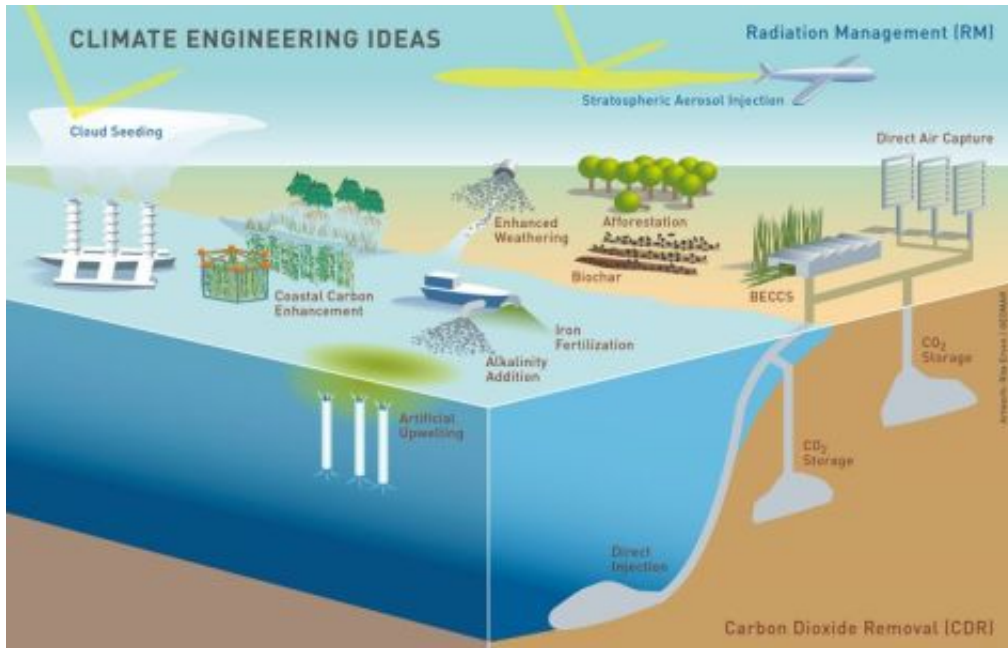


Research to Evaluate Climate Engineering



Risks, Challenges, Opportunities?

The Priority Program (SPP) 1689 of the German Research Foundation (DFG), running from May 2013 to May 2019, investigated the risks and side effects of "Climate Engineering". The term Climate Engineering (CE) describes technological methods that could be used to mitigate or compensate for anthropogenic climate change by either reducing the atmospheric CO₂ concentration or by directly changing the Earth's radiation balance.

The main objectives of the Priority Programme 1689 are:

- Investigation of the climatic, ecological and social risks and potential effectiveness of different Climate Engineering methods
- Evaluation of the scientific and public perception of Climate Engineering
- Assessment – not development! – of Climate Engineering, including scientific, social, political, legal and ethical aspects

DFG Recommendations Regarding Climate Engineering

(1) The DFG should first promote research on Climate Engineering (CE) to "assess the effectiveness and consequences" of it. This research will take into account the fact that previous research has heavily focused on the technical feasibility of climate engineering. The new research should provide the scientific

basis for a comprehensive evaluation of the advantages and disadvantages of different types of CE. A major research gap that needs to be addressed is our limited knowledge of the possible negative side effects of climate engineering.

(2) The research on the possibilities, effectiveness, and impacts of CE must be carried out within an interdisciplinary framework that includes scientific, technical, social, economic, legal, ethical and political dimensions.

(3) Presently, the research priority should be to investigate and assess the side effects of different types of CE using improved Earth system models. All assessments need to be done with a close collaboration between the natural and social sciences.

(4) Due to the advanced political debate in some countries, studies of the legal, social, and international political dimensions of a potential deployment(s) of CE technology are urgently needed. Furthermore, potential CE regulations should be developed.

The complete DFG statement (german text) can be downloaded here:

 [Stellungnahme climate engineering_120403.pdf \(266.7 KiB\)](#)

The History of the SPP 1689

The SPP initiative (= DFG Priority Programme SPP 1689) was launched at an interdisciplinary round table conference that was initiated by the National Committee for Global Change Research. with Prominent committee members include Gernot Klepper, Ulrich Platt and Martin Visbeck.

- Kiel, June 4, 2009: Geoengineering – the role of science → "Kiel thesis"
- Eisenach, 2./3.März 2010: Responsibility initiative of Sciences
- Kiel, September 17, 2010: Climate Engineering – Challenges for Science, Evaluation and governments
- November 2010: SPP filing of the first application
- April 2011: Intensive discussions in the DFG Senate → rejection or postponement of the request for an until an opinion of is reached by National Committee on Global Change Research (NKGCF) and DFG Senate committees

Findings:

- Interdisciplinary Research supported by the Excellence Initiative of the German Federal and State Governments has decisive advantages
- Communication and language are key criteria
- Society must be involved
- June 2011: Launch of the website www.climate-engineering.eu for informing the interested public and improving communication among SPP scientists
- November 2011: Submission of the revised SPP application
- 26th April 2012: SPP application approved by the DFG Senate
- 22, May 2012: Public call for applications (deadline 30.9.12)

- Hildesheim, 25./26.6.2012: Open SPP workshop
- Bonn, 17./18.1.2013: Assessment of SPP applications

Institutions involved in SPP 1689 // 2013–2019



More information about Priority Programme 1689

 [Folder with general information about SPP 1689 Phase 2 \(2.3 MiB\)](#)