

Post-Dam Ecologies of Seyhan Basin:

Re-Constructing a Vanished Migration Corridor

Adana, Turkey
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Country /City Turkey, İstanbul

University / School İstanbul Technical University

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TECHNICAL DOSSIER

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Written statement, short description of the project in English, no more than 250 words

The city of Adana on the southern Mediterranean coast of Turkey is highly dependent on the Seyhan River, which flows through the urban settlement. Apart from its economic value for the surrounding agricultural lands, the basin is also an important refuge for migratory birds crossing the continent. Adana is the last place where bird communities coming from Africa gather before continuing their journey apart to Asia and Europe. The main attraction for thousands of birds is the basin's rich aquatic network, which is severely impacted by a series of dams built on the river channel. By their very nature, the dams prevent the flow of water, which is contrary to the fluvial principles of the river. The stability causes particle residues and heavy metal sedimentation in the water body and increases in invasive species' numbers as native species fail to compete. Because the sustainability of bird communities and the watershed depends on the migratory cycles of native fish species, the project proposes an infrastructural typology known as a 'fish ladder' that is mandatory for newly constructed dams, but is not currently in place at Seyhan Dam. However, this typology is reinterpreted in an unconventional way by extending it to the level of an urban park and creating a water corridor between the upper and lower parts of the dam that revives the vanished migration practices of native fish species. It integrates public spaces with a constructed riparian corridor and introduces volumes of an aquatic research institute that studies watershed ecologies.

