No, we should not just 'at least do the research'

The idea of applying geoengineering research to mitigate climate change has not been thought through, argues Clive Hamilton.

Fresh concerns about using geoengineering projects to cool the planet emerged late last month, when scientists at the UK Met Office said that possible unintended consequences demanded global oversight of such schemes. With the Intergovernmental Panel on Climate Change soon to report on it, geoengineering will not go away and neither will the controversy it provokes.

One constant is the call that 'we should at least do the research' so that we can be prepared. In truth, this simple injunction is part of the problem. It rests on a string of questionable assumptions and a naive understanding of the world that owes more to the quaint ideal of the white-coated scientist dispassionately going about the process of knowledge generation than it does to reality.

There are some hard questions for those who believe that 'we should at least do the research'. To start with, who is this 'we'? Is it the 'rogue' geoengineer Russ George, who wants to fertilize the oceans with iron so that he can generate carbon credits to sell? Is it the eccentric Russian Yuri Izrael, who is experimenting with aerosol spraying? How about oil giants such as Exxon-Mobil, which for years funded climate-science disinformation and is now talking up the prospects of geoengineering. Does 'we' mean the Chinese or US military, the organizations with the best access to the equipment needed to deploy a sulphate aerosol shield?

And who should pay for the research? Should it be the public, through national research programmes? Or is it all right for it to be billionaires, backyard tinkerers and oil companies? Shell now funds research into liming the oceans through the Cquestrate project, and ConocoPhillips, among others, is investing in biochar research.

Should the research be transparent, or should it be secret? If we believe that it is too important to be carried out in secret, should corporations be forced to open up their labs? Should the United Nations have weather-technology teams that are empowered to inspect military research facilities in, say, China, in the same way that it sent weapons-inspection teams into Iran? We also need to decide who should oversee and regulate the research. Should it be left to the scientists to regulate themselves, as they proposed at the Asilomar geoengineering conference in 2010? What if those scientists are employed by oil companies or the governments of coal-dependent states?

Should national governments impose ethical standards? Should a UN agency be established to oversee all global research? Should vulnerable nations have a greater say in where research funds are spent and how research is governed, or should their poverty exclude them from any say in potentially world-saving technologies?

Who should own the results of the research?

Should private patents be issued so that individuals or corporations are in a position to decide to sell their planet-saving technologies?

Such fears are not new. US President Dwight Eisenhower warned in 1961 of the "danger that public policy could itself become the captive of a scientific-technological elite". So how do we prevent the formation of a powerful constituency of scientists, investors and politicians after a quick fix, a lobby that could manipulate the political system to downplay or override serious concerns about safety in order to see its technology deployed? And if we do the research and obtain the hoped-for results, and the demands for deployment become overwhelming, who will control what is deployed, and when and where? If deploying a solar shield has divergent effects on precipitation in rich and poor nations, who decides where the rain should fall?

We should have satisfactory answers to these questions before developing the means to engineer the climate. We cannot be content with the idea that the world will somehow muddle through. Research around the world is gathering pace and is answering these questions by default. Frequently, the answers are unpalatable — for example, a slew of private patents has already been taken out over methods to engineer the world's climate. So the call to 'do the research' entrenches a situation in which geoengineering is often carried out by the wrong people, for the wrong reasons and with no oversight, and in the process is creating a lobby group that is likely to press for deployment because it is in its financial or

professional interests to do so.

Political context matters. These concerns are amplified when we think about how we got here. We are entertaining the idea of intervening in the climate system to prevent climatic disaster because of the inability of our political and social systems to implement sharp reductions in greenhouse-gas emissions. If weak political leadership, the power of the fossil-fuel lobby, pervasive wishful thinking and a culture of denial have undermined plan A, why would we not expect those same conditions to govern the development and deployment of plan B?

The 'we should at least do the research' lobby assumes that, if geoengineering research succeeds and the situation calls for deployment, it will be done in a way that respects the scientific evidence and protects the interests of the poor and vulnerable. Do we really believe that? The irony is that if we did believe in such a world, there would be no need for research into geoengineering. ■

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