Harvard Scientist Proposes Refreezing Arctic to Prevent Global-Warming Disaster

Harvard University geoengineer and environmental scientist David Keith has a "plan B" in case of an environmental emergency.

Keith's unusual proposal is this: Force reflective particles into the Earth's upper atmosphere -- the stratosphere -- to reverse global warming.

"One approach is to disperse particulates at high altitude to reduce the effective solar ?ux entering the atmosphere," Keith and his fellow researchers report in the Nature Climate Change [1] journal and Environmental Research Letters [2].

The idea comes from nature, Keith said in a TED talk [3]. In 1991, Mount Pinatubo in the Philippines erupted and cooled the Earth. About 15 millions tons of sulfur dioxide rose into the upper atmosphere, creating an "hazy layer" of aerosol particles, according to NASA [4]. The plume of particles in the atmosphere shaded the Earth's surface, creating a cooling effect for almost two years.

Keith is proposing something similar to save the Arctic sea ice, which is at an all-time low [5]. The large-scale geoengineering solution could reduce the penetration of the sun by at least 0.5%, according to his papers.

For now, the $8 billion geoengineering plan remains a radical option. The solar geoengineering investigators hope their ongoing research sparks a global conversation about the environment.

"If one is optimistic, one might hope that the injection of this new technology into climate policy will energize the topic, breaking the static trench warfare that now characterizes much of the debate about climate and perhaps producing a better outcome. But, that is a wish, not a prediction," Keith said in a recent Q&A with the Belfer Center Newsletter [6].

The scientist believes there are solutions for global warming, including enforcing global conversation, reducing carbon-dioxide emissions and increasing wind power. What we currently lack, according to Keith, is urgency, attention to the problem and action.

Do you think we're doing enough to conserve the environment, and reduce greenhouse gas emissions?

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