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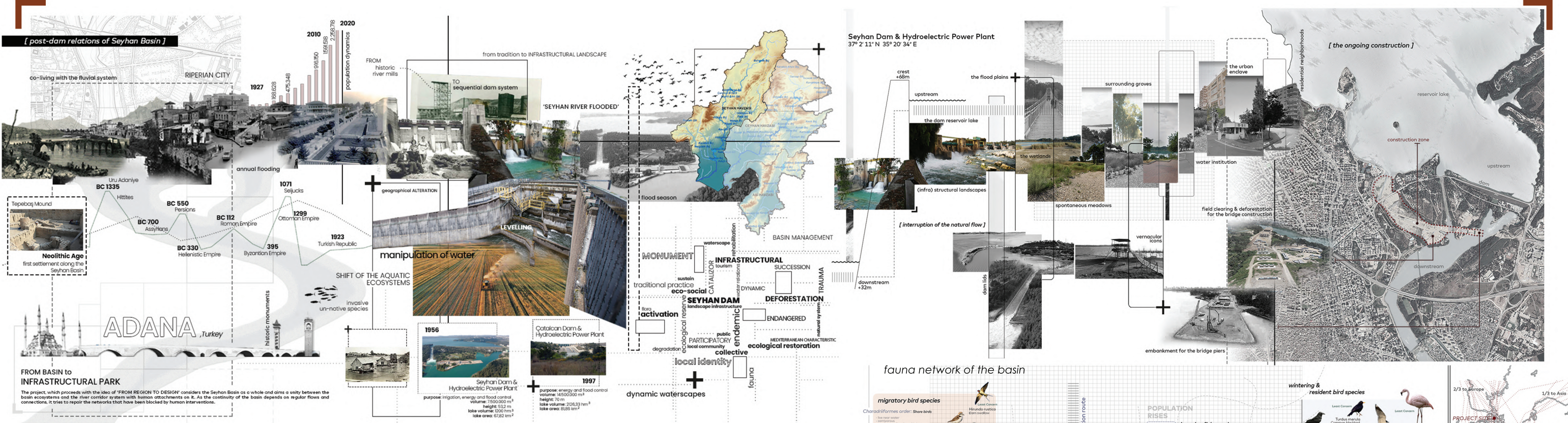
