

Geoengineering further encroaching on the IPCC's work: 46th IPCC meeting in Montréal, Canada

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Earlier this month, the Intergovernmental Panel on Climate Change (IPCC) – the main scientific authority in the field of climate change – came together for their 46th meeting in the city of Montréal, Canada. Although the work of IPCC is geared towards producing scientific assessments and reports, it is also an intergovernmental institution, which means that the 195 governments party to the IPCC get to decide on the broad course of what particular topics relating to climate change the IPCC should assess. At the Montreal meeting, Government delegations negotiated the three Working Groups' chapter outlines for the upcoming 6th Assessment Report (AR6), to be published in 2021.

We were there to monitor developments around geoengineering, and have to conclude that the normalization push is well under way at the IPCC:

Carbon Dioxide Removal (CDR) – or, in fact, Greenhouse Gas Removal (GGR), which is the adopted language at the IPCC – appears prominently in Working Group III, whose task it is to “assess options for mitigating climate change through limiting or preventing greenhouse gas emissions and enhancing activities that remove them from the atmosphere.” (IPCC Working Groups)

CDR/negative emissions technologies will appear, where relevant, in the sectoral Chapters 6-11 – but certainly in the chapters on energy systems (CCS-based technologies being at the core of geoengineering proposals for this sector) and the Agriculture, Forestry and Land-Use (AFOLU) chapter (relying on large-scale afforestation).

Beyond the sectoral chapters, WGIII Chapter 12 will be on “cross-sectoral perspectives.” Here all CDR technologies will be assessed that do not fall neatly into any of the preceding sectoral chapters – such as BECCS and ocean fertilization. While AR5 was hiding the excessive reliance on BECCS and afforestation in the footnotes, AR6 is going to fully embrace the discussion of basically all geoengineering technologies available – their status, cost, risks and impacts, but also their potentials.

Special attention was given to “impacts, risks and opportunities of large-scale land-based mitigation”, i.e. BECCS and afforestation. While some countries wanted to see the same in-depth assessment of large-scale ocean-based mitigation (despite the fact that ocean fertilization is already prohibited under the London Protocol of the London Convention), WGIII Chairs argued that prominence was accorded to large-scale land-based geoengineering – or mitigation, as they call it – due to these approaches' role in mitigation pathways to 2°C and 1.5°C produced by Integrated Assessment Models (IAMs). And indeed, no other geoengineering technology has yet made its way into the models.

SRM will be discussed in WGIII Chapter 14, International Cooperation. In the initial draft outline it was included in Chapter 12, Cross-sectoral Perspectives chapters, but some delegations preferred to highlight the dimension of international cooperation (and potential conflict) on SRM, so it was moved to Chapter 14. The respective bullet point now reads “Ethics and governance of SRM, associated risks” – which may risk precluding a discussion of

other political and social risks of SRM beyond questions of governance and international cooperation and make them slip from view.

Civil society observers have argued throughout the meeting that geoengineering technologies should not be given such prominence as they remain high-risk and speculative response strategies with large-scale foreseeable negative impacts on human communities and ecosystems.

Nevertheless, geoengineering has been agreed on as one of eight cross-cutting issues identified by all Working Groups (I-III). So beyond being treated in dedicated chapters, geoengineering may very well sprawl across the report's three Working Groups and show up in all different places, giving readers and policy makers no systematic account of the political, social and ecological risks and impacts of geoengineering proposals.

Geoengineering creeping into Working Group I on the physical science basis of climate change

Quite shockingly, the IPCC in its AR6 will do an in-depth assessment of both Greenhouse Gas Removal (GGR) scenarios and Solar Radiation Management (SRM) scenarios not only in Working Group III, which, as per usual, looks at mitigation options and pathways, but also in Working Group I – tasked with assessing “the physical scientific aspects of the climate system and climate change.” In Chapter 4 of Working Group I, authors will look at the climate response to GGR and SRM scenarios, in Chapter 5, they will further analyze the biogeochemical implications of GGR and SRM scenarios. This group's work is supposed to focus on the physical science basis of climate change, while assessing the geoengineering scenarios – a high-risk and largely speculative response strategy – is clearly outside the scope and mandate of WGI. WGI will also not assess the physical science basis of *other* types of responses to climate change, thereby giving undue prominence to geoengineering proposals.

It is worrying that including geoengineering (both CDR and SRM) scenarios in Working Group I's contribution to AR6 may set a dangerous precedent for future assessment cycles of the IPCC. By establishing alleged unpolitical “scientific facts” about the climate response and biogeochemical implications of geoengineering scenarios, the IPCC is very likely to foster the normalization trend around geoengineering. The first problem with this is that the scientific consensus so established rests on results spit out by computer models that could never do justice to the complexity, interconnectedness and unpredictability of the Earth's systems. It thus creates a false sense of controllability of geoengineering and climatic responses to it. The second problem relates to treating geoengineering in WGI in a seemingly neutral and unpolitical fashion – as if the decision to go down that path were not a fundamentally political one. The attempts at establishing an allegedly neutral scientific consensus on geoengineering is part of the larger thrust towards normalizing geoengineering as a response strategy to climate change.

However, knowledge production in the natural sciences is also not neutral: Given the disproportionate representation of geoengineers in the modelling community that will write WGI's contribution to AR6, we are likely to see a heavily one-sided account of geoengineering scenarios, one that focuses on “potentials” while disregarding risks, impacts and disturbances of the climate system and ecosystems entailed by large-scale technological interventions.

The adopted chapter outlines can be retrieved from the IPCC website:

[Working Group I](#)

[Working Group II](#)

[Working Group III](#)