GRADUATE PORTFOLIO

M.S.Architecture & Urban Design | 2020

ASHWIN NAMBIAR

index

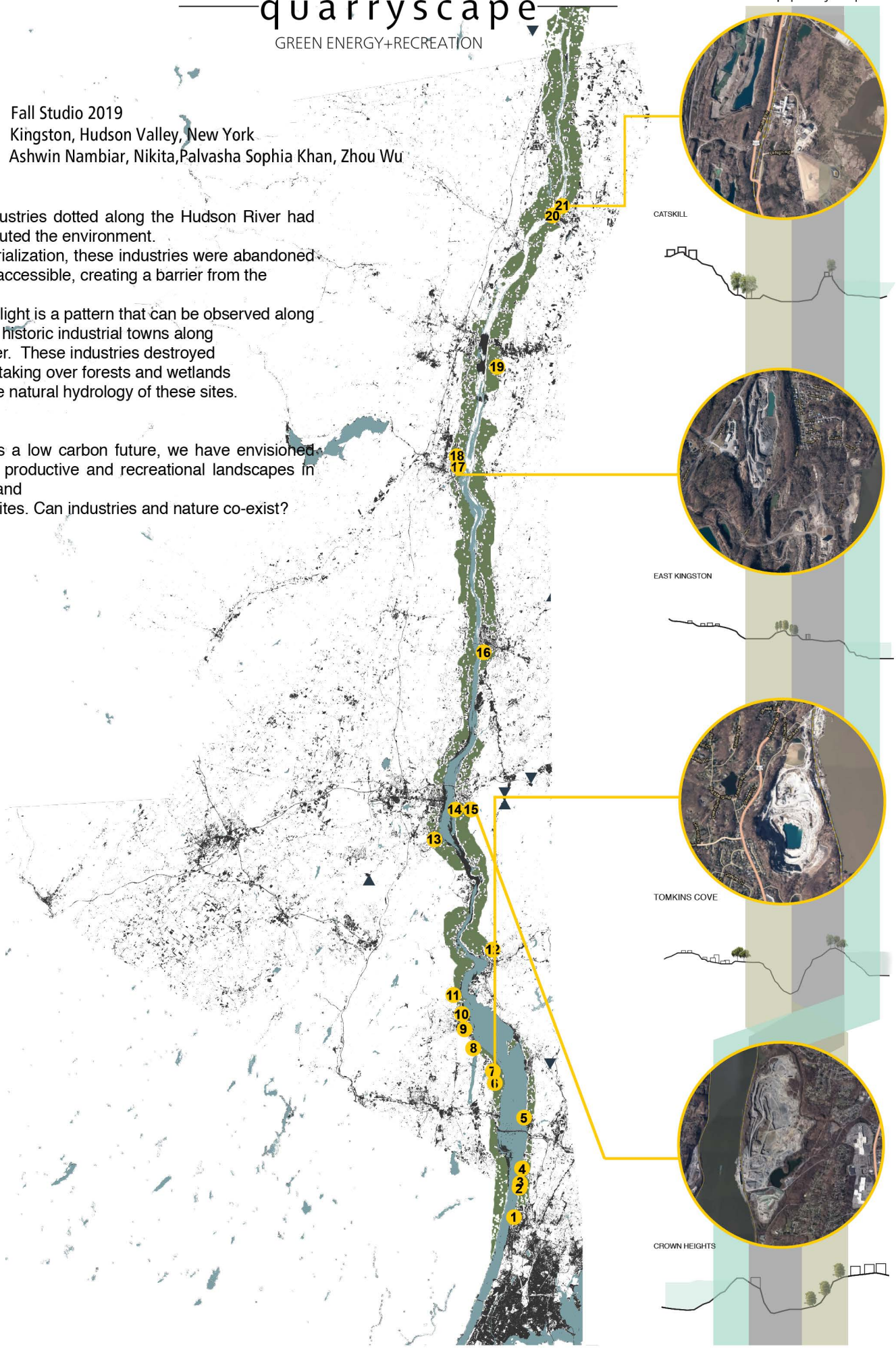
quarryscape

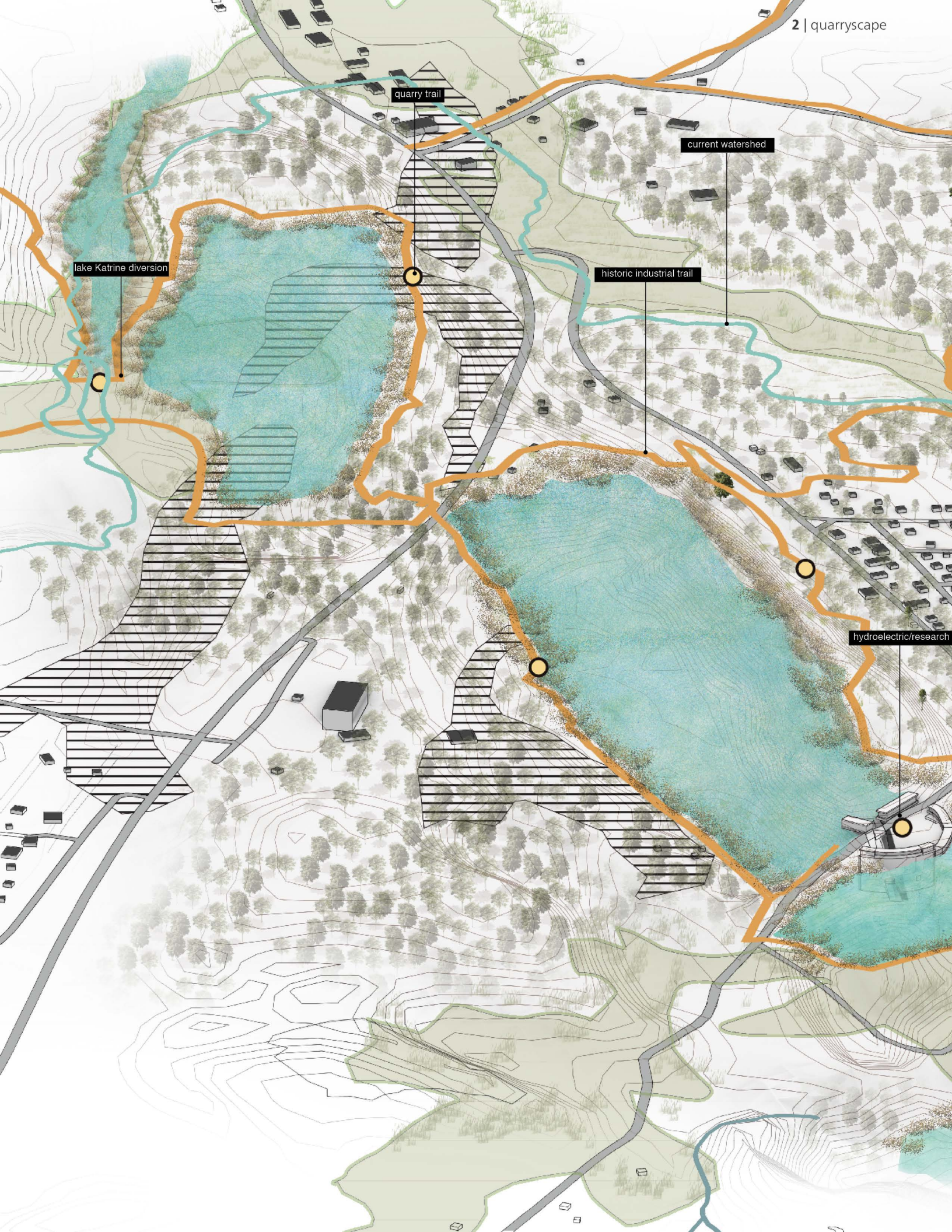
GREEN ENERGY+RECREATION

PROJECT TYPE: Fall Studio 2019
LOCATION : Kingston, Hudson Valley, New York
MEMBERS : Ashwin Nambiar, Nikita,Palvasha Sophia Khan, Zhou Wu

Historically, industries dotted along the Hudson River had thrived and polluted the environment.
Post De-industrialization, these industries were abandoned and are now inaccessible, creating a barrier from the waterfront.
The barrier of blight is a pattern that can be observed along the riverfront in historic industrial towns along the Hudson river. These industries destroyed the ecology by taking over forests and wetlands thus altering the natural hydrology of these sites.

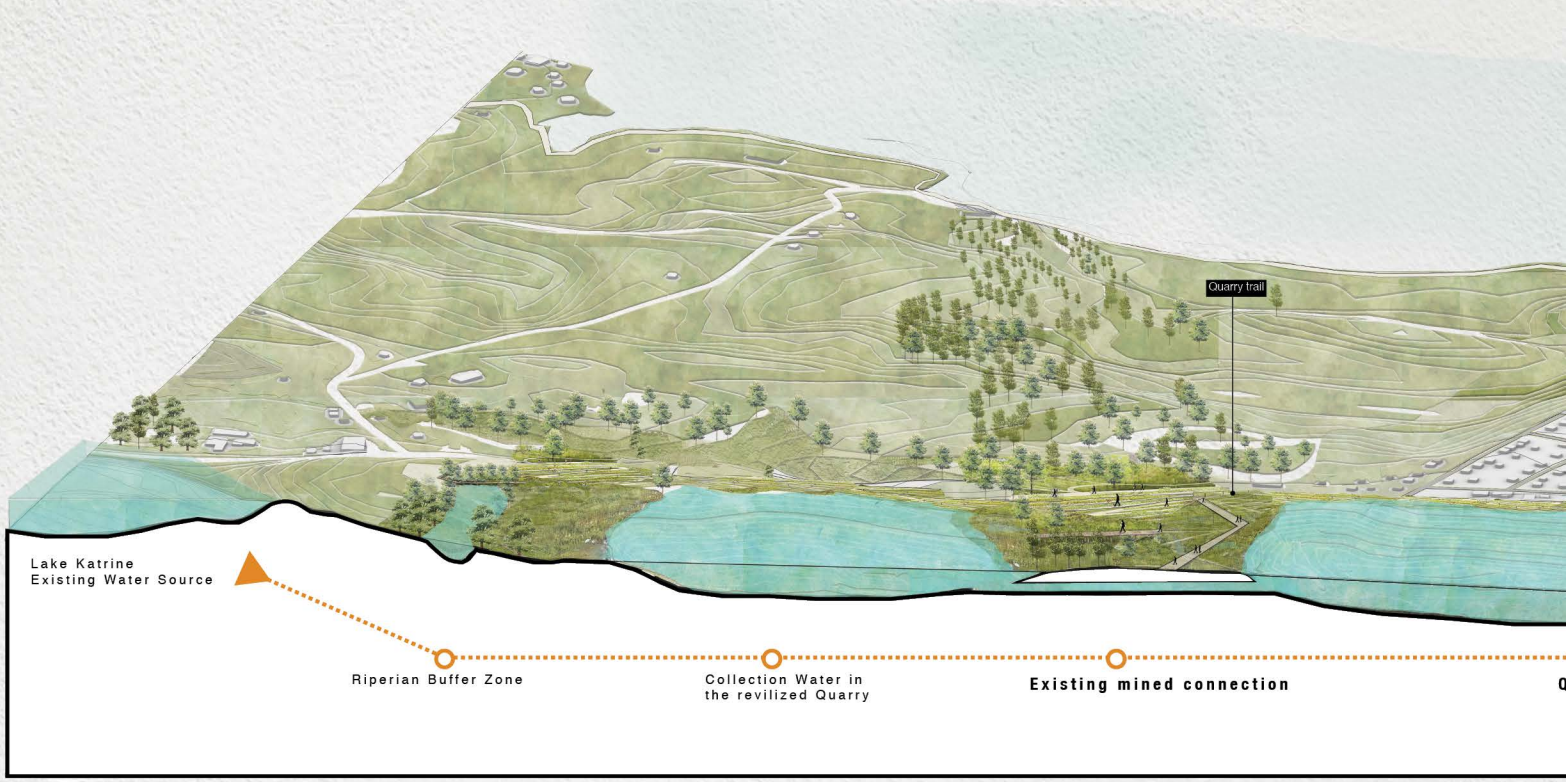
Moving towards a low carbon future, we have envisioned the creation of productive and recreational landscapes in these polluted and
contaminated sites. Can industries and nature co-exist?



