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Geoengineering: An Idea Whose Time Has Gone

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As it has become more and more evident that humanity is not going to rapidly stop burning fossil fuels, some very worried scientists have increasingly turned their thoughts to reduce global warming. They correctly recognize that the now likely temperature rise of 3-4 degrees Celsius or more presents an existential threat to civilization. Various ways of getting the job done by human intervention in the climate system have been discussed.

The schemes include everything from ways to prevent carbon dioxide from fossil fuel burning from entering the atmosphere or sucking it out of the atmosphere, to shielding Earth's surface from some of the sun's warming radiation. Some of these schemes involve adding another gigantic global industrial infrastructure onto the gigantic one that already exists to mobilize the energy of coal, oil, and natural gas – rather than greatly reducing the profits of the fossil fuel industry.

There are three basic problems with all forms of geoengineering. One is the enormous difficulty of predicting its results. One only need consider that today all the efforts of a brilliant community of climate scientists, with all the information at their command, still cannot predict with high confidence what and when climatic changes will occur in any given region. The uncertainty of the results of humanity's current massive climatic experiment is enough to convince us that a brand new manipulation, loaded on top of today's increasing climate extremes, would not be a clever move. After all, how can we "engineer" a system we don't understand.

Worse yet is the prospect of differential results from any scheme, and how international agreement on who would do the engineering and target climates could be achieved. What if China starts to put shielding sulphate particles into the stratosphere and the result is intensification of droughts in India, how might India respond? What if Russia wants it two degrees hotter than the United States? It is no mystery why military establishments are considering anti-geoengineering tactics.

The final basic problem, and perhaps the most serious one, is related to what economists call “moral hazard.” Moral hazard exists when people are encouraged to take risks because they are unlikely to bear the consequences – say paying less attention to fire safety if their homes are insured. Thus the prospect of geoengineering “saving us” could delay desperately needed steps to slow the flow of greenhouse gases into the atmosphere, and in most cases would do nothing to prevent acidification of the oceans. Would humanity be happy to sit by while the seas are turned into club soda and marine ecosystems, on which billions depend for protein, collapse? The fossil fuel barons apparently would be delighted with an excuse to continue to reap gigantic profits while ruining the lives of their great grandchildren (or worse). Their business plan may be to destroy the world, but we don’t have to let them do it.

MAHB-UTS Blogs are a joint venture between the University of Technology Sydney and the Millennium Alliance for Humanity and the Biosphere. Questions should be directed to joan@mahbonline.org.

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