

News Center

[BPC in the News](#)
[Press Releases](#)
[Multimedia](#)
[Videos](#)
[Photos](#)
[Audio](#)

Blue Ribbon Task Force on Climate Remediation Releases Report Calling for Federal Geo-Engineering Research Program

Experts Caution Greenhouse Gas Mitigation and Adaptation Measures Must Take Priority; Recommend Full Evaluation of Long-Term Feasibility and Consequences; Too Little Time to Discuss Deployment at this Time

Oct. 4, 2011

Washington, DC – Leading experts on climate change science and technology comprising the Bipartisan Policy Center's (BPC) Task Force on Climate Remediation Research today released a report calling for a coordinated federal research program to explore the potential effectiveness, feasibility, and consequences of climate remediation technologies.

Media Contact:

Paul Bledsoe
(202) 204-2400
pbledsoe@bipartisanpo

[\[Read the full report here\]](#)

The group of 18 leaders from the natural science, social science, science policy, foreign national security, and environmental communities was convened by the BPC in early 2011. This is the first expert report to address what the federal government should do about research on climate remediation technologies.

The BPC Task Force report argues that managing risk is a central principle of effective policy, and emphasizes that climate remediation is no substitute for controlling risk through mitigation (i.e., reducing emissions of carbon dioxide and other greenhouse gases) and adaptation (i.e., enhancing the resilience of man-made and natural systems to climate change).

Furthermore, the report emphasizes that it is far too premature to contemplate deployment of climate remediation technology. However, the Task Force report finds that it is time for the federal government to undertake a climate remediation research program to understand the risks, costs, and effectiveness of these approaches.

"Most climate remediation concepts proposed to date involve some combination of high costs, and/or physical limitations that make them inappropriate to pursue except as co-occurring or emergency measures—for example, if the climate system reaches a "tipping point" where remedial action is required," the report notes. "The United States needs to be able to justify particular climate remediation techniques could offer a meaningful response to the risk of climate change. But even if it decides not to deploy any climate remediation technology, the U.S. should evaluate steps others might take and be able to effectively participate in—and lead—these international conversations that are likely to emerge around these issues and activities ahead."

"With that in mind, the Task Force believes the federal government should embark on a systematic program of research into climate remediation. The federal government is the only entity that has the incentive, responsibility, and capacity to run a broad, systematic, and effective research program. It can also play an important role in effectively establishing international research norms."

"This Task Force has not recommended deployment of climate remediation technology until far more research is needed to understand the potential impacts, risks, and costs associated with specific technologies. The purpose of this report, rather, is to describe how the Task Force believes the U.S. government should go about improving understanding of climate remediation technologies, how it should work with other countries to foster procedures for research based on that understanding."

- The physical risks of climate change are real and growing.
- The geopolitical and national security risks of deployment of climate remediation technologies by some other countries or actors are real.

As a result, the Task Force believes that the United States must have the knowledge required to:

1. Judge whether particular climate remediation techniques could offer a meaningful response to the risks of climate change; and
2. Evaluate steps other nations may be in a position to take, and lead the important international conversations that are likely to emerge around these issues in the years ahead.

The report notes that climate remediation proposals generally fall into two broad categories:

- *Carbon Dioxide Removal (CDR)*: CDR strategies aim to remove greenhouse gases from the atmosphere, thereby addressing the root causes of climate change.
- *Solar Radiation Management (SRM)*: SRM strategies aim to counteract or mask the effect of rising greenhouse gas concentrations in the atmosphere by increasing the amount of solar energy that is reflected back into space.

“...research into climate remediation is needed on multiple fronts, but is particularly focused on solar radiation management (SRM) options because of the potential, the risks, and the management difficulties this set of options presents,” the report states. “The Task Force notes that the risk profiles of carbon dioxide removal (CDR technologies) vary by technique, and that studies of some CDR approaches have been supported by the government for many years.”

- **The Task Force recommends that the federal government embark on a focused and systematic program of research on climate remediation.** The report argues that the federal government is the only entity that has the incentive, responsibility and capacity to run a broad, systematic and effective program, and that it can play an important role in effectively establishing international research norms. The report emphasizes the need for coordination, especially the need for the government to develop an overarching agenda and funding strategy as part of a coordinated research effort, rather than simply yoking together disparate programs and projects that emerge on an ad hoc basis.
- **Specifically, the Task Force recommends that a climate remediation research program be coordinated by the White House Office of Science and Technology Policy (OSTP).** The group finds that basing coordination in the White House can ensure that the larger goals of the program are maintained over the more narrow interests of particular agencies, and that the political support of the President is clearly established over the course of the initiative. Additionally, the report argues that coordination in the White House will help ensure that research is linked to other relevant government activities, such as international relations and environmental regulation. The Task Force states that any controversies over experimentation by the United States or by other countries could certainly require White House engagement, which would benefit from having been involved from the outset.
- **The Task Force suggests that some research into climate remediation, not to mention climate remediation efforts themselves, could pose risks and raise new ethical, legal and social issues of broad public concern.** For these reasons, the Task Force notes that some kinds of research will require more robust forms of oversight than usual, involving more diverse kinds of experts and more public involvement. Given these unique characteristics, the group recommends that **OSTP should be guided by a diverse advisory commission.** The Commission should report to the Director of OSTP, and be responsible for: (1) advising the government on how to set up an effective and adequately funded scientific program commensurate with the scale of the problem, and identify dimensions of the problem that are being overlooked; (2) identifying and recommending policies and practices that ensure effective scientific research is conducted in a manner consistent with the principles articulated in this report; (3) recommending criteria for federal agencies to use in deciding whether to approve field research based on the level of risk posed by the proposed activity. Such criteria could also become the basis for international norms; and (4) conducting public communication and engagement activities.

