futures**

   Geography, economy, climate (historical trends, stresses, etc.)

   Socioeconomic, environmental, and climate future(s)

   e.g. Evaluate and respond to NCA scenarios, Identify uncertainties, Climate Indicators

3. **Planning for the 21st Century**

Identify key vulnerabilities (expressed in terms of risk with attribution to the criteria and traceable accounts to statements about likelihood and consequence as well as descriptions of how you arrived at these conclusions)

Inventory key regional adaptation and mitigation efforts and capacity. What can we do (or are we doing) now (with respect to ameliorating risk either through exposure or sensitivity with traceable accounts to the underlying documentation and your thought processes)?

Define priority topics and information needs. What do we still need to know or have assistance with/for? Are there 'timing' issues to stage them?

4. **Regional richness: case studies (important sectors, places of importance, etc)**

Explain the selection process in terms of evidence & degree they illustrate key vulnerabilities.

If possible, select case studies that portray both regional richness and some of the nuances that emerge from your discussions per numbers 2 and 3.

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Questions and Comments

- For more information on the National Climate Assessment, please visit: http://assessment.globalchange.gov

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