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National Climate Assessment

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National Climate Assessment and US Global Change Research Program Newsletter

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Welcome to the National Climate Assessment and US Global Change Research Program newsletter! We are happy to report that assessment teams are working towards providing technical input reports in every region of the country, and in 13 sectors. In addition, external groups have been offering support and technical inputs through our "Request for Information" process. We ask that external teams who are working towards inputs for the 2013 version of the Assessment report let us know what topics they are working on and provide us with an "Expression of Interest" (EOI) by October 1 so that we can help connect groups that are working on similar topics, and so that the author teams for the 2013 report will know what kinds of information will be available to them. Please send any questions about EOIs, technical inputs, and offers of support to Emily Cloyd (ecloyd@usgcrp.gov). Finally, the NCADAC Executive Secretariat is now working to propose "Convening Lead Authors" for the 2013 report and for reports that will be produced after 2013. Stay tuned for more information!

Establishing a Sustained Assessment Process

A topic of considerable interest at the last meeting of our Federal Advisory Committee, the National Climate Assessment Development and Advisory Committee (NCADAC, see meeting summary below), was the need to focus on the "continuing assessment process" and engaging potential stakeholders as opposed to only focusing on writing the 2013 report. We would like to take this opportunity to discuss the current preparations for the longer term.

From the beginning of the current Assessment effort, our goal has been to set up a permanent capacity to conduct assessments both inside and outside of the federal government. Multiple steps have already been taken and are described in the NCA Strategy Summary. They include:

- Committing to building a web-based Assessment information storage, access, and retrieval portal that will allow easier access to information for decision makers, better capacity to synthesize information, and ways to provide up-to-date information over time rather than waiting for new synthesis reports every four years.
- Developing a range of Assessment methodologies intended to inform the ongoing process through a series of workshops held over the last year. These include workshops on approaches to building indicator systems that will help us better understand change in natural and social systems, developing our web-based knowledge management and peer review systems, designing the approach to regional and sectoral assessments, building scenarios and using models for a consistent way of understanding a range of possible climate impacts in the future, identifying techniques for vulnerability assessment and for valuation of impacts, etc.
- Working with the Council on Environmental Quality to organize an interagency process to design and develop a set of eight regional assessment teams that include multiple federal agencies and

external partners. The expectation is that at least some of the partners within these teams will continue their work over time, by conducting vulnerability assessments, documenting impacts, and inventorying and evaluating the effectiveness of adaptation and mitigation efforts.

- Developing a sophisticated engagement strategy for the Assessment that is designed to support the engagement of and communication with a network of stakeholders in regions and sectors on an ongoing basis. Properly staffing and funding these efforts are a high priority for the NCADAC and for the Office of Science and Technology Policy, and we hope to share more news on this soon.
- Establishing a continuing Federal Advisory Committee, the NCADAC, to produce Assessment reports and provide advice on the ongoing process.
- Ensuring a continuing source of funding and staff support for the central coordination office at USGCRP; this includes commitments from 7 agencies on an ongoing basis to ensure that the work of the distributed assessment teams is properly supported and coordinated.
- Establishing a new working group of the Subcommittee on Global Change Research known as the Interagency National Climate Assessment working group, or "INCA." This group of program managers from about 15 federal agencies has been working diligently over the last 18 months, and expect to continue working into the future, to support the Assessment processes and ensure that the scientific information generated by the agencies is available for the NCA.

The next phase of demonstrating the commitment to the "sustained process" is to identify specific Assessment reports and products that will be produced in 2014, 2015, and 2016, before the next synthesis report is produced in 2017. Although some of the topics are still in negotiation, it is clear that some highly-desired inputs cannot be completed prior to March 2012. One example is that the next set of climate model intercomparison products, to be used in the next IPCC report (CMIP 5), will not be properly reviewed and vetted in time to contribute significantly to this Assessment report. They will be referenced, to be sure - but there is still much work to be done before these model outputs can become inputs into the regional and sectoral assessments. There is a strong desire on the part of scientists and stakeholders alike to evaluate how different the climate outlooks for states, regions, and sectors will be given the significant improvements in model capacity at finer scales. Possibly the most-anticipated future contribution is the implementation of the physical, societal, and ecological indicators that we will use to track climate impacts and response capacity at a national level over time.

