

Bonn: Climate engineering is risky, but should be explored, experts say at UN conference

16 November 2017 – Climate engineering, or climate intervention, is risky but needs to be explored as a supplement – not as a ‘Plan B’ – to greenhouse gas emissions reduction, said experts at the United Nations Climate Change Conference ([COP23](#)), in Bonn, Germany.

Climate engineering, also referred to as geoengineering, is the deliberate and large-scale intervention in the climate system with measures including carbon dioxide removal from the atmosphere or solar radiation management.

“We can do a lot, we have to do a lot, we have to try much harder at cutting our emissions, but there will remain certain emissions, especially in the land use sector, which are not going away. So we actually need to start talking about this removal of greenhouse gases inevitably,” said Matthias Honegger, research scientist with the Institute for Advanced Sustainability Studies, at a press conference.

Different approaches are being discussed. Some already exist, like planting trees. Other ideas include dispersing certain minerals in the oceans to enhance the growth of algae, which then as they sink to the ocean floor, would create a net flux of carbon from the atmosphere into the oceans.

“Business as usual is a little worrying,” said Dr. Hugh Hunt, from the Department of Engineering at Cambridge University. “The concept of not doing anything is full of danger. Now the concept of cooling the planet is full of danger as well.”

“We need to have full-on public engagement, full-on societal involvement. The reason is that the risks of climate change are huge, the risks of doing nothing are huge; but the risks of geoengineering are huge as well. We’ve got to explore those risks, because who knows, we may end up entering a very risky world without understanding it,” he added. “Geoengineering risks are not well understood and need to be explored.”

Stratospheric aerosol injection

Due to the great uncertainties over effectiveness and side effects of climate engineering – including the risk of disrupting natural systems – experts think that there is a need to discuss climate engineering governance, especially as it relates to stratospheric aerosol injection.

Stratospheric aerosol injection consists of injecting sulfate aerosols into the stratosphere with aircraft or balloons to create a global dimming effect.

“This technology is absolutely terrifying. We may actually need it, but then, who do we want to decide. That’s where this society-wide discussion has to take place,” said Janos Pasztor, Executive Director of the Carnegie Climate Geoengineering Governance Initiative (C2G2), and former UN senior climate advisor. “It would require a level of international cooperation that we have not yet seen.”

“Who will decide whether we should make use of stratospheric aerosol injection and when that decision should take place? [...] Who will make that decision on behalf of the world? And then how far do we turn the thermostat of the global air conditioning system [...] to cool the planet?” he said.

“There are issues: the more temperature you want to reduce the higher the chance there will be negative impact and the higher the chance that some of these impacts will not be the same across different geographical zones. You might end up in a situation where some people benefit from the reduced temperature but some people would have negative impacts. What do you do with those people? How do you compensate them? How do you take care of them?” he added.

Mr. Pasztor concluded that the highest priority should remain the gas emission reduction. “But we have to consider these other options, as supplements, not as a ‘Plan B,’” he warned.