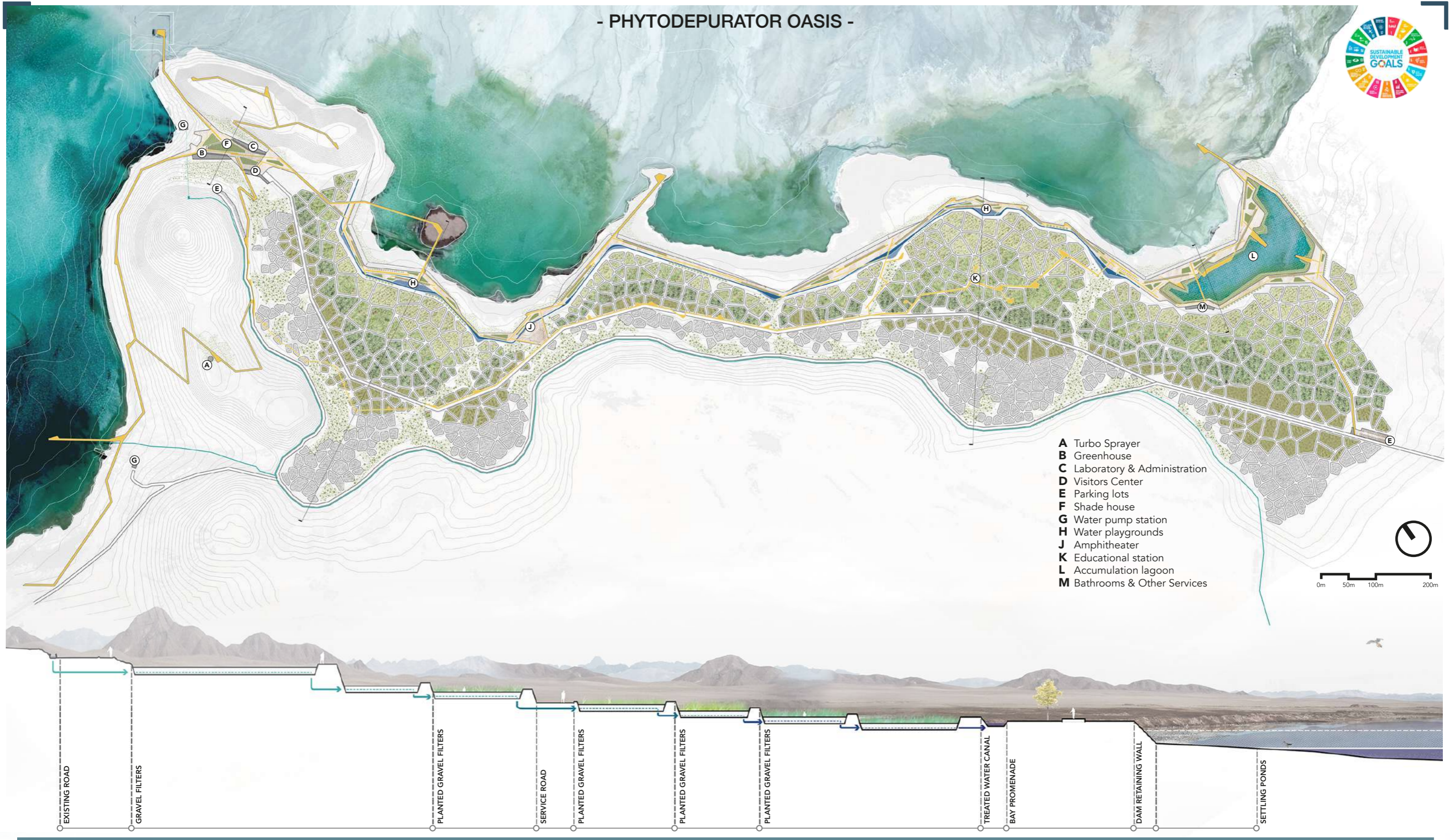


- PHYTODEPURATOR OASIS -



Country / City Santiago, Chile.....
 University / School Pontificia Universidad Católica de Chile.....
 Academic year 2019.....
 Title of the project Phytodepuration Oasis: Water Infrastructure and Consolidation of the Pampa Austral Tailings Dam.....
 Authors Gonzalo Quevedo Egaña.....

