

**NATIONAL CLIMATE ASSESSMENT AND DEVELOPMENT ADVISORY COMMITTEE
MEETING MINUTES**

THURSDAY, FEBRUARY 20TH – FRIDAY, FEBRUARY 21ST, 2014

IN-PERSON MEETING AT FOUR POINTS BY SHERATON, WASHINGTON DC DOWNTOWN

DAY 1: THURSDAY, 20 FEBRUARY 2014

WELCOME, INTRODUCTIONS, AND APPROVAL OF AGENDA; REVIEW OF MINUTES FROM PREVIOUS MEETING; ATTENDANCE AND CONFIRMATION OF QUORUM

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

Dr. Cynthia Decker, NOAA, NCADAC Designated Federal Official

Attendance was taken and the presence of a quorum was confirmed. Jerry Melillo welcomed the NCADAC members and opened the meeting. Dr. Melillo introduced Fabien Laurier to the group as the new Director of the Third National Climate Assessment (NCA). The minutes from the November 18th, 2013 NCADAC teleconference are pending completion and were not brought for review.

Cynthia Decker reminded NCADAC members that their 3-year terms, which began in April 2011, were scheduled to expire in April 2014. She stated that NCADAC members would receive letters extending the length of their membership until the end of the NCADAC charter, which is the sooner of June 2015 or 90 days after the release of the Third National Climate Assessment (NCA3) Report.

Decision

There were no objections to the meeting agenda.

Decision

Dr. Melillo requested and received approval for NCA staff, specifically Dr. Fabien Laurier, Dr. Glynis Lough, Ms. Susan Hassol, and Dr. David Easterling, to participate freely in the discussions as needed.

STATUS OF THIRD NCA REPORT, HIGHLIGHTS DOCUMENT, AND DERIVATIVES

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

Dr. Glynis Lough, U.S. Global Change Research Program, NCA Chief of Staff

Jerry Melillo stated the NCA3 Report Draft has been in the Legislative Referral Memorandum (LRM) process to move toward adoption as a government report. Glynis Lough reviewed the specifics of the LRM process, which is led by the White House Office of Management and Budget (OMB). The NCA3 Report Draft was submitted from NCADAC to the National Oceanic and Atmospheric Administration (NOAA). NOAA confirmed that the draft met the requirements of the Information Quality Act (IQA) and transmitted the draft to OMB. To complete the LRM, OMB sent the draft to policy staff at agencies across the federal government, including all of the thirteen U.S. Global Change Research Program (USGCRP) agencies and others. A list of agency staff members who had previously reviewed the document accompanied the draft. Agencies submitted comments to the NCA office, and the NCA Director and staff worked with agency representatives to clarify their comments and concerns. The

FINAL

NCADAC Executive Secretariat (NCADAC ES) reviewed the comments and provided feedback about proposed changes. NCA staff then discussed proposed changes with the Convening Lead Authors (CLAs) to reach agreement on changes. The NCADAC ES met on February 19th to discuss several critical comments still to be resolved. The CLAs will share final versions of the revised chapters with their Lead Authors (LAs) to make sure there are no objections to any of the revisions.

The NCA3 Highlights document will be wholly derivative from the full NCA3 Report. The Highlights document is organized around the NCA3 Report overview, the 12 report findings, response strategies, regions, research needs, sustained assessment, and concluding thoughts. It will be about 100 pages total with 30 pages of references. A separate “traceability” document will identify the location in the full Report of each piece of text in the Highlights. The sections have been reviewed by the corresponding CLAs, and there were three webinar opportunities for NCADAC members to provide input about the Highlights document. In some cases, comments that resulted in changes to the Highlights also indicated necessary changes to the corresponding text in the full NCA3 Report for consistency. Chapter CLAs were consulted on all changes.