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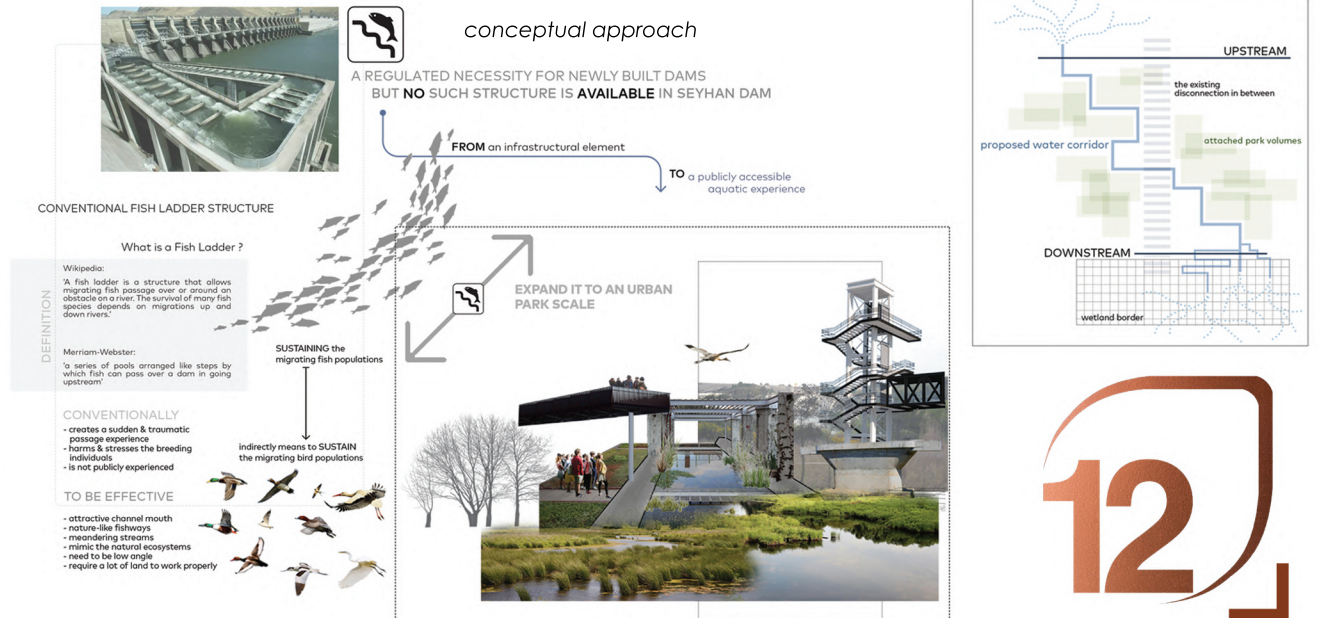
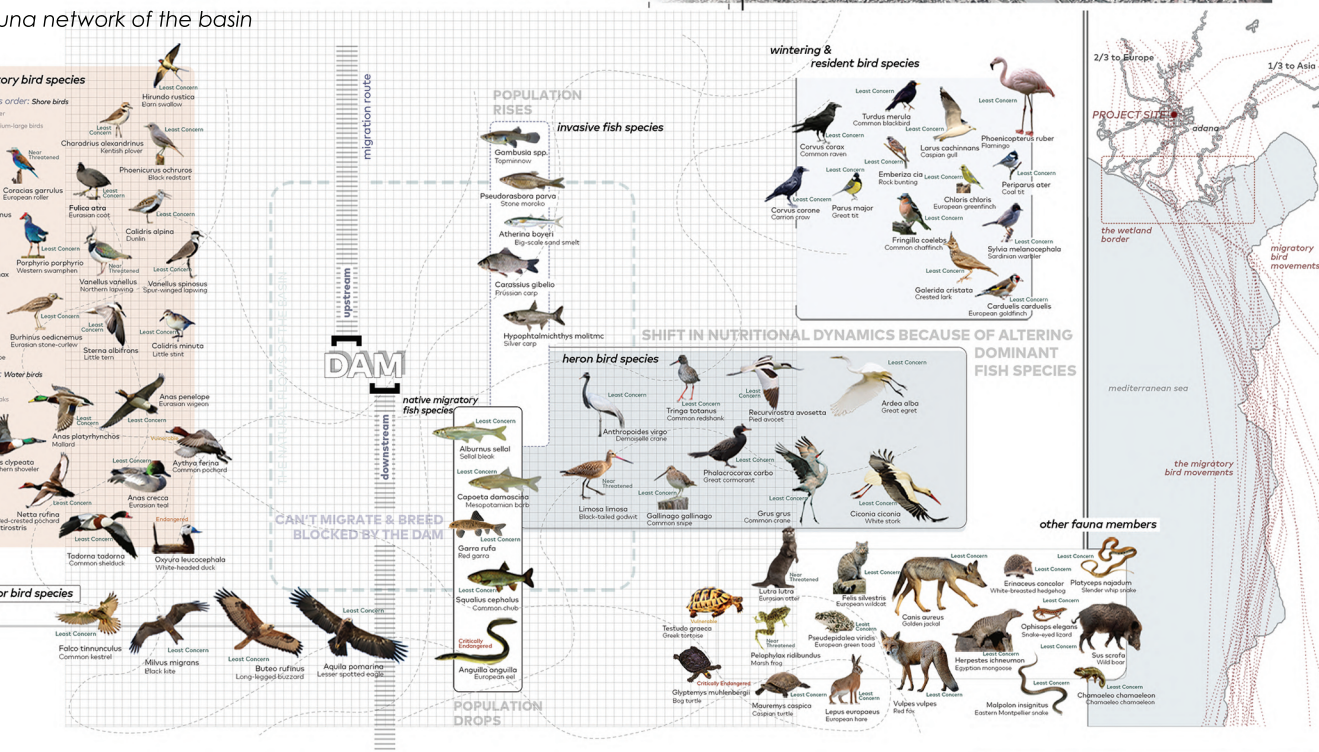
