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Title of the project Breathe: Redefining a zone of informal settlements for Ho Chi Minh city
Authors Rapa Surajaras

TECHNICAL DOSSIER

Title of the project	Breathe: Redefining a zone of informal settlements for Ho Chi Minh city
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Title of the course	Graduation Studio Landscape Architecture: Flowscapes
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Ho-Chi-Minh-City, Vietnam has experienced a massive transformation due to rapid urbanization. This growth has had a large impact on the quality of life in the city, increases its vulnerability to flooding and has meant a loss in a water-related lifestyle. The “Breath” project proposes to enhance the culture of living next to by and with the water by redefining a zone of informal settlements next to a canal which is hardly visible anymore. The pilot location is in Doi-Te canal, flanked by dense informal settlements. The project elaborates on four design strategies at different scales from small interventions to the district scale. The first strategy [collect] involves the inhabitants where floating waste in the river is captured by installing a small-design-intervention that cooperates with the tidal difference on the balcony of their homes. The second strategy [purify], transforms a vacant area used for aquaculture into a purification park to filter the water from a tributary before it reaches the main canal. The two sides of the canal are joined by employing a third strategy [connect], by designing experiential routes and adding opportunities to cross the river by boats that allow residents, tourists and informal communities to meet and interact. In the fourth strategy [adapt], the project examines the possibility of adding a sponge park, which can store a lot of water during the monsoon season to safeguard the city from flooding. Moreover, a water barrier enhancing the construction of the houses is installed to protect the urban area from a tidal flood. The four strategies require the involvement of the informal community. They need to become the caretakers of the canal zone and the water managers of the city. In doing so, the area will become attractive for all people living in Ho-Chi-Minh. The project revives the existing landscape and transforms the space into a living system which does not only create a better environment, but also offers a better quality of life for all people in the city.

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CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

