

# Managing flood risk in the urban environment: linking spatial planning, risk assessment, communication and policy

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## Abstract

Over recent years there have been a number of attempts at integrated approaches being taken to water and flood risk management. Recent flooding events in Europe have triggered discussions about giving rivers back their nature (floodplains instead of dikes). However, the emphasis tends to be on finding space for flood water in rural areas in order to protect the urban areas. The question how to deal with major floods in urban areas has not received much attention, and as yet the delivery of increased system resilience as defined by de Bruijn (2005) is a major challenge. In a resilient approach the focus is on accommodating flood waters, with concurrent impact minimalization and rapid recovery. Spatial solutions (diversification of defense levels for different land uses according to their vulnerability) may provide important opportunities to reduce flood impacts, whereas flood proofing of buildings enhances the recovery capacity of the system. In this paper it is argued that cities play an important role in driving the transition to adaptive flood management approaches across different spatial and temporal scales. Yet, at the moment there are a number of bottlenecks which have so far hampered the adoption and effective implementation of flood risk management into urban planning practices. As such the recent Urban Flood Management (UFM) project, which aims at the development and verification of UFM strategies and methodologies in the cities of Dordrecht, Hamburg and London, may provide relevant practical examples to address these issues. These experiences could contribute to national and European policy making, such as input for the EU Flood Directive. This paper discusses the background and challenges to the UFM project, and also shares the first insights from this international umbrella project.