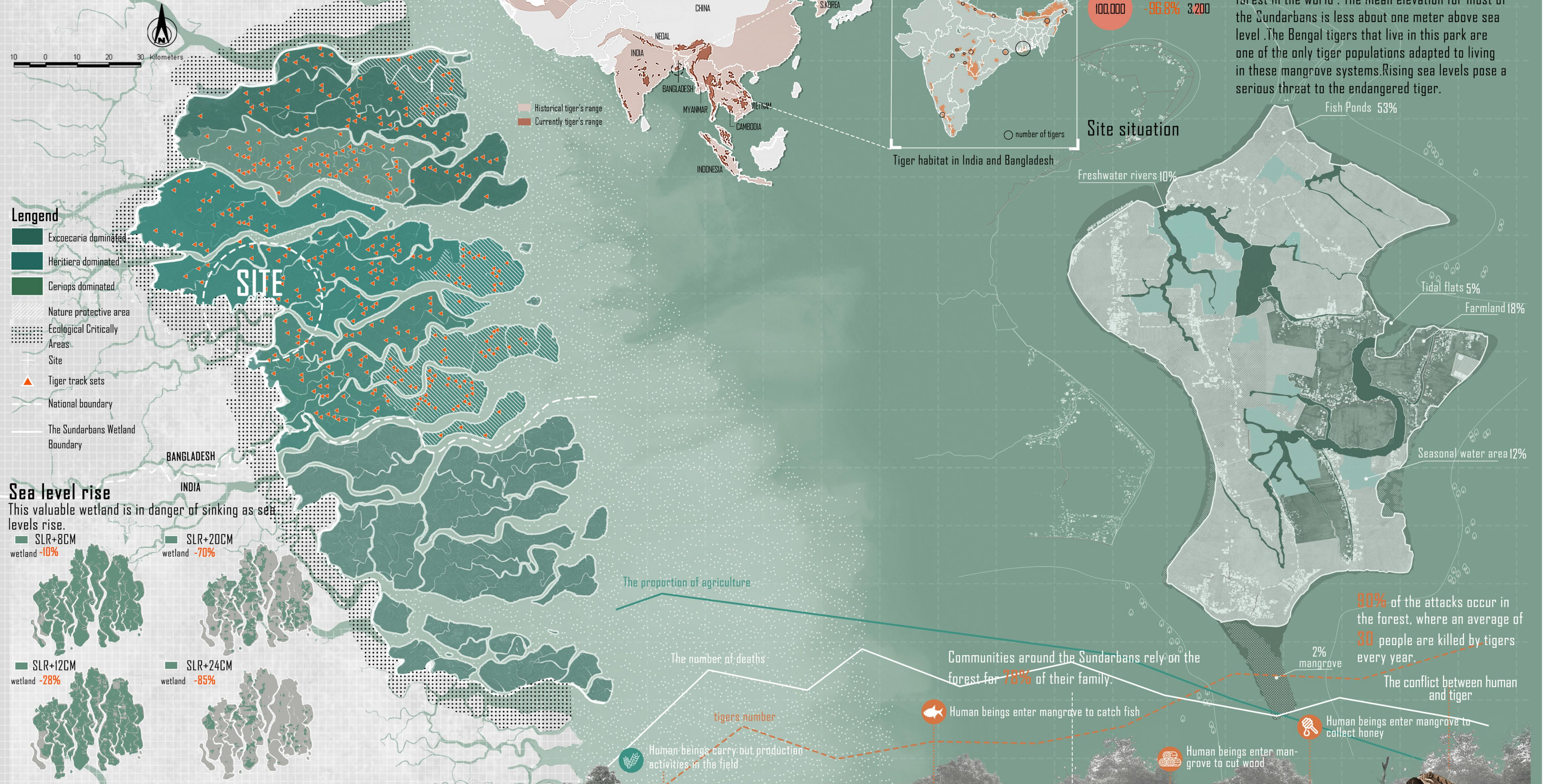


SYMBIOSIS WITH NATURE

I. Sundarbans national park



Country /City China / Chongqing

University / School Chongqing University / College of Art

Academic year 2022 / 2023

Title of the project Symbiosis with nature

Authors Tengfei YU, Shuai JIANG, Shuxian FENG

TECHNICAL DOSSIER

Title of the project Symbiosis with nature
Authors Tengfei YU, Shuai JIANG, Shuxian FENG
Title of the course Landscape architecture
Academic year 2022 / 2023
Teaching Staff Junqiao SUN
Department / Section / Program of belonging Department of Environmental Design / College of Art
University / School Chongqing University