.....
international cooperation and consideration. Unilateral actions by one or more individual countries could have far-reaching consequences. A number of nations are moving forward with research programs. Early efforts by the U.S. to engage other major nations and launch an international dialogue on relevant policy issues are essential

- **The Task Force recommends that the U.S. promptly commence working with nations that have the requisite scientific, technological, and financial qualifications to establish common norms and expectations for climate remediation research. Such a process would facilitate future formal or informal agreements among participating nations on norms for considering the deployment of climate remediation technologies. The Task Force recommends, however, that, for the foreseeable future, as a practical matter, a less formal process would be considerably more productive than a formal multilateral discussion or negotiation of climate remediation.**

Initially constituted as a task force on “geoengineering,” the group determined that the term “geoengineering” was problematic, partly because is used in other disciplines to describe engineering applied to a geological problem or setting. The task force prefers the term “climate remediation,” which more accurately describes techniques intended to counteract the climate effects of past greenhouse gas emissions to the atmosphere, and does not assume anything about the efficacy, feasibility, or desirability of those techniques. The group is therefore called the “Bipartisan Policy Center’s Task Force on Climate Remediation Research.”

Dr. Jane C. S. Long, Task Force Co-Chair and Associate Director-at-Large at Lawrence Livermore National Laboratory, said “Society has thus far failed to reduce greenhouse gas emissions to stave off severe climate change—global emissions are actually accelerating, and climatic impacts are increasingly apparent. Reducing emissions must remain the fundamental aim of any approach to climate change. Some climate remediation ideas might offer temporary relief from devastating climate impacts, and others may help to remove the cause of climate change. The U.S. government needs to conduct important, focused research to determine if these proposals could be appropriate tools in a robust, equitable climate risk strategy.”

Stephen Rademaker, Task Force Co-Chair and Former U.S. Assistant Secretary of State, said “Some proposed climate remediation techniques, particularly solar radiation management, could be fast-acting, be deployed at very low cost, and have quite serious and uneven impacts—intended and unintended. The U.S. has the capacity to establish norms and facilitate international cooperation in this realm, as it has in other areas of scientific research of international concern. At this point, a number of nations have begun to conduct research in this space. A federal research program will help the U.S. government participate meaningfully in international dialogue about this important subject.”

“Our intent was to bring together leading experts from diverse disciplines to evaluate technical, diplomatic and practical aspects of climate remediation research,” said Jason S. Grumet, President of the Bipartisan Policy Center. “The report reflects a consensus view from experts in natural science, social science, science policy, foreign policy, national security, and the environment. We are deeply grateful for their efforts.”

Read the full report [here](#).

*Members of the BPC’s Task Force on Climate Remediation:**

Jane C. S. Long, Co-Chair

Associate Director-at-Large, Lawrence Livermore National Laboratory

Stephen Rademaker, Co-Chair

Principal, Podesta Group
 Former Assistant Secretary of State

James G. Anderson

Philip S. Weld Professor of Atmospheric Chemistry, Harvard University

President, National Council for Science and the Environment
Former Ambassador and chief U.S. negotiator for the 1987 Montreal Protocol

Ken Caldeira

Senior Scientist, Department of Global Ecology, Carnegie Institution, Stanford University

Joe Chaisson

Research and Technical Director, Clean Air Task Force

David Goldston

Director of Government Affairs, Natural Resources Defense Council
Former Chief of Staff, House Committee on Science

Steven Hamburg

Chief Scientist, Environmental Defense Fund

David Keith

Gordon McKay Professor of Applied Physics, School of Engineering and Applied Sciences (SEAS);
and Professor of Public Policy, Kennedy School of Government, Harvard University

Ron Lehman

Director, Center for Global Security Research, Lawrence Livermore National Laboratory

Frank Loy

Former Undersecretary of State for Global Affairs and Chief U.S. Climate Negotiator, 1998-2000

Granger Morgan

Lord Chair Professor in Engineering, Carnegie Mellon University

Daniel Sarewitz

Director, Consortium for Science, Policy and Outcomes, Arizona State University

Thomas Schelling

Distinguished University Professor Emeritus, University of Maryland

John Shepherd

Professorial Research Fellow in Earth System Science, School of Ocean & Earth Science, National
Oceanography Centre, University of Southampton

David G. Victor

Professor, School of International Relations and Pacific Studies, University of California, San Diego;
Director, Laboratory on International Law and Regulation

David Whelan, Ph.D., NAE

Boeing Defense, Space, and Security Chief Scientist and Vice President, Strategic Innovation,
Phantom Works Former Director of the Tactical Technology Office of the Defense Advanced
Research Projects Agency (DARPA)

David E. Winickoff

Associate Professor, Department of Environmental Science, Policy, and Management, University of
California, Berkeley

*Affiliations are provided for identification purposes only.

###

Task Force on Geoengineering, Energy Project, Energy Innovation Initiative

Bipartisan Policy Center 1225 Eye Street, NW Suite 1000 Washington, DC 20005 bipartisaninfo@bipartisanpolicy.org
(202)-204-2400 (main) (202)-637-9220 (fax) Copyright 2011 All rights reserved. [Privacy Policy](#)