TECHNICAL DOSSIER

Title of the project	Phytodepuration Oasis: Water Infrastructure and Consolidation of the Pampa Austral Tailings Dam
Authors	Gonzalo Quevedo Egaña
Title of the course	Graduation Project Workshop
Academic year	2019
Teaching Staff	Pilar García · Ignacio García Partarrieu · Arturo Scheidegger
Department/Section/Program of belonging	MAPA - Magister en Arquitectura del Paisaje
University/School	Pontificia Universidad Católica de Chile



Atacama Desert is recognized as the most arid place on Earth, where water is understood as a strategic resource and allows the development of an exceptional ecosystem in this dry climate. The Pampa Austral Tailings Dam, located in this region, is a critical area, resulting from a complex production system of copper mining, where a large amount of highly intervened water is required, producing large and polluted territories of tailings in dams. Pampa Austral Tailings Dam, in the middle of the desert, is a critical case because of the large amount of water contrasting with the region's growing water scarcity, but — at the same time — it presents a great opportunity for productive, social, and ecological development.

The proposal responds to the productive, social, and ecological activities that are possible to develop using the water in the Pampa Austral Tailings Dam. The project develops a chain production system around the treatment of contaminated water and shows the possibility of using this liquid by just cleaning a small part of the pollutants. This would allow the development of various activities around the dam such as agriculture and new urban green space.

The water treatment process uses phytodepuration techniques on a serial of semi buried plant filters, located on the dam's bay. By using these kind of filters, ecological activities are enhanced, increasing its vegetation cover, strengthening the already exceptional microclimate and improving the ecological succession over time, consolidating the birth of a new Oasis.



CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

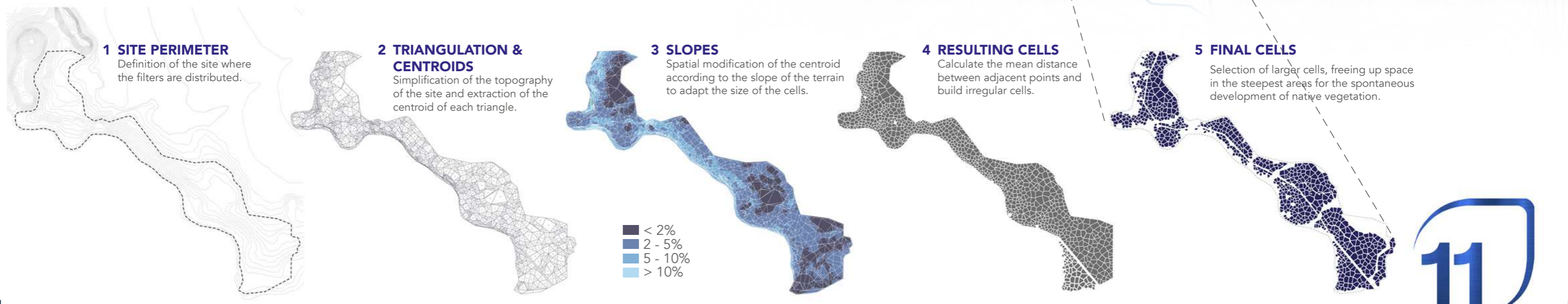
