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Toward a Second U.S. National Climate Change Assessment

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The Bush administration has a problematic relationship with climate science research and the U.S. Climate Change Science Program (CCSP), the program through which federal agencies coordinate support for research on climate and global change. The administration has acted to impede forthright communication of the state of climate science and its implications for society, particularly at the points at which key scientifically-based assessments of climate change touch on the arenas of policy-making and research planning.

The administration essentially has suppressed a major study, the National Assessment of Climate Change Impacts, which was produced by an independent team of scientists with the support of the federal research program [*National Assessment Synthesis Team*, 2000, 2001; Piltz 2005; Thacker, 2005a; Thacker 2005b] (<http://www.usgcrp.gov/usgcrp/nacc/>). In its place, the administration has substituted a set of 21 prospective synthesis reports on disparate topics, under a process in which drafts by lead authors will undergo final review at a political level prior to being published as government documents (described at <http://www.climate-science.gov>).

These prospective reports do not amount to an integrated effort to effectively inform society and policy-makers responsible for dealing with the climate change problem, as was called for in the Global Change Research Act of 1990. In addition, the convoluted bureaucratic process under which these reports are being developed has led to lengthy delays in even the early stages of designing and drafting them.

In contrast, the National Assessment was developed by a distinguished synthesis team and hundreds of other scientists. The project produced a set of national, regional, and sectoral reports that is the most comprehensive and authoritative scientifically-based assessment undertaken to date of the potential consequences of climate change for the United States. The reports looked at projected climate change resulting from human activities and identified a range of likely adverse consequences.

The assessment process was a pioneering experiment in stakeholder engagement and societal relevance [*Morgan et al.*, 2005]. Building appropriately on this work would have had a salutary influence on developing the “decision-support” component of the CCSP and surely would have led the program toward a different overall configuration of follow-up assessment priorities, including a focus on vulnerability, resilience, and analysis of proactive response strategies.

Yet the administration has disbanded the developing networks of scientists and stakeholders that were identifying key issues and producing the reports. Further, the administration has directed

federal climate science program executives to systematically refrain from any further substantive reference to or use of the National Assessment in public statements, reports to Congress, and research planning.

In its review of the CCSP Strategic Plan, the National Research Council (NRC) of the U.S. National Academies criticized the failure of the CCSP to incorporate and build on the National Assessment in its planning for decision support activities [*National Research Council, 2003*]. The NRC special committee review of the Strategic Plan said

The National Assessment's Overview and Foundation reports are important contributions to understanding the possible consequences of climate variability and change. The processes of stakeholder engagement and transparent review of the National Assessment reports were exemplary....The revised plan generally overlooks the insights and relationships that were developed by the National Assessment....This deficiency needs to be remedied quickly so that the program's decision support activities reflect what the scientific community now knows, what it can accomplish, and what users would like to know.... [pp. 13, 14]

The administration and the CCSP have offered no meaningful response to the NRC critique.

The administration has chosen to require that future CCSP synthesis reports go through a White House and political-level federal agency review, rather than follow a more straightforward path of accepting, as written, reports drafted by independent scientists. The guidelines for preparation, review, and approval of the synthesis reports are posted at <http://www.climate-science.gov/Library/sap/sap-guidelines.htm>. This approach undermines scientific independence, and it has led the CCSP into a tangle of bureaucratic and political problems that could and should have been avoided.

The guidelines for the development of future reports, including final editorial review and approval at a political level of the administration, do not ensure lead author control of final text. Critical review comments on the draft guidelines solicited a year ago are posted at <http://www.climate-science.gov/Library/sap/guidelines-comments/default.htm>. They include, for example, extensive and strongly worded critical comments from Susan Solomon at the U.S. National Oceanic and Atmospheric Administration, who also currently serves as co-chair of the Intergovernmental Panel on Climate Change Working Group I. Calling into question the credibility and integrity of the process for producing and reviewing CCSP synthesis reports, Solomon said

...[T]he authors must have independence in their work if the reports are to be credible. Agencies, CCSP principals, OSTP, or others should not have oversight, and they certainly should not have a right of final review. Many people can and should participate in providing written review comments, but any oversight mechanisms should involve only distinguished scientists.

The administration has failed to seriously address this criticism, and it remains to be seen how this political-level review process will play out.

The CCSP Strategic Plan announced that nine of the 21 prospective reports would be published by September 2005, but 29 months after the release of the Strategic Plan, only one of the 21 reports has even been released in draft form for public comment, let alone for final government review. Of the other 20, 19 do not yet even have an administration-approved report prospectus (<http://www.climate-science.gov/Library/sap/>). The whole enterprise has become bogged down.

Although a great effort may be expended over a period of years by a large number of scientific expert authors and reviewers to produce these reports, the process seems designed to, in effect, “run out the clock” on eight years of this administration and about \$16 billion in funding for research without even coming close to producing a coherent body of assessment work on anthropogenically-influenced climate change and its implications for national policy-making and planning.

A CCSP-sponsored workshop on decision support held in Arlington, Va., on 14–16 November did not focus on the core problem of anthropogenic climate change. The promise made by the administration in 2002 to move the federal climate change program into a phase that would include a “new period of comparative analysis of response strategies” [CCSP, 2002] appears to be one that will be unfulfilled.

The key issue that should be addressed is how to move U.S.-based climate change assessment beyond the administration’s failure to use the findings of the major existing assessments as an underpinning for policy-making and national preparedness. The administration should engage in honest discourse about observed and projected climate change and its implications for society and the environment.

The climate science community, as well as policy-makers and other users of assessments of climate change issues, should push to revitalize the National Assessment process and carry it forward into a new stage. There are many lessons to be learned from earlier work that can inform and improve a future effort [Morgan *et al.*, 2005].

A second U.S. National Climate Change Assessment should be undertaken, based on advances since the 1990s in understanding the climate system and potential ecological and societal impacts of climate change in the United States. The new National Assessment should be developed as part of a process that institutionalizes a national climate change impacts assessment capability, i.e., an ongoing dialogue between scientists, policy-makers, and other stakeholders, with periodically updated, scientifically-based assessments.

Further, as suggested by Morgan *et al.* [2005], the scope of the enterprise should be expanded to include, in an appropriate manner, the analysis of mitigation and adaptation response strategies. Finally, there must be a guarantee of scientific independence and lead author control in the production of climate change assessment reports that are commissioned by the federal government.

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