This thesis is part of a broader research, started with the Joint Workshop done in Hong Kong to explore the relations between water and the public space at every scale, in order to foresee the consequences of a catastrophic event that could trigger a crisis on the urban water management infrastructure of Qianhai Bay, the so-called “Finger”. What came out was a picture of dramatic and extended vulnerability, connected to a situation of recurrent extreme meteorological events, as flooding and disruption, due to environmental and planning imbalances. Those considerations have led me to research the extreme urbanization process that is taking place in China, identifying a strict relation between the latter and the challenge of water management. The scientific research about the urban area of Shenzhen has revealed interesting insights into the water-related attitude and behavior of mega-cities populations, like in Shenzhen, presenting significant evidences of the dual-stresses that insist on the area. The Guangdong province presents the largest water-consumption trend, characterized by an increasing pressure on water resources due to the rapid industrialization and urbanization processes. On the other hand, the land reclamation process, that has become a common practice on a global scale, demonstrates to provoke significant influences on the groundwater flow systems, increasing water level. A further increase of the water level is expected in the next years on the Qianhai Bay, validating the speculations expressed in the initial workshop of potential flooding on the area. With a soil composition that does not allow water infiltration, the management of storm-water on the area has revealed a real challenge motivating me to find tools to provide a solution. Those considerations have called into question the urban layout and his resiliency where the “Finger” cannot foresee the water management. It shows a potential lack to operate out of the comfort zone, laying the foundations for a specific design solutions where the integration between the landscape and the urban environment that intend waste-water as a resource becomes a key element. Researching an integration between the aesthetic experience and the ecological dimension of the landscape, the potential widespread introduction of grey-water recycle and storm-water harvesting in the
An infrastructure-based approach to design scenarios in Qianhai Bay (China). Building with water

Tutor
BERTA MAURO
FRASSOLDATI FRANCESCA
AMBROSINI GUSTAVO

by
ALESSIO MIGLIASSO

DECEMBER 2017
For further information please contact:
Alessio Migliasso, migliasso.ale@gmail.com