

Title: Adaptation to Climate Change in the Urban Landscape: Case Study of Bratislava City, Slovakia

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Abstract

Regarding the situation in Slovakia, the development of adaptation strategies in regional and local levels is in a very early stage. Partial analyses of climate change impacts and adaptation measures in various sectors (e.g. agriculture, water management, forest management, tourism, transport, biodiversity, health and energy) have been already developed (Mind'áš et al., 2011). Preparation of the National Adaptation Strategy has recently begun under leadership of the Ministry of Environment. So far small attention has been paid to urban landscape. Currently cities and municipalities in Slovakia have limited support from the national governance. Adaptive climate change actions are in most cases on a voluntary base and are performed by members of NGOs with support of self-governmental authorities and experts. The Regional Environmental Centre Slovakia was involved in GRaBS project: Green and Blue Space Adaptation for Urban Areas and Eco Towns (Kazmierczak, Carter, 2010). The GRaBS methodology was also applied in Bratislava City in 2009-2011 (Hudeková et al., 2011). The guidelines for the self-governance were developed by the Carpathian Development Institute in Košice (Šteiner, Hegyi, 2012) and a pilot demonstration project was conducted in city Spišská Nová Ves.

In our contribution, we assessed the development process of the Climate change adaptation strategy for Bratislava City, the capital of Slovakia (0,462 mil. inhabitants, 2012). Bratislava City has been involved in the training phase of the EU project "Adaptation strategies for European cities" initiated by the European Commission's DG CLIMA (2012-2013). The project evaluates best practices across Europe, provides guidance and tools for adaptation strategies and organises training for local communities. The adaptation strategy for Bratislava City was prepared on the basis of best existing practices (e.g. Ribeiro et al., 2009; Birkmann et al., 2010; Hunt, Watkiss, 2010; Kazmierczak, Carter, 2010; Hudeková et al., 2011; EEA, 2012a,b; Šteiner, Hegyi, 2012, Kozová, Hudeková, 2013). Experiences with development of adaptation measures for urban landscape in Bratislava City are presented and following questions are discussed:

1. Which climate change impacts on key sectors and areas of significant vulnerability need to be addressed as priorities?
2. What procedure should be applied and implemented in urban landscapes for applying new innovative approaches to present governance mechanisms and planning practices at local and regional levels?
3. How to revise existing monitoring systems and supplement these with cross-sectoral indicators for assessing adaptive capacity of the urban landscape?

4. Which were main obstacles and problems have been identified in preparatory phase, development of the adaptation strategy, determination of strategic direction, proposal of adaptation measures to climate change and their implementation into existing planning documentation in Bratislava City?

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