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

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"The Metropolis strives to reach a mythical point where the world is completely fabricated by man, so that it absolutely coincides with his desires. The Metropolis is an addictive machine, from which there is no escape, unless it offers that, too...."
BLACK SEA

MARMARA SEA
97% of Istanbul’s water supply

Average annual rainfall: 852 mm/m²
Total reservoirs capacity: 910 mln m³
Ancient water systems

Aqueducts
Ancient water systems

Cisterns
Abandonment of the water system
Fountains
Expansion of Istanbul
The Metropolis
Expansion of Istanbul
Speculative expansion of Istanbul in future
• Water collection system is becoming a part of the urban environment.
• With the continuous growth of population current resources of drinking water will not be sufficient in future.
• Strategies of incorporation of the built environment with the nature have to be developed

Hypothesis
Golden Horn
Two shores of different character

Retreat from the crowded old city
Aynalıkavak Kasrı
Switching position

Golden Horn During Tulip age
18th century

1836
19th century

Beginning of the 20th century
Industrialization of Golden Horn

1982
Industrialized waterfronts

1982

- 700 factories
- 2000 workshops
Ecological disaster
Golden Horn have became a sewage
Abandonment
Requalification
Requalification - missed opportunity
Culture Valley
Pollution
Still one of the most polluted basin in Istanbul

Golden Horn watershed capacity: 6,8 mln m³
Istanbul average daily water consumption: 2 mln m³
Abandoned Shipyard
Current condition
Site Infrastructure
Access points
Greenery connection
Reconnection to the waterfront
Reconnection to the waterfront
Qualities of the site
Masterplan concept

Water strategies, Programme
Anchoring the strip
Water processing axis
Brackish/Grey/Swimming waters

Masterplan
Masterplan

Rowing Club

Temporary housing

Restaurant
Storm water collection - precipitation tank
Natural filtration embedded in the strip
Gradient between different experiences, typologies, densities
Roof collecting water

Hollow columns with slow sand filtration
Extension of the topography
Positioning over the ground
Section through the whole intervention
Mechanical filtration plant

Precipitation tank
Longitudinal Section
Open reservoir / roof pond

Clean water cistern
Filtration basin

Sand filter

Clean water cistern
Research center
Filtration basins

Auditorium

Filtration columns
Filtration column
2x2
7.2 x 7.2
Observation deck

Public roof

Vertical ecosystem

Overflow water spout
Sectional perspective
Spiral through the large ecosystem
Aquarium plan
Plan
Plan fragment
Air in / out, flexibility
South facade
Attractor