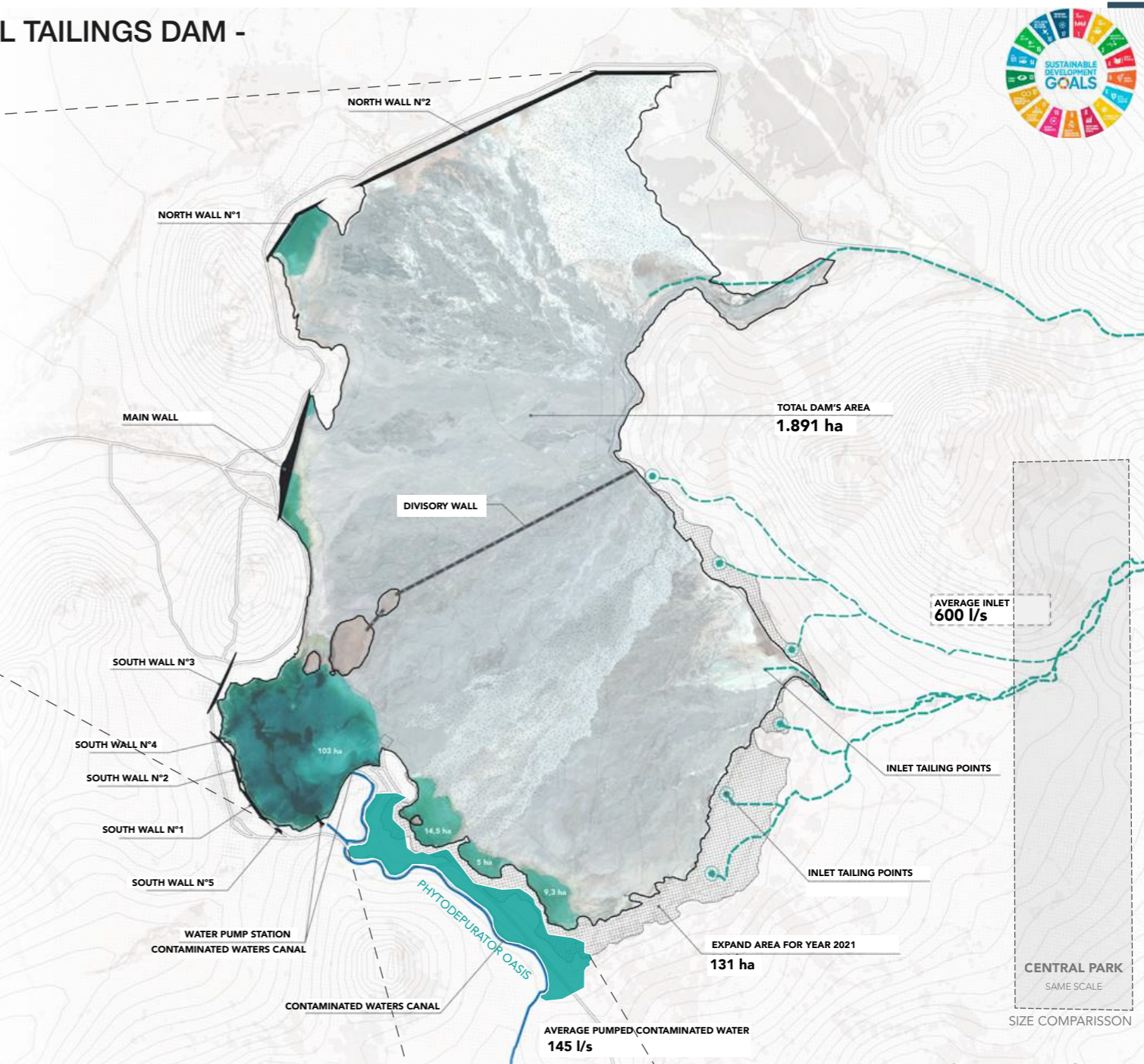
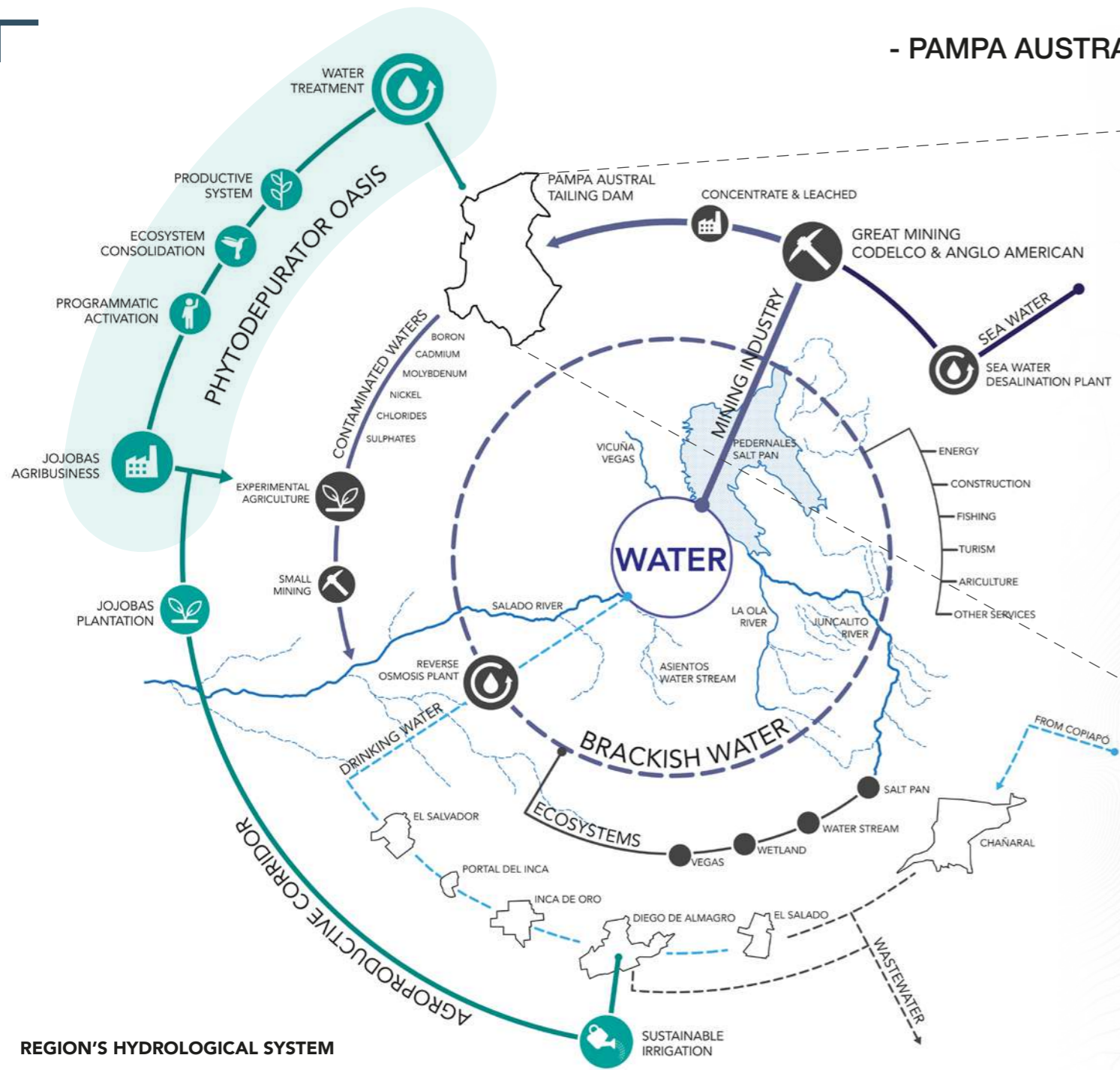