The Highlights will be reviewed through the LRM process as a separate document, but the purpose of the review will be only to verify that the Highlights is entirely derivative of the NCA3 Report. The NCADAC ES will finalize the Highlights document during the first week of March. The NOAA IQA review of the Highlights document will be concurrent with its LRM review. Any necessary revisions will be made, in consultation with the NCADAC ES and CLAs, and the Highlights document will be finalized in mid-March. The Government Printing Office (GPO) then will need 6-7 weeks to print the Highlights document. There are also discussions about having additional derivative products including a shorter summary on the order of 30 pages and two-page handouts for some regions and sectors. These smaller products would also be government products, but would not need LRM review because they will be identical to portions of the approved Highlights.

Discussion

There was a request that the authors and NCADAC members continue to assist the NCA Technical Support Unit (TSU) and USGCRP Global Change Information System (GCIS) staff in ensuring that metadata records are complete for the figures in the NCA3. The TSU will continue to gather metadata after the NCA3 Report is released, and agency Ex-Officio NCADAC members, in particular, can help get metadata for figures that use their agency’s data sources.

OVERVIEW OF THE EXECUTIVE SECRETARIAT’S RECOMMENDATIONS AND GUIDANCE FOR THE GOVERNMENT REVIEW DRAFT AND HIGHLIGHTS DOCUMENT IN RESPONSE TO THE AGENCY REVIEW

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

The NCADAC ES noted that several chapters received more comments and questions through the LRM process, especially Mitigation and Health. The types of comments received can be separated into four categories: 1) science, facts, and updated information; 2) appearance of policy prescription; 3) appearance of funding implications; and 4) clarity of language. The NCADAC ES meeting to review the comments resulted in suggested changes that will be cleared with the CLAs and will be available for the rest of the NCADAC to review in about one week. All final changes will be reviewed with agency commenters as needed.

The Mitigation chapter issues were primarily about ensuring language was not prescriptive. The Health chapter comments identified new references and areas for more detailed review. NCA staff worked with the commenters and the authors to reach an agreement, and the CLAs and LAs have signed off on changes. Food security issues discussed in the Agriculture and Health chapters brought concern from NCADAC ES members that food security was too narrowly defined in the report in terms of crop productivity and not connected to other aspects of the topic. The authors are currently working to resolve these concerns. Other issues that are being addressed included confirming consistency across chapters in the numbers cited for the proportion of CO2 emissions created by the United States, making sure chapter changes are reflected in the Highlights, and ensuring language is not prescriptive. The full NCADAC will be asked to approve the document by consensus at a future date, expected in late April.

In previous drafts, the Letter to the American People included at the front of the draft was written and signed by the NCADAC Chairs. Because the NCA3 will be adopted by the government and released as a government document, including signatures from the Chairs is not consistent with their role on the final Report. The discussion document “Time and Responsibility Schedule for Third NCA Report” described several options for including the content of the Letter in the final NCA3 report.

Discussion

Several members were concerned about the relative lack of transparency in the LRM process compared to that of the overall NCA process. The LRM process is a formal approval process with a defined set of procedures and instructions to the agencies. To ensure final transparency of the NCA process, all the public comments (with names of commenters) and the responses to each of the comments will be made public. Furthermore, all versions of the document will remain or be made public, including the Government Review Draft, for comparison after the release of the final NCA3 Report. The agencies will also have access to the responses to their LRM comments and final versions of the chapters to compare with the Government Review Draft.

The NCADAC Chairs agreed to pursue options for the use of the contents of the Letter to the American people in the final document. One option discussed was to have a short, signed transmittal letter to the government along with an unsigned preface in the report. The unsigned preface could possibly also be used as the basis for NCADAC member op-eds.

There was discussion and then agreement about proposed changes to the timeline. Amendments were made to extend the period for CLA and LA opportunity for final review for the Third NCA Report by one week. To accommodate that change, adjustments were made to the end of the LRM comment period for the Highlights document and the time for the NCADAC ES to provide advice on responses to comments on the final Highlights document.