Another excellent example of a highly desired report is a synthesis and discussion of international climate-related considerations for the nation. Although this effort is moving forward, it is not likely to be done in time to include the complete report as a part of the 2013 report. Future reports may include assessments within major watersheds like the Mississippi, high-altitude and arid region impacts assessments, and other topics. In reality, there will be ongoing investigations of many important topics, including progress on adaptation and mitigation.

National Climate Assessment Development and Advisory Committee Meeting - August 16-18, 2011

The third meeting of the National Climate Assessment Development and Advisory Committee (NCADAC) took place in Arlington, VA on August 16-18, 2011. The agenda, presentations, and documents from the meeting are available here. The meeting focused both on developing a sustained assessment process and on formalizing the timeline and process for delivering the 3rd NCA report in 2013. Highlights of the meeting included:

- Opening remarks by John Holdren, Assistant to the President for Science and Technology, and Director of the White House Office of Science and Technology Policy
- Approval of guidance on risk-based framing for the NCA
- Discussion of ways to clearly communicate levels of certainty for key findings in the assessment
- Updates on the progress of regional and sectoral assessment team activities and development of scenarios for use in analyses
- Discussion of ways to include long-term trends, extremes, and thresholds in regional, sectoral, and cross-cutting analyses
- Support for a "climate information portal" that will provide a single point of access to assessment findings and to the underlying data and analyses used in the assessment
- Discussion of streamlined and transparent systems for tracking inputs to and activities of the NCA
- Conversation about the need for additional resources to support engagement, communications, and outreach, including the need for high-profile support from the Administration
- Suggestions to engage more specifically with the private sector, especially as a means of understanding the needs of and finding ways to present the NCA in ways that are more relevant to business and industry communities
- Affirmation of the NCA as an ongoing effort that extends beyond the 2013 report and establishment of a NCADAC Working Group focusing specifically on "sustained assessment process"
- Adjustments to the proposed timeline for producing the 2013 report, including accelerating the appointment of convening lead authors for chapters, extending the time for writing and synthesis, releasing an electronic version of the report ahead of the printed version, and phasing high-visibility or expanded topical reports to come out in the interim between quadrennial reports
- Presentation and discussion of a suggested outline for the section on adaptation and mitigation
- Presentation of approaches to place the assessment within the appropriate international context and discussion of how to include the international context in the 2013 report and in subsequent assessment reports
- Discussion of approaches to developing a framework for a system of indicators to use in tracking climate change and impacts of climate change
- Agreement on a new format for NCADAC meetings that will allow for working groups to meet in person at the start of meetings with a shortened plenary session

Recent NCA Activities

Summaries and reports from previous NCA-related listening sessions, topical workshops, and process workshops are available here.

Listening Sessions

Coastal Zone 2011

Ralph Cantral (NCA Sectoral Coordinator) and Fred Lipschultz (NCA Regional Coordinator) conducted a listening session at the Coastal Zone 2011 Conference in Chicago on July 20. Participants discussed a number of issues that should be included in the National Assessment, including the impacts of

sea level rise on bay and delta systems, the availability of data related to sea level rise, and potential roles for state resource managers in the climate assessment process.

