

## Assoziierte Wissenschaftlerinnen und Wissenschaftler



Christian Baatz

- [Christian Baatz](#) // Christian-Albrechts-Universität zu Kiel // Philosophisches Seminar der CAU zu Kiel

Miranda Boettcher

I am planning to develop a discourse analysis framework which assesses the role of both the discursive structure and the agency of privileged story tellers in the co-creation and (de-)legitimization of research and governance agendas in the field of Climate Engineering. I believe that tracing the development of the climate geoengineering discourse and the role played by scientists both pre- and post-Paris provides a unique opportunity for analysing the reflexive interactions between science, society and politics in an emerging technology discourse.

[Miranda Boettcher](#) // Institute for Advanced Sustainability Studies Potsdam

Vera Heck

My work is focused on global terrestrial carbon dioxide removal (CDR) strategies for climate engineering. I am interested in the overall potential of terrestrial climate engineering via re- and afforestation measures and the related impacts on the Earth's biogeochemical and hydrological cycles.

- [Vera Heck](#) // Potsdam-Institut für Klimafolgenforschung (PIK) // Erdsystemanalyse

Tronje Kemena

### **Climatic impacts of irrigated afforestation of the Sahara in a complex Earth System Model**

Some scientists proposed afforestation of the Sahara as an applicable climate engineering method to counteract global warming. Past studies have primarily investigated the efficiency of carbon dioxide removal and estimated the realization costs. Possible impacts on climate were only treated aside and with simplified climate models.

Here we use for the first time a high-top state-of-the-art Earth system model, (NCAR's CESM-WACCM) to investigate in more detail changes in climate variability and circulation to a large-scale afforestation. We are interested in local changes but also in particular in global teleconnection patterns. A thorough analysis of the resulting regional and global changes will be presented, and the risks and feasibility of such large-scale afforestation projects will be reevaluated.

- [Tronje Kemena](#) // GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel // Ozeanzirkulation und Klimadynamik & Marine Biogeochemie

Judith Kreuter

Anthropogenic climate change is one of the greatest challenges of our time. The public, science and politics share this notion. The presentation of the phenomenon as a “crisis” in public discourse, however, could cause developments which have not been considered as of yet. While in the first four Assessment Reports by the Intergovernmental Panel on Climate Change (IPCC), the instruments of mitigation and adaptation play a central role, international scientific as well as political interest in Climate Engineering (CE) as a solution to problems caused by climate change is increasing. The thesis of this paper states that the perception and presentation of climate change as a crisis and the resulting state of exception could lead to the development and even deployment of instruments of CE, while alternative potential solutions are eliminated in public discourse. In that case, the development and deployment of CE instruments would not be based on sound scientific knowledge about the processes and backgrounds of the climate system, but rather on the fear of an even greater catastrophe.

The analysis of the above mentioned thesis is complicated by a common assumption about the situation of climate change which is often considered a necessary property of exceptional situations: Generally, climate change and its consequences for global society are considered unprecedented. According to this assumption, there is no past situation which can serve as precedence and which can inform and guide the search for a solution for the problem of climate change. This assumption is contested here. Instead, it will be presumed that the case of climate change is comparable to the case of antagonism during the Cold War: Both situations are considered “crisis” by their contemporaries, which, in turn, justifies the development and deployment of extraordinary measures; in one case, CE, and in the other, nuclear weapons. In both cases, the perception of “crisis” is based on objective as well as subjectively felt threats to values of a community; the situation has been communicated as a danger and has been accepted as such in the public sphere; the danger is considered global and the deployment of extraordinary measures is proposed.

- [Judith Kreuter](#) // Technische Universität Darmstadt // Institut für Politikwissenschaft

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- [Constanze Werner](#) // Potsdam-Institut für Klimafolgenforschung (PIK) // Erdsystemanalyse

Jiajun Wu

- [Jiajun Wu](#) // GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel // Marine Biogeochemie

Zhihong Zhuo

My research focuses mainly on volcanic aerosols' hydrological effect in Asia monsoon region in the past several hundred years. I combine different kinds of volcanic indices compiled from ice cores, proxy data reconstructed from tree-rings, historical records, drought indices and model outputs from PMIP to study it comprehensively. Besides, I always keep an eye on solar radiation management, especially research progress on stratospheric aerosol engineering. I would like to do further researches using model outputs from VolMIP and GeoMIP, or test some findings using model simulation.

- [Zhihong Zhuo](#) // Freie Universität Berlin // Institute für Meteorologie