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Max. 400 words, title, name and contact data of authors, short description of presentation

4. Adaptation in different sectors (water, coasts, agriculture, forestry, nature, health)

VII. Ecosystem-based approaches to adaptation and disaster risk reduction

Integrating the ecosystem-based approach in municipal adaptation strategies: the case of Germany

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In order to address the increasing impacts of climatic extremes and variability, more and more cities are establishing climate change adaptation strategies. In parallel, the ecosystem-based adaptation approach has gained increasing interest during recent years by governmental bodies and scholars alike. The approach uses biodiversity and ecosystem services for adapting human systems to climate change. In cities, green infrastructure provides ecosystem services and biodiversity, and its climate regulating functions are widely acknowledged. Nevertheless, it remains unclear how the importance of ecosystems and natural resources for climate change adaptation is addressed in urban adaptation strategies. The present study aims to increase knowledge on the integration of ecosystem-based adaptation in urban adaptation strategies and related planning processes. The adaptation strategies of German cities are assessed to analyse whether or not the ecosystem-based adaptation approach is explicitly or implicitly addressed, and if so, why. The analysed cities were selected according to three criteria: 1) They include a stand-alone adaptation strategy or an integrated adaptation strategy in their mitigation or urban development programmes; 2) They have over 100,000 inhabitants, as large cities are highly vulnerable due to their concentration of population and economic assets; 3) They are affected by an increase of extreme heat events and flooding after heavy rain. On this basis, 32 adaptation strategies were identified. The strategies were reviewed using ecosystem-based adaptation related keywords to identify sections of text for a content analysis. Results show that none of the analysed strategies deals explicitly with the ecosystem-based adaptation approach. However, implicitly, nearly all strategies include activities that can be related to the ecosystem-based adaptation approach and its underlying ecosystem services concept. Reasons for including these activities are often not elaborated in detail and generally only related to certain aspects of the ecosystem service concept. A comprehensive approach is missing. On this basis, the paper discusses core areas and possibilities for decision-makers to further enhance the integration of ecosystem-based adaptation into urban adaptation strategies and planning.

(323 words)