REQUEST FOR THE EXECUTIVE SECRETARIAT TO CONTINUE TO MANAGE AND COORDINATE THE REVISIONS TO THE FINAL NCA3 AND HIGHLIGHTS DOCUMENTS

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

Ms. T.C. Richmond brought to the committee the decisions on the timeline and revisions for the full report.

FINAL

Decision 1

The NCADAC authorizes the Executive Secretariat to continue to manage and coordinate advice to the government on revisions of the Government Review Draft and Highlights Documents, and to keep the NCADAC apprised of progress on and major changes to the documents. The NCA3 and Highlights documents will be brought to the NCADAC for final approval.

Decision 2

The NCADAC approves the NCA revised timeline dated 20 February 2014 and authorizes the Executive Secretariat to continue to manage and coordinate amendments to the NCA Report Timeline as needed. Updates on revisions will be provided to the NCADAC.

REVIEW AND DISCUSSION OF WEB VERSION MOCKUP OF THE NCA3 AS PART OF THE NEW GLOBALCHANGE.GOV WEBSITE

*Dr. David Easterling, NOAA National Climatic Data Center, NCA Technical Support Unit Director
Dr. Glynis Lough, U.S. Global Change Research Program, NCA Chief of Staff*

Glynis Lough described the globalchange.gov redesign and Global Change Information System (GCIS). The globalchange.gov redesign for USGCRP will be launched at the same time as the NCA3 rollout. GCIS is initially focused on documenting information in the NCA3 report in order to demonstrate the system's value and potential. The redesign for the NCA3 web presence will provide quick access to the report and the underlying information.

David Easterling provided an overview of NCA data documentation. Dr. Easterling emphasized that traceability and reproducibility of data are high priorities both for text and for graphics.

Jamie Herring demonstrated the NCA3 web pages that were in development. The design will be similar enough to the globalchange.gov redesign that it will feel cohesive, but different enough to clearly be associated with the NCA3. The site design is focused on "mobile first" and scalable among phones, tablets, laptops, and desktop computers. Social media will be a large part of the overall outreach strategy and heavily integrated into the site design. The site is built for a range of users with the goal of engaging a variety of communities.

Discussion

It was suggested that NCADAC members assist Dr. Easterling and the NCA Technical Support Unit in collecting metadata from the author teams since responses to requests have been mixed. There were requests for social media training and for access to web links as early as possible before launch so contributors can use links in materials they are preparing for launch.

INDICATORS UPDATE: PROCESS REVIEW, PROPOSED SET OF PILOT INDICATORS, PATH FORWARD

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

Tony Janetos gave a presentation about the latest updates from the NCADAC Indicators Working Group. The Indicators team has briefed the full NCADAC and SGR Principals in a series of webinars, totaling 150 attendees. The NCADAC was scheduled to decide whether to adopt the indicators report on day 2.

FINAL

If approved, the report will be submitted to the government, through NOAA, and USGCRP will consider implementation of the report's recommendations. The next three phases would then proceed with the launch of the pilot system several months after the NCA3 rollout, then the launch of the full indicators system one year after the pilot, and finally the ongoing evaluation of the system and modification of specific indicators. There are currently +150 social, physical, and natural scientists serving on the indicators technical teams, which produced documentation about the data and analysis methods used in each of the selected indicators. There are indicators for a variety of decision contexts, sectors, systems, and scales, and they have been scientifically vetted. The governance will evolve as the development of the system progresses.

Discussion

There are still opportunities for input about specific indicators and contributions by communities that have not been involved so far. In the set of pilot indicators recommended in the report, the team has attempted to capture indicators that would be flexible to different scales and of interest for a variety of users. Appreciation was expressed for the phased approach towards the launch of the full system, which can help manage budgetary constraints. It was also noted that there is broad support for the indicators effort within USGCRP.

