



UNITED STATES DEPARTMENT OF COMMERCE
The Under Secretary of Commerce
for Oceans and Atmosphere
Washington, D.C. 20230

JUL 15 2005

The Honorable Jim DeMint
340 Russell Senate Office Building
United States Senate
Washington, DC 20510

Dear Senator DeMint:

I am writing to follow up on the letter that I transmitted to you on June 16 regarding climate change assessments. In that letter, I stated that, "An updated schedule for all products is currently being developed by the Climate Change Science Program (CCSP) participating agencies, and will be provided to you in a separate communication no later than July 15, 2005."

Because a revised schedule and scope of the products involves the commitment of all CCSP agencies, it is more appropriate to have that information come from the program itself. Please see the enclosed letter from Dr. James Mahoney, Assistant Secretary of Commerce for Oceans and Atmosphere and the Director of CCSP, who can speak on behalf of all participating agencies to address the updated schedule. Dr. Mahoney's letter is being circulated to other interested committees as well.

Please feel free to contact me if you have any specific questions regarding our response.

Sincerely,

Conrad C. Lautenbacher, Jr.,
Vice Admiral, U.S. Navy (Ret.)
Under Secretary of Commerce for Oceans
and Atmosphere

Enclosure

cc: Senator John McCain, United States Senate





JUL 15 2005

The Honorable Jim DeMint
340 Russell Senate Office Building
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Washington, DC 20510

Dear Senator DeMint:

I am writing to provide an updated schedule and scope of the Climate Change Science Program (CCSP) Synthesis and Assessment products, which reflects the strategy to comply with Section 106 of the 1990 Global Change Research Act (GCRA).

Background

The President established the U.S. Climate Change Science Program in 2002 as part of a new cabinet-level management structure to oversee public investments in climate change science and technology. The new management structure also includes the Climate Change Technology Program, which is responsible for accelerating climate-related technology research and development. The CCSP incorporates the U.S. Global Change Research Program, established by the GCRA, and the Climate Change Research Initiative, established by the President in 2001. CCSP coordinates and integrates scientific research on global change and climate change sponsored by 13 participating departments and agencies of the U.S. Government.

CCSP is a comprehensive interagency research program charged with investigating natural and human-induced changes in the Earth's global environmental system; monitoring important climate parameters; predicting global change; and providing a sound scientific basis for national and international decisionmaking. A central tenet of CCSP has been a focus on improving key elements of climate science to provide a basis for improved climate assessments.

In July 2003, the Administration released the *Strategic Plan for the U.S. Climate Change Science Program*. The Strategic Plan responds to the President's direction that climate change research activities be accelerated to provide the best scientific information to support public discussion and decisionmaking on climate-related issues. The plan also responds to Section 104 of the GCRA, which mandates the development and periodic updating of a long-term national global change research plan coordinated through the National Science and Technology Council. This was the first comprehensive update of a strategic plan for U.S. global change and climate change research in 14 years. The Strategic Plan is considered a living document as we anticipated that adjustments would be needed as the science evolved and priorities changed over time.

The Strategic Plan identified 21 Synthesis and Assessment (S&A) Products to be produced over a four-year time frame (2004-2007).

THE DEPUTY ADMINISTRATOR



Formal Recommendations Received on the Synthesis and Assessment Products

National Academies' National Research Council (NRC)

In February 2004, the NRC review committee issued a public report, *Implementing Climate and Global Change Research: A Review of the Final U.S. Climate Change Science Program Strategic Plan*, expressing the committee's conclusions on the content, objectivity, quality, and comprehensiveness of the updated Strategic Plan, on the process used to produce it, and on the proposed process for developing subsequent findings to be reported by the CCSP.

Recommendation NRC-1: The synthesis and assessment products should be chosen to explicitly address the range of needs for decision makers and program management, as well as the broad scope specified in the Global Change Research Act.

CCSP Response: CCSP adopted a strong emphasis on advancing our understanding of climate science as the basis for improved decision support information. CCSP has carefully analyzed the relationship between the synthesis and assessment products and the requirement of the Act. The scope of the products, in some cases revised to be more responsive to the Act, is described in Table 1 below.

Recommendation NRC-2: The CCSP should ensure the credibility of synthesis and assessment products by producing them with independent oversight and review from the wider scientific and stakeholder communities throughout the process.