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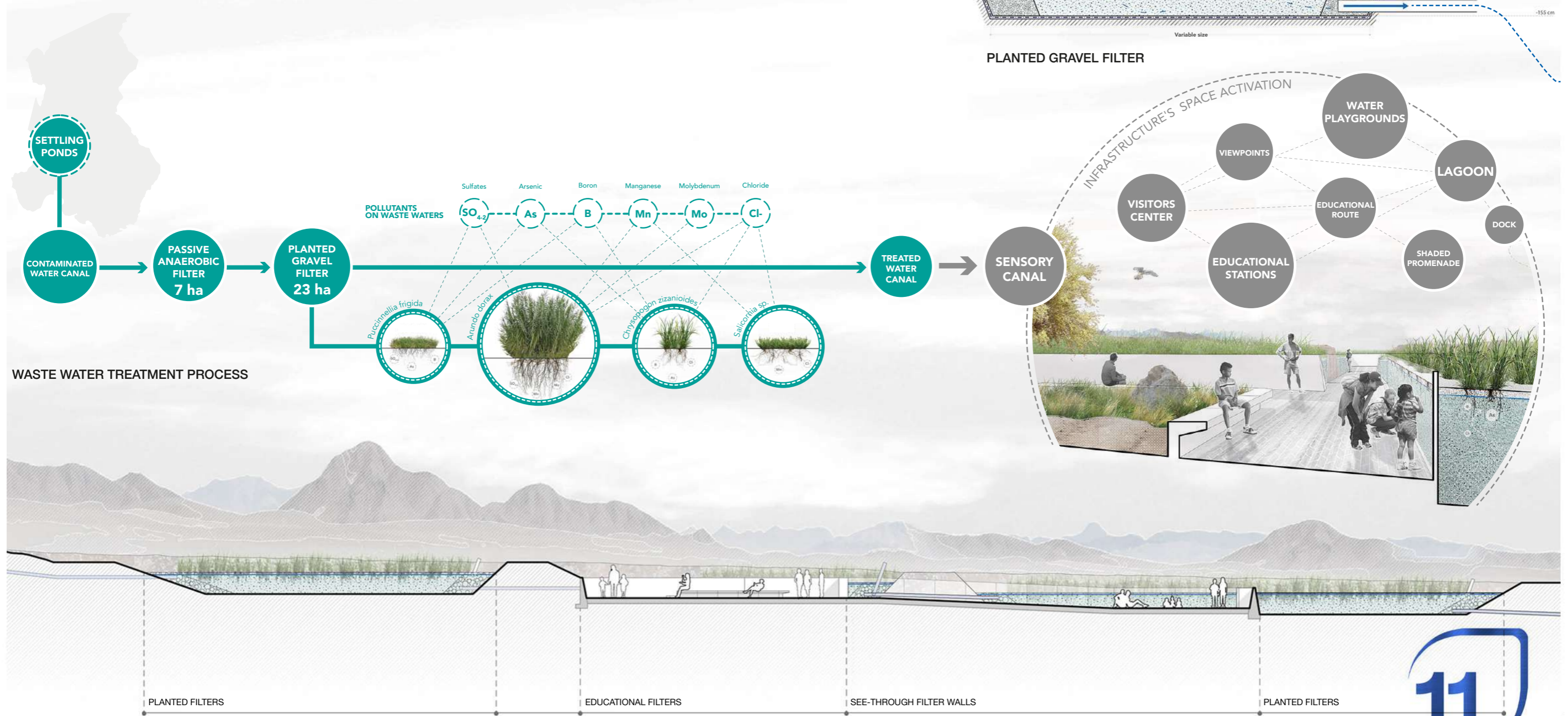
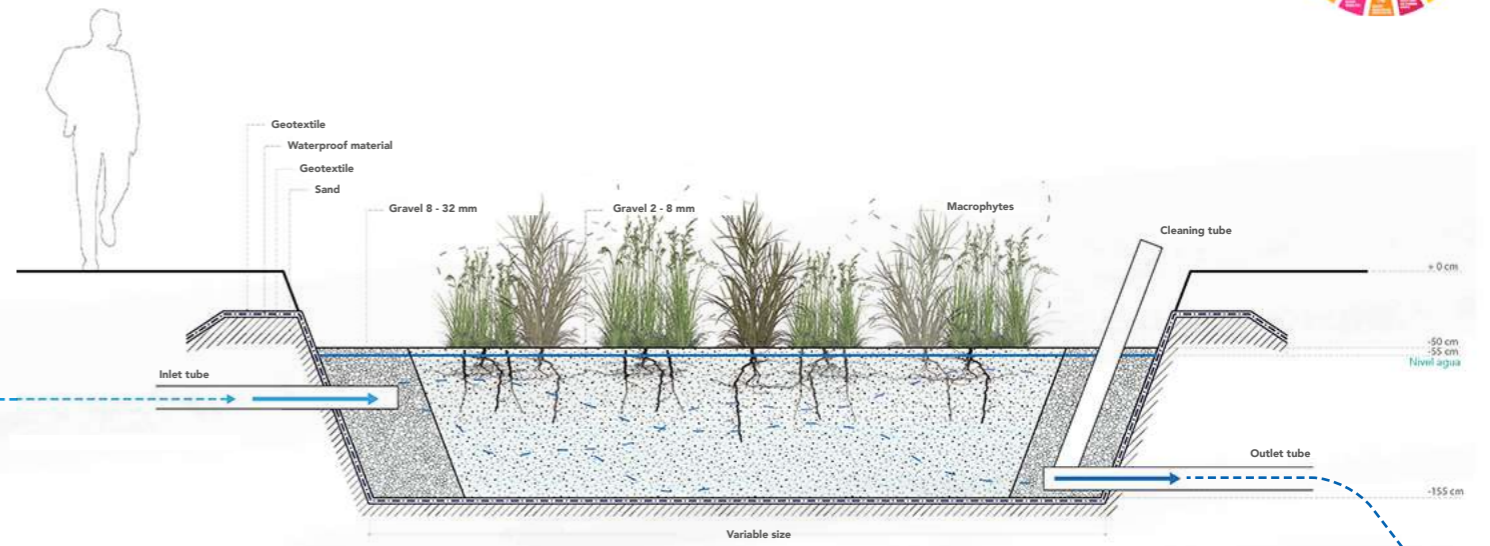