Ecological Society of America

The NCA hosted a listening session at the 96th Annual Ecological Society of America Annual Meeting in Austin, TX on August 8. Emily Cloyd (NCA Public Participation and Engagement Coordinator), William Emanuel (NCA Senior Scientist), Nancy Grimm (NCA Senior Scientist), and Melissa Kenney (AAAS Fellow / NOAA) served as panelists at the session and provided an overview of the NCA and highlighted activities including the recent Request for Information, development of the NCA indicators strategy, and work on assessment topics such as ecosystems, biodiversity, and land use. Following the overview, the approximately 30 audience members at the session had an opportunity to ask questions about the NCA and engage in a discussion about the products and processes under development. Major themes of this discussion included:

- Integration of ecological and social sciences using a risk-based framework
- Creating a dialogue between researchers and decision makers about the science used in the assessment and the types of decisions that the assessment might support
- Examining the impacts of climate change within the broader context of global change
- Ways to provide technical inputs from and build assessment capacities within regions and across disciplines

Regional Activities

The NCA regional teams continue to progress with planning for their technical inputs to the NCADAC, identifying key management issues and priorities as well as engaging potential partners and authors for the critical issues in each region. All of the eight regions of the NCA have now initiated leadership teams to direct their efforts, and are either planning leadership workshops or have already held them.

Southwest Climate Assessment Authors Meeting

The <u>Southwest Climate Alliance</u> (SWCA) convened potential authors of a comprehensive assessment for the Southwest on August 1-4, 2011 in Boulder, CO. The SWCA is a multi-institution consortium that includes: three NOAA RISAs (CLIMAS, the Climate Assessment for the Southwest; CNAP, the California-Nevada Applications Project; and WWA, the Western Water Assessment), the Department of Interior Southwest Climate Science Center (SW CSC), the Western Regional Climate Center, the University of California-Davis, and the University of California-Los Angeles. Participants included representatives fromfederal agencies, non-governmental organizations, academia, and professional organizations. After a half-day of plenary talks to set the stage, the workshop focused on small breakout sessions on potential chapters of the assessment, with participants engaging in lively discussion of chapter outlines. NCADAC member Richard Moss discussed characterizing and communicating confidence and uncertainty in the NCA process, based on new IPCC language, which generated discussion throughout the meeting.

The Team proposes to produce a comprehensive technical report for the Southwest Region (~100 to 150 published pages). Subsequent to submitting that report by the March 1, 2012 deadline for the NCA, they plan to engage stakeholders more fully, and then revise the report into their own assessment document during the summer of 2012. This post-March 1 effort is envisioned to not only produce a glossy publication for use within the region, but to build

out the network of partners and explore various climate scenarios for ongoing assessment capacity. Contributing lead authors, and potential contributing authors were identified for 20 chapters within the SW Assessment.

Midwest Region Planning Workshop

The Midwest Region Technical Input Team held a small planning workshop on July 25 in Ann Arbor, MI. The Team is coordinated by the USDA-ARS and the NOAA-funded RISA for the Great Lakes Basin, with participation of key Federal agencies. The team will draw on the rich background of material from academic and other entities in the region. The Team intends to provide information on the sectors required by the NCA legislation (water resources; energy supply and use; transportation; agriculture; forestry; ecosystems and biodiversity; and human health), as well as address issues of particular importance within the region such as tourism, natural resource-based recreation, fisheries, and coastal concerns. They plan to produce a series of white papers that develop or update four types of information: 1) Historical Climate Trends; 2) Projections of Future Climate; 3) Impacts by Sector; and 4) Integrative Case Studies that might include Great Lakes coasts, Mississippi River levees, the interface between agriculture and water, impacts to Tribes in the region, or drought impacts.

