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## The role of climate information for the urban transition towards sustainability

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Urban areas are prone to climate change impacts. A transition towards sustainable urban systems is relying heavily on useful, evidence-based climate information on urban scales.

However, many of the urban climate models and regional climate models are currently either not scale compliant for cities, or do not cover essential parameters and/or urban-rural interactions under climate change conditions. Furthermore, although e.g. the urban heat island may be better understood, other phenomena, such as moisture change, are little researched. Our research shows the potential of regional climate models, within the EURO-CORDEX framework, to provide climate information on urban scales for 11km and 3km grid size. The city of Berlin is taken as a case-study. The results show that the regional climate models simulate a difference between Berlin and its surroundings for temperature and humidity related variables. There is an increasing urban dry island in Berlin towards the end of the century, as well as an increasing urban heat island. The study shows the potential of regional climate models to provide climate change information on urban scales.

For climate information to underpin the urban transition this information will need to be put in a decision-making context. As an example, the research aims to understand connections to the health sector on how to integrate the information in order to manage e.g. the dispersion of pollen in cities, assisting in mitigating pollen allergies. The research showcases an interdisciplinary way forward to firstly produce climate information on urban scales and secondly how to connect it to city sectors in a suitable manner to underpin the transition to sustainable urban systems.