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

The Sundarbans, a world Natural Heritage site in the Ganges Delta, is home to one of the largest mangrove ecosystems in the world. The project focuses on the ecologically sensitive boundaries of the Sundarbans mangrove forest, where hundreds of thousands of people depend on mangroves for their well-being. Since the 19th century, due to irrational land development and use in surrounding communities, community productivity has been lost, and people have become increasingly dependent on illegally collected resources and sources of livelihood from mangroves, exacerbating forest degradation, biodiversity loss, and human-tiger conflict. The project analyzes the causes of livelihood choices and vulnerability of the surrounding communities, and promotes more adaptive and nature-based sustainable livelihood models to ensure livelihood security and mitigate risks by helping the residents to change their land use patterns and forest-dependent livelihoods.

These strategies, inspired by local traditional wisdom, use biodegradable infrastructure and water to live. All measures are local, low-cost, low-tech and sustainable, affordable for local residents. It enable maintain the balance between human beings and resources.

For further information

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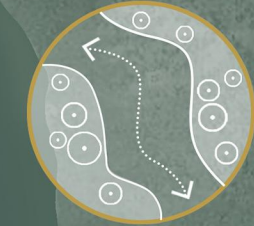
12th International Biennial Landscape Barcelona

Barcelona November 2023

SCHOOL PRIZE



Strategy 1 Soften boundary



Break the border dyke
Open boundary fish ponds are used to collect sediment and plant mangroves.

Strategy 2 Increase productivity



A. Crop rotation and floating agriculture
Floating agricultural and Use of low-lying areas for fishing and agricultural rotation during the rainy and dry seasons.



B. Economic forest belt and bee farming
Cross-planting economic forest belts can provide communities with needed timber and provide a place for beekeeping.



