Smart and nature-based urban design improving flood resilience

Flooding is the most damaging and costly hydrometeorological hazard affecting millions of people globally every year. In Vietnam, low-lying coastal cities, particularly in river deltas, face increased flood risk and vulnerability due to rapid urban development and climate change. Between 1990-2009 floods caused estimated damages of US$3.85 billion, equivalent to 1.3% of national GDP; between 1989-2010 floods accounted for 67% of deaths (6,757 cases) among all disaster types. The city of Can Tho, with a population of approximately 1.5 million and situated in the centre of the Vietnamese Mekong Delta is an example of a city vulnerable to multiple types of flooding.

A team of researchers from Vietnam and the UK are taking an untraditional approach and look into the potential of investments in blue/green infrastructure (BGI) to enhance flood resilience and improve natural capital in Can Tho at the same time. With proper planning and design, urban BGI such as riverside parks, roadside buffer strips or roof gardens, can reduce flood risk while also alleviating heatwaves, air and noise pollution and providing space for recreation. The project, which started in early 2019 and will run until June 2021, will bring together researchers and local and regional practitioners to assess costs and benefits of traditional and BGI flood risk reduction measures in different scenarios across Can Tho.

“Investment in blue/green infrastructure is a promising strategy to achieve multiple development goals in urban areas faced with increasing risks of river- and rain-induced flooding. Working with natural processes to manage flood risk does not only promote flood resilience but provides a range of other benefits, such as recreation and reduction of air and noise pollution. Finding ways to value these improvements of blue/green infrastructure and comparing their benefits against the investment is important for urban development in Vietnam and globally.”

Dr Tobias Börger

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