PLANNING AS A TRANSFORMATIVE ACTION IN AN AGE OF PLANETARY CRISIS

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lenges, and public perceptions (Reed, 2008). Policy recommendations include strategies to incentivize green infrastructure, enforce land-use regulations, and foster integrated governance frameworks that align technical solutions with social equity considerations.

By demonstrating the capacity of the Sponge City concept to mitigate flooding, enhance urban livability, and build resilience, this research contributes to a broader understanding of how nature-based solutions can complement conventional infrastructure in dense urban environments. The findings offer Gangnam actionable strategies for sustainable flood management while providing a replicable framework for other cities facing similar challenges. This study aligns with the conference's call for proactive disaster risk management and highlights the importance of shifting from short-term emergency responses to holistic, preventative resilience-building practices.

Keywords:

Sponge City; Flood Resilience; Green Infrastructure; Climate Adaptation

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T_12 DISASTER-RESILIENT PLANNING / 1090

How the coastal cities are transforming? The disaster as catalysts of change

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In the contemporary era, rapid demographic growth, widespread urbanization in vulnerable areas, and the escalating impacts of climate change have heightened the exposure of cities to natural disasters. Among the various forces of nature, water emerges as a pivotal factor in these catastrophes, manifesting both as scarcity and overabundance. Prolonged droughts and wildfires are direct consequences of insufficient water availability,

while sudden and excessive precipitation often leads to devastating floods and hydro-geological instability. In addition to these acute and extreme events, slower and more progressive phenomena, such as rising sea levels, present equally significant threats to urban landscapes and coastal territories.
Coastal cities, particularly those situated along the U.S. East Coast (Rebuild by design, 2012), and in India, have been at the forefront of monitoring and addressing the risks posed by rising sea levels. Similarly, several northern European nations have proactively implemented national strategies aimed at enhancing urban resilience for several decades. In contrast, the Mediterranean region has emerged as one of the most vulnerable areas globally to the impacts of rising sea levels. According to projections by the European Environment Agency (EEA, 2024), sea levels in the Mediterranean are expected to rise by approximately 10 centimeters prior 2050. While early discussions on this issue began as early as the 1970s under the framework of the Barcelona Convention (UNEP/MAP, 1976). —highlighting the need for integrated coastal area management—many countries in the region still lack the necessary tools and frameworks to address these challenges effectively. The absence of adequate planning mechanisms significantly increases the likelihood of emergency scenarios, such as those witnessed along the Valencian coast in late October 2024.
Given these pressing challenges, a critical question arises: how can we effectively plan coastal territories using a resilient approach that prioritizes proactive management of change over reactive responses to emergencies? This research aims to address this question through an inductive methodology that bridges the domains of design and planning. By analyzing concrete case studies from diverse geographic and socio-economic contexts, the research seeks to develop a comprehensive strategy for guiding coastal planning practices. The ultimate goal is to formulate actionable guidelines that integrate the scales of urban planning and design, ensuring a holistic and resilient approach to managing coastal areas.
A central component of this research initiative is the development of an "Disasters Compendium" for coastal cities. This compendium serves as a repository of global case studies documenting disasters resulting from the dynamic interaction between land and sea. These disasters are conceptualized not merely as crises but as catalysts for innovation and transformation in urban and territorial planning. By systematically collecting, classifying, and analyzing these global experiences, the compendium aims to identify patterns, strategies, and best practices that have emerged in response to such challenges.
The insights derived from this analysis will form the basis for structuring comprehensive guidelines tailored to the Mediterranean region's unique vulnerabilities. By framing disasters as opportunities for learning and innovation, this research underscores the need for a paradigm shift in coastal planning—one that embraces resilience as a cornerstone for sustainable urban development in the face of climate change.
This paper presents the progress of a key outcome from the PRIN COSTA|Med research project, currently being conducted at Università degli Studi Roma Tre.

Keywords:

Disaster; Coastal cities; Sea-level rise; Resilient planning

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Assessment of community resilience to disaster at the local level in Korea

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