Urban resilience to waterlogging: a multi-city comparison in China

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Rainstorm-triggered waterlogging is one of the major water-related disasters in urban areas. In recent years, it has been observed more frequently and has therefore received growing attention globally. The emerging concept of resilience provides an innovative and alternative perspective on urban disaster prevention and mitigation. However, this concept hasn't been sufficiently applied to improve our understanding of urban waterlogging mechanisms and management. In this study, we develop a framework for assessing urban resilience to waterlogging and for examining disaster coping strategies at the city level. Based on a cross-sectional study of over 30 cities in south-eastern coastal China and their rainstorm and waterlogging events in the last decade, we discover and evaluate the key factors that determine cities' capacities to respond to these water-related disasters. These outcomes can serve for both scientists and decision-makers as instructions for resilience building and risk mitigation.