



Project: **1173**

Project title: Climate, Climatic Change and Society

Principal investigator: **Detlef Stammer**

Allocation period: 1.7.2020 – 31.12.2020

The Cluster of Excellence “Climate, Climatic Change, and Society” (CLICCS) investigates how the climate changes and how society changes with it, thereby feeding back on climate. Understanding these changes, including how societies adapt, will enable us to assess with far greater confidence than before the range of imaginable climate futures. In taking on this challenge, CLICCS is guided by the overarching research question: Which climate futures are possible and which are plausible?

CLICCS will identify those climate futures that are possible, meaning that they are consistent with our joint understanding of both climate and social dynamics, and those that are plausible, meaning that we expect them to unfold with appreciable probability. CLICCS will boost the understanding of the crucial natural processes that either enhance or reduce anthropogenic climate change, allowing us to rein in more tightly our estimates of possible climate futures. CLICCS will identify which social dynamics support or prevent the deep decarbonization required to meet the climate targets of the Paris agreement; this will enable an assessment of which greenhouse gas emissions pathways are more probable than others. CLICCS will comprehensively characterize magnitude and mechanisms of chaotic variability in a warming climate, found to be much larger than expected, and will explore how the resulting irreducible (aleatoric) uncertainty can be accounted for in climate-socioeconomic interactions and in decision-making processes. CLICCS will establish an understanding of the competition between climate targets and other social goals in concrete case studies of sustainable adaption to climate change, by combining possibly unstable social dynamics with the impulses arriving from the physical system marked by unpredictable variability and extreme events.

The Cluster of Excellence CLICCS is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany’s Excellence Strategy – EXC 2037 'Climate, Climatic Change, and Society' – Project Number: 390683824 for a total duration of 7 years and runs until 31.12.2025. The long-term program spans the range from basic research on climate dynamics and climate-related social dynamics to the transdisciplinary exploration of human–environment interactions. The 16 CLICCS projects are structured in three themes (A: Sensitivity and Variability in the Climate System; B: Climate-Related Dynamics of Social Systems; C: Sustainable Adaption Scenarios); these use observations and models of the natural, coupled human–environment, and social systems to understand the processes that govern these systems and to formulate adaptation and mitigation strategies.