

5.

EXPLORATIONS

The on-site application of the cities under pressure mechanism will require a high capacity of adaptation to the unique economic, social, cultural, historical, and climatic conditions of each city and territory involved in extreme events. Conducting design explorations into the specific solutions required by each site facilitates a synthesis leading to the selection of the most appropriate tools capable of guiding the positive metamorphoses of the urban pattern. Each exploration assesses site conditions, defines the most pressing issues, and sets in motion the design process by defining suitable urban triggers and forecasting the consequent evolutions of the urban environment. The variability of the designs allows one to observe the wide range of urban and architectural solutions.

5.1

SETTLEMENT PRINCIPLE AS A CHANCE FOR URBAN METAMORPHOSIS



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VENEZIA / ITALY



45°26'23"N 12°19'55"E

The city of Venice owes its worldwide fame to the aquatic landscape from which it emerges. The lagoon with its network of canals has allowed the protection of the urban environment from enemy invasions for almost twelve centuries and still today attracts visitors from all over the world due to its uniqueness. A continuous negotiation between water and man has been evolving for centuries, but in recent years, it has been jeopardizing the very existence of the city. The year 2019 marked a record number of exceptional weather-marine events: the sea level exceeded 110 centimeters (the level at which 12 percent of the city is flooded) twenty-eight times and reached 189 centimeters on November 12, the second greatest extreme event since the acqua grande of 1966, which, with its 194 centimeters, started the global debate on the need to save Venice.

In addition to the increasing frequency of extreme events, there is a progressive reduction of services to citizens in favor of touristic services and a relocation of management and administrative activities. These are all factors that have favored

a sudden decrease in the resident population in the historic city, halved compared to 1966 and falling below the symbolic threshold of 49,999 in May 2022. Countering depopulation, enhancing the quality of living, and eliminating disastrous floods while preserving the environmental system and diversifying tourist monoculture are the most urgent objectives for present-day and future Venice. MOSE, a system of mobile sluice gates installed on the seabed of the port inlets of the lagoon to protect the city from high tides, is fully functional but not a definitive solution since the sudden rise of the average sea level will make it obsolete within a few decades.

The last significant urban changes in Venice date back to the Napoleonic era, and in the collective imagination the city appears immutable. In reality, however, there are areas of significant dimensions on the edge of the city which can be subject to strong changes. Areas that have lost the historical settlement principles where it could “image a spectrum of modern types of homes and quarters, not reproducing the standard of the international types, but trying to follow the peculiar needs of climate, of tradition, and wishes” (BENEVOLO 1976). It is possible to imagine a unitary design for these edges that responds to emerging critical issues and enhances local character. It is a coherent transformation, taking up the settlement principles that gave rise to the city: walls perpendicular to the canals, with an almost constant structural pace (19–31 Venetian feet corresponding to 6.60–10.75 meters) resulting from the size of the wooden trunks; covered spaces alternating with a hierarchy of public, semipublic, and private spaces that develop flawlessly without interruption.

The walls will manage the development of the new urban fabric, allowing a hooking system with various configurations; a controlled process that is open to varying conditions, an operation carried out in verifiable stages and in continuous evolution; a renewal that follows the urban form of the historic city as an ideal model but which updates its typological features, structural elements, and technological solutions.