Great Plains Region Planning Workshop

Led by the DOI Climate Science Center in Colorado and a NOAA RISA component in Oklahoma, the Great Plains region covers a swath of the central U.S. from Montana to the Gulf Coast. The potential leadership for the region met on August 18, 2011 in Lakewood, CO, in conjunction with a planning meeting for the CSC. A diverse suite of federal agencies, tribal representatives and academic institutions, attended the meeting, which included an overview of the NCA from Fred Lipschultz, the regional NCA coordinator, and which discussed critical management issues for the northern and southern Great Plains. They are beginning to develop plans to cover the scope, history, and trends in the region, including social-ecological situation, natural resources and land use patterns, as well as demographic and socioeconomic dynamics. Particular issues they identified include: Natural Resource and Management Opportunities and Challenges, Biodiversity, Ecosystem, Wildlife and Habitat Considerations, Water and Land Management, and Rural-Urban Dynamics. Participants also suggested focused topical cross-cutting topics: Tribal and rural landscapes; Extreme events - seasonal and interannual dynamics on natural resources and disturbance regimes; Migratory birds, habitat change, and water resources; and Mountain to Plains - regional connectivity across social-biophysical-natural resources.

Request for Information

As announced in our last newsletter, the NCA is inviting the public to provide comments and expressions of interest in offering technical inputs or assessment capacity on topics related to the National Climate Assessment. Expressions of interest are due by October 1, 2011, and final inputs are due by March 1, 2012. The July 13, 2011 Federal Register Notice announcing the request for information is available in both html and pdf formats here; the September 7, 2011 amendment, which clarifies deadlines for inputs targeting the 2013 report, is available here. Both notices are also available on the NCA website's Federal Register Notices page. Frequently asked questions about the request for information and expression of interest process are available here.

Teams may provide one or more types of technical inputs to the NCA, including (but not limited to) literature reviews, discussion papers, and other review papers; case studies; and modeling results, interpretation of data, and topical reports. In addition, teams may offer to partner with the NCA by providing short- and long-term assessment capacities, including (but not limited to) hosting meetings and workshops that address specific NCA report topics and/or developing a sustained assessment process; supporting the

development and implementation of indicators systems through integration of data and analytical tools and plans for maintaining monitoring and observation networks; and partnering with the NCA to develop stakeholder engagement networks that focus on public participation, communication, education, or other outreach. These technical inputs and assessment capacities are further described here. Teams are also encouraged to suggest other types of technical inputs and assessment capacities not listed here.

If you have any questions regarding the Request for Information, please contact Emily Therese Cloyd (ecloyd@usgcrp.gov).

US Global Change Research Program Strategic Planning Update

On August 9, Tom Armstrong (USGCRP Office Director), along with Subcommittee for Global Change Research (SGCR) Chair Tom Karl and Vice Chair for Strategic Planning, Tim Killeen, attended an all-day meeting with the newly-formed National Research Council Committee on Advice to the USGCRP (more information about committee scope and membership is available here). Also in attendance were members of the Strategic Plan Integration Team and representatives from two other NRC Committees that have provided guidance to USGCRP: Human Dimensions and the Board on Atmospheric Sciences and Climate (BASC). The committee provided SGCR leadership with their initial reactions to the first draft of the new Strategic Plan. Following a brief overview of USGCRP and the Strategic Plan by Karl, Armstrong, and Killeen, the Committee asked questions about the program and the plan and then proceeded to describe their initial reactions to the first draft. Overall, the discussion with the Committee was excellent and highly informative. Specifically, the committee was very encouraged by the progress made in developing the first draft, but felt that more work was needed to effectively describe how the USGCRP will use the plan in order to meet the goals of the Global Change Research Act, to provide more detailed discussion or at least examples of successes that the program has made over the course of its first twenty years, to define how the Program will measure success for the next ten years, to describe how and from where the program will incorporate social science and related expertise to meet the expanding objectives laid out in the new end-to-end approach, and outline how implementation will succeed the strategic plan. Overall, there appeared to be no showstoppers or any issues that cannot be rectified in the ongoing revisions of the first draft by the Integration Team and SGCR Executive leadership. A draft of the plan will be available for public review later this fall from USGCRP's Strategic Planning webpage.