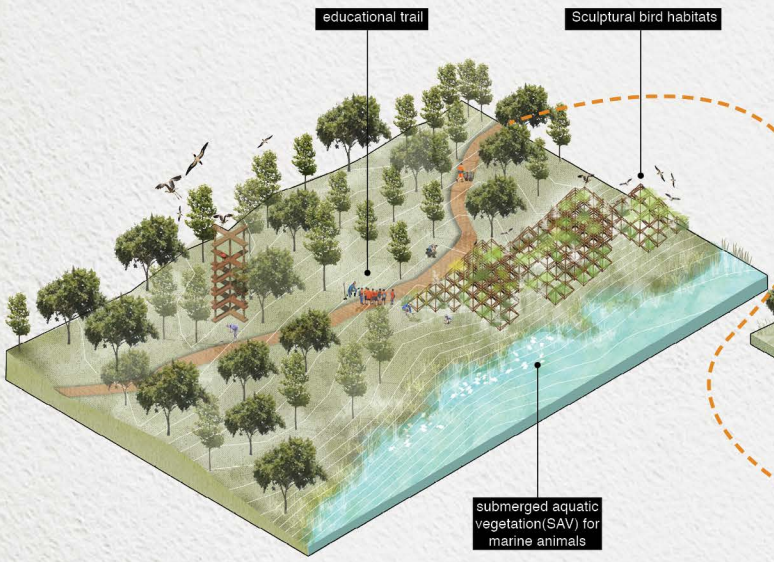

quarry trail
current watershed
lake Katrine diversion
historic industrial trail
hydroelectric/research


sculpture+birds
waterfront park
animal observation
interactive art trail
activity/event hub
east Kingston ferry

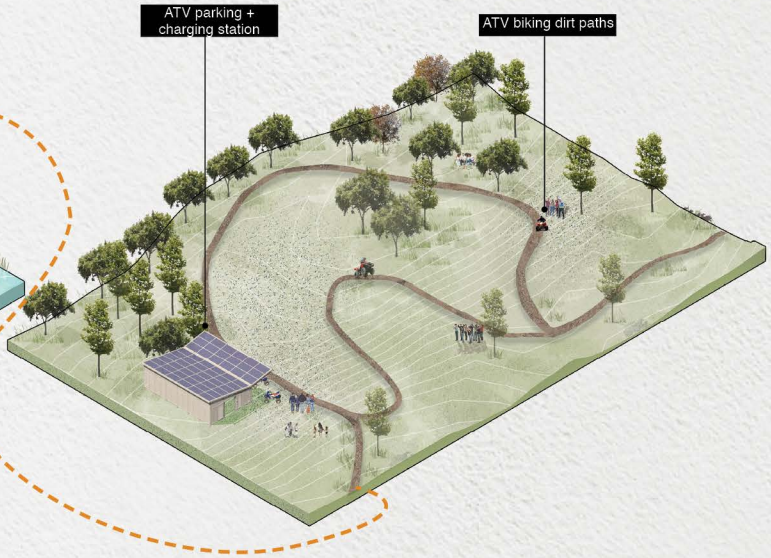
SITE WATER AND ECOLOGY SYSTEM



BIRDS/ANIMALS HABITAT TRAIL



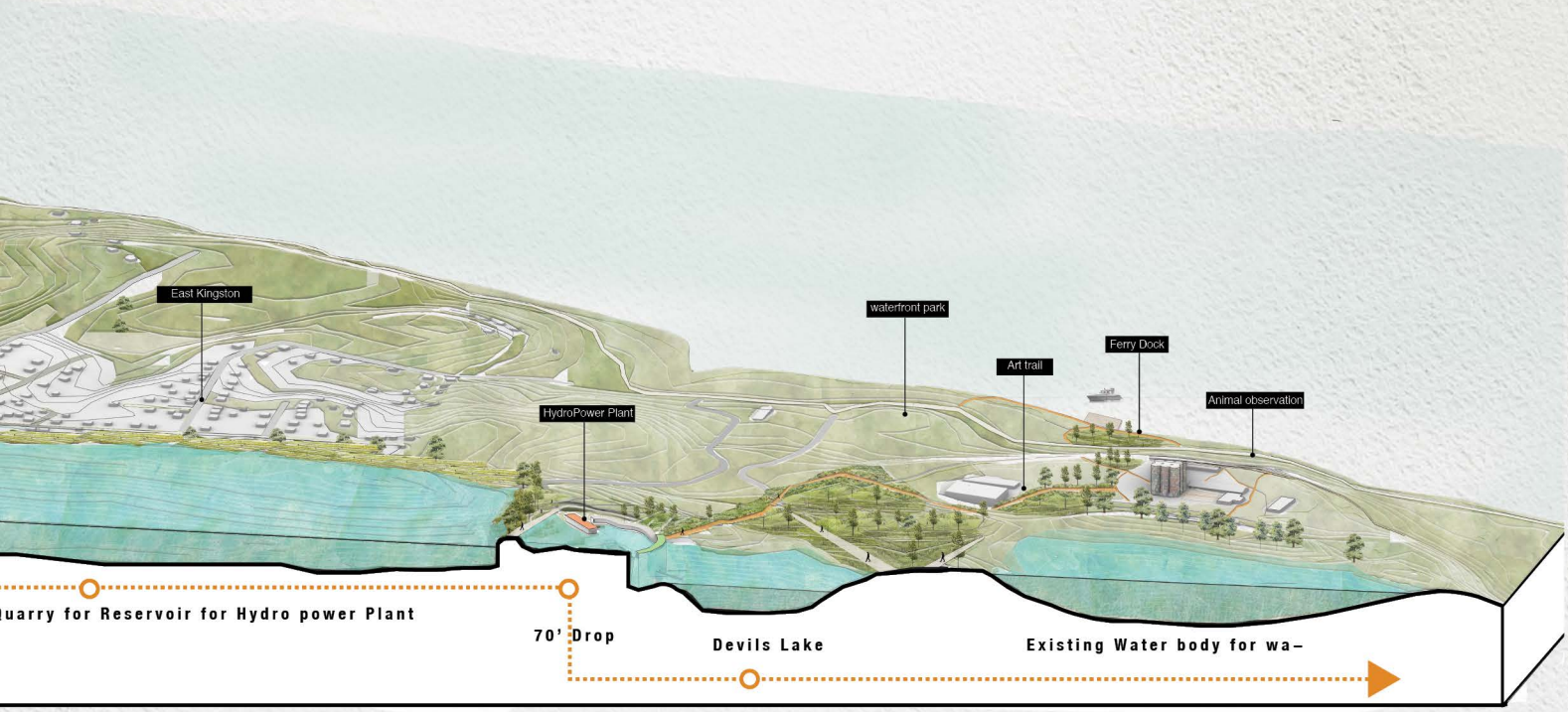
ATV BIKING+RACING ZONE



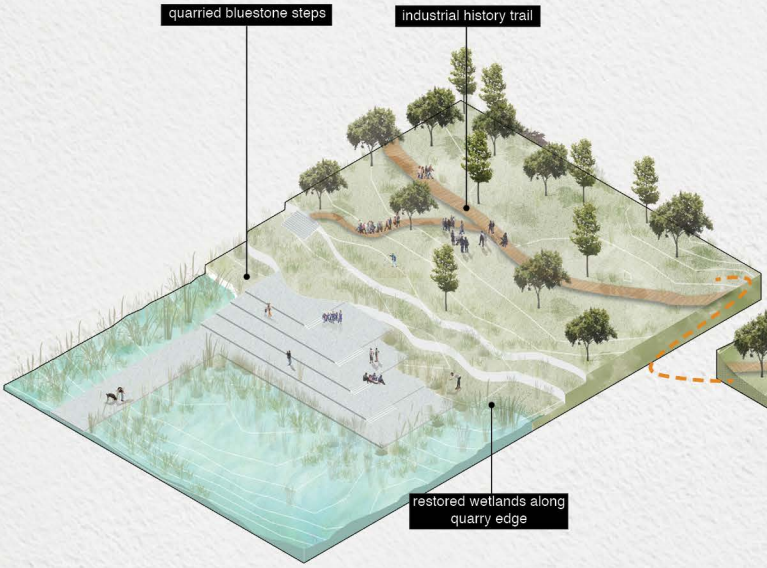
BELOW: Hydropower plant with an observation space for visitors

ABOVE(1): Restored quarry industrial trail

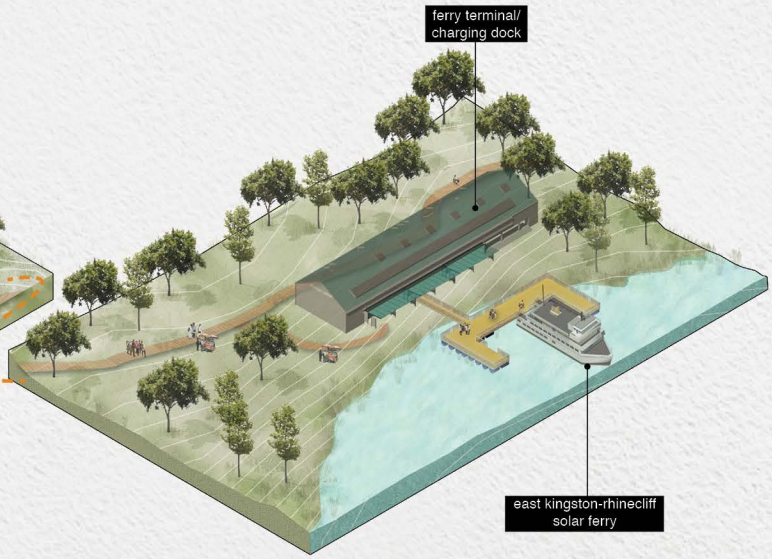
ABOVE(2): Accessible waterfront trails and sculptural bird habitats