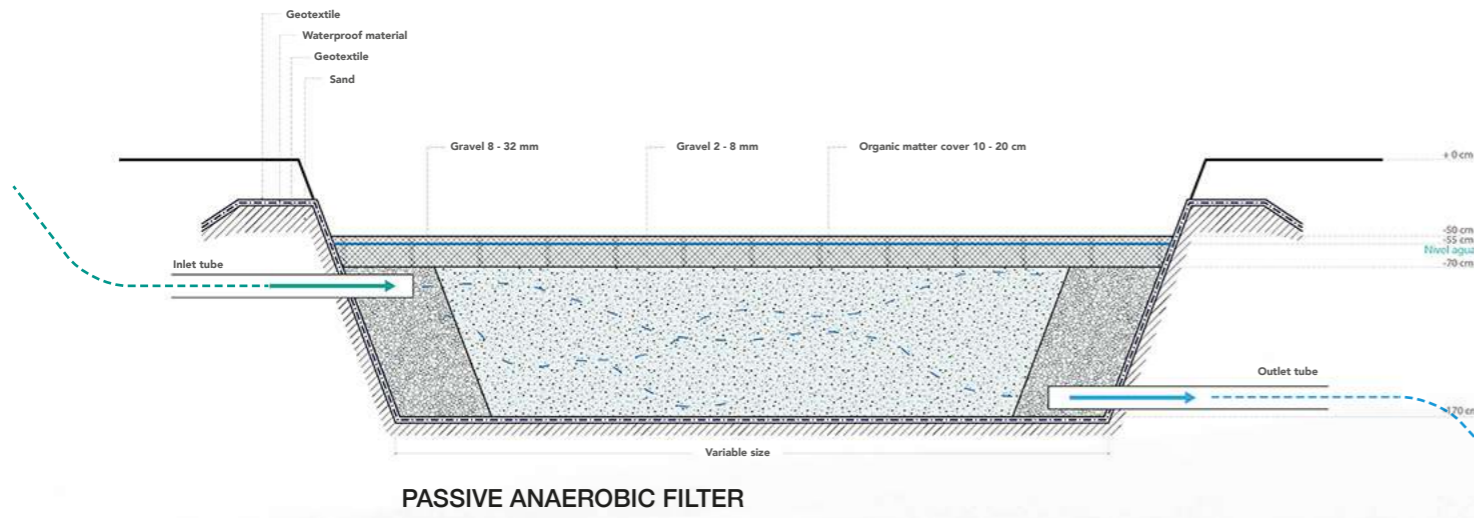
Barcelona September 2020
SCHOOL PRIZE

