

NATIONAL CLIMATE ASSESSMENT AND DEVELOPMENT ADVISORY COMMITTEE
MEETING MINUTES
TUESDAY, JULY 9 – WEDNESDAY, JULY 10 2013
IN-PERSON MEETING AT NASA HEADQUARTERS

WELCOME

Dr. Jerry Melillo, Marine Biological Laboratory and NCADAC Chair

Jerry Melillo welcomed the NCADAC members and opened the meeting. Michael Freilich, NASA Earth Sciences Division Director, welcomed the committee on behalf of NASA, host of the meeting. Dr. Freilich pointed out that NASA is supporting the NCA in multiple ways, including through major funding to engage the Earth sciences community. Minutes from the May 2013 NCADAC meeting were brought forward. No comments or corrections were noted, and the minutes were accepted as written. Attendance was taken and the presence of a quorum was confirmed.

Decision

Dr. Melillo requested and received approval for Ms. Kathy Jacobs, NCA Director, to freely participate in the discussions.

UPDATE ON NCADAC CHARTER AND STATUS OF THIRD NCA REPORT

Dr. Jerry Melillo, Marine Biological Laboratory and NCADAC Chair

Ms. Kathy Jacobs, Office of Science and Technology Policy and National Climate Assessment Director

Dr. Cynthia Decker, NOAA, Designated Federal Official

Jerry Melillo gave an update on the new NCADAC Charter, which was approved by the Department of Commerce on June 24, 2013. The Charter will terminate on the earlier of two dates: either 90 days after delivery of the NCA Report or two years from the date the charter was signed. Most NCADAC member terms will expire in April 2014, so a process to extend memberships will be developed in order to complete any remaining committee activities following the report release.

Kathy Jacobs thanked NASA for its commitment to the NCA, and reviewed the status of the NCA report. In June, President Obama made a speech on climate change that introduced the President's Climate Action Plan, which addresses management of emissions, preparedness and resilience, and international engagement. The Plan commits to delivering the NCA Report in Spring 2014 and also mentions several other assessment documents. As of the NCADAC meeting date, a revised version of each Third NCA Report chapter has been developed with changes in response to the 4161 comments received on the public draft. All authors' responses to comments have been reviewed by an external Review Editor to ensure that responses were adequate and appropriate. Chapter Traceable Accounts have been edited for consistency with revisions in the text. The Executive Secretariat planned to revise the full report by August 7th, for review by the National Research Council (NRC), agencies, and NCADAC. In addition, Susan Hassol and the editorial team have developed a draft Highlights document, which is entirely derivative of the report and will be updated to be consistent with the final report contents.

DISCUSSION AND APPROVAL OF AMENDMENTS TO NCA REPORT TIMELINE

Ms. Kathy Jacobs, Office of Science and Technology Policy and National Climate Assessment Director

Kathy Jacobs presented minor amendments to the timeline. The first proposed change was that the Highlights document would not be reviewed by the agencies during the full draft review in August, but would be developed for review by the NCADAC in September and submitted with the Government Review Draft in October. The second change was that the meeting of CENRS (Committee on Environment, Natural Resources, and Sustainability) to discuss the need for agencies to provide detailed reviews of the report was scheduled for July 19th. The CENRS meeting was considered to be an important step to ensure that agencies bring any concerns forward prior to formal agency review.

Decision

The NCADAC approved the timeline by consensus.

MAJOR COMMENTS AND OUTSTANDING ISSUES ON DRAFT THIRD NCA

Ms. Kathy Jacobs, Office of Science and Technology Policy and National Climate Assessment Director

Dr. Jerry Melillo, Marine Biological Laboratory and NCADAC Chair

Dr. Glynis Lough, U.S. Global Change Research Program and National Climate Assessment

Dr. Donald Wuebbles, University of Illinois and NCADAC Executive Secretariat Member

Dr. Aris Georgakakos, Georgia Institute of Technology and NCADAC Member

Mr. Paul Fleming, Seattle Public Utilities and NCADAC Member

Ms. Lynn Scarlett, Resources for the Future

Dr. Anthony (Tony) Janetos, Boston University and NCADAC Member

Dr. Diana Liverman, University of Arizona and NCADAC Member

Dr. Melillo requested and received approval for Glynis Lough to freely participate in the discussions. Dr. Lough presented an overview of the Review Editor process conducted in June and July. One or more external Review Editors per chapter were selected by the Executive Secretariat. After reviewing the revised chapters, comments, and authors' responses, Review Editors were overall very positive about the authors having responded clearly and adequately. Review Editors' concerns were generally minor and commonly included: authors missed a point in a long comment, authors used space limitations as a reason not to add new material, and some revised graphics were not available for evaluation. About half of the review editors iterated with authors; the other half signed off without iteration. Thirty-five of forty review editors had certified their final comments by the meeting date; the remaining editors were expected to finish within in a few days.