QUARRY EDGE TRAIL



EAST KINGSTON–RHINECLIFF FERRY



BELOW: Hydropower plant with an observation space for visitors

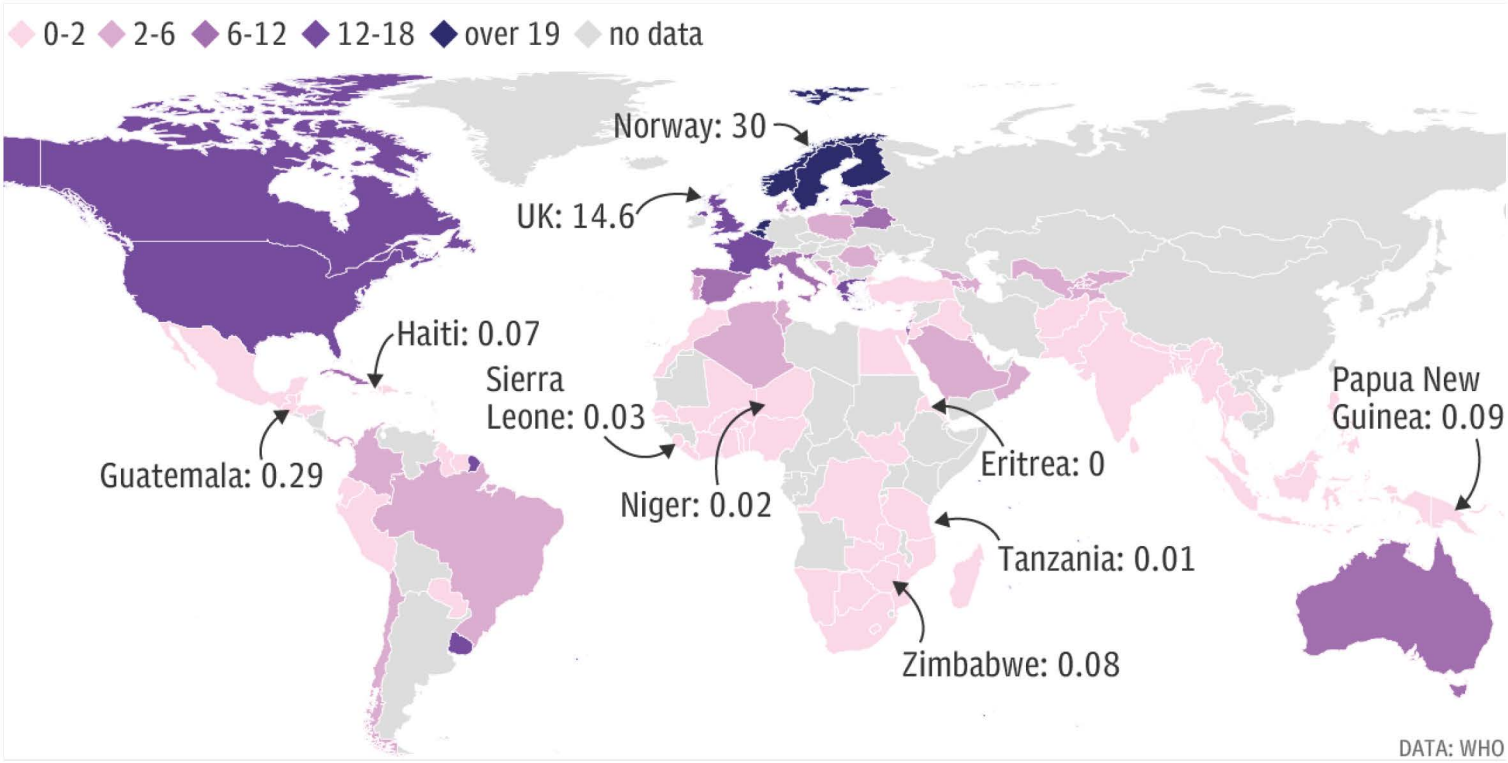
ABOVE(1): Restored quarry industrial trail

ABOVE(2): Accessible waterfront trails and sculptural bird habitats


I'm gonna take Ferry from here to make it in time for my Amtrack train. Its way faster !!!
and energy efficient!!

PROJECT TYPE : Fall Semester 2019 Seminar
PROFESSOR : Justin G. Moore
CLASS : Difference in Design

Today, there is no shortage of countries in conflict. UN estimates suggest that in 2019, nearly 132 million people in 42 countries around the world will need humanitarian assistance resulting from conflict or disaster. Nearly 69 million people worldwide have been forcibly displaced by violence and conflict, the highest number since World War II.1
This study and thereby the proposal focuses on methods and techniques to alleviate mental health problems in non combatant civilians at the forefront between countries at war. Can mental health practitioners and advocates help combat this unseen war?
WHO estimates 540 million people worldwide suffer from mental health disorders, with nearly 75 per cent of them living in low- and middle-income countries.
Can communities be educated about the co-relation between war and mental health?
Will a platform to make these voices heard be a spring point for uprooting the social stigma that comes with it?



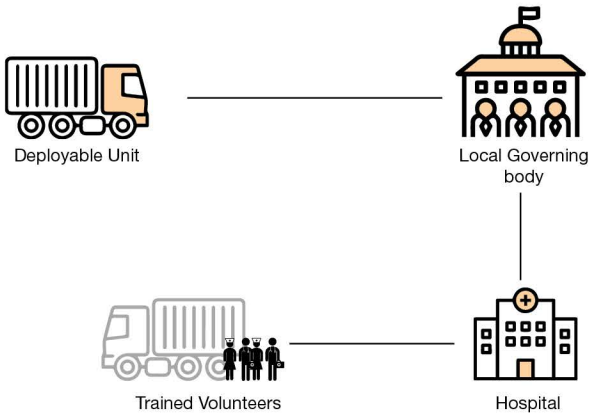
Psychiatrists working in the Mental Health Sector, 2014 (per 100,000 people)
Source: World Health Organization(WHO)

Children at the forefront of war

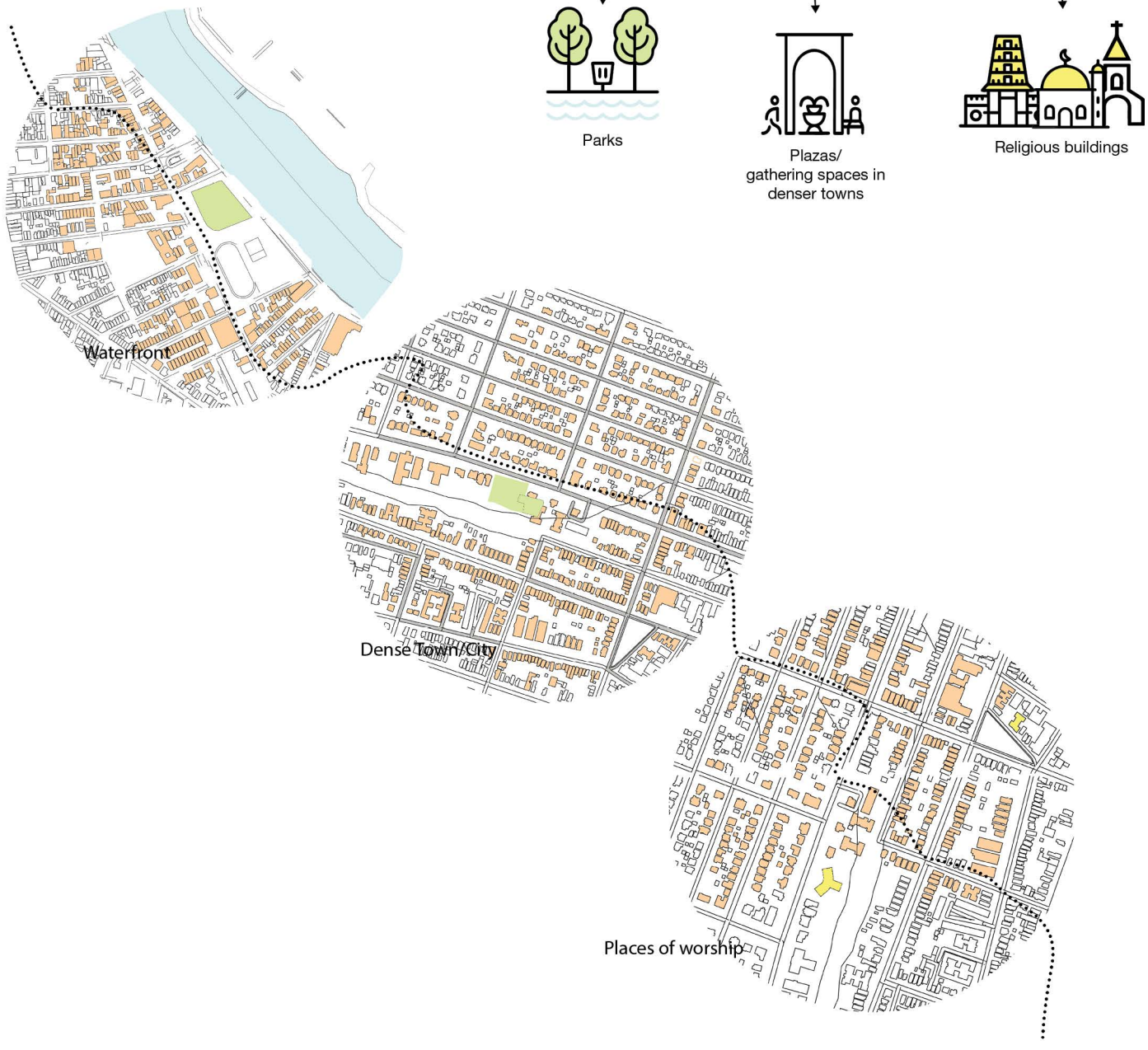
(Above): A still of the 'Girl in The Red Coat' from the movie, The Schindler's List; (Below-Left): A girl stands by Israeli soldiers in Palestine; (Below-Right) A schoolgirl walks past troops in Kashmir

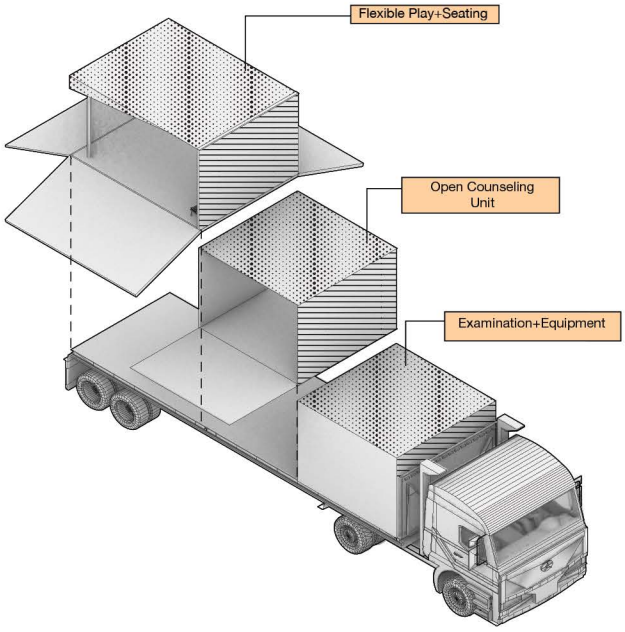
Source: Media, ISM. "ISM Stands in Solidarity with the People of Kashmir." International Solidarity Movement, August 16, 2019.

