**Date: September 30, 2010**
**Intro to the National Climate Assessment**

The Regional Integrated Science Assessment Teams (RISAs) met with other NOAA and DOI entities in Georgetown September 30-Oct 2. At that meeting all 11 RISAs (located at universities across the US, Alaska and Hawaii) were represented, and a significant portion of the agenda focused on the National Climate Assessment and the role of RISAs and other regional partners. The Assessment related questions and answers below are summarized from this useful discussion.

**Questions and Answers:**

Question: How will the regions be defined and how will they dovetail with the RISAs and other government regions? NOAA's own program boundaries are not consistent, so how is it possible to pick regions across all the issues that the NCA is concerned about?

Answer: We are starting with the regions used in 2009 Global Change Impacts on the US report because there is a good basis for comparison if we use the same boundaries used in that report. The discussion from the November Regions and Sectors workshop includes ideas on how to approach regions and sectors for this next Assessment report. Selecting boundaries is less important than building data layers that can be useful to decision-makers in various regions. In the long-term, it is important that the people engaged in understanding the Assessment process in their region can make sense of how the data are compiled.

Question: How will the integrated cross-sectoral issues that are to be addressed by the Assessment be selected? Will urban areas be included?

Answer: A preliminary list of the inter-sectoral topics was included in the Federal Register Notice that came out in September within the proposed outline of the 2013 report. Among the initial topics selected were impacts of climate change on:

- the energy/water nexus (possibly expanded to the energy/water/agriculture nexus) the nitrogen and carbon cycles
- urban systems and infrastructure
- coastal ecosystems/water/coastal development
- interactions between adaptation and mitigation efforts
- impacts on culture, cultural activities and valued places (with particular focus on indigenous cultures but possibly including rural communities more generally)

These topics are not yet finalized and will be discussed in the November Regional-Sectoral Workshop. The federal register notice is available online at http://globalchange.gov/what-we-do/assessment/notices.

Question: Will you be considering trans-boundary issues?

Answer: Yes. We have been encouraged not to emphasize the boundaries between the US and Mexico and the US and Canada, but rather deal with issues based on the geography of their impact . Its also been suggested that the Assessment use "fuzzy boundaries" if possible, i.e it should not artificially constrain the areas to be considered. To facilitate this, representatives of the Canadian and Mexican assessments have been invited to the November workshop.

Question: How will you be dealing with issues such as "down-scaling" from global scale models to regional and local models, and "upscaling" from understanding of local and regional issues to larger scales?

Answer: The NCA staff is concerned that stakeholders may think that "down-scaling" will provide the answer to all their questions about what future impacts they need to be prepared for. This can be dangerous, because there are limitations to such techniques. A better way to think about this is "right-scaling," which is the building of regional models or scenarios of future conditions at the scale at which decisions are made – and with full disclosures about the skill of these approaches. Enhanced computer capacity is making more fine-scaled modeling possible, so this arena is changing fast. There is a need for a consistent approach to regional modeling for the Assessment and an initial conversation about this will be held at the December modeling workshop.

Question: Can you talk about the relationship between a sustained process and the selection of national indicators of change?

Answer: The indicators are critical to the ongoing process, and represent a significant departure from how the two previous Assessments were done. It would be helpful to have a link between the things that we care about (indicators) and what is measured (observations). Additionally, because it may be easier to observe a proxy in some situations, some indicators may depend on proxies rather than actual measurements.

We will also include consideration of risk in selection of indicators, because we want to prioritize Assessment activities on that basis. The implementation of the national indicator system might not get done well before 2013 (when the next report is due), but we can start to identify the priority issues that we need to monitor through the ongoing process (climate drivers, impacts, vulnerability).

Question: Are social and demographic changes going to be included in the Assessment?

Answer: Yes. This is a high priority, but exactly how these topics will be fully integrated is not yet well articulated.

Question: Is this Assessment only about climate change or also about impacts of variability?

Answer: It is about the impacts of climate, including both climate variability and change. At this time it is often difficult to delineate where the line between the trend and the underlying variability is.

Question: How do the RISAs fit in, and how they can contribute to the national assessments?