CCSP Response: CCSP has adopted a wide ranging scientific peer review and stakeholder review process to ensure transparency, inclusiveness, and utility of the reported information. CCSP agencies will also follow the OMB Guidance on the Information Quality Act and Peer Review.

Recommendation NRC-3: The CCSP should ensure that the synthesis and assessment products are produced without unduly affecting the ability to conduct research and in coordination with the Intergovernmental Panel on Climate Change (IPCC) assessment.

CCSP Response: CCSP is managing the Synthesis and Assessment Product process with careful consideration of needs for the climate specialists to continue to lead their underlying research and, in many cases, to participate in the IPCC Fourth Assessment process.

Government Accountability Office (GAO)

In April 2005, the GAO issued a report, *Climate Change Assessment: Administration Did Not Meet Reporting Deadline*, making recommendations on the CCSP Products.

Recommendation GAO-1: Develop plans to prepare the next assessment within the prescribed time frame, or if 4 years are insufficient to complete the assessment, recommend to the CCSP interagency Committee that CCSP request an extension from the Congress.

CCSP Response: CCSP plans to complete the S&A products necessary to comply with Section 106 of the GCRA by the end of 2007. Production of some of the CCSP Products, not required by Section 106, will be extended into 2008. (See Table 1.) CCSP requests that the Congress recognize 2007 as the required completion date for those products required by Section 106. CCSP also requests that the Congress consider establishing a longer cycle for future assessments, to be prepared under the provisions of the GCRA, that reflects the increasing complexity of climate science and related information. This consideration is used by the IPCC, which has adopted a seven-year cycle for its Fourth Assessment Report.

Recommendation GAO-2: Develop a specific plan to address all eight of the assessment areas.

CCSP Response: CCSP plans to modify the current list of 21 Synthesis and Assessment Products to incorporate coverage of all assessment areas. Recognizing the multiple demands on the climate science community responsible for preparing these products, CCSP will delay until 2008 some of the products not required by the GCRA. (See Table 1.) The eight assessment areas listed under Section 106 of the GCRA will be addressed in the following synthesis and assessment products:

- A. The natural environment: 4.3, 4.4
- B. Agriculture: 4.3
- C. Energy production and use: 2.1, 4.5
- D. Land and water resources: 4.3
- E. Transportation: 4.7
- F. Human health and welfare: 4.6
- G. Human social systems: 4.6
- H. Biological diversity: 4.3

Recommendation GAO-3: Recommend to the CCSP interagency Committee that a summary report be prepared to integrate the findings of the 21 or more individual reports.

CCSP Response: CCSP will incorporate a summary of findings of all completed Products required by GCRA in our annual *Our Changing Planet* reports to Congress, starting in 2006.

Revised Schedule and Scope of the CCSP Synthesis and Assessment Products

Table 1 outlines the revised schedule and scope of the 21 Synthesis and Assessment Products.

**Table 1. Revised Schedule and Scope
of CCSP Synthesis and Assessment Products
July 15, 2005**

	Description	Agency Lead	Scheduled Completion* and Scope Revisions, where noted
GOAL 1	<i>Improve knowledge of the Earth's past and present climate and environment, including its natural variability, and improve understanding of the causes of observed variability and changes</i>		
Product 1.1	Temperature trends in the lower atmosphere—steps for understanding and reconciling differences.	NOAA	1 st quarter 2006
Product 1.2	Past climate variability and change in the Arctic and at high latitudes.	USGS	2 nd quarter 2008
Product 1.3	Reanalyses of historical climate data for key atmospheric features. Implications for attribution of causes of observed change.	NOAA	2 nd quarter 2008
GOAL 2	<i>Improve quantification of the forces bringing about changes in the Earth's climate and related systems</i>		
Product 2.1	Updating scenarios of greenhouse gas emissions and concentrations, in collaboration with the CCTP. Review of integrated scenario development and application.	DOE	4 th quarter 2006
Product 2.2	North American carbon budget and implications for the global carbon cycle.	NOAA	1 st quarter 2007
Product 2.3	Aerosol properties and their impacts on climate.	NASA	3 rd quarter 2007
Product 2.4	Trends in emissions of ozone-depleting substances, ozone layer recovery, and implications for ultraviolet radiation exposure and climate change.	NOAA	2 nd quarter 2008
GOAL 3	<i>Reduce uncertainty in projections of how the Earth's climate and related systems may change in the future</i>		
Product 3.1	Climate models and their uses and limitations, including sensitivity, feedbacks, and uncertainty analysis.	DOE	2 nd quarter 2007
Product 3.2	Climate projections for research and assessment based on emissions scenarios developed through CCTP.	NOAA	3 rd quarter 2007
Product 3.3	Climate extremes including documentation of current extremes.	NOAA	2 nd quarter 2008