USGCRP EVALUATION WORKSHOP: DISCUSSION OF POSSIBLE OBJECTIVES FOR EVALUATION OF NCA3

Dr. Glynis Lough, U.S. Global Change Research Program, NCA Chief of Staff

Ms. Emily Cloyd, U.S. Global Change Research Program, NCA Engagement Coordinator

Emily Cloyd delivered a presentation that defined evaluation, identified a logic model and performance measures for evaluating the NCA, explained the reasoning and timing for evaluation, and outlined previous evaluation of USGCRP assessments, the upcoming evaluation workshop, and potential discussion questions for getting evaluation feedback from the NCADAC. Program evaluation can improve understanding of the NCA program, process, outcomes, impact, and cost-effectiveness. The goal of evaluation planning is to identify questions and metrics that are meaningful, credible, and practical.

The focus of the discussion at the NCADAC meeting was the questions that NCADAC members would be interested in learning from an evaluation of the NCA3. The NCADAC members were asked to consider the following questions and provide additional suggestions for questions that could be asked in a future evaluation. Example questions: What questions most interest NCADAC members about science in the assessment? What questions could be asked of NCADAC members in order to better evaluate the NCA? What questions are of most interest about the process of assessment? Are there any suggestions for broadening participation and contributions to the NCA? What questions most interest you about stakeholder engagement? What questions most interest you about decisions supported by assessment?

Discussion

NCADAC members suggested a number of potential evaluation questions in response to the questions from Dr. Lough and Ms. Cloyd. These suggestions were documented for future use.

DISCUSSION OF SUSTAINED ASSESSMENT PROCESS IMPLEMENTATION BY USGCRP

Dr. Tammy Dickinson, White House OSTP, Principal Assistant Director for Environment & Energy

Tammy Dickinson emphasized the White House and OSTP's strong interest in the NCA3 Report and its role the focal point for the first phase of the Global Change Information System. Dr. Dickinson expressed appreciation for the NCADAC's Sustained Assessment Special Report (SASR). The government has seriously considered the SASR and has held ongoing interagency discussions about each of its recommendations. There is a broad appreciation for the ties between a sustained assessment process and the broader goals of USGCRP. OSTP is considering options for how the SASR recommendations might be implemented, and Dr. Dickinson is confident there will be strong support for implementing a general approach that is consistent with the SASR, the Global Change Research Act, and the USGCRP Strategic Plan.

Discussion

Through a number of pre-decisional interagency discussions, OSTP and USGCRP are developing sustained assessment options for Dr. Holdren. While there is great focus on finalizing the NCA3 Report, there are also considerations about broader sustained assessment topics including partnerships, evaluation, and the potential next iteration of a Federal Advisory Committee.

PUBLIC COMMENT PERIOD

Dr. Cynthia Decker, NOAA, NCADAC Designated Federal Official

Dr. Kandis Wyatt, NOAA NESDIS, NCADAC 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.

SUMMARY OF DAY AND ASSIGNMENTS FOR THE EVENING

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

Jerry Melillo noted that the day included important discussions and exchanges of information in addition to two decisions made by NCADAC. There were no assignments for the evening.

DAY 2: FRIDAY, 21 FEBRUARY 2014

ATTENDANCE FOR CONFIRMATION OF QUORUM

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

Attendance was taken and a quorum was confirmed.

REVIEW OF PREVIOUS DAY AND DECISIONS TO BE TAKEN

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

The first day of the NCADAC meeting included discussions about the LRM process for the Government Review Draft and the NCA3 Highlights document, the preference for retaining the content of the Letter to the American People, the decision to authorize the NCADAC ES to manage and coordinate advice to the government on the report and Highlights, and the decision to adopt the revised NCA3 Report timeline and delegate authority to the NCADAC ES to make further changes as required. There were also informational sessions about the web page development, the NCADAC Indicators Working Group and report, and the NCA engagement process and methodology workshop. Tammy Dickinson also spoke about OSTP's support for the sustained assessment process.

