

Climate Change Adaption Strategies in German Regions and Cities - a review -

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Climate change is in progress. The year 2010 was the warmest year since climate recordings. On the climate conference in Copenhagen and Cancun the world community acknowledged that a heating up of the atmosphere higher than 2 degrees is crucial. On the other hand necessary conventions towards a CO₂ reduction were not decided. Therefore apart from the climate mitigation also climate adaptation becomes a growing topic worldwide. Also in the last years the resolution of the global climatic models was improved. It is now possible to calculate by so-called „Downscaling “ methods the regional impacts of climate change scenarios. In Germany different models (WETTREG, REMO, STAR, CLM, MOVE) are used. Regional differences as well as differences between North and South Germany are shown by the effects of climatic change.

In Germany the federal government agreed 2008 to the ‘German adaptation strategy towards climate change’ (Deutsche Anpassungsstrategie an den Klimawandel (DAS)). Since then several research projects were started by the government with focus on climate adaptation strategies. The research projects are supported by the Federal Office for Building and Regional Planning and of the Federal Ministry for traffic, building and town development (BMVBS). Different metropolitan regions (e.g. Berlin, Hamburg, Frankfurt, Ruhr district and Stuttgart) are participating in the research projects and have started to work out climatic change adaptation strategies. Within the projects are close working together between scientist and the municipalities and other actors are part of the projects concept. Beside possible impact studies and vulnerability analysis, adaptation ways are of discussion.

The research program (KlimaExWost) carried out by Federal Institute of Building and City and Spatial research (BBSR) has two main research fields – strategies and potential to the climate change one focusing city planning the other focusing real estate projects. In the context of the project the existing problems and constraints are to be examined and first steps towards a climate change respecting city planning are tested. The following topics are regarded thereby:

Basis knowledge towards a climate change responsible city planning, decision tools for planning, international examples and climate adaptation on different planning levels.

With the scheme „model project of the regional planning” (KlimaMORO) the Federal Ministry for traffic, building and town development also supports the practical testing and conversion of innovative programs and instruments to the climate change in co-operation between science and practice, i.e. with participants locally in eight selected regions of Germany. The region Stuttgart is one of the eight promoted regions. By the natural topography and settlement conditions this region will have a variety of negative climate change impacts, i.e. heat stress, drought, etc.. In order to develop a climate change adaptation strategy it is necessary to analyze the current climate situation in the region including as well future climate scenarios. Therefore in the Region Stuttgart a Climate Atlas with many climatic maps was developed in 2008 (<http://www.region-stuttgart.org/vrs/main.jsp?navid=427>).

This lecture will give an overview on current climatic change strategies in German regions and cities.