



The Science and Governance of Climate-altering Techniques: Implications for Sustainable Development

Thematic Track at the World Sustainable Development Summit
New Delhi, 23 Feb 2023, 14:00-15:30 IST

Host: The Energy and Resources Institute (TERI)

Partner: Carnegie Climate Governance Initiative (C2G)

Format: In-person event (speakers may be able to connect virtually)

Background

The world is not on track to meet the Paris Agreement temperature goals. According to the latest reports released by the Intergovernmental Panel on Climate Change (IPCC), even with the deepest emissions reductions and removals scenarios assessed by the IPCC, it is now more likely than not that warming will temporarily exceed 1.5°C (overshoot). Human-induced climate change has already caused widespread adverse impacts and poses additional severe risks if global warming exceeds 1.5°C, threatening the achievement of the Sustainable Development Goals (SDGs). In this context, some additional approaches have been proposed by scientists to limit temperature rise.

Carbon dioxide removal (CDR) refers to human activities removing carbon dioxide from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. The IPCC reaffirms that large-scale CDR will be needed, in addition to transformative emission reductions, to deliver net-zero emissions by mid-century and net negative thereafter, to achieve the Paris Agreement temperature goals. However, many CDR techniques are untested at scale and many governance challenges remain to be addressed.

Considering the increasing likelihood of overshoot, another set of techniques known as solar radiation modification (SRM), seek to deliberately change the albedo of the Earth system, reflecting solar radiation back into space to cool the planet. According to IPCC assessments, while some SRM techniques may be theoretically effective in reducing some climate hazards, they face large uncertainties and knowledge gaps, and give rise to substantial risks including the lack of governance around SRM representing a risk on its own. However, overshooting the Paris Agreement temperature goals also entails many risks for both humanity and the ecosystems we depend on for survival. To make well-informed decisions for managing climate risk, will require the benefits and risks of these approaches to be assessed and compared to scenarios without their use, in a quickly warming world. The Sustainable Development Goals (SDGs) can be used as a basis for evaluating the risks and benefits of CDR and SRM in the context of sustainable development.

Objective: the purpose of this event is to engage a high-level discussion about the need for managing the risks of temperature overshoot and issues relating to the governance of large-scale CDR and SRM.



Indicative questions

[Question 1] What is the state of the evolving science around carbon dioxide removal and solar radiation modification ?

[Question 2] How is the governance of climate-altering techniques likely to evolve? what would be the geopolitical implications of governing solar radiation modification?

[Question 3] Can climate-altering techniques (including solar radiation modification) be governed consistent with a framework for delivering the sustainable development goals? And if so, how?

[Question 4] What are the potential implications of governance of carbon dioxide removal and solar radiation modification for the Global South?

[Question 5] What needs to happen next to progress international discussions around the governance of large-scale CDR and SRM?

Format

The event will include three segments. The opening segment of the event will include Opening Remarks followed by a Keynote Address. This will be followed by a Panel Discussion which will include a Q&A segment. The chair of the event will conclude the event with closing remarks.