

Does knowledge of stratospheric sulphate injection change individual efforts to mitigate climate change?

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The injection of sulphate into the stratosphere might develop into an effective measure against global warming in a few decades. Scientific knowledge about the technology, however, is currently limited and its many risks caution against its use. A major risk is that knowledge about the potential climate effect of sulphate injection or its actual deployment could make people reduce their mitigation efforts. This counter-argument is called risk compensation, moral hazard, or mitigation obstruction. If sulphate injection reduced the risks from climate change while at the same time causing only minimal side-effects this response would be individually rational. However, today's consumption level would be maintained at the risk of a technological lock-in of future generations. In our paper, we analyse how learning about sulphate injection changes people's short-term willingness to mitigate climate change. We use data from a framed field experiment. The control group receives only information on climate change. The treatment group additionally receives information on sulphate injection and its risks. All subjects have the opportunity to buy CO₂-certificates after they have received the information. If treated subjects buy less certificates than subjects in the control group this would support the hypothesis that information on sulphate injection as a measure against climate change leads to risk compensation, i.e., mitigation obstruction. If the treated subjects buy more certificates this would support the hypothesis that knowledge of sulphate injection increases mitigation efforts. The fieldwork will be finished by April 2015.