C. Travel
Develop local tourism, watch tigers and tiger conservation.

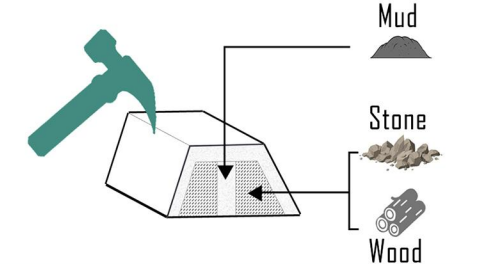
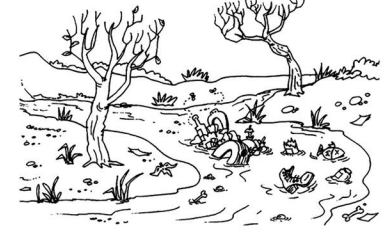
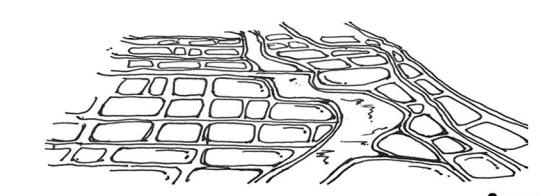
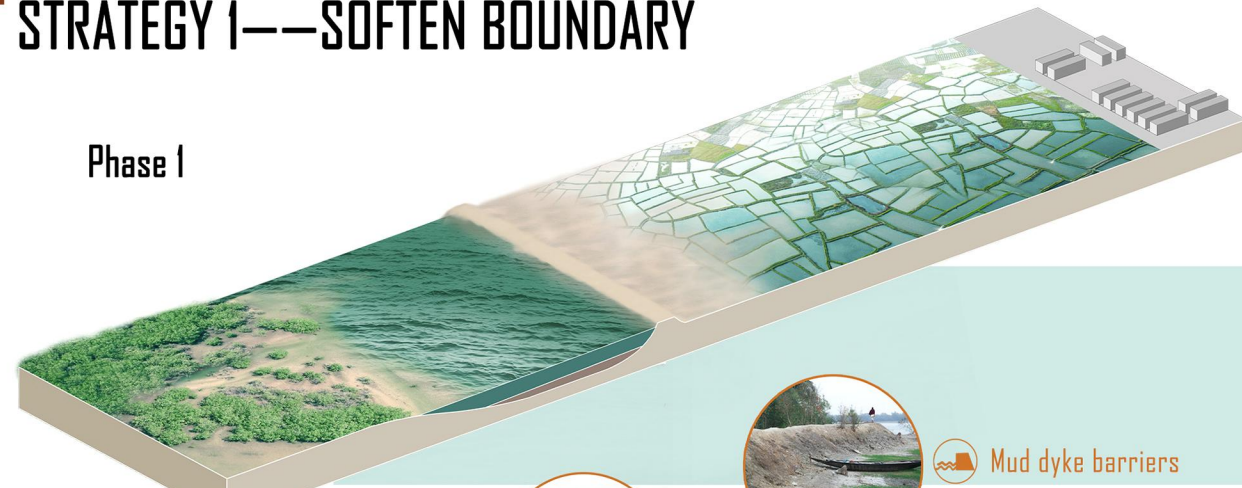
Strategy 3 Mangrove retreat management



Retreating Mangroves
To prepare for the ecological migration of mangroves to help them cope with sea level rise.

PLANNING PROPOSAL
100M 200M 400M

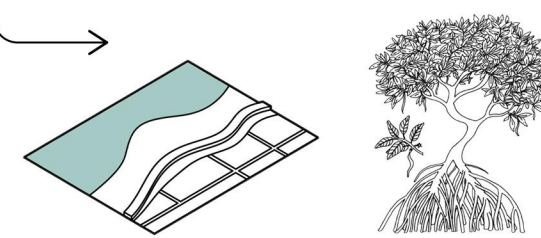
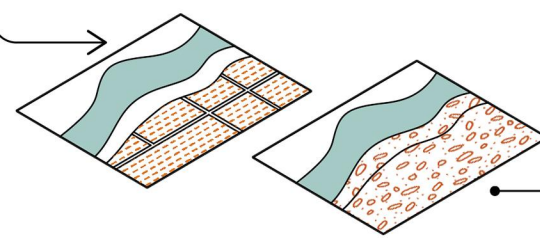
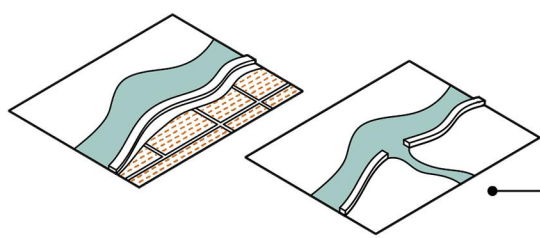
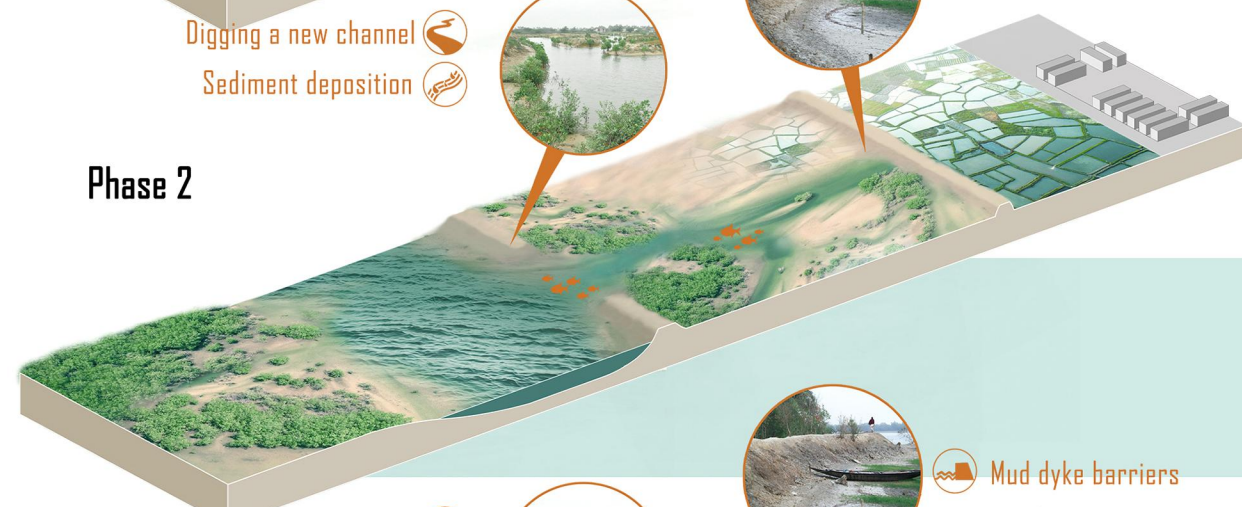
STRATEGY 1—SOFTEN BOUNDARY