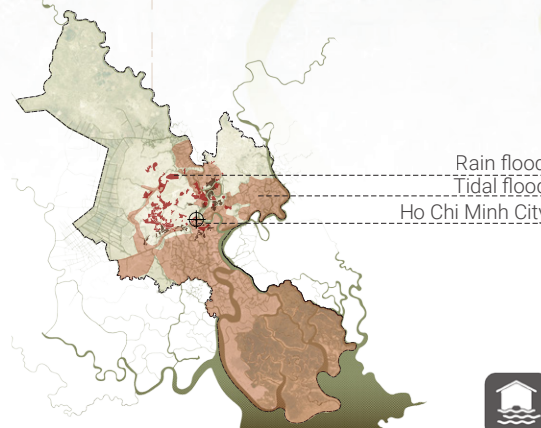
Barcelona September 2020
SCHOOL PRIZE



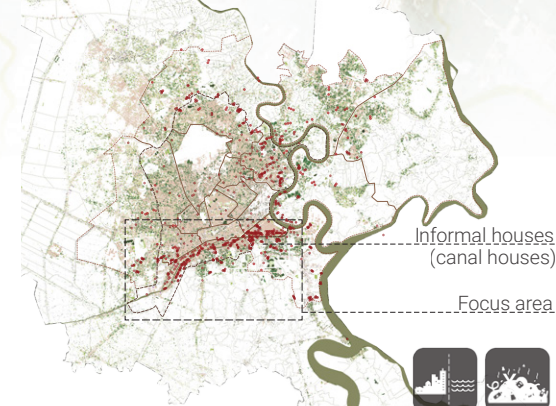
Breathe



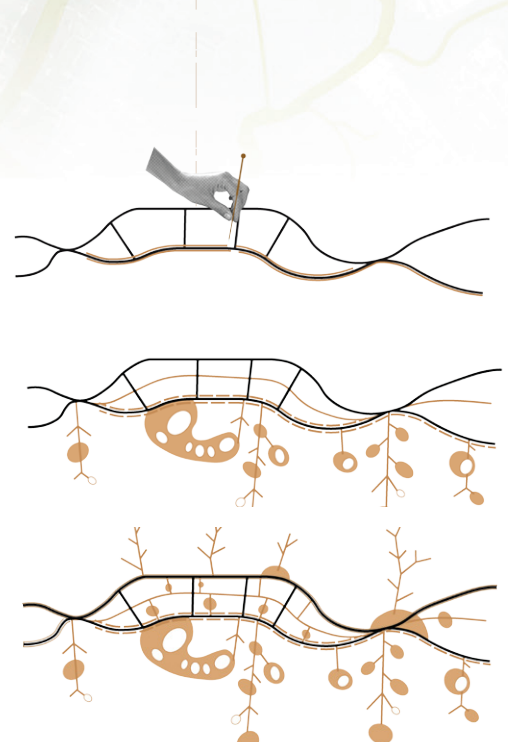
Major Challenge I Flood



Major Challenge II Informal Settlement Clearance & the identity lost



Design Concept Breathing System



Masterplan

- Existing
 - zone of informal settlement
 - existing informal houses
 - 1 port area
 - 2 district 4 - cbd
 - 3 high way
 - 4 industrial area
 - 5 government office
 - 6 residential area
 - 7 abandoned aquaculture farm
 - 8 rural area
- Propose
 - a sponge park
 - b sponge area
 - c city park
 - d water inlet to purification park
 - e purification pond
 - f aquaculture farm
 - g green buffer
 - h constructed wetland
 - i recreational area
 - j biogas island
 - k ecological strip
 - demolished houses
 - newly proposed houses
 - intervention type 2
 - intervention type 3
 - intervention type 4
 - intervention type 5
 - water gate
 - pump
 - bridge

Due to the rapid urban development in Ho Chi Minh City and the pressure from the annual flood, the city came up with several plans to overcome the immediate problems. The approach attempted to apply the engineering method to tackle flooding issues and the imminent problem of climate change. A large infrastructure such as ring dike, concrete barrier, gigantic Watergate has been proposed to take control of the water. The canal houses along the water structure have been removed and relocated to provide spaces for urban development. It is hard to argue that Ho Chi Minh City is strongly in the needs of strong action to undertake with the problems, however, is this the only way to approach the issues? The top-down solution somehow neglected the cultural value of the city and overlooked

the life of people who live right next to the water. What could be the alternative solution for Ho Chi Minh City? This project illustrated the alternative approach to rethink about the challenges and redefine a zone of informal settlements as an opportunity for the city and the environment.





Product

Intervention

Opportunity



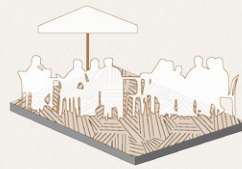
I Design Strategy I
Collect - floating waste

