

CEN

SCIENTIFIC FOCUS

- stands for: “Center for Earth System Research and Sustainability”.
- is engaged in climate, environmental, and earth system research.
- bundles expertise from twelve institutes and institutions of Universität Hamburg and is part of the local network KlimaCampus Hamburg.
- members include oceanographers, meteorologists, marine biologists, geophysicists, geologists, soil scientists, geographers, biogeochemists, economists, social scientists, historians, as well as peace and security researchers. The goal is to work together to address overarching scientific issues.
- works interdisciplinary and therefore links the natural and social sciences – in research, research-driven education and support for young scientists. Teaching and research are closely linked and young scientists are actively involved in research.
- is a central research center at Universität Hamburg and is located directly at the presidium.
- takes part in research networks and is a member in numerous national and international programs. In addition, CEN coordinates a number of national and international scientific projects.
- scientists work in different buildings. From 2020 they will find their common home in the new building next to the Geomatikum (Haus der Erde).

- What are the interactions between ocean, atmosphere, biosphere and geosphere?
- How has our Earth system changed and what must we expect in the future? How do environmental risks and climate change affect marine and terrestrial ecosystems?
- What social reactions are to be expected? How do energy hunger, intensive or extensive use of resources shape our society and our environment?

CEN RESEARCH TOPICS UNTIL 2020

EARTH SYSTEM DYNAMICS

- Causes and impacts of climatic changes in the earth system
- Energy flux as a communicator of earth system changes
- Element cycling at boundary layers of the earth system
- Impacts of sea level changes on coastal regions

SUSTAINABLE STRATEGIES AND SOCIAL DYNAMICS

- Marine ecosystem services and their management
- Urban areas in global change
- Energy landscapes
- Climate change and society

EMERGING ISSUES

- Soil resources in the environment and climate system
- Food transitions
- Climate and georisks

COORDINATION OF MAJOR PROJECTS

- **CLICCS “Climate, Climatic Change, and Society”** (Cluster of excellence, funded by the DFG, is part of Germany’s excellence strategy)
- **CERES “Climate change and European aquatic RESources”** (fisheries and aquaculture, funded by the EU)
- **CarboPerm** (German-Russian project on permafrost soils in a changing climate, funded by the BMBF)
- **FOR: AFC “Evaluation of the Atlantic freshwater cycle”** (funded by the DFG)
- **TRR 181 “Energy transfer in Atmosphere and Ocean”** (funded by the DFG)
- **NACLIM** (Predictability of the climate in the North Atlantic region, funded by the EU)
- **SPP “Regional Sea Level Change and Society”** (DFG priority programme on global and regionale sea level changes)
- **WIT “Wave Inversion Technology”** (research for seismic exploration, funded by companies from the energy industry)



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CENTER
FOR EARTH SYSTEM RESEARCH
AND SUSTAINABILITY (CEN)