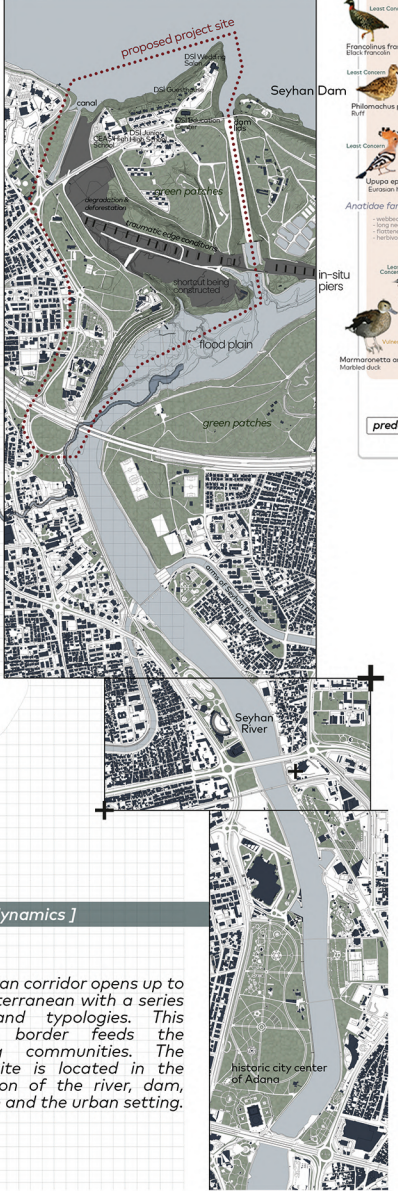
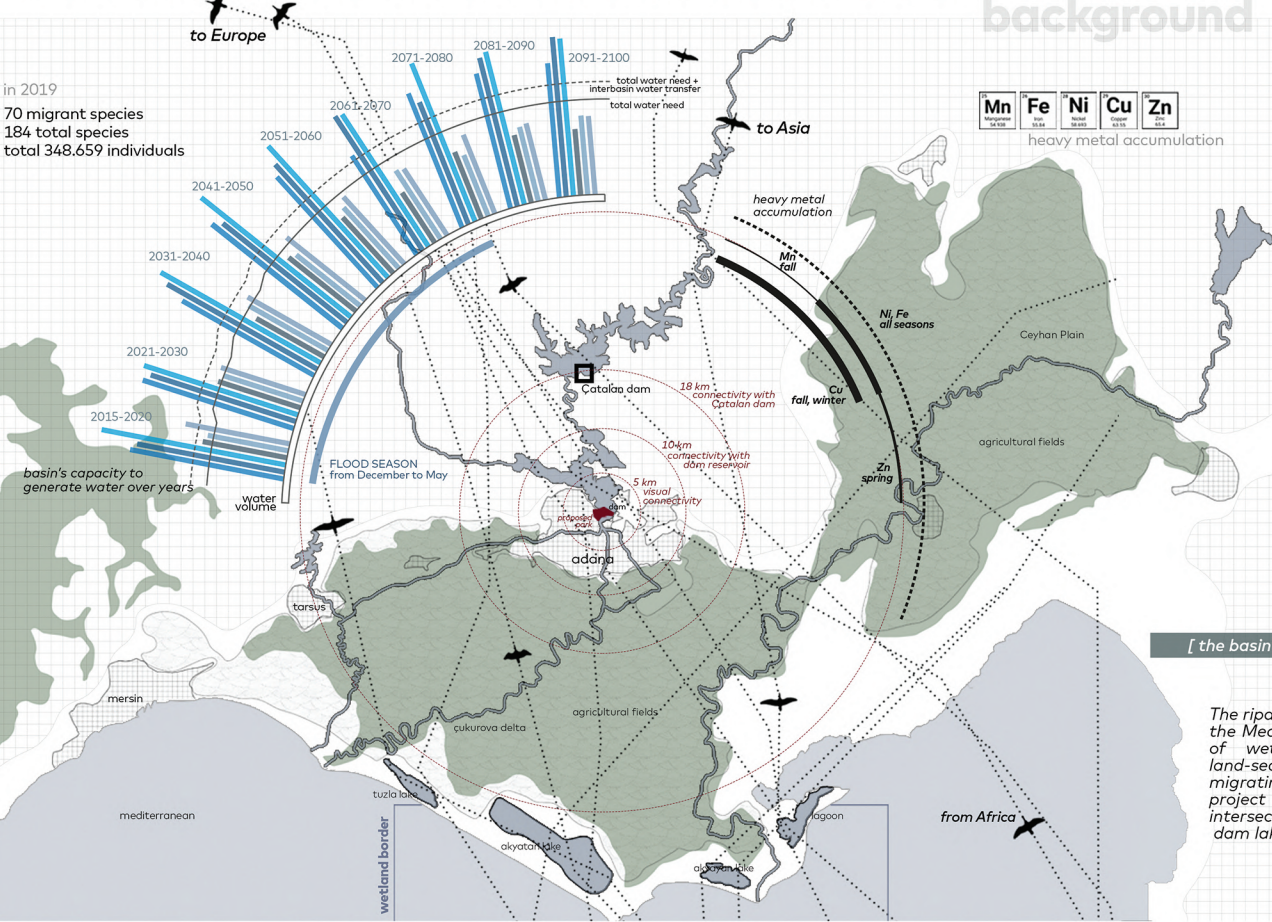
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