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KLIMZUG climate change in regions

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The Northwest of Germany

The Northwest of Germany is characterized by lively and modern cities and a rough landscape of coastal wetlands and moors.

The flat land in the Northwest has long become a centre of logistics and harbor industry, of food production, and expertise in aerospace, energy and environmental technology. The region is one of Germany's most dynamic industrial locations.

nordwest2050 focuses on the Metropolitan Region Bremen-Oldenburg in the Northwest of Germany, a region with more than 2.3 million inhabitants.

nordwest2050

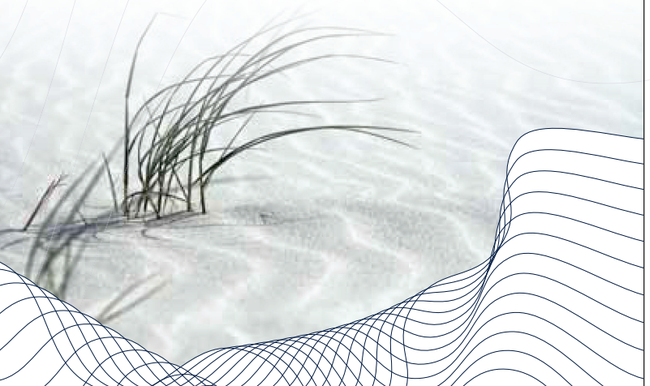
Prospects for Climate-Adapted Innovation Processes in the Metropolitan Region Bremen-Oldenburg in Northwestern Germany

A “Roadmap of Change” for the Northwest of Germany

Key instruments of **nordwest2050** are innovation, dialogue, and the definition of a harmonized “Roadmap of Change” for the Northwestern region of Germany. The aim of **nordwest2050**, an interdisciplinary research project, is to prepare the region for the expected impacts of climate change while improving local planning and development processes.

nordwest2050 is a consortium of partners representing regional economy, science, and politics. The project partners will develop and implement technological and institutional innovations concerning regional adaptation to climate change in collaboration with the local semi-public agency “Metropolitan Region Bremen-Oldenburg in the Northwest”. All partners will commonly define a long-term “Roadmap of Change” and identify adequate adaptation strategies for the region, thus helping to reduce risks and leverage opportunities created by climate change.

A close cooperation with the partner region of Maryland (USA) and further research projects on adaptation to climate change in Germany will assure a general transferability of the results.



Analysis and methods: The concept of resilience

The “Roadmap of Change” is mainly based upon sectoral strategies for adaptation to climate change. These sectoral approaches are developed in three economic clusters (energy, food, harbor/logistics) as well as on the regional level. The sectoral approaches will consider results deriving from five relevant fields of consolidation:

Theory and methods: What are theoretical and conceptual foundations for a successful development of strategies on adaptation to climate change?
Analysis of vulnerability: How vulnerable is the Northwestern region to the expected changes in the climate system? How sensitive are the economic clusters along their value chains towards ecological incidents? Regarding a growing demand for adaptation goods and processes, how large is the economic potential of adaptation to climate change for the region?
Analysis of innovation capacity: Which competencies and potentials are available within the economic clusters in order to tackle climate change? How can these capacities be mobilized?
Governance: Are existing governance structures in the region sufficiently prepared to successfully implement adaptation strategies?
Paths of innovation: Which concrete adaptation projects can be developed and implemented by 2014 in cooperation with corporate partners?

nordwest2050 combines existing methods of future research with computer-based modeling in order to present different possibilities of change management. The approach results in a comprehensive “Roadmap of Change” for the whole region. Monitoring and evaluation continuously accompany the process.

Paths of innovation: On the way to a regional adaptation strategy

The following questions function as key issues, which frame the research of **nordwest2050** in order to come up with integrated, applicable solutions:

How do regional **governance structures** have to be designed in order to be receptive towards the implementation of a flexible adaptation strategy in the long run?

How do sectoral **value chains** have to be designed in order to be resilient towards climate variability?

How can successful **company-based adaptation** strategies be designed and implemented?

How far and under which circumstances can **visions** be used as successful instruments within the development and design of technology?

How can **energy infrastructure** be designed to be more resilient towards climate change?

How can the potential of unused **ambient and waste heat** be exploited in order to provide cooling and electricity?

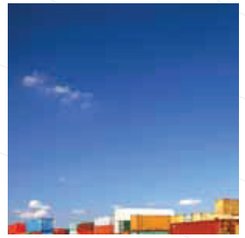
Which variations of cultivation and breeding can be offered in order to maintain the productivity of the **food industry** with regards to the dynamics of climate change?

How must **production and marketing strategies** be adapted to meet consumer requirements in times of climate change?

Where do **conflicts of land use**, caused by the interest gap between energy production and alimentation security, arise? Are their any options that could solve these conflicts?

How can the **harbor industry** contribute to a more resilient regional development?

What are instruments suitable to solve conflicts of land use arising from the expansion of **renewable energy sources**?



Photos (from left to right): Designritter, Rowan, Kai, Knockenmitte, Hindemit | Source: PHOTOCASE