

It's Smart Risk Management and a Political Investment

By CYNTHIA SCHARF

When I speak to audiences about geoengineering, I often start by saying I wish my job never existed. There would be no need to inform and encourage governments to create international guardrails around emerging climate technologies because decades ago my generation had taken care of job number one: radical, immediate decarbonization and strengthened adaptation.

Alas, that's not the world we live in. Even at current levels of warming, climate change impacts are devastating, as we saw last summer, especially for those who did least to contribute to the problem but suffer first and worst from its effects. The longer the anemic global response to the climate crisis, the greater the pressure to deploy large-scale carbon removal, and potentially even solar geoengineering, to reduce dangerous climate impacts.

These technologies could potentially provide significant, if unequal, benefits if governed in an inclusive, just, and transparent manner. But they also pose critical environmental and geopolitical risks — known and unknown. Geoengineering will affect every country, hence all countries — and all sectors of society — need a say in how it is governed.

In speaking with governments and civil society organizations, it is abundantly clear we do not know enough about the risks, costs, and potential benefits of these technologies. Nor are we doing near enough to address how we might govern them in an equitable, accountable manner.

Several international agreements have potential relevance for geoengineering, but at present there is no systematic set of international frameworks. This needs to change —now.

We need a society-wide discussion about how to govern these technologies, before events overtake our ability to respond in an informed way. Indeed, this could be one of the most important conversations any government and civil society leader has in coming years.

To do so is not to abdicate responsibility for reducing emissions. Rather, it's smart risk management and a wise political investment in a safer world.

Effective governance should be grounded in the precautionary principle and be inclusive, transparent, and equitable. It also should be developed in parallel with research, so the latter informs the former. Large-scale carbon removal and solar geoengineering will require multilateral governance, as both entail transboundary risks and challenges and could affect all countries, if unequally, creating global winners and losers.

Current UN bodies, primarily the climate convention, are appropriate for governing carbon removal at the multilateral level. National and sub-national governance also will play a key role. Solar geoengineering, however, poses thornier challenges. No existing institution covers the full range of issues that might arise. A polycentric approach will be needed, since the world evidences no appetite for creating new multinational institutions in the current political atmosphere. Existing institutions could include the UN Environment Assembly, the Convention on Biological Diversity, the General Assembly, and regional bodies.

The Intergovernmental Panel on Climate Change's recent report makes clear that the world will need tremendous amounts of carbon removal in coming decades to avoid runaway climate change. Are existing climate convention mechanisms, including Paris, sufficient to address the full range of issues that may arise? These include land use, storage, liability, and compensation as well as responsibility, monitoring and reporting, and impacts on the Sustainable Development Goals. Eq-

uity and political responsibility are also key. Governments will need to cooperate on technology, funding, and the policy and market mechanisms that can make those technologies that have a social license to operate viable.

Even with a massive ramp up, it may not be possible to remove enough carbon in time to keep global temperatures from breaching danger points. Some countries might then consider solar geoengineering. At best, it might buy the world some time.

But who would be making the decisions to use this powerful technology? Whose hand will set the global thermostat? Under whose authority and with what political legitimacy? How, when, and under what circumstances? Political, as well as profound ethical and moral issues, are in play.

The world needs rules of the road to stop anyone — a government or even a non-state actor — from testing and deploying solar geoengineering unless the risks and potential benefits are sufficiently understood, and international governance frameworks are agreed and in place. Absent this, the world would be faced with environmental and geopolitical risks that could affect current and all future generations.

The era of risk-free options is past. Three years after Paris, there is a grave risk in assuming that our present tools — emission cuts and removals of small amounts of carbon dioxide — may be enough. It is critical that society as a whole wake up and weigh in on how geoengineering should be governed. The voices of the poor and marginalized, as well as faith communities, are essential to this discussion.

Governments need to learn more about geoengineering and put it on their shortlist of priorities. It is up to them to create the international guardrails that can help the world stay safer in a climate-chaotic future. The stakes could not be higher.

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