

P4 Reflection

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Studio Public Realm - Istanbul: Projections to City and Utopia / Public Buildings

Another nature: Water ecologies within post-industrial waterfront of Golden Horn.

Istanbul is dependent on the rainwater, 97% of its water resources come from rain collected in the water catchment basins and stored in water reservoirs artificially created through construction of the dams in valleys. Since the beginning of its history Constantinople had to deal with the problem of bringing water to its citizens. Elaborate system of aqueducts was created in order to transport the water from the distant location towards the center of the city. Today those distant locations are becoming the part of the metropolis through the uncontrolled and unsustainable developments.

The issue of water in Istanbul only starts here; problems in providing sufficient supply for the increasing consumption of water in this rapidly growing Metropolis is just a tip of an iceberg. The problem of water ecologies as a whole is more complex. The aspect of collection of potable water cannot be considered without holistically addressing the water as ecology – a living system. Partial solutions sought by the authorities disrupt this organism. Recent news regarding initiative to start pumping water from Black Sea to Golden Horn seems to prove that it is a valid concern. Decades of rapid industrialization of the waterfront of Golden Horn have turned this once recreational area into the most polluted basin in Istanbul. Urbanization of the hills of Istanbul has led to proliferation of the problem with the stormwater runoff. Lack of management of this greywater only contributes to the pollution of Golden Horn.

Society once centered around fountains and cisterns which marked the gathering areas for local communities seems now unaware of its connection to the ecology at large. Water infrastructure of the city, hidden from the gaze of the people builds on this disconnection, as it is taken for granted and associated with the mythical 'technology'. Raising the awareness about the importance of water ecology within Istanbul seems a particularly pressing issue. It is a goal of this project to conceive a public space as ecology where built environment blends with the natural processes. Therefore, nature is not conceived anymore as a distant arcadia but as a part of the urban environment.

Generally speaking this research has focused on the urban ecology of Istanbul. Discontinuities and failures within this system were the indications where to look. Of course the complexity of the issue could not be dealt with from a general perspective, one has to center its attention on a specific case in order to look at the whole. In this research Golden Horn served as a lens, through which certain problems and tendencies were noticed. Golden Horn presents an example par excellence of the transformation of the metropolis and how endangered and crucial water is in the ecosystem of the city. Its cycles correlate with the growth and expansion of the city. This historical estuary acted as a main inlet of goods, it was a water highway, a throat, which has fed the city. Increasing urbanization of the land however brought the construction of the roads and bridges, which often



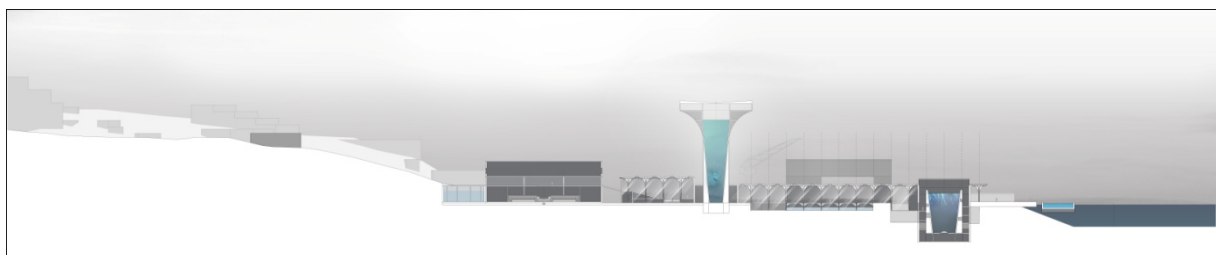
Condition of central part of Golden Horn in 1979



Condition of the same area today

located on the shores, have created a separation between neighborhoods and waterfronts. It has not only changed the spatial condition of the waterfront but also the way people commute. Deterioration of the waterfronts and more inland urbanizations has drastically lowered the amount of people who used water as a mean of transport. Moreover, uncontrolled developments eliminated recreational potential of the shores of the Golden Horn, which were once place of many gardens and orchards. Industrialization has drastically changed the spatial, social and ecological condition of the estuary. By the beginning of 1990s the Golden Horn was facing ecological disaster. Lack of fresh water inlet caused by damming the valleys, waste discharged straight into estuary from the industries and polluted stormwater flowing straight from the densely surrounding streets and hills have turned this estuary into sewage. This condition has led to social and spatial abandonment of the whole estuary. According to some scientists Golden Horn is today the most polluted basin in the Istanbul area.

The design has been closely related to the themes investigated in the research. Although the themes seemed very general and abstract at first (from architectural point of view) they have led to an interesting explorations of the consequences of ecology and the built environment. Despite the mainstream understanding of environmental issues in architecture under the term of sustainability, the goal of this project was not to design a politically correct building but rather engage with the topic of social relevance and incorporation of natural processes, which could contribute to the urban longevity.



