

The Future of the Venice Lagoon

Authors : Sara Moro, Daniele Corrado

Abstract : Designing in the Venice Lagoon means engaging with a unique and complex context shaped by centuries of interactions between natural and anthropogenic factors. The transformation of the Venetian lagoon is an early example of how human activities can be considered true shaping forces of the Earth's surface, anticipating by at least six centuries the official dates proposed for the onset of the Anthropocene. Despite the characterization of Venice as 'resistant to modernization,' its history reveals that the city is the result of continuous experimentation, sometimes involving interventions that have been incompatible with the delicate environmental and cultural balance of the lagoon territory. While water, a fundamental element of its identity and economic prosperity, has historically represented a strength, since the 19th century, it has increasingly been perceived as a constraint hindering urban development. The Venice Lagoon is now facing an unprecedented environmental crisis. The constant erosion of salt marshes, combined with the loss of hydrodynamic complexity and sea-level rise, threatens the survival of the lagoon ecosystem. These environmental challenges are compounded by socio-economic issues, such as the demographic decline of the historic center, overwhelmed by tourist flows, which make life difficult for residents. In this context, the 'Water City Lab' project proposes a distinct approach to environmental regeneration and the enhancement of lagoon heritage. The intervention focuses on reconstructing salt marsh surfaces, contributing to improved hydrodynamics and providing natural protection against high tides and wave motion. The identified intervention area is the southern lagoon, which is most affected by erosion, where the project aims to restore and repurpose abandoned minor islands. These islands, once strategic for the Serenissima Republic, are reimagined as spaces for interaction between local operators, researchers, residents, and visitors. The island of Ottogono Alberoni, a historic fortification, is proposed as a hub for environmental monitoring, complemented by floating architectures serving as operational spaces. In a second phase, these floating structures will be converted into laboratories and temporary accommodations, fostering an inclusive and multifunctional transformation of the territory. Water, once perceived as an obstacle, becomes central to the urban project, reinterpreted as public space and ecological infrastructure. Through the regeneration of salt marshes and the promotion of intermodal mobility based on eco-sustainable means, the project aims to improve the environmental, socio-economic, and cultural state of the lagoon. This article builds on analyses developed by a research study and seeks to explore the potential of a design model that combines sustainability, innovation, and the enhancement of lagoon heritage. Venice, a city seemingly resistant to modernization, confirms itself as a unique laboratory for experimenting with resilient solutions capable of bridging tradition and the future.

Keywords : eco-sustainable mobility, intermodal transportation, floating architectures, lagoon infrastructures

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