Upcoming Events

In the next few months, many of the regional, sectoral, and topical assessment teams will be launching or continuing their efforts to develop technical inputs for the assessment. The US Global Change Program also has a number of events, many of which will focus development of a new strategic plan for the Program. Information about upcoming events can also be found here.

September 12, 2011

NCA Alaska Regional Team Organizational Meeting - Anchorage, AK (invitation only). For more information, contact Fred Lipschultz (flipschultz@usqcrp.gov).

September 12-14, 2011

Great Lakes Coastal Habitat Conservation Workshop - Ann Arbor, MI (invitation only)

 Overview of the National Climate Assessment and Break-Out Session: September 14, 8:35-10:25 am

September 14, 2011

NCA Pacific Northwest Regional Team Organizational Meeting - Seattle, WA (invitation only). For more information, contact Fred Lipschultz (flipschultz@usqcrp.gov).

September 26, 2011

<u>Enhancing Decision Making: A Roundtable Workshop on Climate Change</u> - Chicago, IL. For more information, contact Emily Wasley (ewasley@usgcrp.gov).

September 26-27, 2011

NCA Southeast Regional Team Organizational Meeting - Atlanta, GA (invitation only). For more information, contact Fred Lipschultz (flipschultz@usqcrp.gov).

October 3-5, 2011

NASA Carbon Cycle and Ecosystems Joint Science Workshop - Alexandria, VA

 Overview of the National Climate Assessment and Listening Session: October 4, 5:30-6:30 pm

October 24-25, 2011

Urban Vulnerability to Climate Change Workshop - New York, NY (invitation only). For more information, contact Ralph Cantral (rcantral@usgcrp.gov).

October 27, 2011

World Climate Research Program Open Science Conference - Denver, CO

• Town Hall on USGCRP Strategic Planning: October 27, 6:15 pm. For more information, contact Julie Morris (jmorris@usgcrp.gov).

October 29-November 2, 2011

American Public Health Association Annual Meeting - Washington, DC

 Climate Change and Public Health Listening Session: November 1, 6:30-8:00 pm. For more information, contact Tanya Maslak (tmaslak@usqcrp.gov).

October 31-November 2, 2011

<u>GreenGov Symposium</u> - Washington, DC. For more information, contact Emily Wasley (<u>ewasley@usgcrp.gov</u>).

November 8-10, 2011

Climate Science Working Group Workshop: Trends in Observed Causes in Heat and Cold Waves as well as Drought - Asheville, NC

November 15-17, 2011

National Climate Assessment Development and Advisory Committee Meeting - Boulder, CO

November 30-December 1, 2011

 National Climate Assessment Session: December 1, 11:00 am-12:15 pm

December 13-15, 2011 Climate Science Working Group Workshop: Attribution of Changes in Climate Extremes - Asheville, NC

January 22-26, 2012

American Meteorological Society Annual Meeting - New Orleans, LA

- The New Decadal Strategic Plan for the USGCRP: January 24, 12:15-1:15 pm. For more information, contact Julie Morris (<u>imorris@usqcrp.gov</u>).
- The US National Climate Assessment, Update on the 2013 Report and Establishing and Ongoing Process: January 25, 12:15-1:15 pm.

About Us

The <u>U.S. Global Change Research Program (USGCRP)</u> coordinates and integrates federal research on changes in the global environment and their implications for society. The USGCRP began as a presidential initiative in 1989 and was mandated by Congress in the Global Change Research Act of 1990(P.L. 101-606), which called for "a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change."

The National Climate Assessment (NCA) is being conducted under the auspices of the Global Change Research Act of 1990, which requires a report to the President and the Congress that evaluates, integrates and interprets the findings of the USGCRP every four years. The NCA aims to incorporate advances in the understanding of climate science into larger social, ecological, and policy systems, and with this provide integrated analyses of impacts and vulnerability, helping the federal government prioritize climate science investments, and helping to provide the science that can be used by communities around our Nation try to create a more sustainable and environmentally-sound plan for our future.