Section from P4 (May 2013)

Observation of the condition of Golden Horn has led to the choice of the site. It is located in the central part of its northern shore where the reminiscence of two conflicting eras of the estuary occurs. Situated in one of the most inspiring parts of the Golden Horn, the site of the Naval shipyard has been in negligence for recent decades. This piece of urban waterfront with its scattered abandoned warehouses was cut off from the city and does not serve any public function. This unique piece of land has become in spotlight recently with real-estate developments suggesting hotels and other commercial facilities. In order to prevent arbitrary developments in this area, this project engages in the possible futures for this territory. The quality of this unique place is in its location in a pristine part of Golden Horn – overlooking the historical peninsula with the outstanding views over all of the most significant landmarks of Istanbul. This place has tremendous potential for a public space right at the waterfront. It is located not far from the new Metro station, ferry terminal and center of Galata region of Istanbul. On the other side it is in proximity of a highway. It provides a possibility for extension of the public core of the city along the northern edge of Golden Horn. The idea is to reengage this place with the nature, people, and a city. A primary attempt is to create a public space, taking advantage of the open areas right at the waterfront. The existing warehouses are sorted out. The ones holding an importance, and capable of redevelopment are left. The 'infill' of small, deteriorated ones is cleaned in order to create a clean circulation scheme.

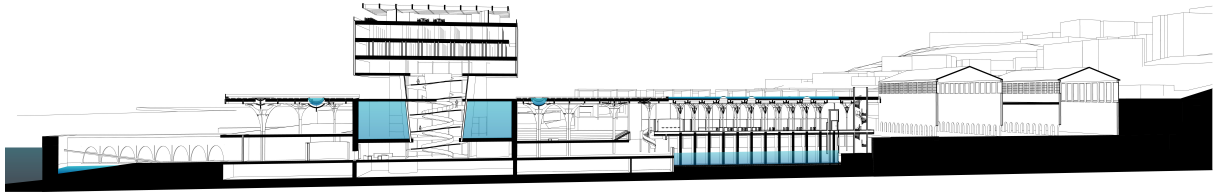
Adjacent to the shipyard the palace built in 1613 is located, once recreational residence of the Sultan at the waterfront. It is now disconnected from water by the industrial warehouses and remnants of the naval shipyard. The intervention sought to find a link between these realities. The proposed perpendicular connection cuts open the introverted warehouses and builds a spatial relation between waterfront and the park surrounding the stranded monument of the Aynalıkavak Kasrı (also called Shipyards Palace).

The warehouses were built on the vast landfill, which also marks a significant shift in topography. This condition served to virtually extend the hill. Spatially the intervention is conceived as a large roof hovering over the ground. Its surface has been utilized as water collection device. Rainwater collected in the shallow reservoir begins a flow of filtration. Sets of columns supporting the structure of the roof are facilitating different functions. Space under the canopy is perceived as a hypostyle hall. This typological device refers to inspiring cisterns in Istanbul, as well as Islamic tradition of generating a space by the repetition of a single element of a column. Hollow columns used throughout the project holds the potential to allow the light, water and air to pass through its core. Some of the openings in the roof are left open; here the surplus of the rainwater flows down creating an event within the open public space underneath. Water, structure and people interact.

On urban scale the design takes a form of a horizontal slab, which through various arrangement of columns can facilitate many functions. It is conceived as a prototype intervention, which could be replicated in other locations. The horizontality expresses the freedom, openness and its social character. It is a permeable space, which does not create hard borders between interior and exterior. On the contrary the inside and outside, water, air and light are intertwined in an ever-changing relations.

The goal of the intervention is to raise curiosity among the residents of Istanbul. It will connect people of different social groups, young and old. It will be both entertainments for kids, and serious

issues of ecosystem for adults. Exhibited ecosystems of surrounding fresh and salt waters in the aquarium will engage families and school excursion to visit the site. It will moreover provide the research facilities with laboratories and learning spaces to examine the current condition of water ecosystems in Istanbul as well as provide future strategies and expertise for dealing with the expansion of Istanbul, preserving water shed, examine processes of filtration, and management of the runoff stormwater.



Sectional perspective. Relation between topography, roof, aquarium and Golden Horn

The ambitions expressed throughout the studio, finally focused more thoroughly on two issues: representation of the flow of water with the process of its filtration and exhibiting the volumes of water ecosystems as an aquarium. In the design phase I have been looking for a system that would emphasize these ambitions. Ancient water systems with their architectural expressions in the form of cisterns and fountains served as an inspiration of how to incorporate water within the built environment. The research however has provided a much wider array of themes, precedents and tools. The process of getting from one into another involved taking many decisions, sorting out many ambitions and leaving out elements that did not contribute to the narrative. It involved constructing the whole new reality within which this project could be rendered relevant. From addressing the problem at large, at the scale of the whole Metropolis, through analysis of its significant waterway, engagement with the site, to the architectural composition, the design exists in its own reality, reality that would never be possible without the extensive research undertaken throughout the studio.