



Scoping report Climate Engineering

Climate engineering – a collective term for large-scale technical interventions in the Earth’s climate system – is increasingly discussed as an option to respond to anthropogenic climate change. Climate engineering technologies cover technologies both for the causative reduction of and the symptomatic compensation for anthropogenic climate change.

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The former are called carbon dioxide removal (CDR) technologies because they reduce CO₂ in the atmosphere, the latter radiation management (RM) technologies because they directly influence radiation balance and therefore temperature. As the definition implies, any application of climate engineering has potentially global effects: climate and ecosystems would be changed across the world, affecting the environments of whole societies. For this reason, a purely scientific or economic analysis of the topic falls extremely short, precisely because climate engineering affects so many environmental media, societies and areas of human life.

The scoping report “Large-scale intentional interventions into the climate system: Assessing the climate engineering debate” has been conducted by an interdisciplinary team of experts from six disciplines on behalf of the German Ministry of Education and Research (BMBF). The Kiel Earth Institute has coordinated this project.

 [Large-Scale Intentional Interventions into the Climate System? Assessing the Climate Engineering Debate \(4.6 MiB\)](#)

 [Overview graphic: Overview of selected Climate Engineering approaches \(494.3 KiB\)](#)

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