Fish pond
There are now a lot of fish ponds at the boundary of the site.

Floating garbage
There is a large amount of floating garbage in the river, causing serious river pollution.

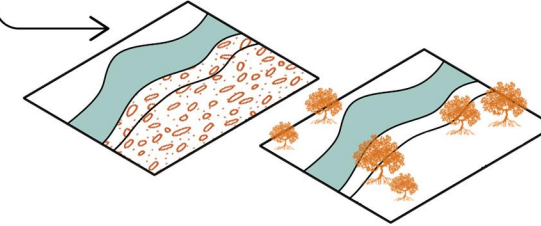
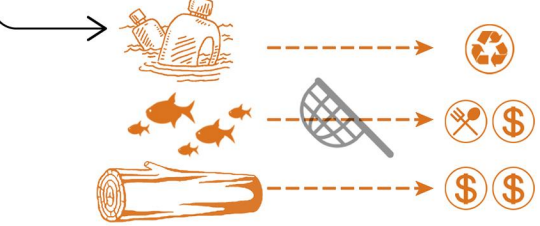
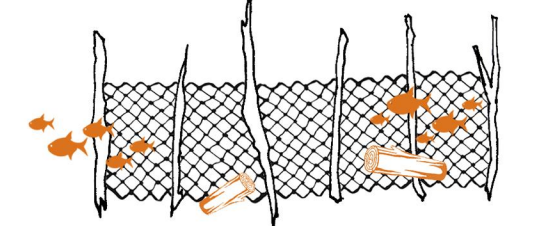
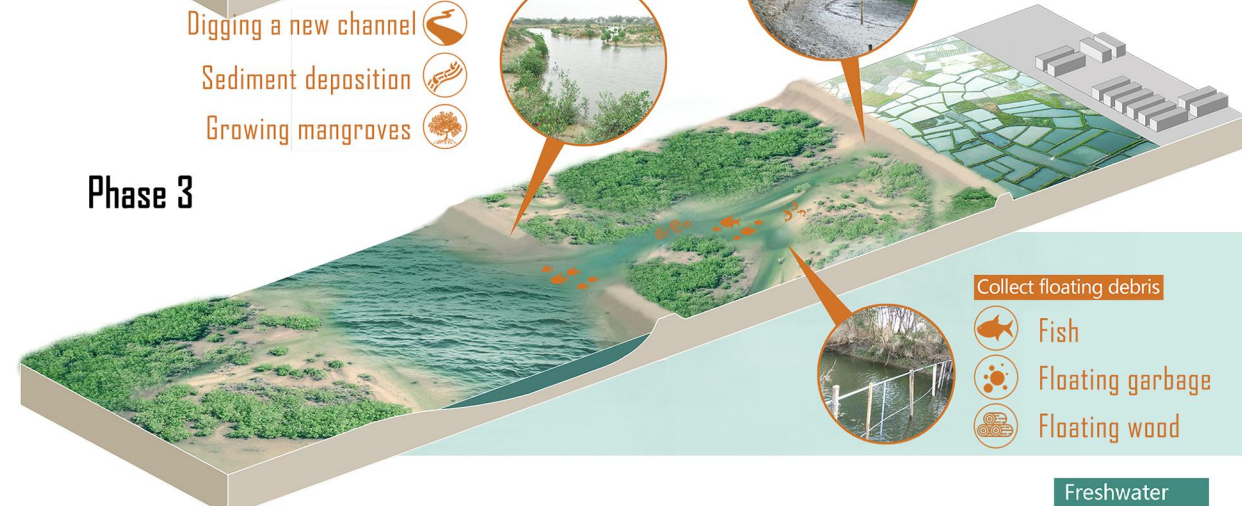
Breaking the hard boundary
Hard dykes cut off the tide from the land, Break old dykes and bring tides to the boundary.



