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Idea of Restoring 'Natural Systems' Misses Mark as Response to Climate Change Challenges, Expert Argues

ScienceDaily (Feb. 25, 2010) — The adage says that to discover the right solutions to a problem you first have to ask the right questions.

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As Arizona State University engineering professor Brad Allenby sees it, our search for technological solutions to large-scale environmental problems sometimes gets off on the wrong track largely because we're posing the wrong questions.

Particularly in the debates about how to respond to atmospheric greenhouse gas buildup, climate change and humankind's impact on the global environment, Allenby says, "We are often framing the discussion from narrow and overly simplistic perspectives, but what we are dealing with are systems that are highly complex. As a result, the policy solutions we come up with don't match the challenges we are trying to respond to."

Allenby offered his recommendations for reframing the approach to such challenges in his Feb. 19 presentation, "Technological Change and Earth Systems: A Critique of Geoengineering," at the annual meeting of the American Association for the Advancement of Science.

Allenby is a professor in the School of Sustainable Engineering and the Built Environment, a part of ASU's Ira A. Fulton Schools of Engineering. He's founding director of the Center for Earth Systems Engineering and Management, and chair of the Consortium on Emerging Technologies, Military Operations, and National Security. He's also a professor of ethics and engineering in ASU's Lincoln Center for Applied Ethics.

Geoengineering focuses on designs for large-scale environmental engineering to influence or counteract such things as climate or atmospheric changes.

One misstep in such endeavors is that we are searching for solutions that will restore natural systems. But Allenby contends that "the planet no longer has purely natural systems. What we have is an integrated natural-human environment, one shaped over centuries by a combination of natural factors and technological evolution."

The questions in which we must frame discussion of potential geoengineering solutions should be grounded in awareness of this reality, he says.

"Responding to something like climate change is not just a scientific and technical matter," he says. "Whatever attempted solutions we chose, or reject, will have significant cultural and ethical implications."

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● **MLA** as response to climate change challenges, expert argues. *ScienceDaily*. Retrieved March 14, 2010, from <http://www.sciencedaily.com/releases/2010/02/100219115346.htm>

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