Towards a Morphological Approach for Water Sensitive Spatial Transformations - the case of Guangzhou, the Pearl River Delta, China

Keywords: spatial transformations, morphological approach, urbanization, water sensitive delta cities, the Pearl River Delta, Guangzhou

Urban Design - Theory & Methods

Area of Research: Urban Morphology

Research Summary: Urbanized deltas are vulnerable to changes driven by natural forces and human interventions, such as climate change, subsidence, population growth and economic development. Among others, flood risk is one of the most common issues all over the world. However, the lack of integration of current spatial planning and water management undermines water sensitive spatial quality for densely populated delta cities. The situation is even worse for Chinese delta cities where extremely rapid urbanization is taking place. The research is targeted to better understand the process of urban transformation and the impacts of urban development on water sensitive spatial quality of Guangzhou in the Pearl River Delta of China. The historical analysis is expected to contribute to sustainable strategies in dealing with flooding issues for current and future urban development towards a better living environment.

Research Methodology: The research adopts a layer approach in the framework of urban morphology, which includes three major layers: Landscape Layer, Infrastructure Layer and Urban Occupation Layer, with special focus on the interactions among three layers as well as the analysis on different scales and timelines.