ENGAGEMENT AND COMMUNICATIONS UPDATE AND LAUNCH PLANS

Dr. Susanne Moser, Susanne Moser Research & Consulting and NCADAC Executive Secretariat Member
Ms. Emily Cloyd, U.S. Global Change Research Program, NCA Engagement Coordinator
Dr. Ed Maibach, George Mason University, NCADAC member

Susanne Moser and Emily Cloyd presented an update about NCA engagement and communications activities and an overview of NCA3 launch plans. The USGCRP office will coordinate the various entities involved in outreach in a three-phase strategy: building anticipation, conducting the release and media rollout, and extended outreach to regions, sectors, stakeholders, and decision makers.

The first phase of building anticipation for the release of NCA3 includes trainings for NCA contributors, NCA participation in various meetings and webinars, and outreach to journalists. NCA staff also held process and methodology workshop on engagement for NCAnet partners and NCA authors to begin planning specific activities for the NCA3 rollout.

The release will primarily be the White House-led release of the full NCA3 Report after the NCADAC approves the document, expected in late April. The NCA3 will be a government report released by the White House. Attention for the release will be generated by White House involvement, participation from recognizable and credible speakers from a variety of communities, and availability of derivative products for places and sectors. Key products for the rollout will include the NCA3 full report (PDF & HTML), the Highlights document (print, PDF, & HTML), derivative products like the overview and topical fact sheets, and globalchange.gov with its NCA portal and GCIS. There will be additional supporting materials including a press release; presentation materials; guidance for NCADAC members, authors, and NCAnet partners; social media support; and video introductions. Other outreach in this phase will include

FINAL

national and regional press events, Congressional briefings, briefings for other key decision-makers, and stakeholder-led calls.

The extended outreach phase will include regional and topical webinars, targeted local in-person events, professional development, and continued development of contributions to and participants in the NCA process. There will also be ongoing tracking of media coverage, events, and utilization of the NCA3 web presence, as well as learning through a robust evaluation process.

Ed Maibach presented findings from a survey about public knowledge concerning the NCA. The questions about the NCA included: Have you heard of it? Have you read any of it? How relevant is it to you? How useful did you find it? A surprisingly high percentage of respondents (~11%) were aware of the NCA; however, this may be because respondents confused the NCA with other reports about climate change. Dr. Maibach encouraged NCADAC members to ask their communities of practice similar questions about whether they are aware of the NCA. Dr. Maibach noted that while 97% of climate scientists believe human-caused climate change is real, only 15% of the American public would estimate that number to be between 80-100%. Therefore, there is a significant role for the NCA3 Report to contribute to public knowledge about climate change.

Discussion

NCADAC members expressed interest in advice on best practices for “messaging” about climate change and sources for statistics from studies described by Dr. Maibach. NCADAC members were encouraged to participate in outreach trainings that can provide these kind of resources.

GUIDANCE FOR OUTREACH EFFORTS

Dr. Cynthia Decker, National Oceanic and Atmospheric Administration, Designated Federal Official
Ms. Emily Cloyd, U.S. Global Change Research Program, NCA Engagement Coordinator

Emily Cloyd reviewed the NCA guidance for outreach. Members of the NCADAC are encouraged to speak in public meetings as appropriate after the government launch of the Third NCA report, but should refer to the guidance to ensure that their role is clear. There will be a series of webinars available for NCADAC members to discuss public engagement activities and guidance. A set of NCA3 presentation materials will be made available to NCADAC members around the time of the final NCA3 Report release. NCADAC members are encouraged to send any media coverage about the NCA to Emily Cloyd. NCADAC members are also requested to notify Emily Cloyd and Glynis Lough about any requests received to talk about the NCA at events or to the media.