Answer: Because RISAs are already deployed, and because there is some funding available from NOAA to enable RISAs to support the Assessment, it is anticipated that there will be a large contribution from the RISAs (as well as other players at the regional level). RISAs could have a number of roles, including: helping to build regional networks, helping to work on regional report chapters, hosting workshops associated with the Assessment, helping to select and monitor indicators, and helping to define the process. RISAs, as well as Regional offices of the Climate Service (RCCs), DOI Climate Science Centers and Landscape Conservation Cooperatives, USDA networks such as NRCS, and the regional offices of EPA can all play both a coordination and science integration role.

A number of specific proposals from the RISAs address social networking, decision support, and building prototypes of national/regional assessment on specific topics. It is hoped that this information will be transferred across multiple networks.

Question: How can RISAs be most useful for collecting data?

Answer: At the Knowledge Management workshop in September there was a clear call for transparency of the data and information that is used to support the assessment. It was also noted that there was a need to document all of the sources and the "chain of custody" between the source and the use of the data.

There is a need to manage a distributed data system that creates a central resource. NOAA's Assessment Technical Support Unit in Asheville is taking the lead on data management and web services.

Question: Why is documentation so important?

Answer: If the information is not from peer-reviewed sources or has not been through the Assessment's own quality assurance process it will not be usable. Data that are used must be accessible and transparent. The way data are uploaded, documented, stored and shared is critical but still in an early stage of development.

Question : What is the link between the NOAA Climate Service and the Assessment?

Answer: Both are still evolving, but the basic premise is that the Assessment provides an information base and a network that supports climate services as well as adaptation and mitigation decisions. It is also likely that climate services will support more operational tools and iterative engagement with decision-makers. However, it is hoped that on the ground the Assessment and climate services will be perceived as one coordinated activity with clear entry points and roles for stakeholders.

Question: Is all of the regional coordination just within the federal agencies?

Answer: No. The point of deploying the regional networks is to engage with stakeholders and others who are both using and generating data that might be helpful in understanding change and making better decisions.

Question: Can you say something about the mix between contemporary (observed) and projected climate in the Assessments? Which models will be used to guide the future assessments?

Answer: Our view is that the reports themselves serve as an integrated set of "time slices" or progress reports through an ongoing process. There is a need to document what is already being observed, and it is useful to compare that to the climatology in the region. The Assessment is also required under the Global Change Act to project potential impacts into the future. The issues related to which models and model outputs to use will be addressed in the December Modeling Workshop.

Question: What might happen if the Presidential administration changes? How can the assessment be less politically fragile than previous Assessments?

Answer: One of the reasons for engaging regional and sectoral networks is to support this process into the future. We are also hoping that agencies will be committed to this process in the long term. There is now an interagency budget for the coordination office, and this will be very helpful in ensuring that the Assessment continues without interruption. In addition, we already have deliverables that are scheduled for post-2012.

Question: How will the Assessment address economics in general and global economics relative to mitigation strategies?

Answer: Supporting adaptation and mitigation decisions is a new part of this program. It will be difficult to provide economic evaluations of options in the short-term, but these are indicators that will likely be included in the initial report and future reports.

Question: RISAs will be doing major workshops in some regions. What kind of interaction would you like with the national assessment?

Answer: The Assessment process will include both a broad overview of conditions in the U.S. and "nested assessments" that focus on specific topics within regions. The Assessment staff is happy to discuss the options for these sorts of interactions.

Question: What is the distinction between NOAA Assessment services within the Climate Service(NCS) and the National Assessment?

Answer: The NOAA components are a part of and a contribution to the national assessment. The staff is not making a distinction between these two efforts because they are part of the same project. Both NCS and assessments support the delivery and use of climate information on an ongoing basis. The difference is that the NCA is focused more on tools and the Assessment is about information. Another approach is to think of NCS as the "operational" part of this system.

Question: Who will be responsible in each region for collating, documenting and collecting the information?

Answer: There will be many potential partners in this process, but they are not yet engaged. This process of deploying in regions will not be just about NOAA, but rather it will be a cooperative endeavor between NOAA and other partners. However, someone will ultimately need to be responsible for each type or source of information that is needed. As part of the planning process for the Assessment, we are trying to figure out what networks and infrastructure already exists, and what the level of capacity to do assessments is in each region.