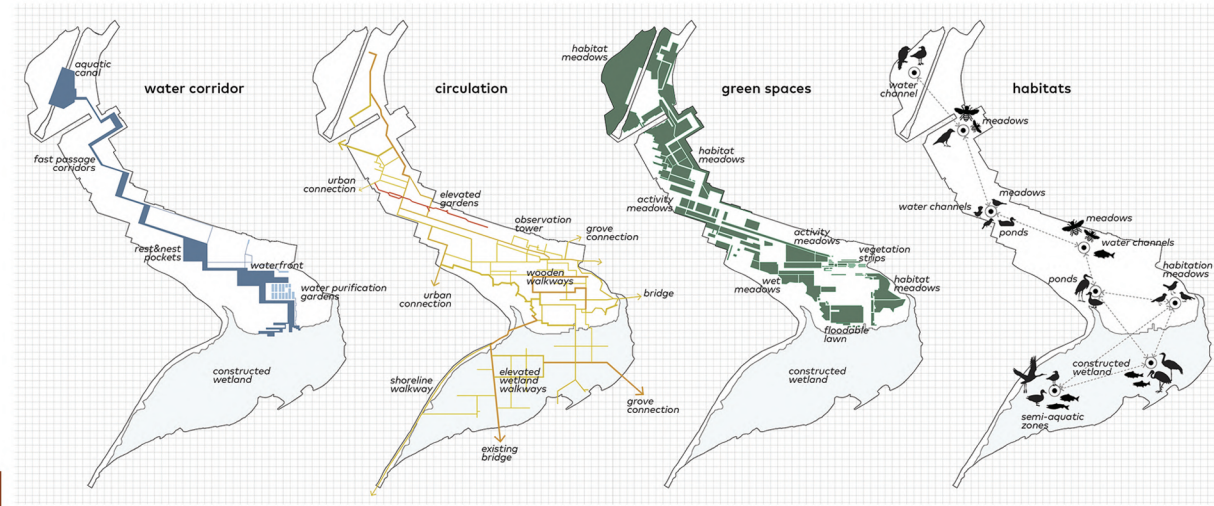
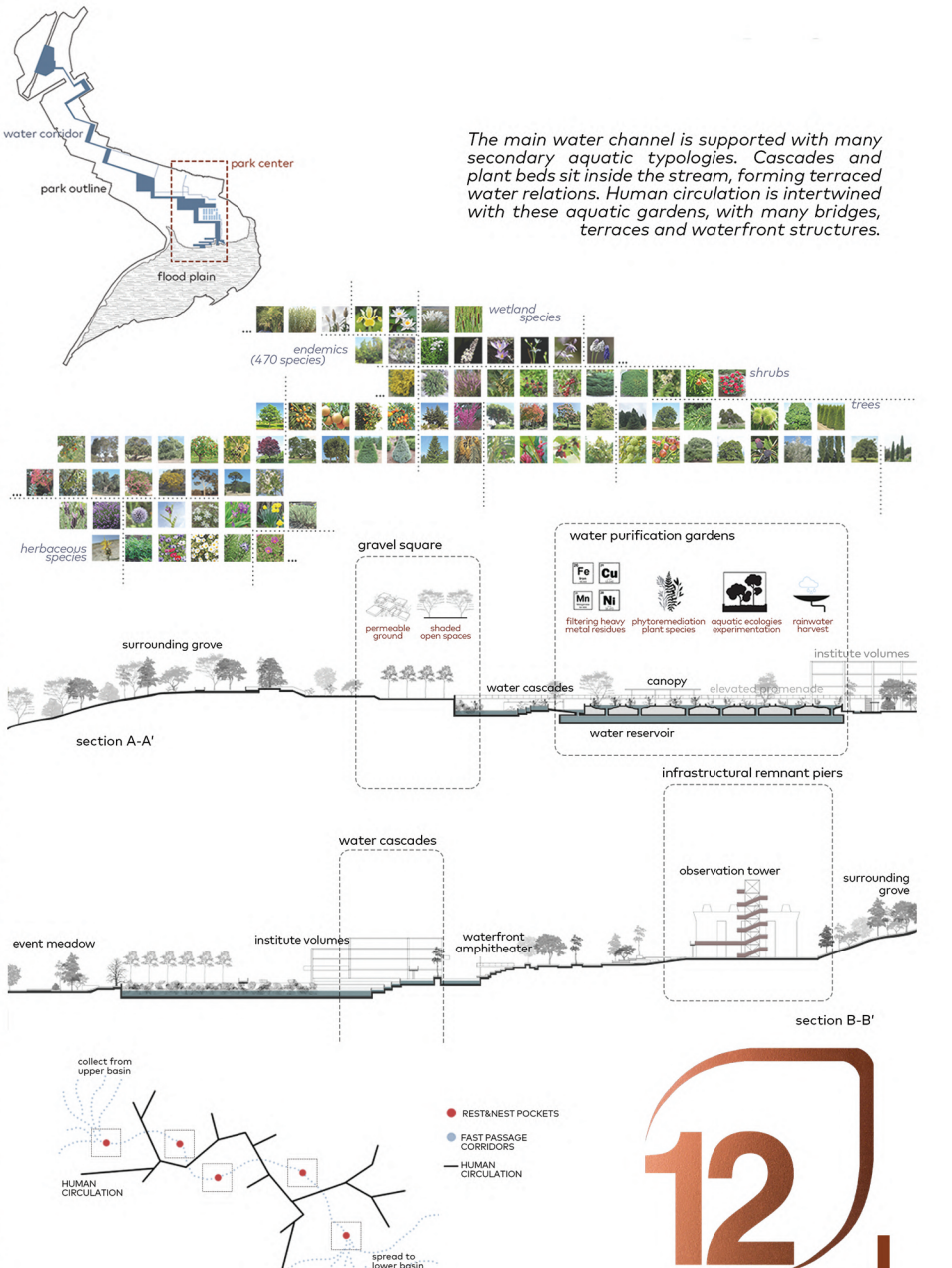