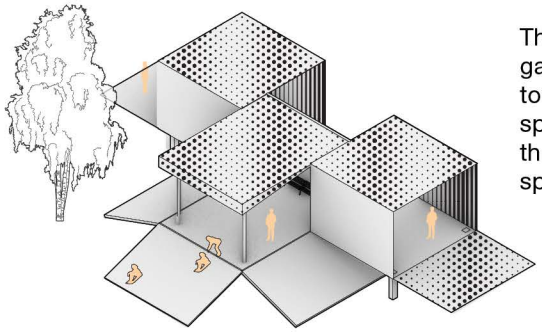
Process of Mobile-Unit wing Setup and Route Access



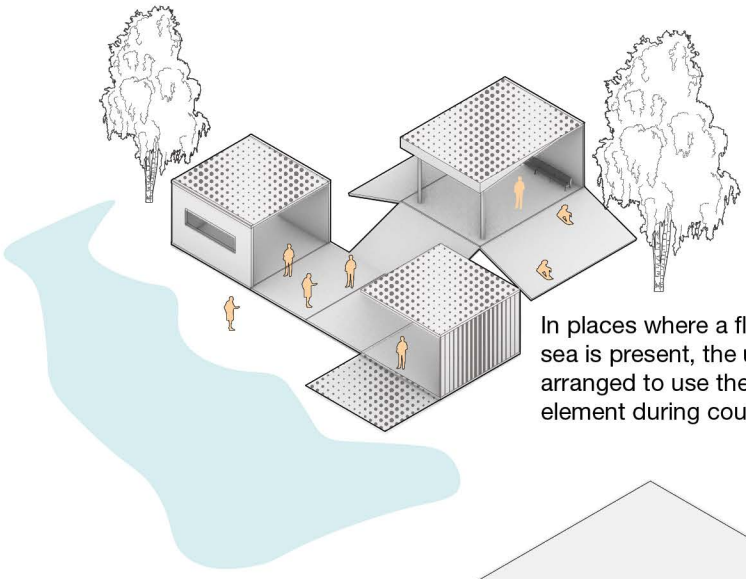
Mobile Unit Deployable Locations





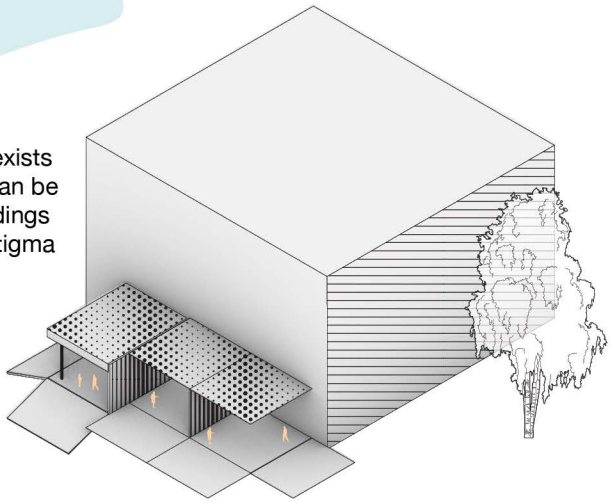


The Units are deployed in a plaza or any gathering area in a densely populated town or village where the flexible play space is used to attract children and thus the adults have an opportunity to speak with the counselors.



In places where a flowing river/lake/ sea is present, the units are strategically arranged to use the water as a healing element during counseling and therapy

A sense of trust and belief usually exists with places of worship. The Units can be deployed to be a part of these buildings eventually helping to mitigate the stigma surrounding mental health.



seeding the machamba

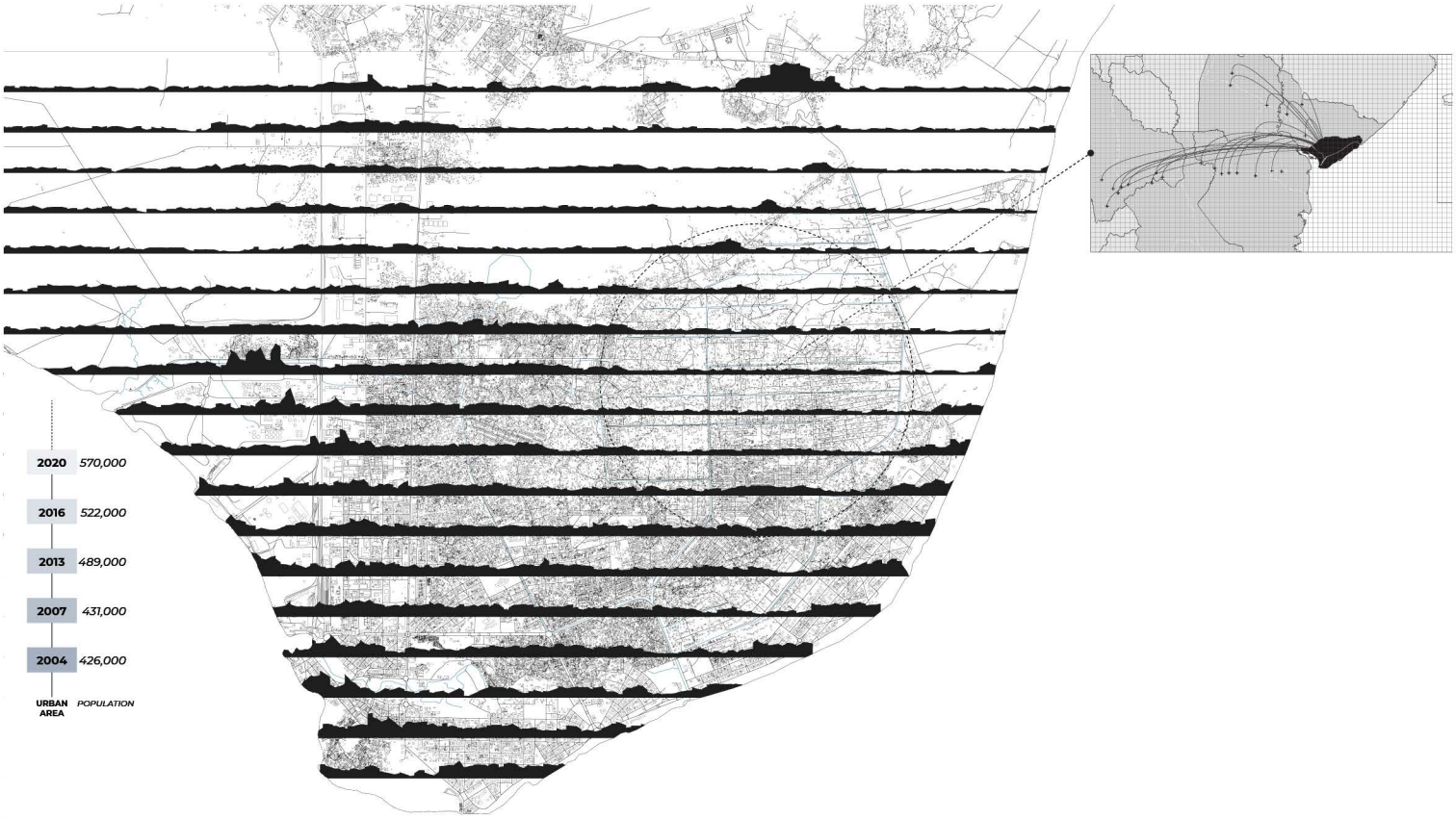
AGRICULTURE BASED DISASTER RECOVERY

PROJECT TYPE: Spring Semester 2020
LOCATION : Beira, Mozambique
MEMBERS : Ashwin Nambiar, Jaime Palacios Anaya, Ting Zhang,Xinyue Liu, You-Chiao Wu (Joy)

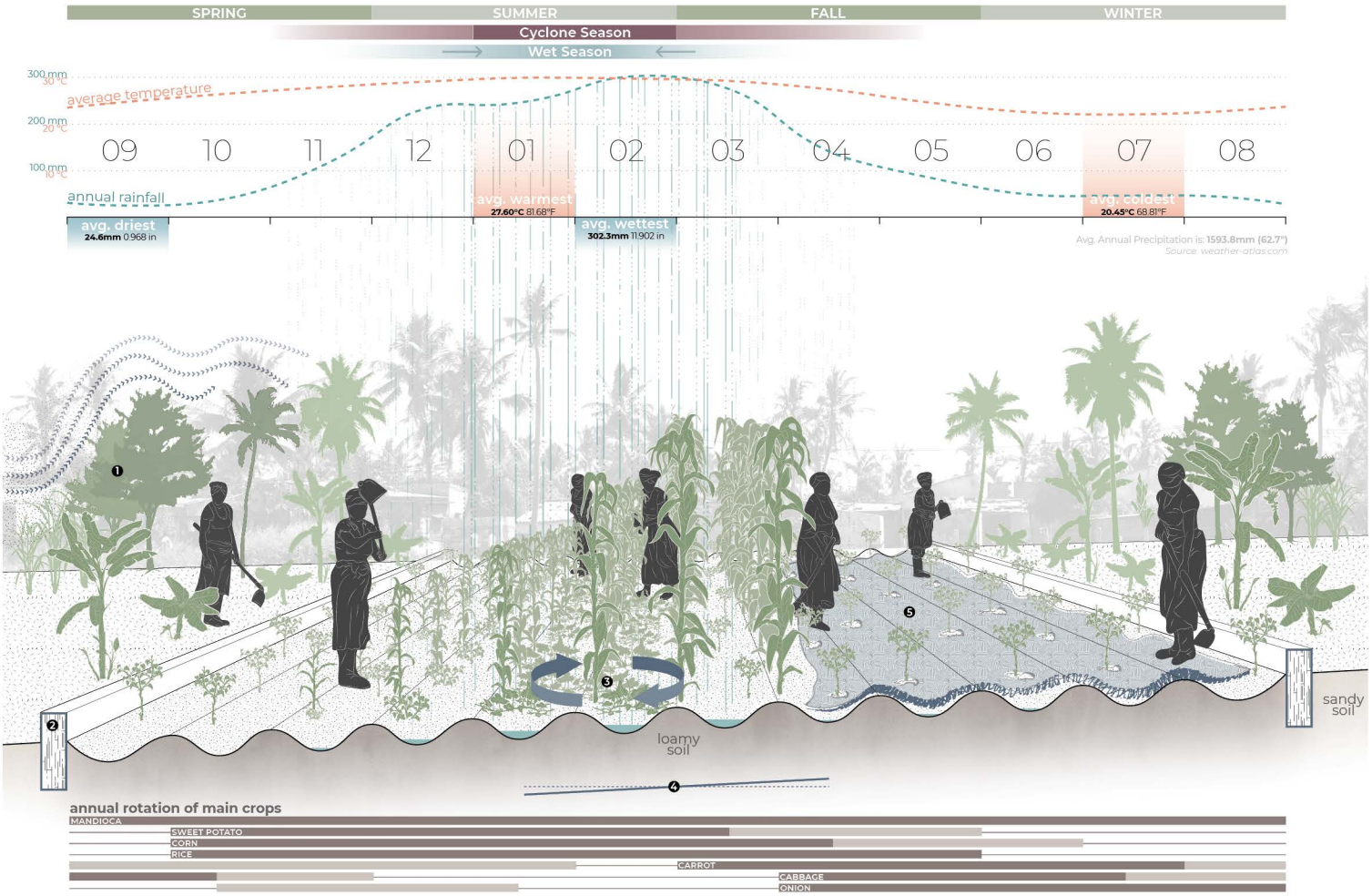
The city of Beira has an extensive and integrated system of traditional agriculture that is under threat. Our project conceives of this system as more than just agriculture - it is a productive and preventative flood infrastructure. We envision that this agricultural system could coordinate communities, organize the city, and be the key to recovery and ongoing resilience.