Product 3.4	Risks of abrupt changes in global climate.	USGS	2 nd quarter 2008 (We will update the 2002 NRC Report.)
GOAL 4	<i>Understand the sensitivity and adaptability of different natural and managed ecosystems and human systems to climate and related global changes</i>		
Product 4.1	Coastal elevation and sensitivity to sea-level rise.	EPA	3 rd quarter 2007
Product 4.2	State-of-knowledge of thresholds of change that could lead to discontinuities (sudden changes) in some ecosystems and climate-sensitive resources.	USGS	4 th quarter 2007
Product 4.3	Analyses of the effects of global change on agriculture, biodiversity, land, and water resources.	USDA	4 th quarter 2007 (Re-scoped to include biodiversity, land, and water resources.)
Product 4.4	Preliminary review of adaptation options for climate sensitive ecosystems and resources.	EPA	4 th quarter 2007
Product 4.5	Analyses of the effects of global change on energy production and use.	DOE	2 nd quarter 2007 (Re-scoped to focus on energy systems.)
Product 4.6	Analyses of the effects of global change on human health and welfare and human systems.	EPA	4 th quarter 2007 (Re-scoped to focus on human health and welfare.)
Product 4.7	Within the transportation sector, a summary of climate change and variability sensitivities, potential impacts, and response options.	DOT	4 th quarter 2007 (Re-scoped to add an overview of the state of knowledge review for potential impacts on national transportation systems.)
GOAL 5	<i>Explore the uses and identify the limits of evolving knowledge to manage risks and opportunities related to climate variability and change</i>		
Product 5.1	Uses and limitations of observations, data, forecasts, and other projections in decision support for selected sectors and regions.	NASA	4 th quarter 2006
Product 5.2	Best-practice approaches to characterize, communicate, and incorporate scientific uncertainty in decisionmaking.	TBD	3 rd quarter 2006
Product 5.3	Decision support experiments and evaluations using seasonal to interannual forecasts and observational data.	NOAA	4 th quarter 2007

** The scheduled completion dates noted in Table 1 can only be met if the administrative challenges described in the "Lessons Learned" section below are resolved.*

Lessons Learned During the Development of the Synthesis and Assessment Products

Establishing the process for preparing the CCSP's synthesis and assessment products has taken longer than anticipated because of the need to harmonize the CCSP process with both new and established legal requirements for producing government-disseminated documents. This has caused time delays in the production schedule for the products and have increased the complexity of the tasks initially envisioned under the plan. Key factors include:

OMB Information Quality Act Requirements: The CCSP product development activities became one of the first examples of large-scale, multi-agency sponsored scientific surveys to be prepared under the 2002 Information Quality Act (IQA). Substantial time was expended in the development of the *Guidelines for Producing the CCSP Synthesis and Assessment Products* in a form that recognized the need to create a workable interaction between the requirements for scientific peer review, public stakeholder review and government agency review with a methodology that would assure credibility among all users of the CCSP documents. After receiving public comments and repeated multi-agency legal review, the *Guidelines* for the preparation of the CCSP products were published in their current form in December 2004.

OMB Information Quality Bulletin for Peer Review: Under the Information Quality Act, OMB was required to develop scientific peer review guidelines (ultimately published in December 2004) for government-disseminated science-based documents. Each agency was also required to adopt or adapt the OMB guidelines for their own use. As a large multi-agency program, CCSP was required to conform to the agency-specific guidelines with a workable agreement among the CCSP agencies. After several reviews among the CCSP agency IQA specialists and OMB, an agreed approach to the preparation of multiple agency science documents was developed in early 2005.

Federal Advisory Committee Act Requirements: The CCSP product development process was constructed to be transparent and fully open to public comments consistent with the goals of the Federal Advisory Committee Act (FACA). In early 2005, CCSP sought and received the opinion of Counsel and the General Services Administration (GSA) that FACA-compliant committees would be needed for all CCSP assessment products that are prepared by expert groups that involved both governmental and non-governmental personnel. The process to establish the FACA committees is underway at those agencies whose product development process triggers the FACA requirement.