- PAMPA AUSTRAL TAILINGS DAM -



TRIANGULATION PROCESS: SHAPING WATER TREATMENT FILTERS

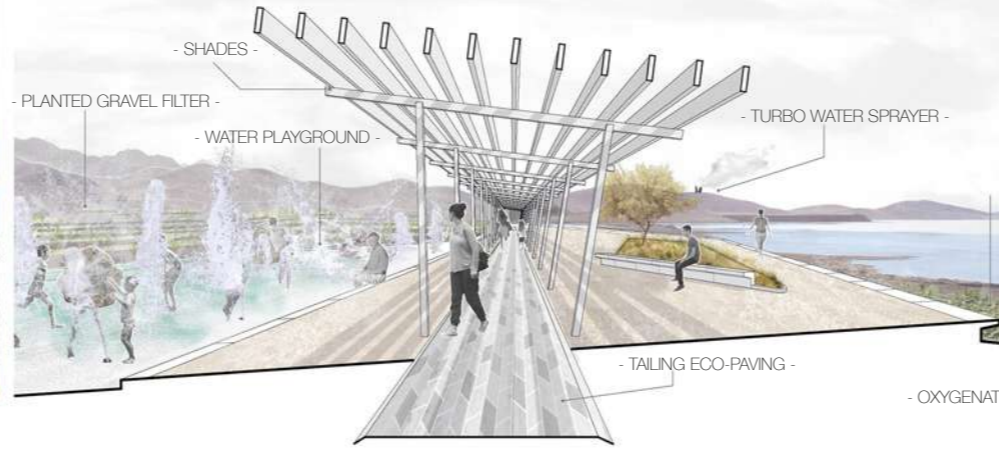
- WASTE WATER TREATMENT -





- SHADE HOUSE -

- GREENHOUSE -



- SHADES -

- PLANTED GRAVEL FILTER -

- WATER PLAYGROUND -

- TURBO WATER SPRAYER -

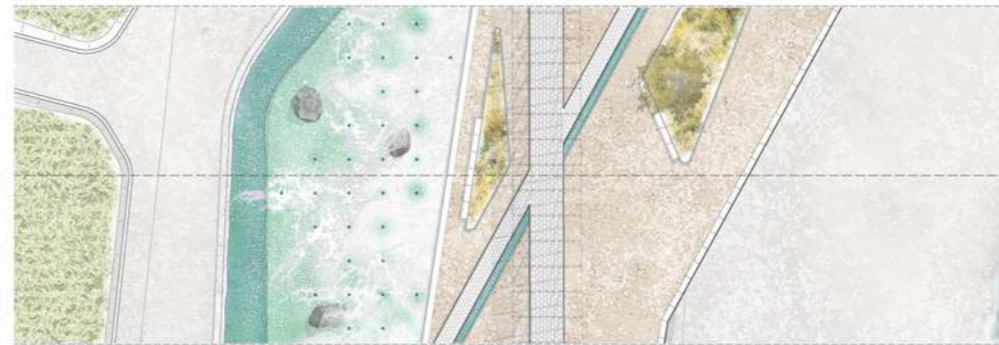
- TAILING ECO-PAVING -



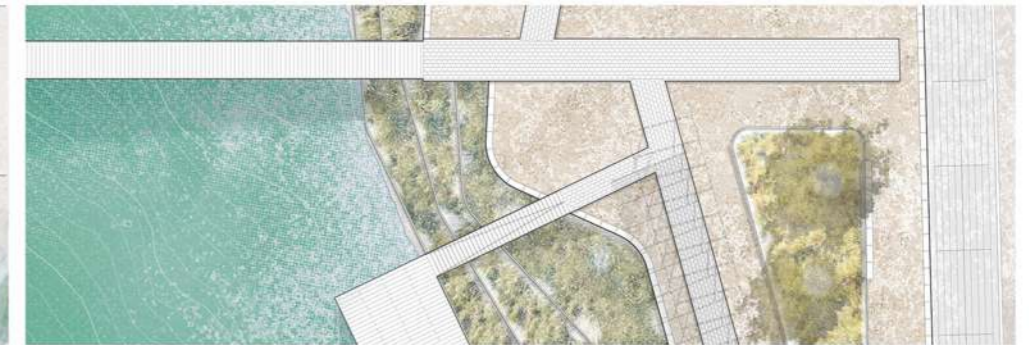