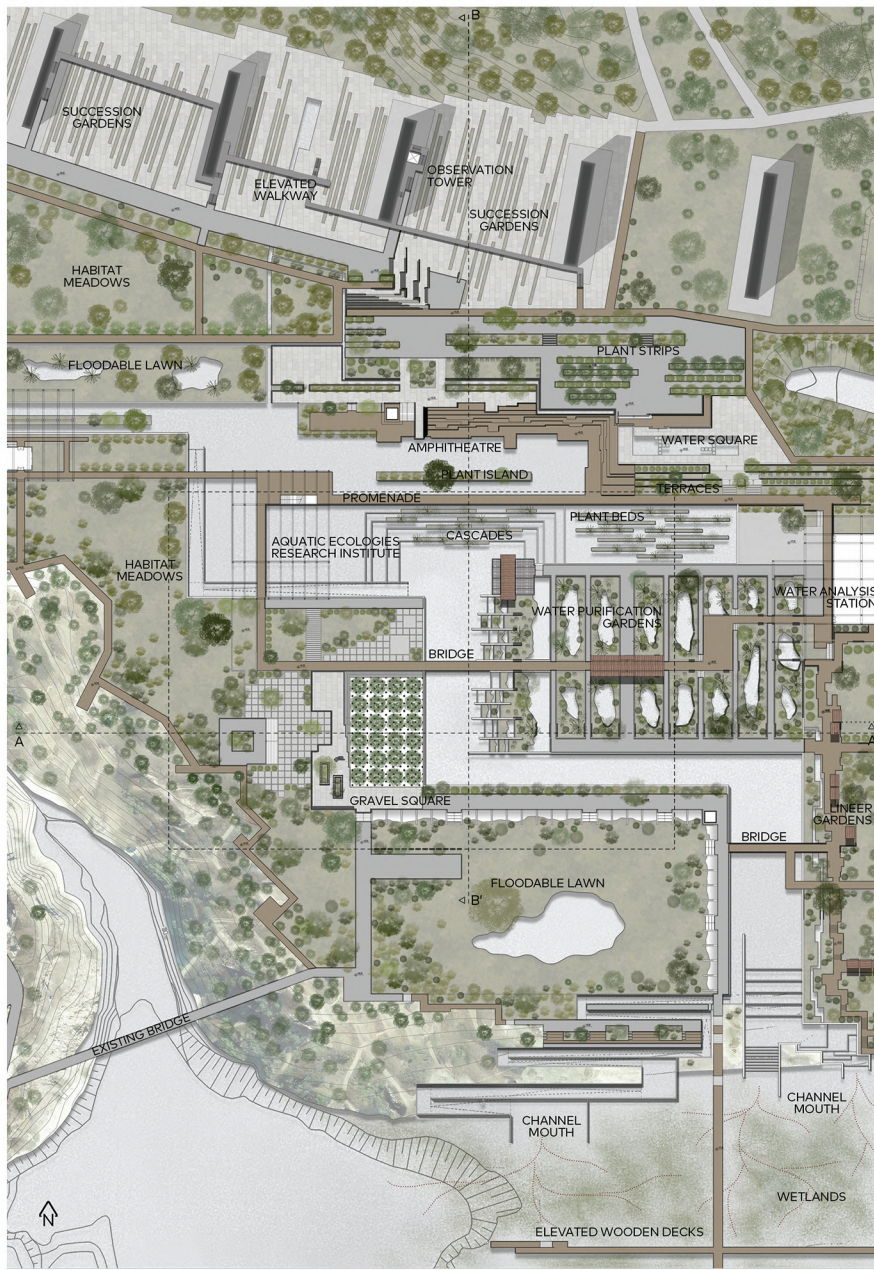
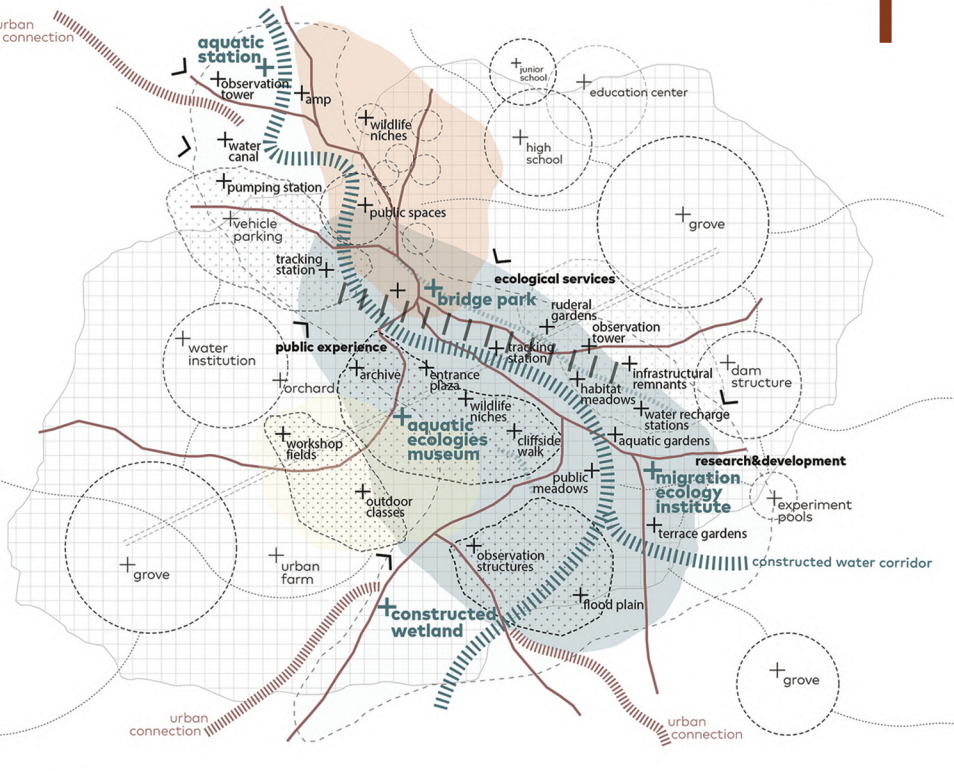
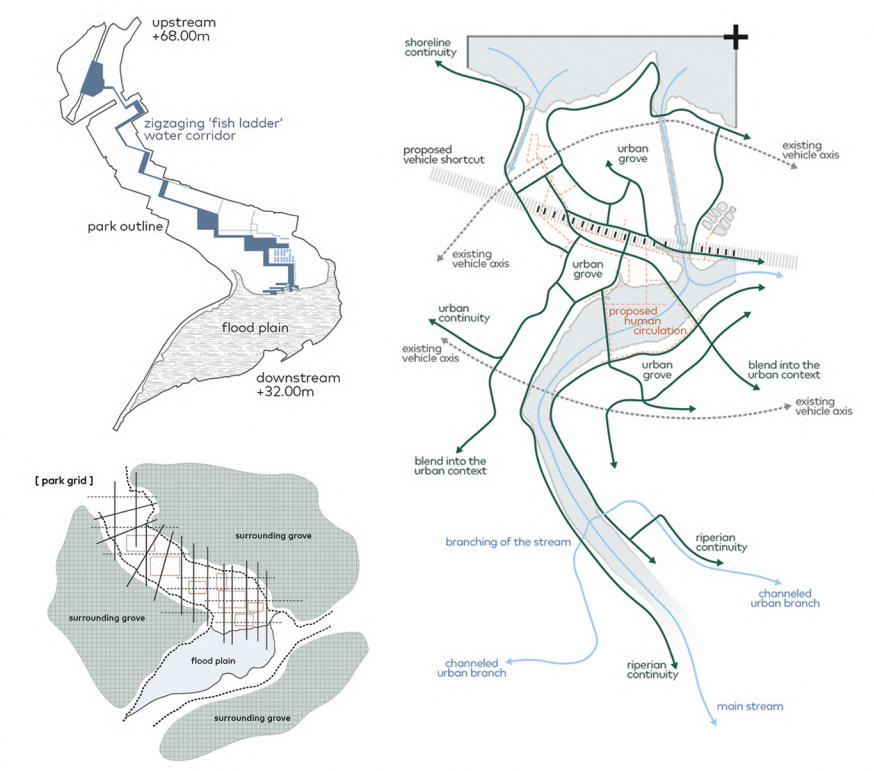