Each of these administrative steps described above has impacted the production schedule for the CCSP products. Once these issues have been addressed, we expect a more routine production in the upcoming period. If further changes to the revised plans are needed, we will communicate them to you directly.

The revised schedule and scope of the CCSP products reflected in this letter has been reviewed by the CCSP Interagency Committee¹. If there are any evolutionary changes to the revised plans, we will communicate them to you directly.

Other Important CCSP Actions

The GCRA was enacted in 1990, and both knowledge and information needs have evolved substantially since that time. In recognition of this fact, the CCSP Strategic Plan highlights three approaches to the application of scientific information to decision making: 1) scientific assessments; 2) resources to support adaptive management; and 3) comparative evaluation of policy options. These approaches, which are described in the CCSP Strategic Plan, provide a more comprehensive framework for decision support than was envisioned in the GCRA, which focused primarily on only the first of the three CCSP decision support approaches.

CCSP has several other ongoing activities that provide information to the public and the scientific and decisionmaking communities. The CCSP Office maintains a website – <http://www.climatescience.gov> – that includes CCSP’s recent activities and announcements, disseminations, current climate events, solicitations for reviews of climate documents, and archives of other relevant information. In addition, CCSP publishes an annual program document, *Our Changing Planet*, to update Congress on program goals, milestones, and budget information.

CCSP also has two new major activities to ensure continuing dialogue with the decisionmaking and scientific communities on our processes and assessment deliverables:

Climate Change Science Program Workshop: *Climate Science in Support of Decisionmaking*: CCSP will hold a public workshop on November 14-16, 2005 in Arlington, VA. The CCSP Workshop will address the capability of climate science to inform decisionmaking and will serve as a forum to address the progress and future plans regarding CCSP’s decision-support deliverables. The Workshop will provide an opportunity for scientists and user communities to discuss decisionmaker needs and future application of scientific information on climate variability and change, as well as discussion on expected outcomes of CCSP’s research and assessment activities that are necessary for sound resource management, adaptive planning and policy. More information on the workshop can be found at <http://www.climatescience.gov/workshop2005>.

Expanded CCSP/NRC Advisory Contract: CCSP has recently expanded its contract with the NRC to incorporate important new NRC advice to the program. The enhanced NRC advisory assignment involves three areas:

- 1) Overall NRC advice on the CCSP research program on a continuing basis over the next three years, involving a broad-based expert committee convened by the NRC;

¹ The CCSP Interagency Committee consists of senior representatives from each of the 13 CCSP agencies, the Council on Environmental Quality, the Office of Science and Technology Policy, and the Office of Management and Budget.

- 2) A comparative evaluation of relevant previous climate change assessments conducted around the world, to provide background information for the assessments being prepared by CCSP in compliance with the GCRA; and
- 3) Designated support from two existing committees of the NRC that are well positioned to support CCSP with expertise in areas central to CCSP's core responsibilities, the Climate Research Committee and the Committee on the Human Dimensions of Global Change.

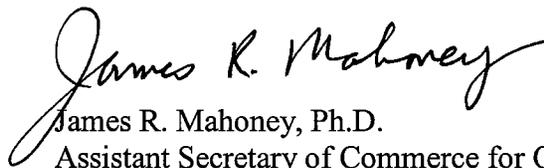
The Administration has endorsed the CCSP/NRC relationship to ensure that CCSP receives independent and credible scientific advice, as CCSP continues to implement its Strategic Plan.

Concluding Comments

CCSP is committed to producing climate science and assessment information, ensuring that the science is relevant and current, and disseminating this information in a way that is useful to the Congress, other decisionmakers, stakeholders, the media and the public. CCSP, together with the community of climate scientists producing the required assessment products, is accelerating its production as much as possible, but we will take care not to compromise the integrity of the science findings in pursuit of rapid production.

We look forward to further dialogue with you on these important issues and will be pleased to offer periodic consultations with Members and staff to provide updates on progress in preparing CCSP's Synthesis and Assessment Products and to review methods and needs for assessment.

Sincerely,



James R. Mahoney, Ph.D.
Assistant Secretary of Commerce for Oceans and
Atmosphere, and
Director of the U.S. Climate Change Science
Program

cc: Senator John McCain, United States Senate