GOALS

+ Consolidate and organize cooperatives at a city scale.
+ Protect social and ecological capital.
+ Empower women in agriculture
+ Diversify income and create job opportunities.
+ Integrate adaptive, nature-based infrastructure.



"Flooding" is a consequence of unplanned sprawl into low-lying agricultural land in Beira.
The current resettlement plan disregards people's livelihoods and defines "risk zones" in the city, instead of recognizing them as assets for the city.
There is an urgent need of elevational programming for future cyclones and urban growth.



ma·cham·ba

(Swahili mashamba, plural of shamba, farm, plantation, cultivated land, field)

feminine noun

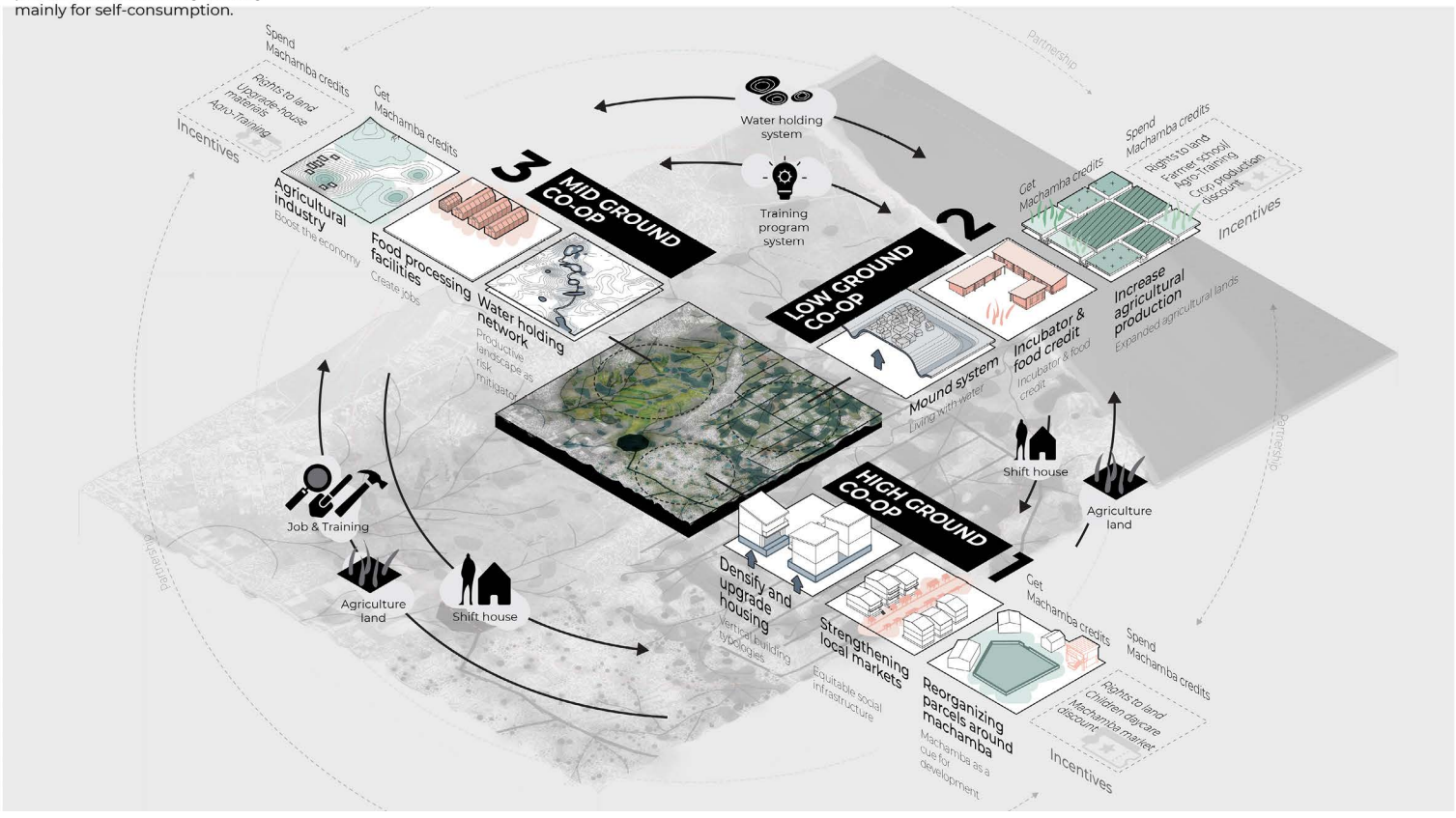
[Mozambique]

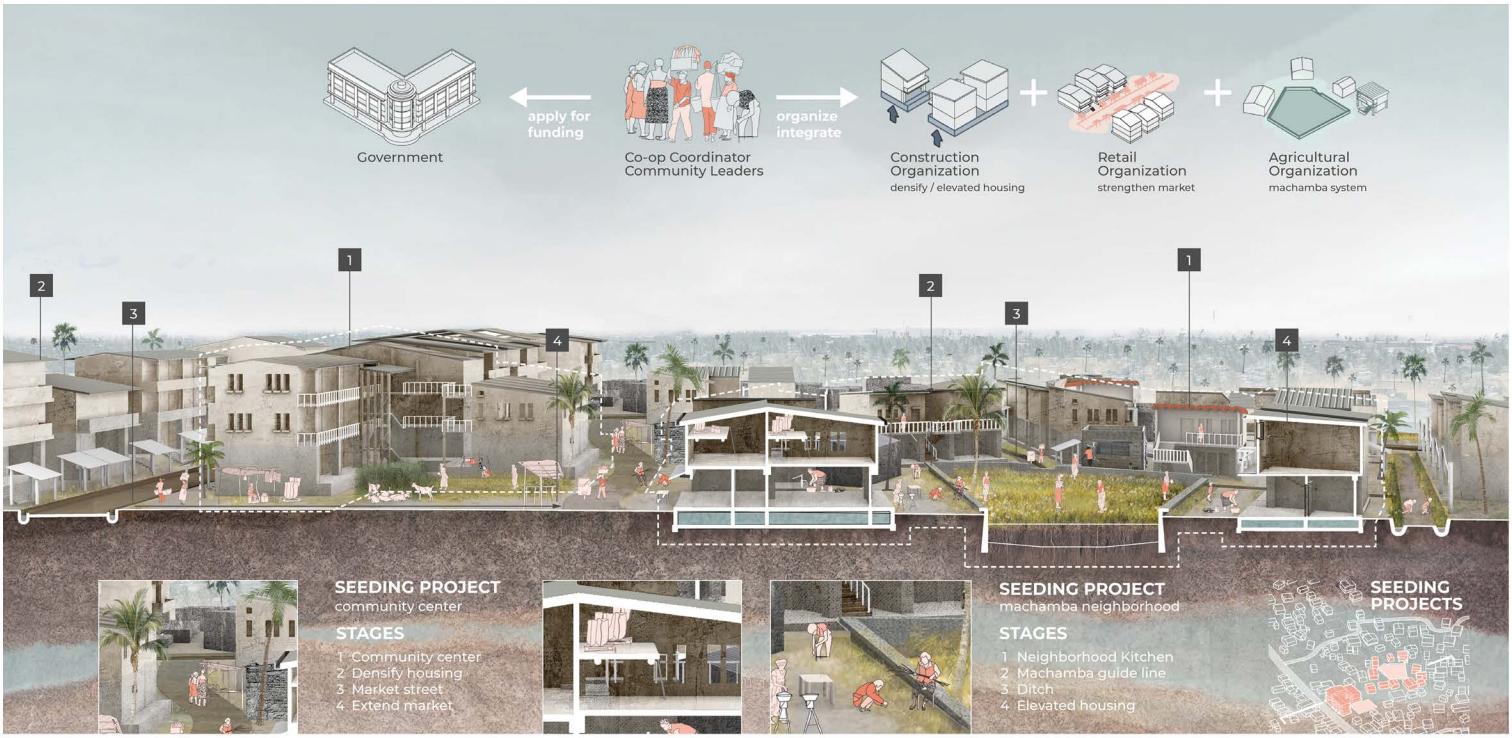
Agricultural garden, where produce is cultivated by a family mainly for self-consumption.

Machambas have been mainly managed by women and are embedded in the day to day life of the people from Beira.

These productive spatial devices are a result of collective efforts, and bring communities together.

The project aims to address the question, what if machambas could work as a dispersed resilient system?

