

## OUR PARTNER INSTITUTIONS

The CLICCS program is coordinated through Universität Hamburg's Center for Earth System Research and Sustainability (CEN) in close collaboration with:

- Max Planck Institute for Meteorology (MPI-M)
- Helmholtz-Zentrum Hereon
- German Climate Computing Center (DKRZ)

Further partner institutions

Deutscher Wetterdienst (DWD)

German Federal Waterways Engineering and Research Institute (BAW)

Bundesamt für Seeschifffahrt und Hydrographie (BSH)

German Institute of Global and Area Studies (GIGA)

HafenCity University Hamburg (HCU)

Helmut-Schmidt-Universität (HSU)

Institute for Peace Research and Security Policy at Universität Hamburg (IFSH)

Hamburg University of Technology (TUHH)



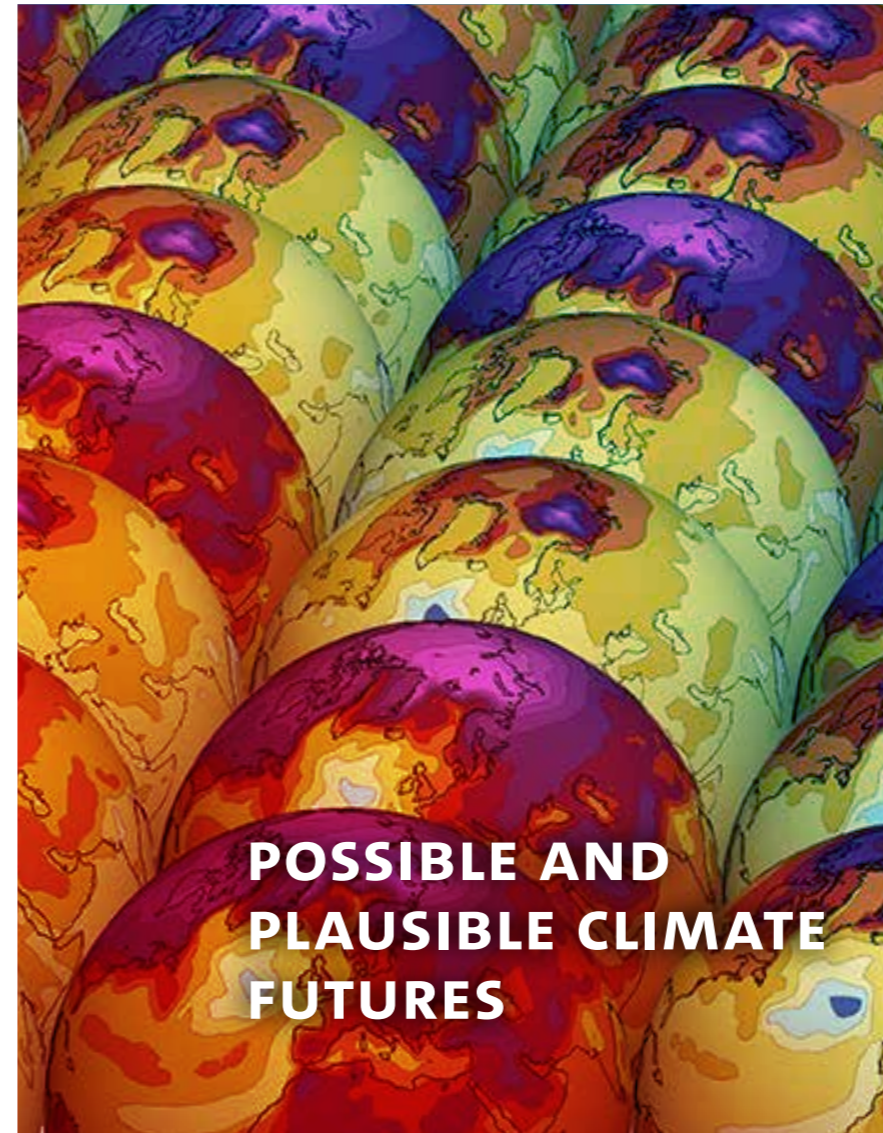
## CLUSTER OF EXCELLENCE CLIMATE, CLIMATIC CHANGE, AND SOCIETY (CLICCS)

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## IDENTIFYING CLIMATE FUTURES

CLIMATE, CLIMATIC CHANGE, AND SOCIETY (CLICCS) is an ambitious research program at Universität Hamburg and strong partner institutions. Funded by the German Research Foundation (DFG), it is part of Germany's Excellence Strategy. The program aims to understand climate changes, taking into account internal variability, extreme events, and unexpected side effects, addressing the natural and social spheres as well as their interactions. The overarching research question is: Which climate futures are possible and which are plausible?

The 2015 Paris agreement provides a powerful impetus not only for climate policy but also for climate research. The research challenges resulting can only be tackled in a program spanning the range from basic research on climate and social dynamics to the transdisciplinary exploration of human-environment interactions – exactly the CLICCS vision.

## ENABLER FOR DECISION MAKERS

Based on extensive experience in interdisciplinary climate research, CLICCS will identify plausible climate futures on all scales – ranging from global to local. This competence is key to provide the information needed by decision makers for planning a sustainable future, including the ability to cope with surprises in the climate system.

A central synthesis project will distill results on possible and plausible futures within CLICCS and worldwide into an annual 'Hamburg Climate Futures Outlook'. Knowledge transfer will be accomplished jointly with the GERICS Climate Service Center.