Redefining the informal houses
Design Intervention

#4 Gather
multi purpose space



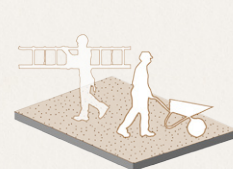
community kitchen



public canteen



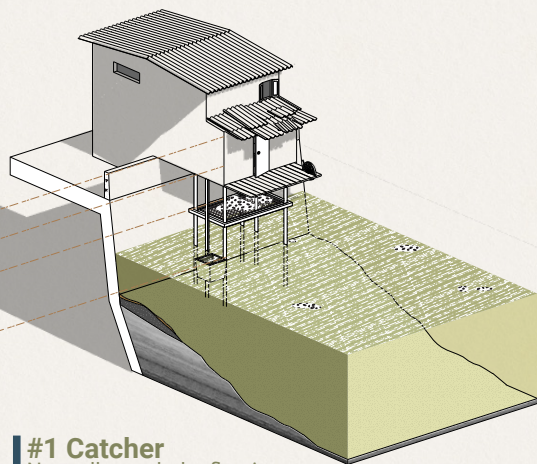
pocket green space



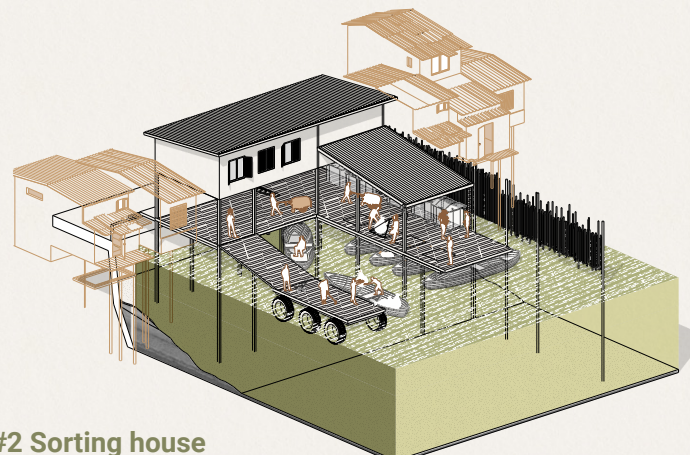
construction storage



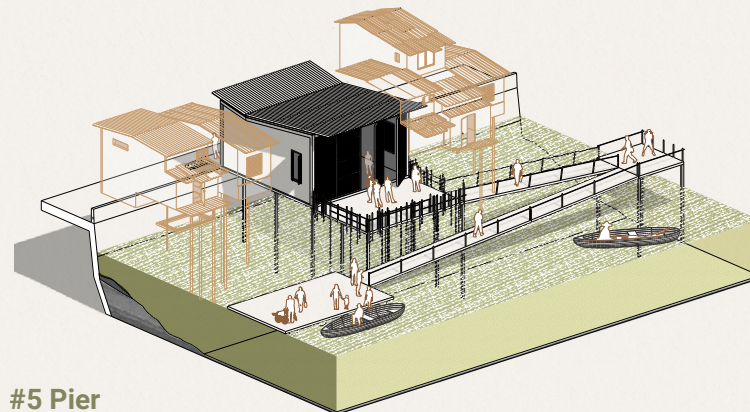
community classroom



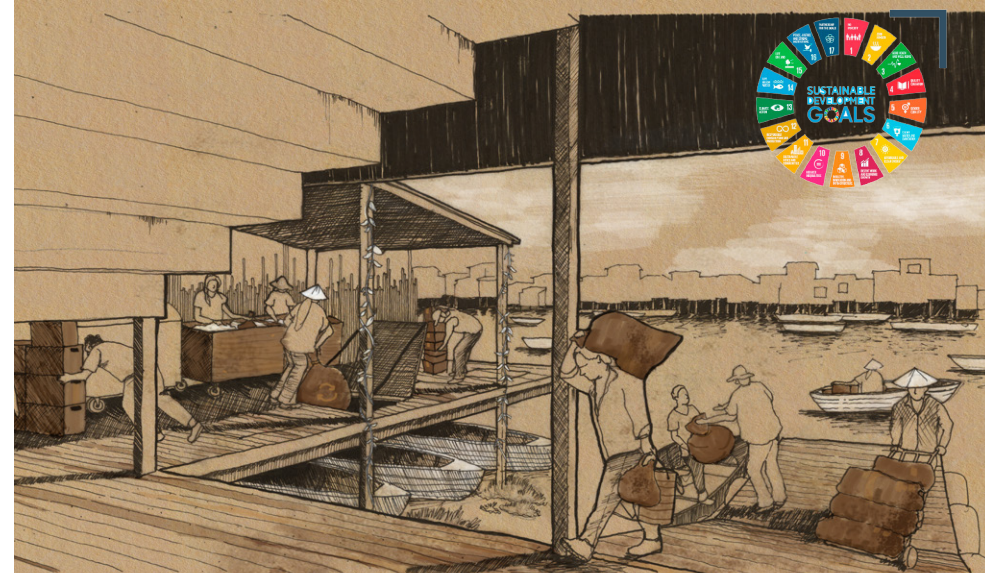
#1 Catcher
Naturally catch the floating waste