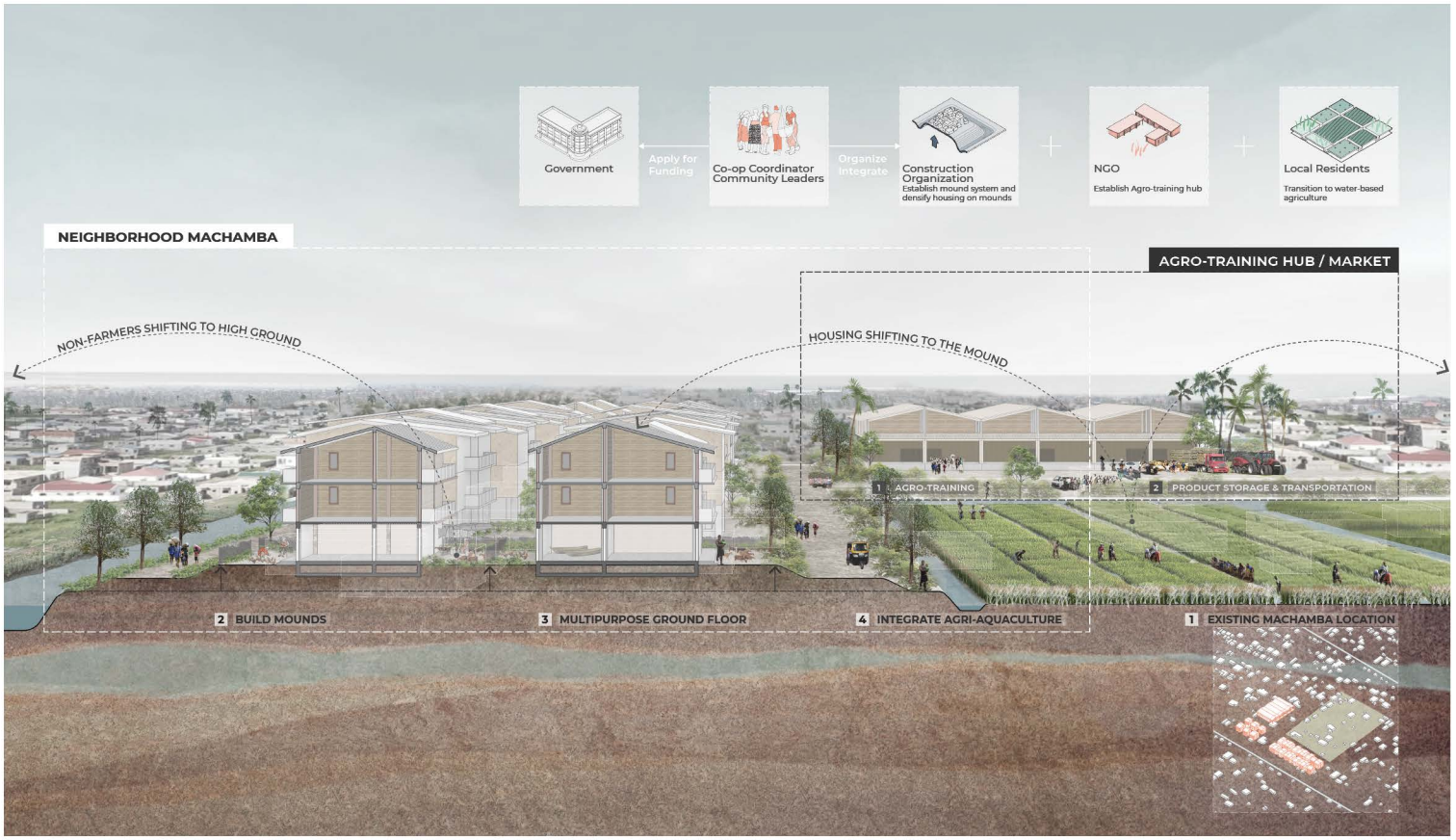




High Ground Co-operative

Machamba is used a planning element to densify the surrounding housing.
The Co-op initiates the translocation of housing from low grounds to high grounds.

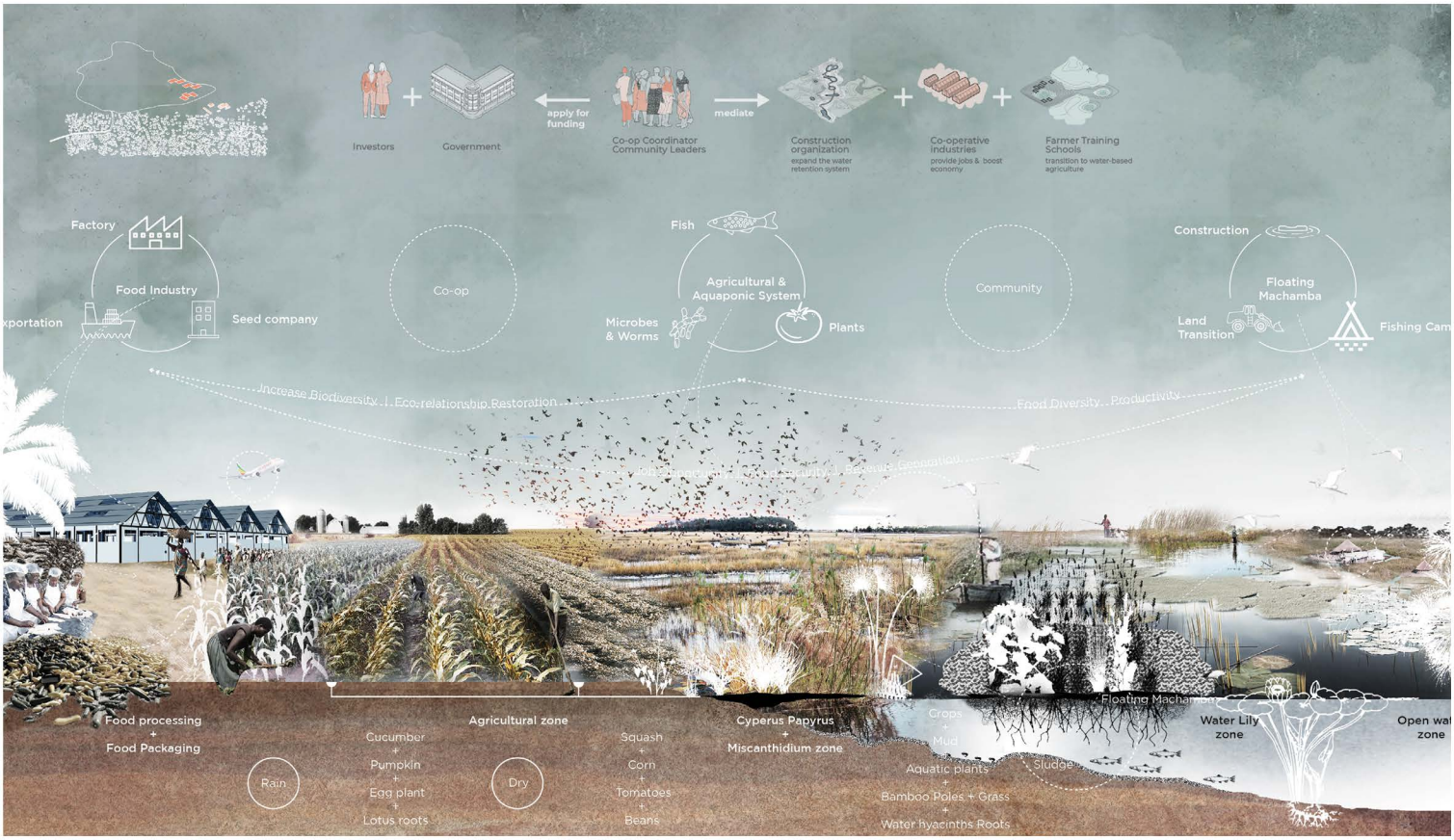
Community Center & Market
Seed banks, agro-training and construction materials are provided by the Community Center & the market is developed along the main armature street.



Seeding Machamba Projects

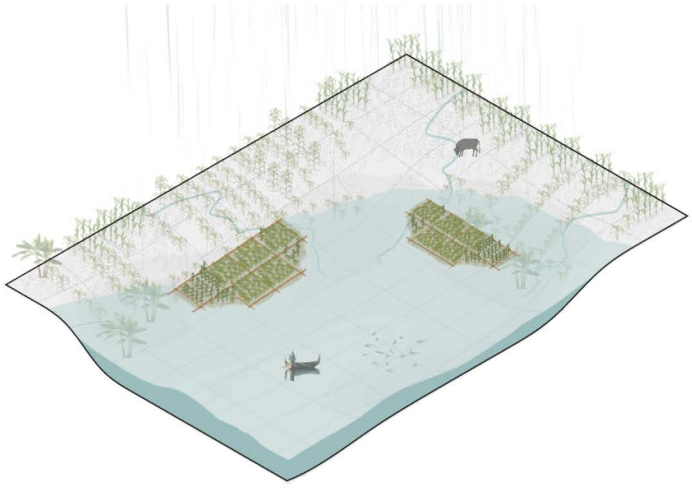
Neighborhood Machamba System:
+ Building mounds near the existing neighborhood machamba.
+ Non-farmer shifted to highlands
+ Expanding the irrigation system.
+ Housing with a multi-purpose ground floor.

Agro-training Hub / Market
+ Providing agro-training, seeds, irrigation construction training / materials.
+ Agricultural product storage and transportation.
+ Integrate adaptive, nature-based infrastructure.



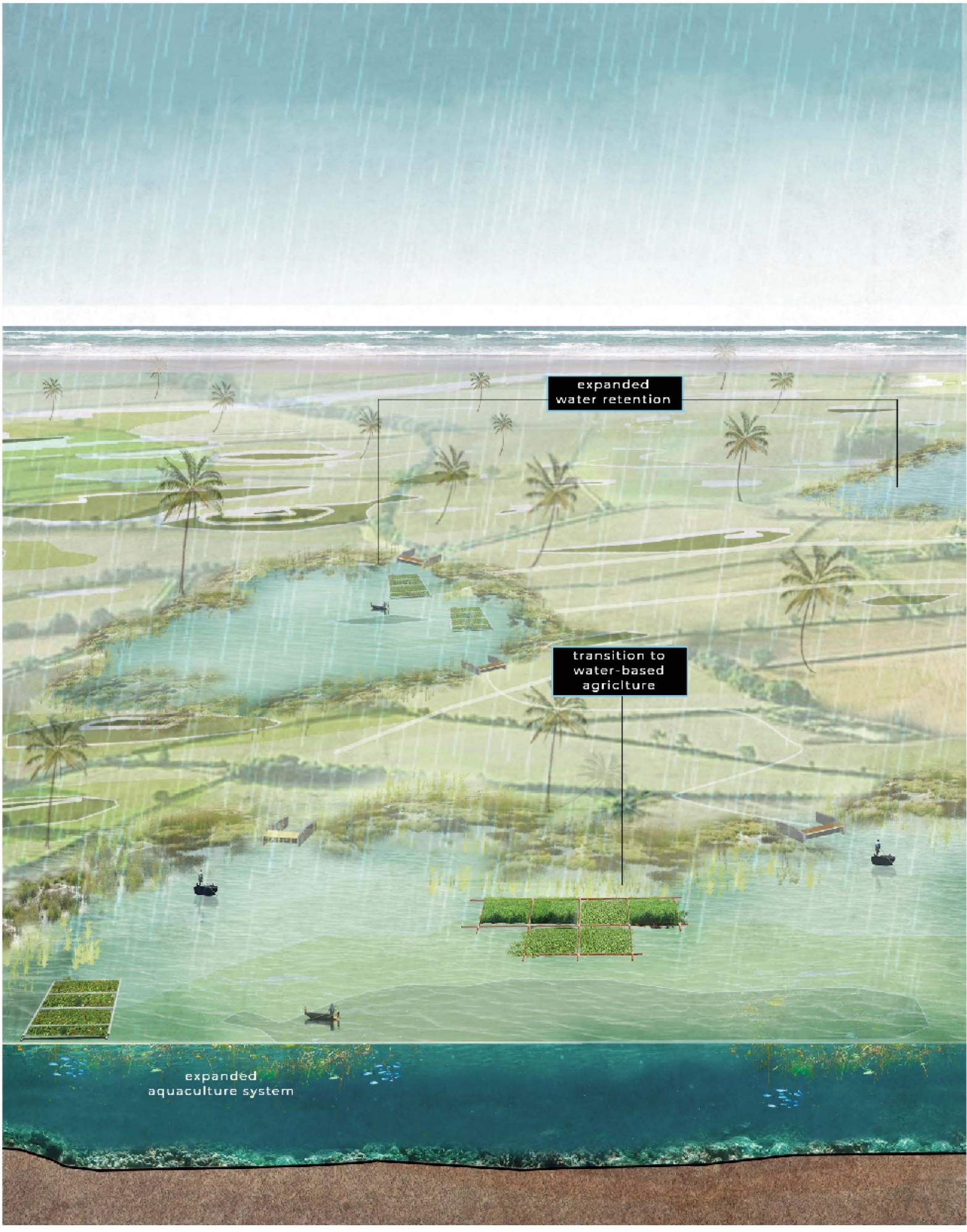
Machamba System: Large machamba

+Tapping into the reservoir for agriculture irrigation and aquaculture
+ Transitioning farmers to a floating machamba typologies.
Food Industries
+ Food processing+packaging facilities
In order for Beira to boost its economy, it first needs to build a manufacturing base. Innovation relies on building infrastructure and capacity to become the driver for economic growth.