Discussion

Several NCADAC members were pursuing the possibility of providing media training opportunities for CLAs and other interested NCA3 Report contributors. NCA staff agreed to add add reminders about guidance for outreach efforts to the weekly NCADAC email updates. There were no specific plans for an international rollout aside from international participation at professional society meetings like AGU, though the USGCRP office includes IPCC staff who coordinate closely with NCA staff.

RECOMMENDATION FOR DEVELOPMENT OF AN INDICATORS SYSTEM AND SELECTION OF PROPOSED PILOT INDICATORS

Dr. Gary Yohe, Wesleyan University, NCADAC Vice-Chair

Dr. Gary Yohe brought before the committee the decision on the Indicators Working Group report, as discussed on the first day of the meeting.

Decision

The NCADAC approved by consensus the recommendation that the U.S. Global Change Research Program develop and implement a system of indicators to provide decision-relevant information on climate changes and physical, natural, and social impacts, vulnerabilities, and preparedness, and to contribute to a sustained assessment process. NCADAC adopted the proposal developed by the Indicator Work Group, dated February 18, 2014, which included recommendations for the implementation of a pilot set of indicators as the first step towards a sustained indicator system.

DISCUSSION AND CONCEPTUAL APPROVAL OF DERIVATIVE DOCUMENT LAYOUT

Dr. Gary Yohe, Wesleyan University, NCADAC Vice-Chair

Dr. Gary Yohe brought before the committee the decision on the conceptual approval of the layout for the derivative Highlights document.

Decision

The NCADAC approved by consensus the decision to authorize the Executive Secretariat to guide the development of derivative documents, such as 2-pagers and handouts, that will be completely derivative of the Highlights document.

CONCEPTUAL APPROVAL OF WEB FUNCTIONALITY FOR DELIVERY OF THE REPORT

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

Ms. T.C. Richmond brought before the committee the decision on web functionality, as demonstrated on the first day of the meeting.

Decision

The NCADAC approved by consensus the conceptual web functionality for the Third NCA Report and Highlights, and authorized the Chair and Vice-Chairs to work with USGCRP on implementation.

REVIEW OF MEETING DECISIONS AND OUTCOMES

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

Jerry Melillo reviewed the first day of the NCADAC meeting, which included a status update about the NCA3 Report, Highlights Document, and other derivative products; an overview of the NCADAC ES's recommendations and guidance for the Government Review Draft in response to the agency review; the decision to empower the NCADAC ES to continue to manage and coordinate the revisions to the final

FINAL

NCA3 and Highlights; a discussion of the web version of NCA3 and its link to the new globalchange.gov website; a review of the NCADAC Indicators Working Group's activities; a discussion of a USGCRP Evaluation Process and Methodologies Workshop; the comments made about the sustained assessment process by Dr. Tammy Dickinson of OSTP; a discussion about maintaining transparency in the NCA process; and the pursuit of options for including the content of the draft "Letter to the American People" in the NCA3 Report and Highlights.

Dr. Melillo also summarized the discussion of engagement, communications, and rollout plans for NCA3; the guidance for NCADAC outreach efforts; an affirmative decision to submit the Indicators report to the government, recommending the development of the indicator system concept and the selection of the proposed pilot indicators; the discussion and conceptual approval of derivative document layouts; and the conceptual approval of NCA3 web functionality and delegation to the NCADAC Chairs to track its development.

FAREWELL LUNCH AND COMMENTS

*Dr. Kathy Sullivan, Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator
Dr. John Holdren, Assistant to the President for Science and Technology, and Director of the White House Office of Science and Technology Policy (OSTP)*

Dr. Kathy Sullivan's remarks to the NCADAC described the need to transform scientific data into timely, actionable, and relevant information for decisions. Dr. Sullivan noted several NOAA activities related to decision support that are underway, including NOAA contributions to the NCA, and highlighted NOAA's interest in the next Assessment.