#2 Sorting house
Sorting solid and organic waste



#5 Pier
reactivating the canal



Waste separation at the sorting house



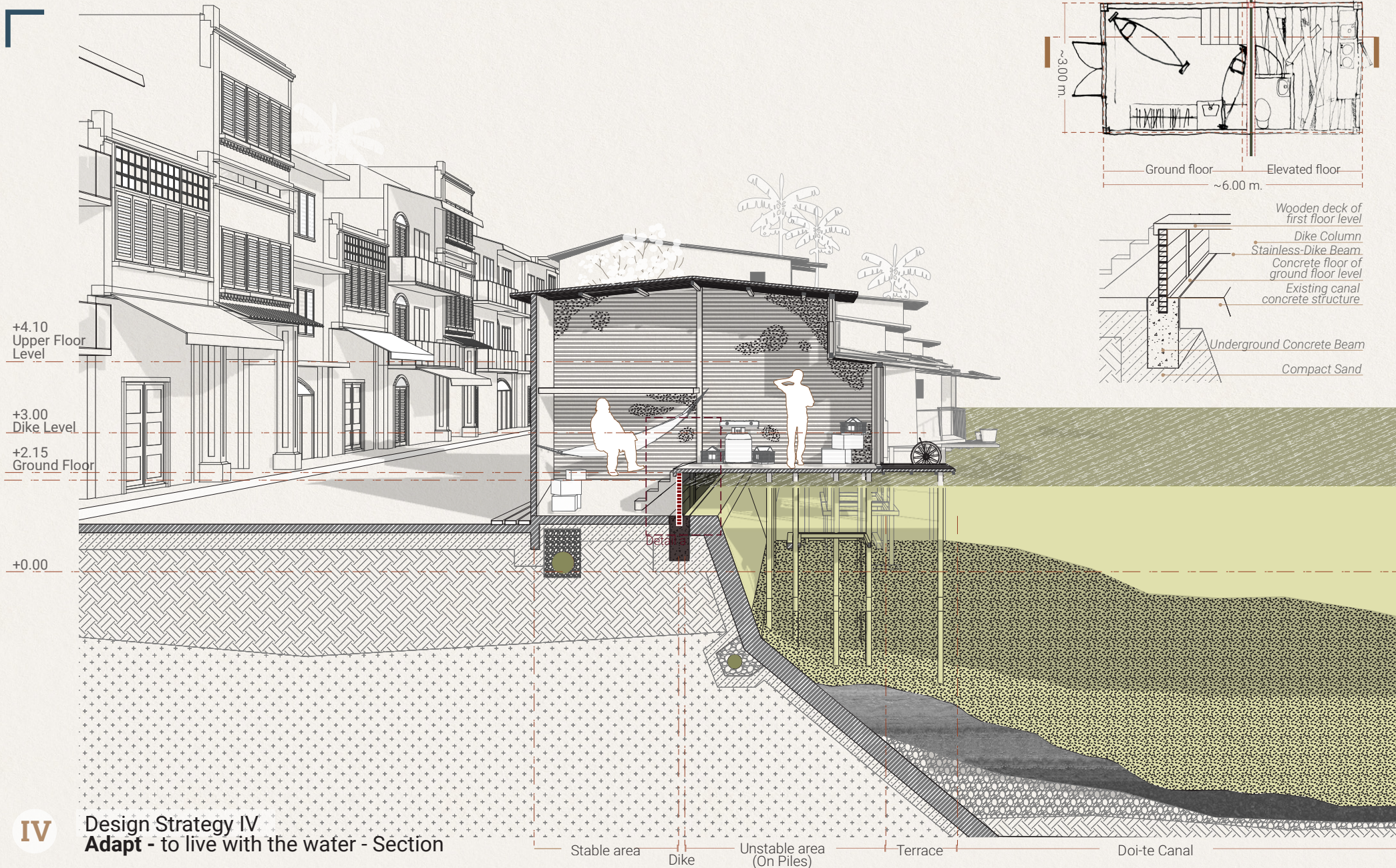
II Design Strategy II
Purify - water quality **#3 Power hub**