- OXYGENATION CASCADE -



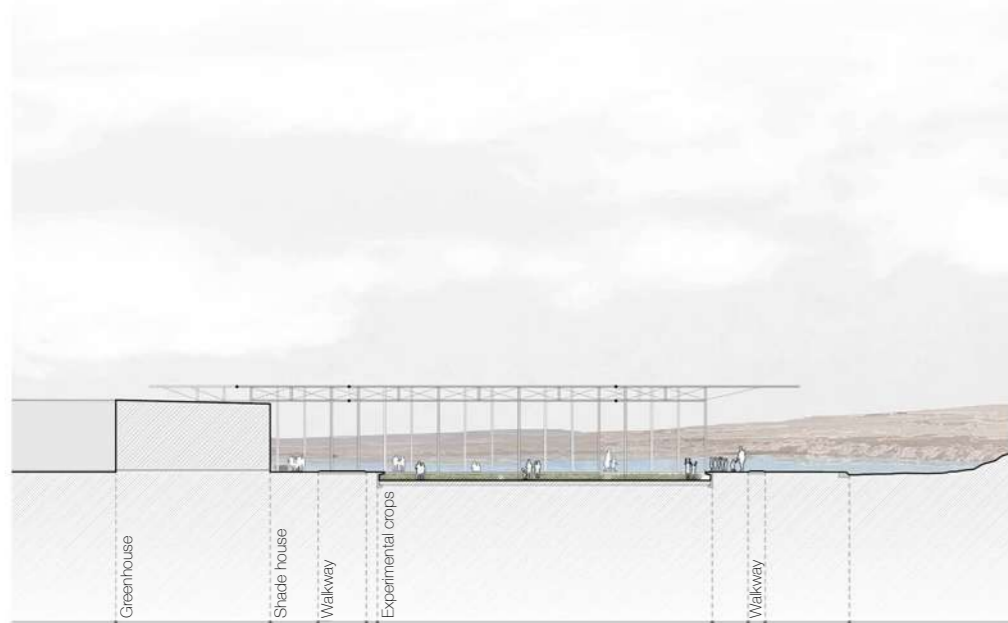
- DEVELOPMENT CENTER -



- PROMENADE -



- TREATED WATER LAGOON -



Greenhouse

Shade house

Walkway

Experimental crops

Walkway



Treated water canal

Water playgrounds

Vegetation cells

Shaded promenade



Dock

Vegetated bay

Shaded promenade

Vegetation cells

Dam retaining wall