Donald Wuebbles presented slides about comments and responses for Our Changing Climate, which received about 600 public comments. Revisions included additional discussion or clarification on: the base period used, uncertainty in model results, climate sensitivity, models and regional precipitation reliability, regional trends in heavy precipitation, attribution, and range of sea level rise projections. A new Key Message and additional discussion were added on hurricanes. Following NCADAC discussion, the language on hurricanes and sea level rise was to be examined again.

Aris Georgakakos and Paul Fleming presented major comments and revisions to the Water chapter, which received over 200 comments. The revised draft included more information on impacts on

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groundwater, flooding, soil moisture, and uncertainty. Following NCADAC discussion, the key message on floods was to be reviewed again to ensure it reflects all relevant literature.

Lynn Scarlett reviewed major comments and revisions on the Decision Support chapter, which received 130 comments. The chapter was restructured and a new conceptual figure was added. Examples were added for decision-support tools, how they are being used, kinds of decision-makers, and kinds of decisions, as well as description of challenges to using decision-support tools. Two key messages were added on tradeoffs and decision support processes. Following NCADAC discussion the authors were to consider revising the Key Messages to make them shorter.

Tony Janetos reviewed major comments and responses to the Mitigation chapter, which received 150 comments. The chapter was revised for consistency with other chapters; to address the international context; and to add neutral discussion of policy actions that are already underway.

Diana Liverman presented issues raised by the 150 comments received on the Research Agenda chapter. The chapter was revised to clarify that its focus was on research needs for improved climate assessments in the U.S., and was reorganized into five research goals and five cross-cutting capabilities. The authors decided not to rank research priorities, nor to connect goals with specific agencies. Following NCADAC discussion the authors were to consider adding evaluation to the research agenda, adding criteria for ranking research priorities, and connecting the chapter to the Sustained Assessment chapter and Sustained Assessment Special Report.

Kathy Jacobs summarized changes to the introductory portions of the report, which received 450 comments in total. The Introduction was revised to guide readers in how to approach the report, now called “About this Report.” A new section was added on key themes, including risk framing, uncertainties, and assessing confidence, called “Context and Background.” This section also includes a set of issues that were not addressed as fully as the NCADAC had hoped to in the report, including national security, economics, international context, and the intersection of adaptation and mitigation.

PUBLIC COMMENT

Dr. Cynthia Decker, NOAA, Designated Federal Official

Dr. Kandis Wyatt, NOAA NESDIS, Designated Federal Official (Alternate)

Kandis Wyatt opened the public comment period. No members of the public offered comments, and the public comment period was closed.

INDICATORS WORKING GROUP UPDATE

Dr. Anthony (Tony) Janetos, Boston University and NCADAC member

Tony Janetos reviewed the goals, progress, and timeline for the National Climate Indicators System. Chartered under NCADAC, the Indicators Working Group is developing a national system that will provide authoritative measures to inform decisions and adaptation and mitigation measures. Because it will be in an online format, the system can be updated more regularly than the quadrennial assessment reports, and its goals are linked to the USGCRP Strategic Plan. The Working Group has established technical teams for 12 sectors, and each team has developed a conceptual model and proposed indicators. Decision criteria for indicators include that they: be scientifically defensible, fit the

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conceptual framework, have a definable relationship to climate, be scalable, build on existing agency efforts, and be current and leading indicators.

The next step is providing feedback to the technical teams, based on a completed high-level review. The teams will then revise their proposed indicators. From the large set of indicators proposed by the technical teams, the Indicators Working Group will recommend pilot indicators for review by NCADAC and USGCRP in Fall 2013, anticipated to be a decisional item at the next NCADAC meeting. Only indicators that have already been peer-reviewed will be chosen for the pilot. An implementation plan for the next 18 months will also be developed in Fall 2013 to guide transition from a large-scale effort by many dedicated volunteers to a targeted, longer-term indicators effort. Pilot indicators will be launched with the NCA report, in Spring 2014, and the full system launch will follow in 2015. The Indicators Working Group will examine governance of the indicators system in the context of sustained assessment.