The natural riparian network generates a sequence of wetlands and salt lakes along its border to Mediterranean Sea and this wetland system is one of the densest bird havens in the world. What makes it so unique is that it's the last location where intercontinental migratory birds are together before parting their way to Asia and Europe. Two-thirds of the communities fly to Europe via the Aegean coastline, and one-third to Russia and Eurasia via the steppes. In the last comprehensive census made by Nature Research Association on behalf of the Ministry of Forestry and Water Affairs, Nature Conservation and National Parks 7th Regional Directorate, a total of 348,659 water birds were detected in all lagoons and Seyhan Dam Lake (Nature Research Association [NRA], 2019). Additionally, 122 species out of total 184 bird species observed in the area are protected under the Bern Convention Annex-II list whereas 59 species are protected under Annex-III list, as indicated in the 2013-2017 Lagoon Management Plan (NRA, 2013). The reason why these crowded bird populations accommodate in a single area is that the given ecological network provides a wide spectrum of aquatic habitats, differing from lagoons to dunes, wet meadows to salt marshes.



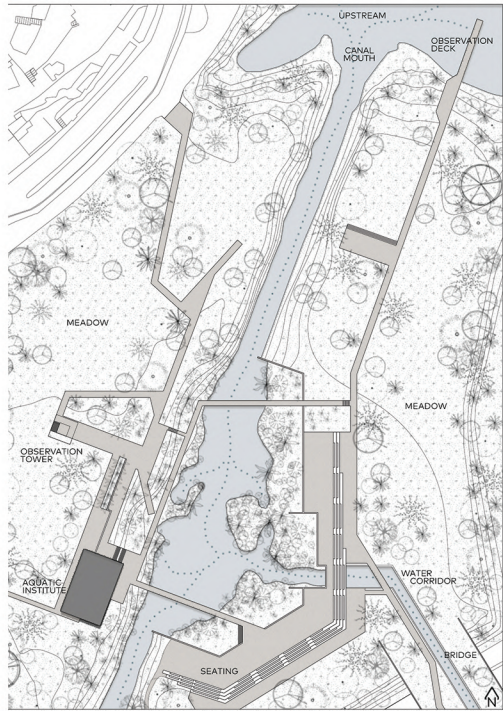
[the basin dynamics]