## OUR VISION



„CLICCS investigates to what extent the world is heading towards or away from a decarbonized future, and if this future world is based on conflict or cooperation.“

PROF. DR. ANITA ENGELS

CLICCS Spokesperson,  
Faculty of Business, Economics and Social Sciences,  
Department of Social Sciences, Universität Hamburg

„We need to advance our understanding of the climate system in all its facets. Only this way will we be able to assess which climate developments are possible, and which are plausible.“



PROF. DR. JOHANNA BAEHR

CLICCS Co-Spokesperson,  
Faculty of Mathematics, Informatics and Natural Sciences,  
Institute of Oceanography, Universität Hamburg

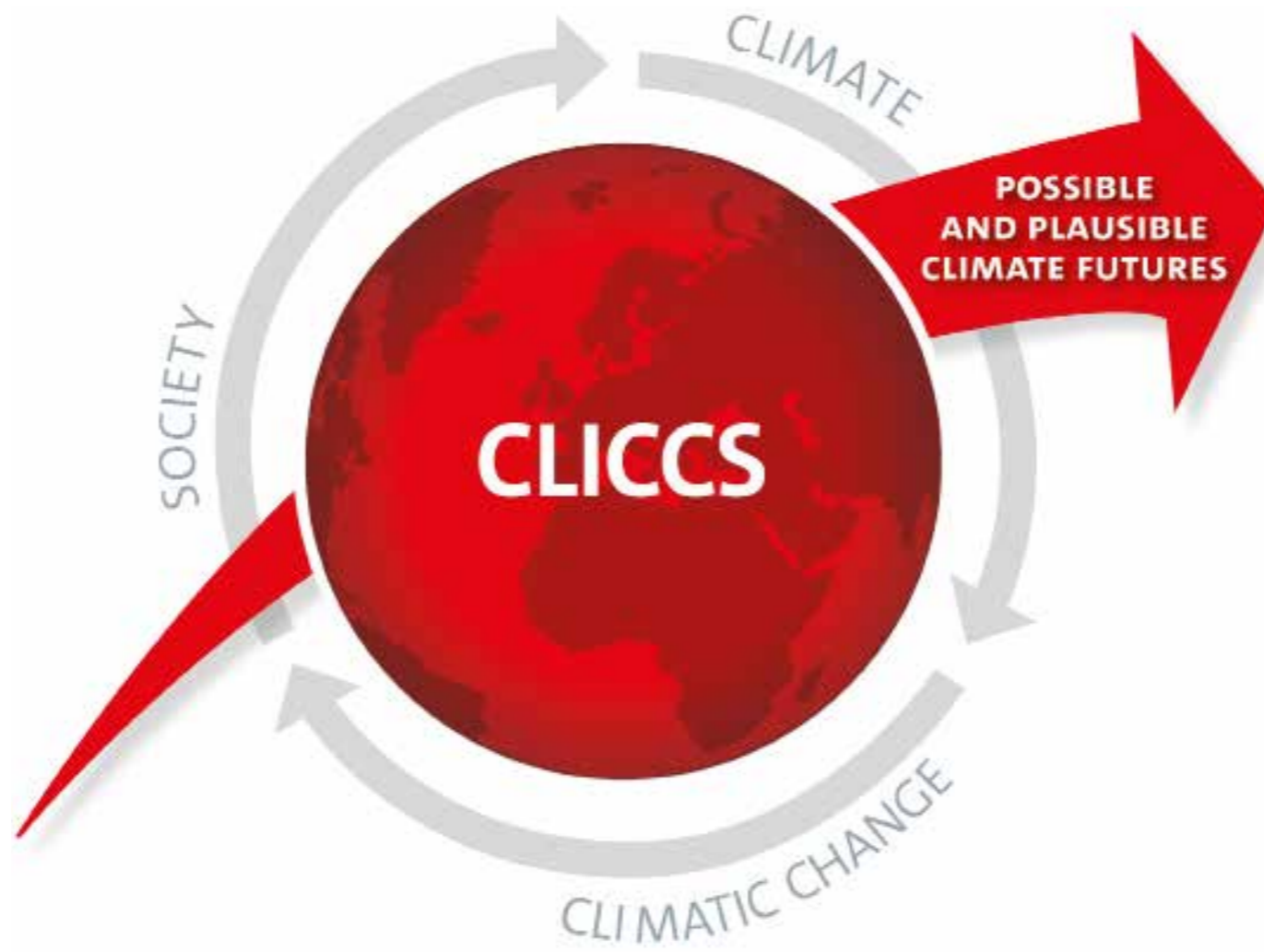


„It is Hamburg where it all comes together: There is close and successful cooperation with a wide scope of partner institutions with strong performance in their respective fields.“

PROF. DR. JOCHEM MAROTZKE

CLICCS Co-Spokesperson,  
Max Planck Institute for Meteorology  
(MPI-M)

# Which climate futures are possible and which are plausible?



## OUR APPROACH

CLICCS investigates how climate changes and how society changes with it, thereby feeding back on climate. It will identify those climate futures that are consistent with both climate and social dynamics (possible), and those we expect to unfold with appreciable probability (plausible).

The program will use observations and models of the natural, coupled human–environment, and social systems to understand the processes governing these systems, and to formulate adaptation and mitigation strategies. The scientific objectives will be achieved through three intertwined research themes:

**A** – provides the natural basis for understanding climate system dynamics, including climate variability and extremes, the climate change already unfolding, and the climate change expected for the future.

**B** – investigates the climate-related dynamics of social systems and provides the social science foundation for the construction of plausible climate scenarios, with a specific emphasis on deep decarbonization.

**C** – focuses on coupled human – environment dynamics on a regional level, where climate change becomes visible and where sustainable adaptation can be realized by local actors.

The themes combine the research of 14 dedicated projects. Support will be given through ‘High-Performance Computing and Data-Intensive Science’.