Discussion

NCADAC members commented that Indicators should be relevant to decision making, which is the intent of the Indicators system. Some of the Indicators technical teams have already looked at topics that would be immediately useful to decision makers in the private sector, but relevant data are not always available. NCA authors had originally noted key vulnerabilities for the Indicators technical teams, and the Indicators Working Group will review NCA chapters again in the fall to be sure no key vulnerabilities were missed. The Indicators Working Group will publish a set of peer reviewed papers in 2015 around the time of the launch of the full system, and all indicators will be peer-reviewed before the launch. Kathy Jacobs encouraged NCADAC members to discuss the indicators system with Tony Janetos and Melissa Kenney.

DAY 2: WEDNESDAY 10 JULY, 2013

DISCUSSION OF NCA REPORT FINDINGS

Ms. Kathy Jacobs, Office of Science and Technology Policy and National Climate Assessment Director

Kathy Jacobs facilitated discussion of revisions to the Report Findings of the Draft Third NCA, which had been revised in response to comments. One Report Finding was added, on impacts of climate change on Native Peoples. The Report Findings were further edited based on discussion by the NCADAC and the work of smaller ad-hoc breakout groups focused on edits to specific Report Findings. Proposed changes were sent out to NCADAC members after the meeting, and any further comments were due by noon EDT Friday 19 July.

REQUEST AUTHORIZATION FOR EXECUTIVE SECRETARIAT TO ACT ON REVISED DRAFT

Ms. Terese (T.C.) Richmond, Van Ness Feldman GordonDerr and NCADAC Vice-Chair

T.C. Richmond presented a request for authorization for the Executive Secretariat to manage and coordinate submittal of the Revised Draft on August 7th for review by the NRC. Agencies will also have an opportunity to review through their ex-officio members. The Executive Secretariat will assist authors to make revisions.

Decision

The NCADAC approved by consensus to authorize the Executive Secretariat to finalize the Revised Draft Report, as informed by the discussion stemming from the NCADAC meeting of July 9-10, 2013, and to manage and coordinate its submittal in accordance with the Time and Responsibility Schedule approved July 9, 2013.

SUSTAINED ASSESSMENT SPECIAL REPORT PRESENTATION AND PATH FORWARD

Mr. James Buizer, University of Arizona and NCADAC Executive Secretariat member

Mr. Paul Fleming, Seattle Public Utilities and NCADAC member

Dr. Sharon Hays, Computer Sciences Corporation and NCADAC Executive Secretariat member

James Buizer, Paul Fleming, and Sharon Hays presented an overview of the revised draft Sustained Assessment Special Report. After approval by the NCADAC, the report will be delivered as advice to the government on how to conduct a sustained assessment process, as chartered to the NCADAC. The Working Group's initial draft report underwent multiple reviews, through webinar presentations, submission of comments from NCADAC members, and solicitation of comments from external reviewers. About 460 comments were received from NCADAC members and external reviewers. Dr. John Hall served as federal liaison and communicated agency feedback to the Working Group.

The initial draft report had been revised to include sub-recommendations, emphasize partnerships, and make the report more consistent on references to costs. The revised draft report at the time of the meeting included four categories of draft recommendations: 1) establish mechanisms to support collaborative partnerships; 2) enhance and organize scientific foundations for managing risks and opportunities of climate change; 3) provide infrastructure to support the sustained assessment process; and 4) diversify the resource base and set priorities. The authors provided a matrix to NCADAC members showing how they handled each of the comments.

Discussion

The authors were asked to provide an explanation of how they arrived at their recommendations, and requested that all options be described. The authors' understanding of their charge did not include laying out all options for every recommendation, but they agreed to consider a compromise approach. Concern was raised that the report should be careful in its discussion of costs, which had already been addressed to some extent in the most recent revision. Several NCADAC members spoke in favor of approving the report.

Decision

Jerry Melillo presented a compromise schedule and plan for revisions. The USGCRP staff was to send out a summary of issues presented by NCADAC members today for review and edit by the end of the week; based on those comments, the Sustained Assessment Special Report Working Group was to revise the report further in the two weeks following the meeting, and send to the NCA office for posting on the Resources website. As soon as the revised draft was available for posting, a Federal Register Notice would be given of a NCADAC telephone meeting for a decision on the final report will be held, likely late August or early September. Dr. Melillo urged all NCADAC members to read the report and provide comments.