Dr. John Holdren's remarks to the NCADAC explained that the White House is taking advice from the Sustained Assessment Special Report very seriously. Dr. Holdren noted that special reports about climate impacts are already underway for water, food security, and human health. These efforts have not gone unnoticed by President Obama, and the President's Climate Action Plan in June 2013 emphasized the need for equal attention for adaptation, preparedness, and mitigation. Dr. Holdren thanked many individuals involved in the NCA and all the NCADAC members for their efforts, particularly noting their contributions to making the NCA relevant for decision-making.

PATH FORWARD

Dr. Jerry Melillo, Marine Biological Laboratory, NCADAC Chair

Jerry Melillo thanked the NCADAC and reminded members of the final review opportunity for NCA authors (CLAs and LAs) in the coming week. He also reminded NCADAC members that a final NCADAC teleconference will be scheduled, tentatively in late April, to consider the final NCA3 Report for consensus approval. Weekly email updates to the NCADAC from NCA staff will continue to include important information and updates for NCADAC members.

APPENDIX A: ATTENDEES

Non-Federal NCADAC Members in attendance

Name	Affiliation
Daniel Abbasi	GameChange Capital, LLC
E. Virginia Armbrust	University of Washington
T.M. Bull Bennett	Kiksapa Consulting
Rosina Bierbaum	PCAST, University of Michigan
James Buizer	University of Arizona
F. Stuart (Terry) Chapin	University of Alaska
Camille Coley	Florida Atlantic University
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
Arthur Lee	Chevron Corporation
Jo-Ann Leong	University of Hawaii
Rezaul Mahmood	Western Kentucky University
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
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
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	National Oceanic and Atmospheric Administration
Virginia Burkett	U.S. Department of the Interior
John Hall	Department of Defense
Patricia Jacobberger-Jellison	National Aeronautics and Space Administration
Thomas Karl	NOAA/Subcommittee on Global Change Research
Andrew Miller	Environmental Protection Agency
Robert O'Connor	National Science Foundation
Susan Ruffo	White House Council on Environmental Quality

USGCRP, NOAA, and NCA Staff in attendance

Name	Affiliation
Susan Aragon-Long	USGCRP (USGS)
Tom Armstrong	OSTP/USGCRP
Emily Cloyd	USGCRP
Cynthia Decker	NOAA
Dave Easterling	NOAA
Ilya Fischhoff	USGCRP
Dan Glick	CICS-NC/NOAA/NCDC
Bryce Golden-Chen	USGCRP
Susan Hassol	CICS-NC/NOAA/NCDC
Paula Hennon	CICS-NC/NOAA/NCDC
Melissa Kenney	NOAA/UMD/USGCRP
Ken Kunkel	CICS-NC/NOAA/NCDC
Fabien Laurier	OSTP/USGCRP
Ainsley Lloyd	USGCRP
Fred Lipschultz	USGCRP (NASA)
Glynis Lough	USGCRP
Andrea Maguire	USGCRP
Bobby Taylor	CICS-NC/NOAA/NCDC
Robert Wolfe	USGCRP (NASA)
Kandis Wyatt	NOAA

Other attendees

Name	Affiliation
Graham Blair	Habitat Seven
Leonard Crook	ICF International
Tammy Dickinson	White House Office of Science and Technology Policy
Lisa Fleisher	Johns Hopkins School of Public Health
Ann Goodman	Telesys
Jamie Herring	Habitat Seven
John Holdren	White House Office of Science and Technology Policy
John Laws	Department of Homeland Security
Anne Lippert	Department of Energy
Rick Piltz	Climate Science Watch
Rich Pouyat	US Forest Service
Amanda Rycerz	Habitat Seven
Bob Simon	White House Office of Science and Technology Policy
Kathy Sullivan	National Oceanic and Atmospheric Administration
Nick Sundt	World Wildlife Fund
Andrea Vittorio	Bloomberg BNA
Joe Witte	National Aeronautics and Space Administration