

# Preface

The development of contemporary society is strongly dependent on its sustainability. The global sustainability is strongly dependent on the sustainability of the urban environment. Cities are quickly growing, and mankind is rapidly concentrating in urban areas. Since 2007, the world urban population had exceeded the rural population and the number of megacities is rapidly increasing. Cities are connected by a dense and complex web of relationships and represent the heart and the engine of the global development of contemporary society.

However, cities are also increasingly vulnerable and any adverse event can rapidly evolve into a catastrophe. Contemporary cities are becoming risk attractors because of the increasing technological complexity of urban systems, along with the increasing population density. A natural event of medium intensity occurring in any given area will threaten more human lives and produce much greater economic loss than a century ago, if proper mitigation actions have not been implemented. Some climate change-related natural hazards (floods, hurricanes, windstorms) are expected to increase with time almost everywhere. A city growing without an urban planning carefully considering such events will enhance its effects and will become a risk trap. In order to increase the resilience of cities against catastrophes the urban transformation processes must be also aware of the importance of extreme events and must be addressed to mitigate their effects on the vital functions of cities and communities. Redundancy and robustness of the components of the urban fabric are essential to restore the full efficiency of the city's vital functions after an extreme event has taken place. Hence, sustainability and resilience are the main keywords for future cities.

The present publication is the result of a Networking Event, held during the 6th UN-World Urban Forum, in September 2012, in Naples, Italy, and entitled "Resilience and Sustainability in Relation to Disasters: A Challenge for Future Cities." The Networking Event was arranged by the research center Analysis and Monitoring of the Environmental Risk (AMRA) and the Department of Structures for Engineering and Architecture of the University of Naples "Federico II." The Networking Event was aimed at presenting different approaches to the issues of resilience and sustainability of future cities. Scholars from different disciplines, including sociologists, economists, scientists involved on natural risks and physical vulnerability, and provided their own perspectives. This publication represents the final product of that event. Its objective is to share knowledge and experience

with the hope to offer a thoughtful interdisciplinary view to sustainable development of future safe cities.

Adam Rose, economist, professor at the University of South California and Coordinator for Economics of the Center for Risk and Economic Analysis of Terrorism Events, illustrates the role of economic resilience in the survival of cities. He highlighted how experience with disasters can be transformed into actions that promote sustainability.

Graham Tobin, professor of Geography, Environment and Planning at the University of South Florida, showed how social networks are related to vulnerability and sustainability, affecting community resilience in all the phases of a disaster, from the exposure to an incoming event, to evacuation, to resettlement.

Gertrud Jorgensen, professor of Architecture at the University of Copenhagen, presents the results of the FP7 CLUVA project (CLimate change and Urban Vulnerability in Africa), focusing on climate change adaptation in African urban areas.

Kalliopi Sapountzaki, professor of applied geography at the University of Athens, highlights the need for both “collective resilience” and “individual resilience for all the citizens.”

Edith Callaghan, professor at the School of Business at the Acadia University, contributes to the final chapter of this publication with his experience on how community engagement into decision-making processes can improve resilience and risk management of urban areas.

Gaetano Manfredi and Domenico Asprone, respectively, professor and assistant professor of Structural Engineering at the University of Naples “Federico II” link the concepts of urban resilience and sustainability and explain how urban resilience can be introduced as a fundamental aspect of social sustainability in future cities.

Paolo Gasparini, professor emeritus of geophysics at the University of Naples “Federico II,” and CEO of AMRA, together with Angela Di Ruocco and Raffaella Russo, respectively, Senior Researcher and Junior Researcher at AMRA, analyze natural hazards impacting on future cities. He indicated that the participation of citizens, along with advanced technologies, can play a fundamental role for effective real-time risk mitigation.

This publication collects all these contributions addressing different issues and scientific points of view to urban resilience in relation to natural disasters. The final chapter provides an integrated perspective to this issue along with a list of

recommendations for decision makers to promote and enhance urban resilience, emphasizing that resilience in the short term is necessary to ensure sustainability in the long term.

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