RELEASE/ROLLOUT PROPOSALS, DISCUSSION, AND DECISION

*Dr. Susanne Moser, Susanne Moser Research & Consulting and NCADAC Executive Secretariat Member
Ms. Emily Cloyd, USGCRP*

Dr. Jerry Melillo, Marine Biological Laboratory and NCADAC Chair

Susanne Moser presented the general concept for the Roll Out and Sustained Engagement (ROSE) strategy being developed by the Engagement and Communications Working Group, including a proposed outreach plan for the final Third NCA Report. She presented both the general approach and the Conceptual Overview of Products and Responsibilities for the Third National Climate Assessment Report Rollout. The purpose of the strategy will be to give a framework for coordinating activities of the White House, NCADAC, staff, USGCRP agencies, NCANet, the NCA Technical Support Unit (TSU), and others. The development of the ROSE strategy is being led by the Engagement and Communication Working Group, based on meetings with NCANet and agencies, and builds on lessons from the draft release, public comment period, and past engagement events. There has been considerable media coverage on the NCA draft even without active media outreach by federal agencies, thanks mainly to NCANet partners. Regional town halls have been crucial in generating the 324 unique print media hits identified by early July 2013. Chapter authors have been quoted frequently. Most coverage has been neutral or supportive reporting.

The Third NCA report will be a government document, and rollout will be done in coordination with the White House, NCADAC, and federal agencies. Accessible products, such as the Highlights document and regional summaries, will be important for outreach and media. After the initial release of the report, there will be a second phase of extended outreach, possibly including regional town halls, professional society meetings, and trainings for translators. Emily Cloyd is the key contact person for this phase. The Committee expressed its appreciation to Ms. Cloyd for all her work on outreach to date.

Discussion

A recommendation was made to survey those who have already given public presentations on the NCA, to find out what has been done, what has worked, and what has not worked. Emily Cloyd said data are being evaluated from a survey of the town hall meetings. Jerry Melillo noted the rollout will not be done by the NCADAC per se because the report will belong to the government at release, but rather that authors and experts will speak about their contributions on their own behalf.

Decision

The general approach of the rollout plan as presented was approved by consensus.

STATUS OF ELECTRONIC DEPLOYMENT OF NCA/GCIS

Dr. David Easterling, NOAA National Climatic Data Center

David Easterling presented a brief summary of how the interactive PDF and Global Change Information System (GCIS) will be constructed. Users will be able to view the interactive PDF of the report from any mobile device. By clicking on links within the PDF, users will access the NCA website, where the GCIS will support all interactivity. To meet NCA legal requirements, the TSU and GCIS have continued to gather data about copyright information, data sources, references, and links to datasets. Kathy Jacobs said it is critical that we get as much information on graphics as possible into the system. The proof of concept website will be ready to share at the next in-person NCADAC meeting.

DISCUSSION AND APPROVAL OF HIGHLIGHTS DOCUMENT APPROACH

Ms. Susan Hassol, Climate Communication

Dr. Jerry Melillo, Marine Biological Laboratory and NCADAC Chair

Susan Hassol gave an overview of the draft Highlights document, which will synthesize the report in 80-100 pages based on the Report Findings and chapters. All chapters will be represented in 2-4 page topical sections about regions, sectors, decisions, and cross-cutting topics. Everything will be derivative of the NCA report. Key Messages have generally increased in length in response to comments, but need to be short to fit in the Highlights and two-pagers.

Discussion

The regional two-pagers will include maps of the regions that are done in a consistent format. The suggestion was made to include climate information in those maps, although Susan Hassol said this would be confusing without national context.

Decision

The NCADAC approved by consensus the general approach for the Highlights document and related summary materials.

CLOSING AND SCHEDULE OF UPCOMING MEETINGS

Dr. Jerry Melillo, Marine Biological Laboratory and NCADAC Chair

Ms. Kathy Jacobs, Office of Science and Technology Policy and National Climate Assessment Director

Kathy Jacobs summarized next steps. Report Findings will be finalized. Convening Lead Authors will respond to Review Editor comments, update comment matrices, and review Traceable Account edits. The Report Integration Team and Executive Secretariat will engage to review the report as it is finalized.

