



Building urban resilience to climate change

Long-term urban planning is needed to adapt the urban environment and make it more resilient to climate change, according to a new European Environment Agency (EEA) report that aims to support urban policy development and decision making.

Certain characteristics make the urban environment particularly vulnerable to heat, flooding and water scarcity. For example, buildings and road surfaces store heat and prevent water from draining away, while in times of water shortage, high population density and the demands of industry put pressure on water sourced from the surrounding regions. As climate change intensifies, it will exacerbate these existing weaknesses and pressures. Cities are home to three quarters of the European population and are the centres of economic activity; doing nothing to protect urban environments from climate change will affect most people in Europe and their livelihoods.

The report provides information intended to help policymakers at all levels of government to reduce the vulnerability of European cities to climate change. It focuses on the most important impacts of climate change on the urban environment, describes potential solutions, such as revising building standards to cope with new conditions, and highlights challenges and opportunities for multi-level governance. It also points out that climate change adaptation presents an opportunity for innovation and job creation.

According to the authors, long-term planning and commitments to provide large financial resources are crucial. They argue that buildings and infrastructure need significant investment over the coming decades in order to climate-proof them and keep them functioning. This entails incorporating climate change adaptation concerns into building standards and retrofitting activities, for example, ensuring that sewage systems can withstand greater rainfall, buildings are better insulated against heat, and transport systems can cope with higher temperatures, low water availability or flooding.

Investment is also needed into 'green infrastructure', such as parks, gardens, wetlands, natural areas, green roofs and trees, which contribute to resilience under a changing climate and deliver ecosystem services. The report states that green infrastructure in cities can create a cooling effect and help manage floods, as well as providing attractive areas for nature, wildlife and recreation.

One key message from the report is that an effective framework for adaptation to climate change depends on planning and cooperation at all levels. While innovative adaptation projects at the local level will be important for dealing with the impacts of climate change, these depend on support from the highest levels of government. Thus, the framework should encourage dialogue between the different levels, as well as with EU citizens and private sector organisations.

Source: European Environment Agency. (2012). *Urban adaptation to climate change in Europe*. EEA Report No 2, 1-143. This report can be downloaded from: www.eea.europa.eu/publications/urban-adaptation-to-climate-change

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