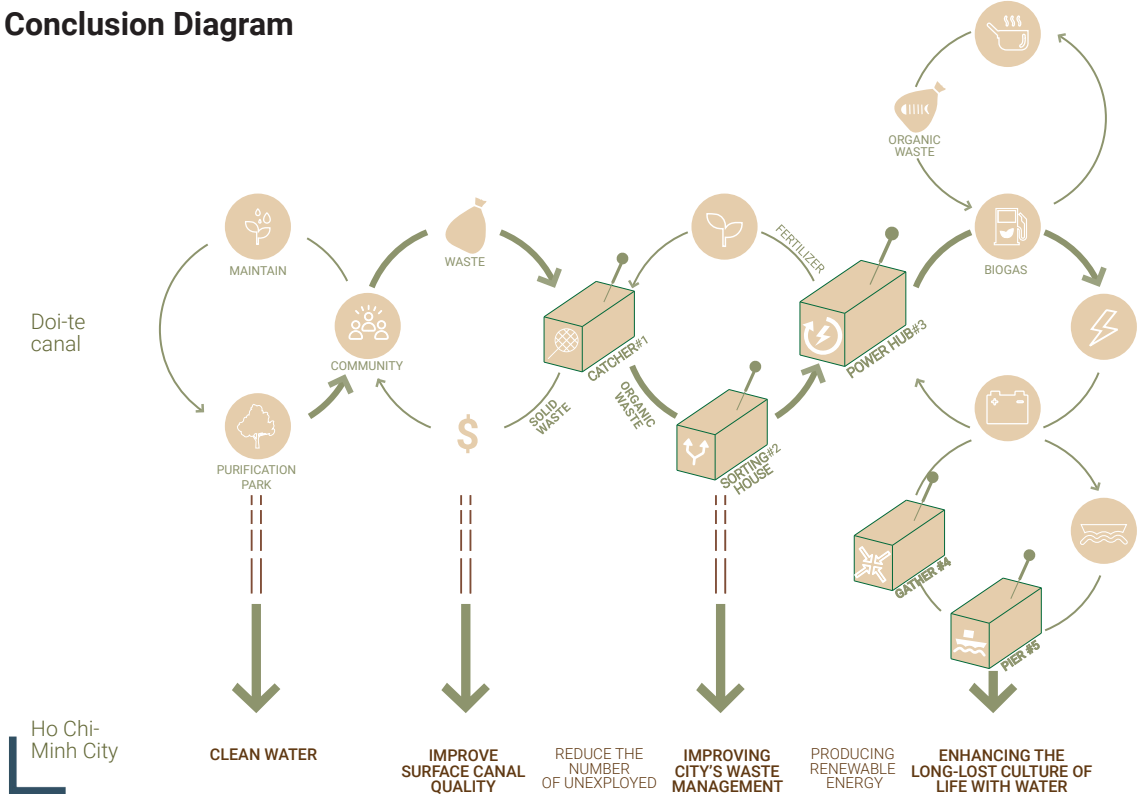
Design Strategy I [Collect] involves the inhabitants to collect the floating waste on the water surface. The small-design-intervention has been installed underneath their house to capture the waste naturally by tidal movement. After that, the waste will be delivered to the sorting house to separate the solid waste and organic waste.

Design Strategy II [Purify], the organic waste is transferred to the power hub station where it is located in the purification park. The unused aquaculture land has turned into a purification park. The strategy is not only transforming organic waste into biogas for the community's cooking purposes but also purifying polluted water from the canal by using constructed wetlands. The 10 different ponds have been constructed in various heights to form a set of cascades to oxygenate the polluted water





Conclusion Diagram



Design Strategy III [Connent] represented the possibilities to include the zone of informal settlement to the city. Some of the informal houses will be replaced by multi-purpose space (Gather) and pier. The different type of exploration route has been created which allows interaction between the informal community and the city to take place.

Design Strategy IV [Adapt] explored and identified possible spaces to use as sponge areas. During the wet season, these sponge areas will reduce flood risk by expanding the water capacity of the city while in the dry season it will function as green areas. More importantly, the informal houses also play an important role in this strategy. By studying the existing condition of the house, part of the house that is on piles will be elevated up and a 75 centimeters low dike will be inserted underneath the structure of the house.

The zone of informal settlements has already been redefined. From the problematic area into the essential zone that can generate further opportunities to the environment included improving waste management of the city, purifying water before release back to the Saigon River, increasing green spaces, preparing the area for annual flood, and imminent challenge as climate change. Moreover, it is also contributed to the city by creating renewable energy, proving job opportunities for the unemployed, and most importantly, it is enhancing the long-lost culture of life with water back to HCMC. The approach and design intervention from this project is applicable to be implemented in other canals in HCMC, this to support the city to be a social-ecological resilient city in the near future.