Jerry Melillo summarized decisions reached at the meeting:

- 1) The Executive Secretariat is empowered to revise, coordinate, and submit the revised draft that will go to the NRC and agencies.
- 2) The timeline for the Sustained Assessment Special Report will be shortened. The working group will revise the special report based on comments received at the meeting and in the subsequent week. Once the revised draft is finished, a date will be established for a phone meeting to approve the report.
- 3) The Conceptual Overview of Products and Responsibilities for the Third National Climate Assessment Report Rollout was approved..
- 4) The general approach for the Highlights document and related materials was approved.

USGCRP staff will send a revised timeline to NCADAC. The next and likely final in-person NCADAC meeting for the Third NCA Report will be October 1st-2nd in Washington, DC.

The meeting was adjourned at 4 PM.

APPENDIX A: ATTENDEES

Non-Federal NCADAC Members in attendance

Name	Affiliation
Daniel Abbasi	GameChange Capital, LLC
Bull Bennett	Kiksapa Consulting
Rosina Bierbaum	PCAST, University of Michigan
James Buizer	University of Arizona
Lynne Carter	Louisiana State University
F. Stuart (Terry) Chapin	University of Alaska
Camille Coley	Florida Atlantic University
Placido Dos Santos	University of Arizona
Paul Fleming	Seattle Public Utilities
Guido Franco	California Energy Commission
Mary Gade	Gade Consulting
Aris Georgakakos	Georgia Institute of Technology
David Gustafson	Monsanto Company
David Hales	Second Nature
Sharon Hays	Computer Sciences Corporation
Mark Howden	Australian CSIRO
Anthony (Tony) Janetos	Boston University
Rattan Lal	Ohio State University
Arthur Lee	Chevron Corporation
Jo-Ann Leong	University of Hawaii
Diana Liverman	University of Arizona
Ed Maibach	George Mason University
Jerry Melillo	Marine Biological Laboratory
Susanne Moser	Susanne Moser Research & Consulting
Richard Moss	Joint Global Change Research Institute
Marie O'Neill	University of Michigan
Jayantha Obeysekera	South Florida Water Management District
Lindene Patton	Zurich Financial Services
John Posey	East-West Gateway Council of Governments
Terese (T.C.) Richmond	Van Ness Feldman GordonDerr
Andrew Rosenberg	UNH and Union of Concerned Scientists
Richard Schmalensee	Massachusetts Institute of Technology
Henry (Gerry) Schwartz	HGS Consultants, LLC
Joel Smith	Stratus Consulting
Donald Wuebbles	University of Illinois
Gary Yohe	Wesleyan University

Federal NCADAC Ex-Officio Members in attendance

Name	Affiliation
Ko Barrett	NOAA
Virginia Burkett	U.S. Department of the Interior
John Hall	Department of Defense
Alice Hill	U.S. Department of Homeland Security
Patricia Jacobberger-Jellison	National Aeronautics and Space Administration
Thomas Karl	NOAA/Subcommittee on Global Change Research
Robert O'Connor	National Science Foundation

USGCRP, NOAA, and NCA Staff in attendance

Name	Affiliation
Sarah Anderson	USGCRP
Susan Aragon-Long	USGCRP (USGS)
Tess Carter	USGCRP
Sarah Champion	LMI/NOAA/NCDC
Ryan Clark	USGCRP
Ella Clarke	USGCRP
Emily Cloyd	USGCRP
Cynthia Decker	NOAA
Alison Delgado	USGCRP (JGCRI)
Dave Easterling	NOAA
Ilya Fischhoff	USGCRP
Elizabeth Fly	NOAA and USGCRP
Dan Glick	CICS-NC/NOAA/NCDC
Bryce Golden-Chen	USGCRP
Eric Golman	USGCRP
Susan Hassol	CICS-NC/NOAA/NCDC
Paula Hennon	CICS-NC/NOAA/NCDC
Kathy Jacobs	USGCRP (OSTP)
Melissa Kenney	NOAA and UMD
Ken Kunkel	CICS-NC/NOAA/NCDC
Jordan McCammon	USGCRP
Fred Lipschultz	USGCRP (NASA)
Glynis Lough	USGCRP
Kandis Wyatt	NOAA

Other attendees

Name	Affiliation
Ann Goodman	Telesys Advisory
Jamie Herring	Habitat Seven
Allison Leidner	National Aeronautics and Space Administration
Lynn Scarlett	Resources for the Future
Bob Simon	OSTP
Lucia Tsaoussi	National Aeronautics and Space Administration
Joe Witte	National Aeronautics and Space Administration