

Testimony for the hearing on political interference with the work of government climate change scientists, Congressional Oversight and Government Reform Committee, Jan. 30, 2007, U. S. House of Representatives

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Good morning. I thank the committee for the opportunity to testify on the present state of climate science and on my experiences with political interference in the communication of climate science by government researchers. I have been a researcher at NASA's Goddard Institute for Space Studies since 1995, and a lecturer at Columbia University for 10 years. This is relevant to my expertise, but today I am presenting testimony as an individual. My participation is not connected to my job duties as a NASA scientist.

Scientists provide information to policy makers and the public on issues affecting society. Climate change is such an issue, and one for which it is especially critical that decisions be made using the best available scientific information as the potential costs to society of action, or of inaction, are large. The Earth as a whole is unquestionably warming, and virtually all climate scientists believe that the evidence regarding a human role in this warming is clear and compelling. Multiple lines of evidence based on measurements, theory, and computer modeling support these conclusions. Observations of the oceans, glaciers and ice sheets, the atmosphere, and ecosystems all show that the impacts of climate change are already being felt. The scientific evidence indicates that the Earth is now warmer than at any time during the last 1000 years. While continued warming is inevitable, the seriousness of the consequences of climate change will depend upon societal action to limit the emissions of greenhouse gases and pollutants that are the dominant cause of global warming. These consequences include more droughts and floods, an increase in the severity of summer heatwaves, and a rise in sea levels that could devastate low-lying coastal areas.

Although the scientific basis for the conclusion that human activities are altering Earth's climate is very strong, arguments are still raised over whether current scientific understanding justifies societal action. One of those arguments concerns Antarctic temperature trends. While most of the planet has warmed rapidly during recent decades, much of Antarctica has cooled. Lack of an adequate explanation for this has been cited as evidence that scientific understanding of climate change is too incomplete to warrant taking action to mitigate global warming.

In the fall of 2004, a team I led published a paper providing an explanation of how ozone depletion over Antarctica and increasing greenhouse gases could together account for the observed Antarctic cooling. This study was the first to look at how these two factors work together to influence Antarctic temperatures. The study not only helped explain the observed cooling, but also predicted a warmer future for Antarctica based on projections of continued increases in greenhouse gas emissions. This has clear implications for potential sea level rise, as Antarctica contains an enormous reservoir of water in its ice sheets. The NASA press corps and I wrote a press release on the findings to convey them

to the public. While previous to this time, press releases had been issued rapidly and with revisions from Headquarters that were made primarily to improve clarity and style, this release was repeatedly delayed, altered and watered down. When we at GISS enquired what was going on, we were told in September 2004 by the press corps that releases were being delayed because two political appointees and the White House are now reviewing all climate related press releases.

Scientists do not simply explore what we happen to be most curious about. Knowing that our research is supported by public funding, we go to great lengths to provide policy-relevant information. While it was frustrating for me to see my work suppressed, even more importantly it is a disservice to the public to distort or suppress the information needed for decision-making. But that experience is only one example of a series of actions that attempted to suppress communication of climate science to the public. Also during the fall of 2004, NASA Headquarters insisted that a NASA press officer monitor all interviews either in person or on the phone, a measure unbefitting a democratic society. As with the interference with press releases, these restrictions were not imposed on our NASA colleagues in Space Science, or even those in areas of Earth Science other than climate change.

NASA's new, written policy of 'openness' regarding press contacts has been a welcome first step. This clearly defined policy is rather unique among federal scientific agencies, and this type of policy should be emulated at others. As this policy seems to have come about as a response to scrutiny of political interference in communication between NASA scientists and the press and public, I hope that the interest evidenced by today's hearing will lead to continued improvements in policies to protect the integrity of government science and its communication to the public.

Even with the best possible information, policymakers must make subjective decisions in the face of uncertainty. These types of decisions go on all around us, for example when a doctor decides on treatment based on the best medical evidence despite the fact that medical science does not understand all aspects of the human body. The public must trust the evaluation of the evidence by policymakers in the same way that patients must trust their doctors. Suppression of scientific evidence has undermined the trust between the public and policymakers and between scientists and policymakers. Cases where scientific uncertainties were exaggerated by political appointees have been equally troubling. Restoring the necessary trust will require the highest standards of scientific integrity and transparency in policies regarding scientists' interactions with the public and in decision-making on the urgent issue of climate change.