The riparian corridor opens up to the Mediterranean with a series of wetland typologies. This land-sea border feeds the migrating communities. The project site is located in the intersection of the river, dam, dam lake and the urban setting.



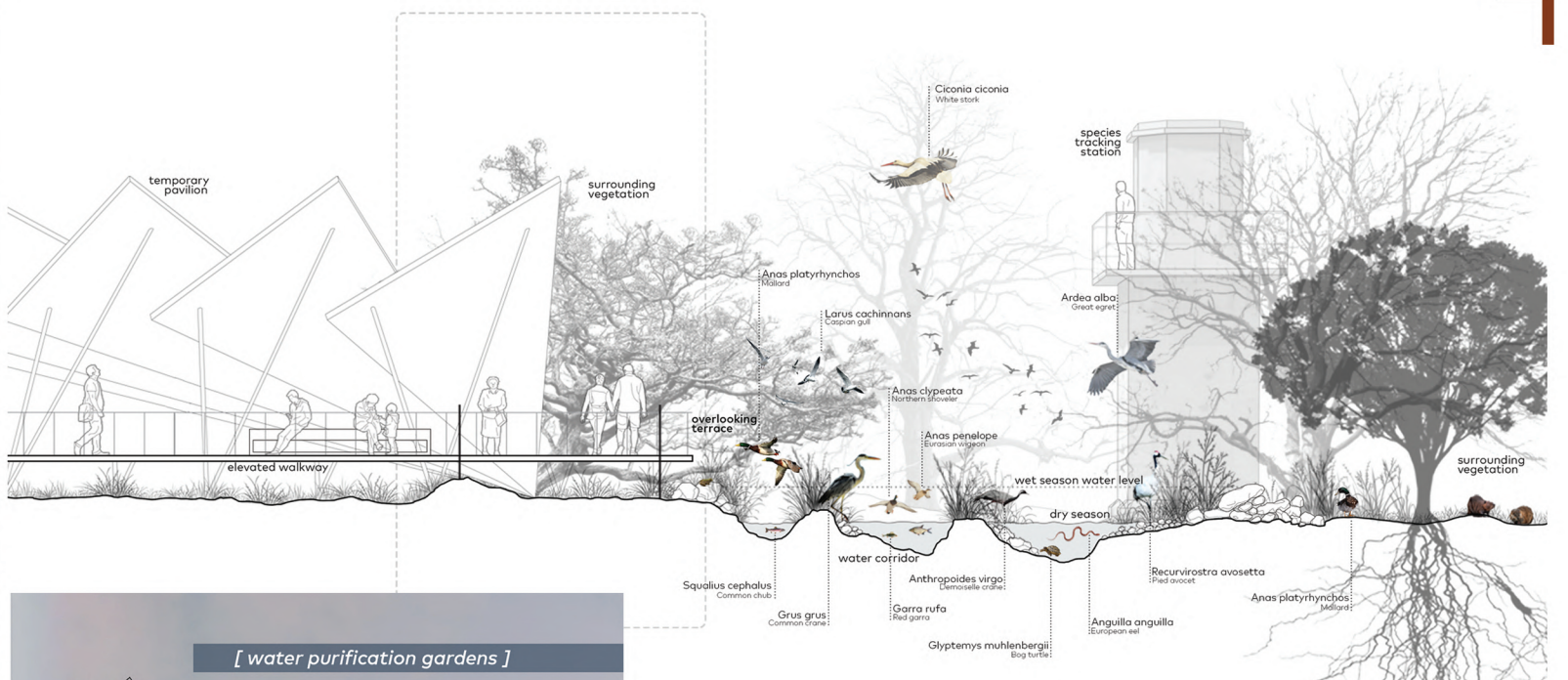
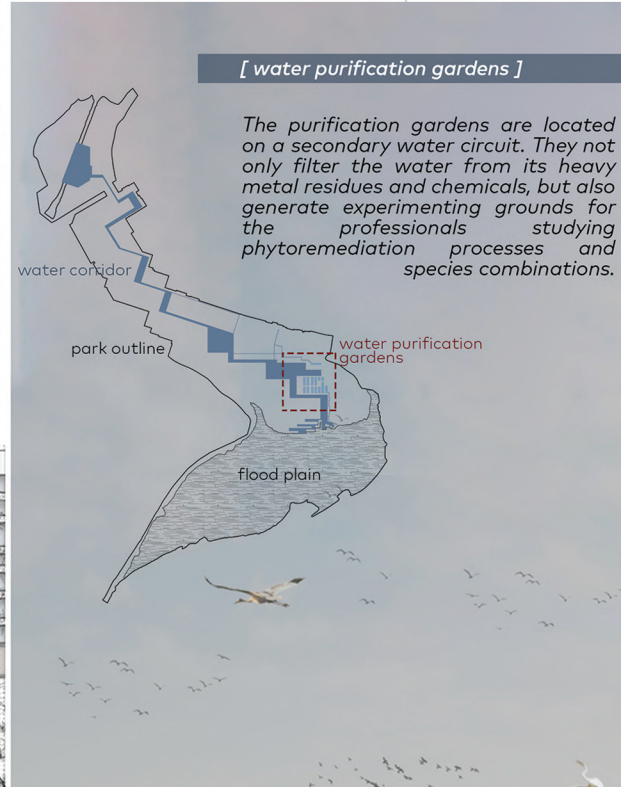
[aquatic canal]

The existing canal of the dam is naturalized to mimic a natural water stream where it would attract the migrating species. This constructed mouth leads individuals to the water corridor while also the aquatic station located across observes these cycles.



[water purification gardens]

The purification gardens are located on a secondary water circuit. They not only filter the water from its heavy metal residues and chemicals, but also generate experimenting grounds for the professionals studying phytoremediation processes and species combinations.



[the ruderal gardens]



[the digital interface]

