

klimazwei overview

- + Funding period: 2006 – 2009
- + Project duration: up to three years
- + Financial volume: about 35 million €
- + 39 research topics (divided roughly equally between mitigation and adaptation)
- + three accompanying research projects

For more information

For a description of the individual research projects and additional information on the research programme **klimazwei**, please refer to

<http://www.klimazwei.de>

klimazwei is funded by the Federal Ministry of Education and Research and managed by

German Aerospace Centre (DLR)
Project Management Agency
“Environment, Culture, Sustainability”
Heinrich-Konen-Str. 1
53227 Bonn
Germany
Phone: +49-228-3821 511
Fax: +49-228-3821 540

Contacts:
Annette Münzenberg (Adaptation)
Gregor Laumann (Adaptation)
Lars Schanz (Mitigation)

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Federal Ministry
of Education
and Research



klimazwei – Research for climate protection and protection from climate impacts



RESEARCH

Igniting ideas!

Climate change is happening

We need to deal with it

The effects of climate change are increasingly being felt and influencing activities in society, the economy and politics. As a critical development factor they pose great challenges, both worldwide and nationally. Everybody is affected, but everybody can also help in mitigating climate change and adapting to those consequences that are already inevitable.

Research must also identify new ways to cope with climate change. The German Federal Ministry of Education and Research (BMBF) is therefore investing in research and development of technologies and strategies to deal with climate change. The aim is to better estimate and reduce the risks resulting from climate change as well as to identify and exploit opportunities for society and the economy. The research programme “**klimazwei** – Research for climate protection and protection from climate impacts” is an essential contribution to the development of suitable ways of dealing with climate change in the future. It is the start of a new generation of research activities from BMBF in this area.



Our capacities for technological advance will play an essential role to meet the challenges of climate change.



Logistical optimization can tap potentials for emission reduction and cut costs at the same time.

programme. Furthermore, it is part of the BMBF framework programme “Research for Sustainability”.

klimazwei is BMBF’s first funding programme explicitly addressing the topic of dealing with climate change. The programme is the first in a series of activities in the context of BMBF’s action programme “Research on Climate Change” in which this topic will be further developed. The research results from **klimazwei** are expected to provide know-how on dealing with climate change to meet the needs of companies and business organisations, society and politics. Furthermore, they will make a significant contribution to international scientific assessments of climate change.

Mitigation and adaptation

Ways to deal with climate change

In **klimazwei** BMBF is supporting projects and research clusters on both aspects of dealing with climate change: mitigation and adaptation.

The mitigation aspect focuses on the development of new technologies, processes, and strategies leading to a significant reduction of emissions of gases that affect climate. As well as carbon dioxide, this includes all other greenhouse gases covered by the Kyoto Protocol. The topics funded cover a wide range of technologies and processes for greenhouse gas reduction. They include techniques for feeding biogas into networks for natural

“mitigation” = measures to reduce or avoid emission of greenhouse gases

“adaptation” = measures to reduce risks and to make use of the opportunities for society and the economy arising from climate change that is already unavoidable

Research programme klimazwei

Dealing with climate change

Under **klimazwei** BMBF is funding more than forty research projects with innovative ideas on how to deal with climate change. The core of all these projects is the development and use of new technologies, processes and strategies as a scientific response to the challenges of climate change. The individual research topics represent a wide range of implementation-oriented research approaches designed to limit climate change and to improve the ability of society and the economy to adapt to the consequences of climate change, globally as well as nationally. Central to all the projects is their close relationship to practice with the goal of definite actions.

The research programme **klimazwei** is an important step towards the mobilisation of the strengths of German research and development for the goals of climate protection and adaptation to climate impacts. It will strengthen the capacity of the German government to act in a global climate regime, and will help to ensure the international competitiveness of the German economy under the conditions of a changing climate.

klimazwei is a contribution to the measures already funded by the Federal Government in the national climate protection



Environmentally friendly wind propulsion system for future ships: The SkySails system uses a large towing kite similar to a paraglider to propel cargo vessels, superyachts and fish trawlers.

gas, processes for the thermo-catalytic disposal of methane-containing exhaust fumes, new types of construction for greenhouses that save energy and resources, and also advising small and medium-sized enterprises on how to increase their energy efficiency. In the energy-intensive sector of transport and traffic, there are projects on optimising flight paths, on the reduction of CO₂ emissions in ocean shipping, as well as on the realisation of a new concept for electrical propulsion in public transport.

The adaptation aspect complements the research programme with activities aiming at the development, implementation and dissemination of technologies and strategies for effective and efficient adaptation to the likely changes of climate and the occurrence of extreme weather events. It aims to reduce negative effects, to implement flexible precautionary measures, and also to seize potential opportunities as they arise. The research clusters range from adaptation strategies in agriculture (e.g. optimised cultivation methods, plant breeding measures or adapted forest management) to innovations in building technology and water management. The development of integrated strategies for individual cities or regions is an important activity as is the development of systems for decision-making and early warning as well as suitable ways to communicate climate-related risks.

In addition to the regular projects funded by BMBF under **klimazwei**, there are three accompanying projects supporting



Wheat is one of the main field crops in Germany. As precipitation patterns change in many places, plant breeding develops wheat varieties adapted to dryer conditions.

the funding programme generally and structurally. The “Service Group Adaptation” (SGA) supplies the **klimazwei** projects with results from basic climate research (especially climate modelling), processing the results according to the specific requirements of the individual research projects and providing advice on the use of the data. A second accompanying project aims at improving information exchange between research institutions, enterprises and business organisations, politics and the interested public. Its particular focus is to enhance communications between climate research and the economy. The topic of the third accompanying project is the communication of ways to deal with climate change as part of the school curriculum.

The effects of climate change are not completely known. However, it is clear that climate change will affect almost every area of life. The projects and project clusters funded under **klimazwei** provide examples for possible mitigation and adaptation measures. There is still much to do in the future.