Floating-Machambas as a transition from conventional agriculture

Food packaging+processing industries steward land and provide jobs


expanded
water retention
transition to
water-based
agriclture
expanded
aquaculture system


increased job ooportunities
food processing industries
connect to the Beira Agricultural Growth Corridor
floating machambas retain water during droughts

C . S . O

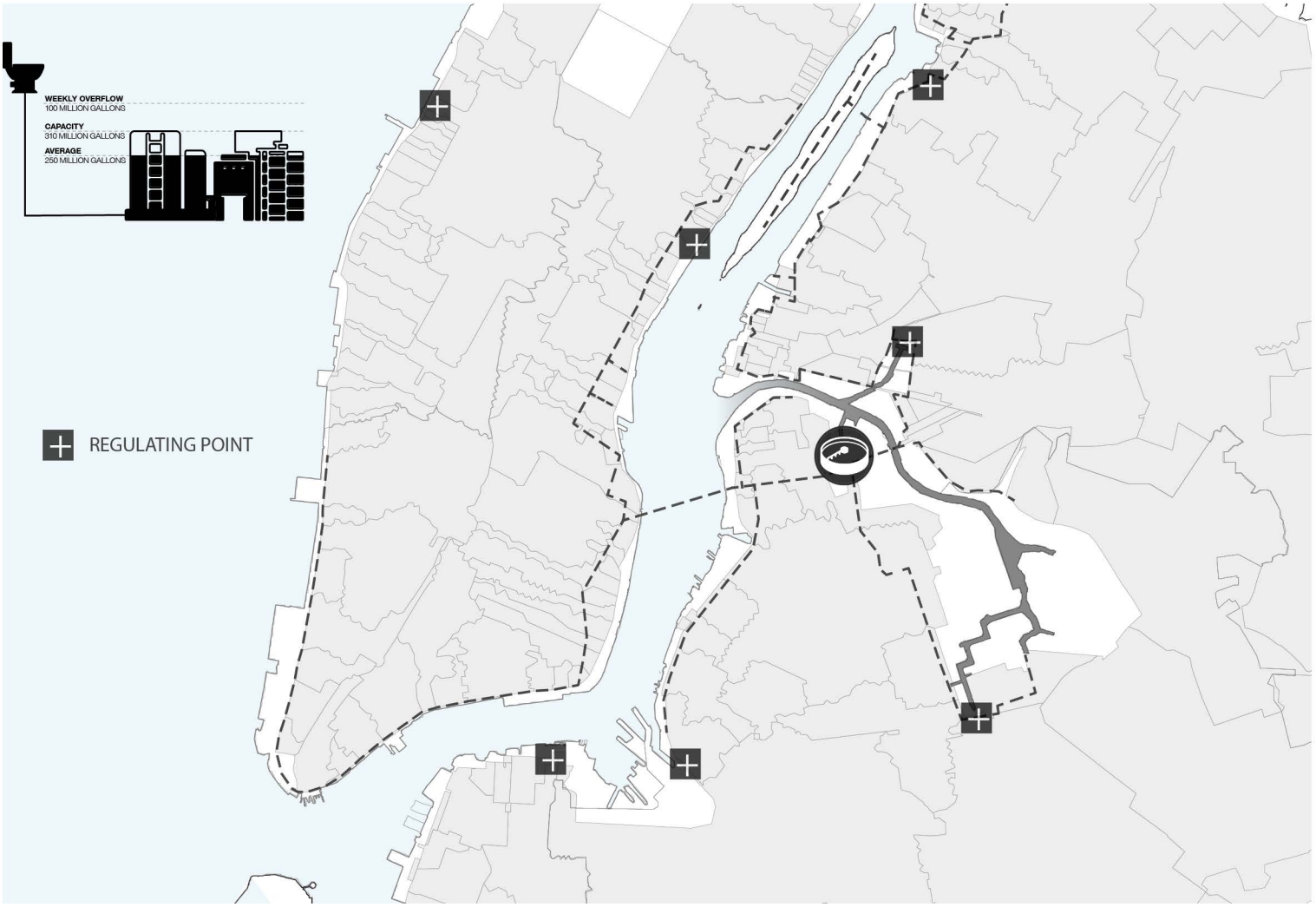
COMBINED SEWAGE TO OPPORTUNITIES

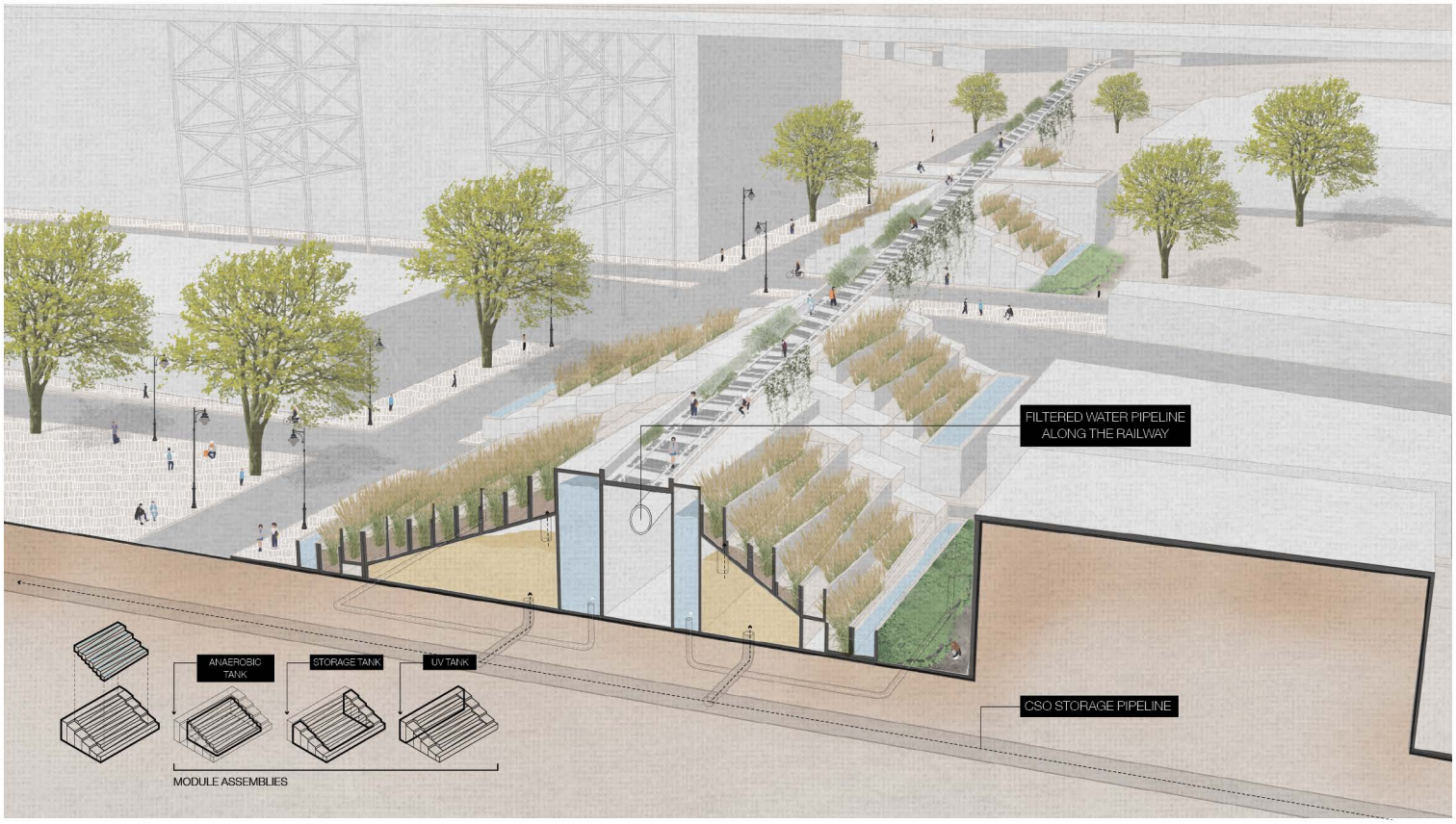
PROJECT TYPE: Summer Studio 2019
LOCATION : Long Island City, New York City
MEMBERS : Ashwin Nambiar, Victoria Vuono, Yizhou Wu(Annie)

Long island city combined storm and sanitary sewage is being treated at the newtown creek wastewater treatment plant. Every time it rains .4" or more, approximately once a week, the combined sewage volume channeled to the treatment plant is beyond its capacity and untreated sewage is dumped into the creek. The creek has numerous outfall points however one of the most utilized outfalls is located at the head of dutch kills, dumping 131 million gallons of sewage per year.

The major sewage pipeline carrying sewage from Manhattan and western queens traverses the IBZ where it meets the Broden Ave Pump station as a final push towards the water treatment plant across the creek. The pipeline frames the areas connected to the sewage system. The areas beyond this line have allocated private outfall pipes that dumps their untreated sewage directly into the creek

Where is the sewage coming from?



