Final Preport for Project **909** Project title: Learning on cloud brightening under risk and uncertainty: Whether, when and how to do a field experiment (LEAC) Principal investigator: Johannes Quaas Report period: Jan. 1, 2014 - Dec. 31, 2020

The series of two DFG-funded projects on climate engineering was a highly successful interdisciplinary endeavour that was to a large extent facilitated by the outstandingly effective and convenient resources offered by DKRZ. A key point was the analysis of the behaviour of climate extremes under different climate engineering scenarios (Aswathy et al., 2015). On the basis of this research and beyond it, the project concluded about the usefulness of open-ended research on climate engineering (Quaas et al., 2017). These ideas led to the hypothesis that regional climate engineering is indeed what seems most likely (discussion by Quaas et al., 2016). We found that this question is particularly important due to the diverging interests of different parties (Rickels et al., 2020).

More publications, on the assessment of field experiments and on regional climate engineering and remote consequences, are in the pipeline.

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