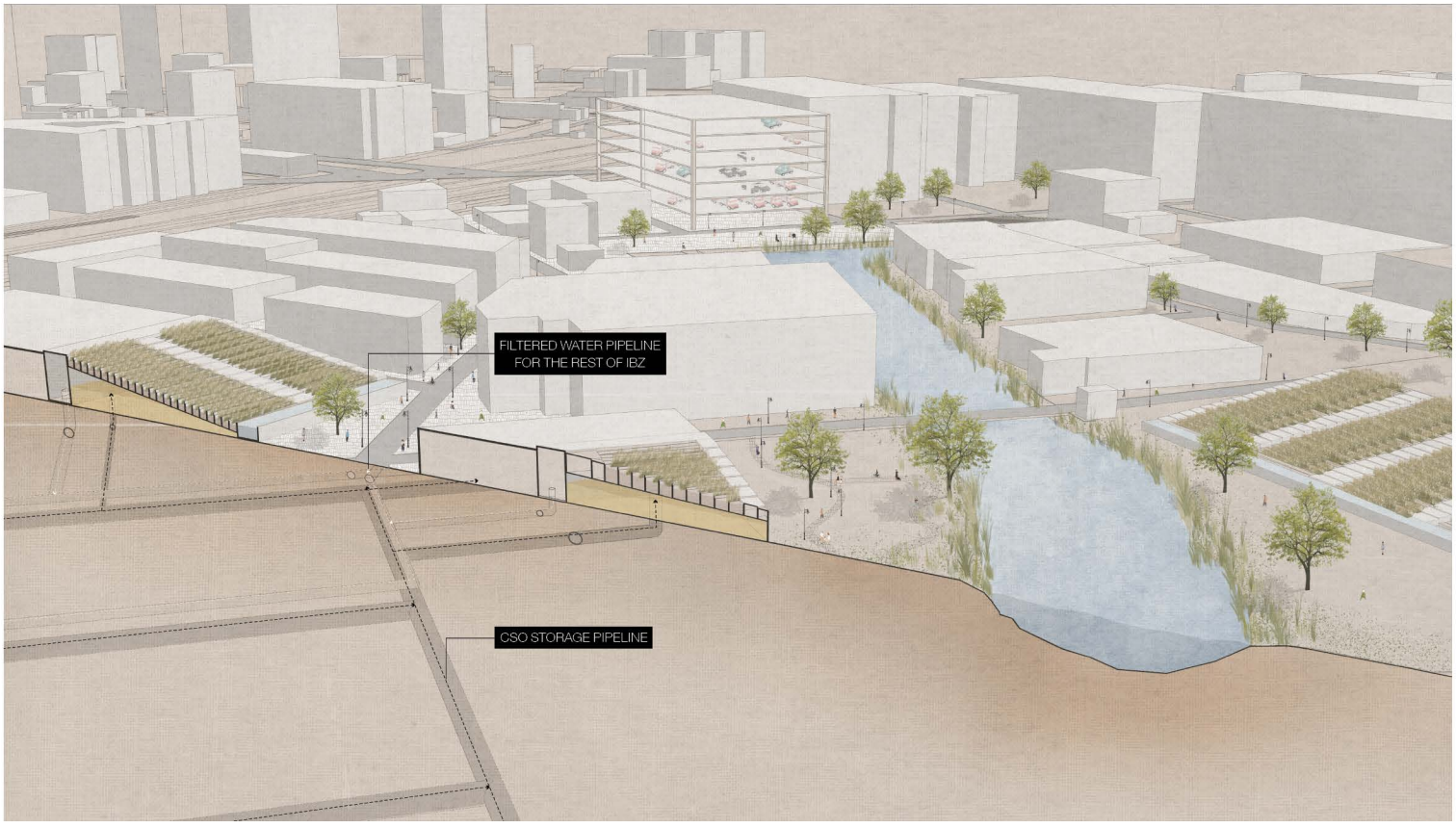


Engineered ecosystem pilot

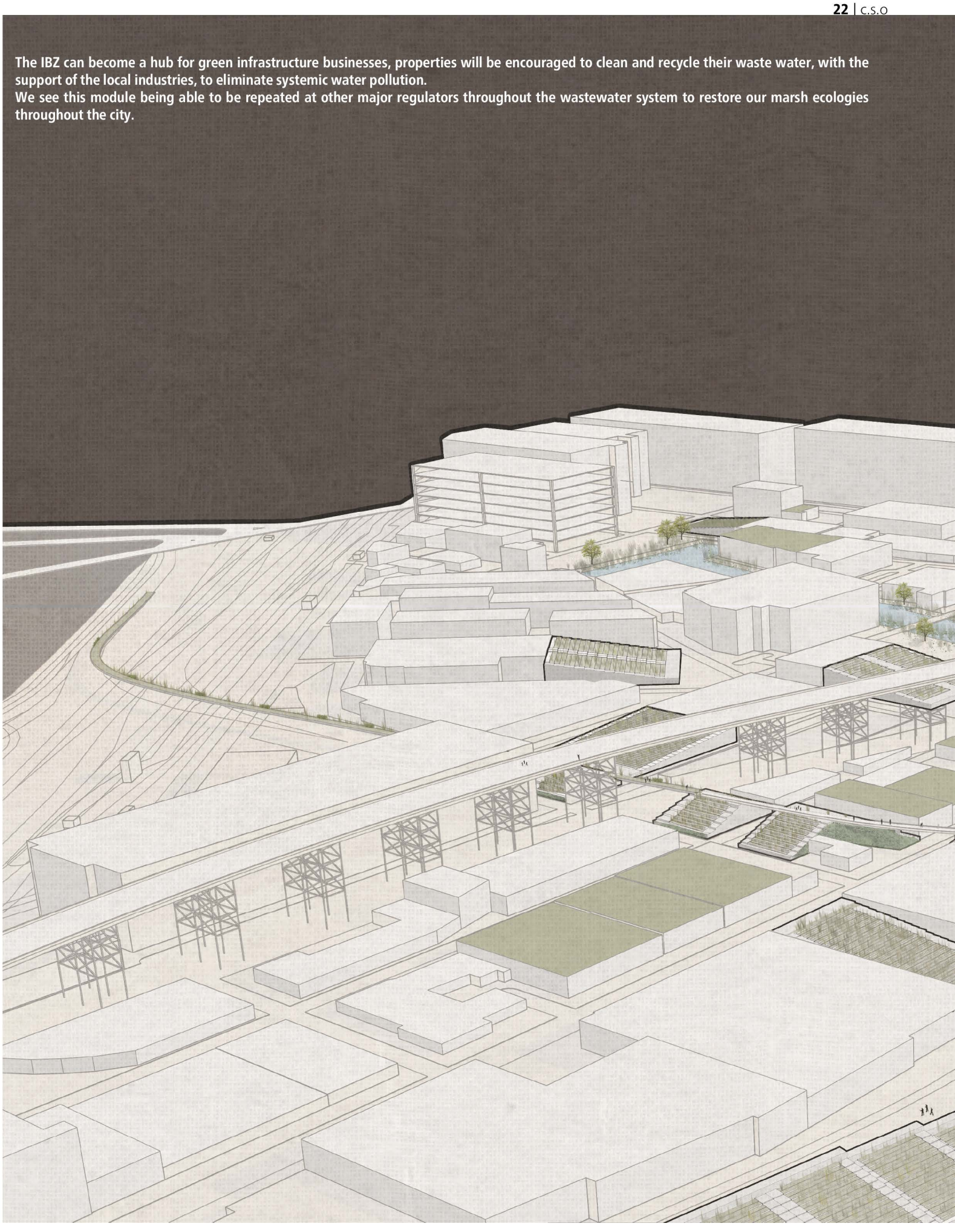
the existing berm can house engineered ecology research labs that can pull Sewage off the storage tunnels and test engineered ecosystems to filter the wastewater. The community garden can thus extend along the rail tracks.
This will provide hands on education for students and the filtered water can then be used for the community garden.

Proposed eco-filtration corridor

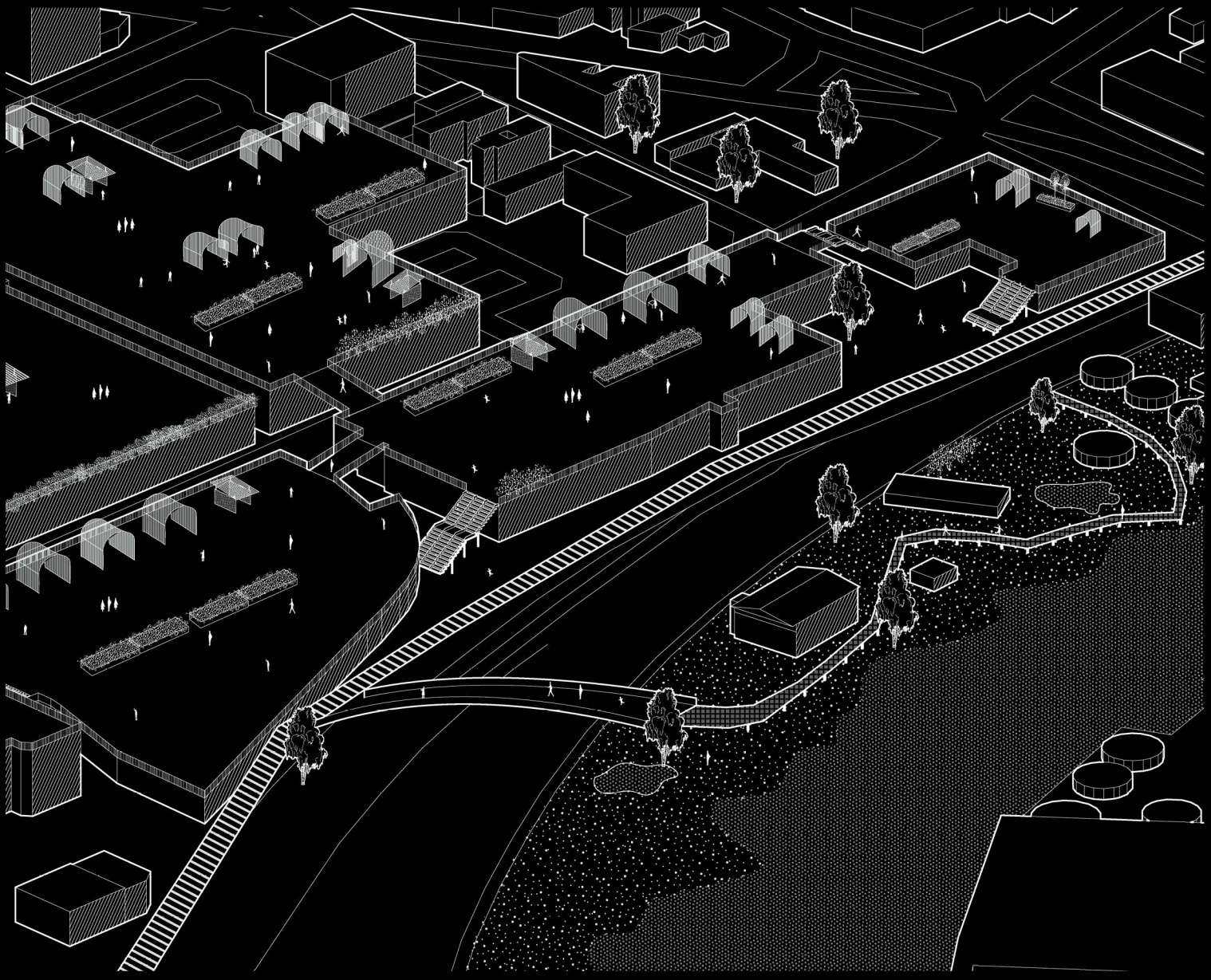
These filtration systems can take load off the wastewater treatment plant and create a network of filtered water pipes that local business can pull off of for grey water.
The systems will utilize the porous industrial architectural grain of the IBZ by taking vacant space and parking lots to building the filtration systems



The IBZ can become a hub for green infrastructure businesses, properties will be encouraged to clean and recycle their waste water, with the support of the local industries, to eliminate systemic water pollution.
We see this module being able to be repeated at other major regulators throughout the wastewater system to restore our marsh ecologies throughout the city.



PROJECT TYPE: Summer Studio 2019, Alternate Vision
LOCATION : Long Island City, New York City
MEMBERS : Ashwin Nambiar, Victoria Vuono, Yizhou Wu(Annie)



C.S.O

PARASITIC FILTERS

PROJECT TYPE : Digital Techniques Summer 2019
PROFESSOR : Carmelo Ignacollo