Dig the river
Break the original mud dyke and dig the river channel at the site boundary. The river sediment deposits at the site boundary and softens the boundary.

Fish pond → Silt
There are now a lot of fish ponds at the boundary of the site. The river silted up and the fish ponds first turned into silt.

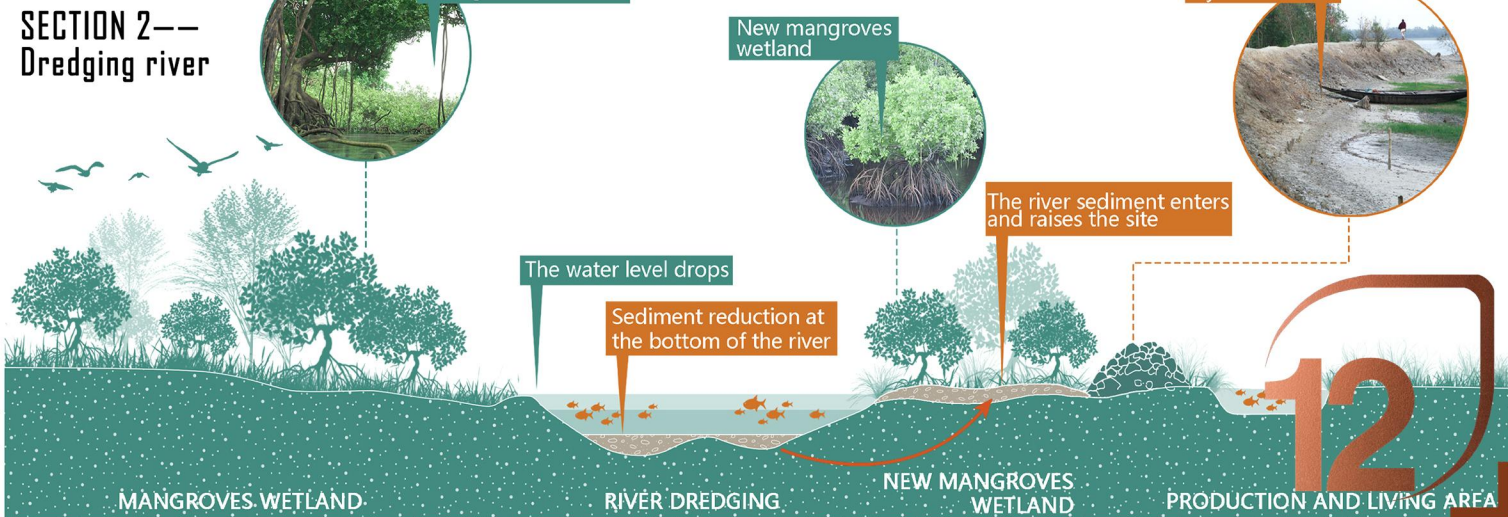
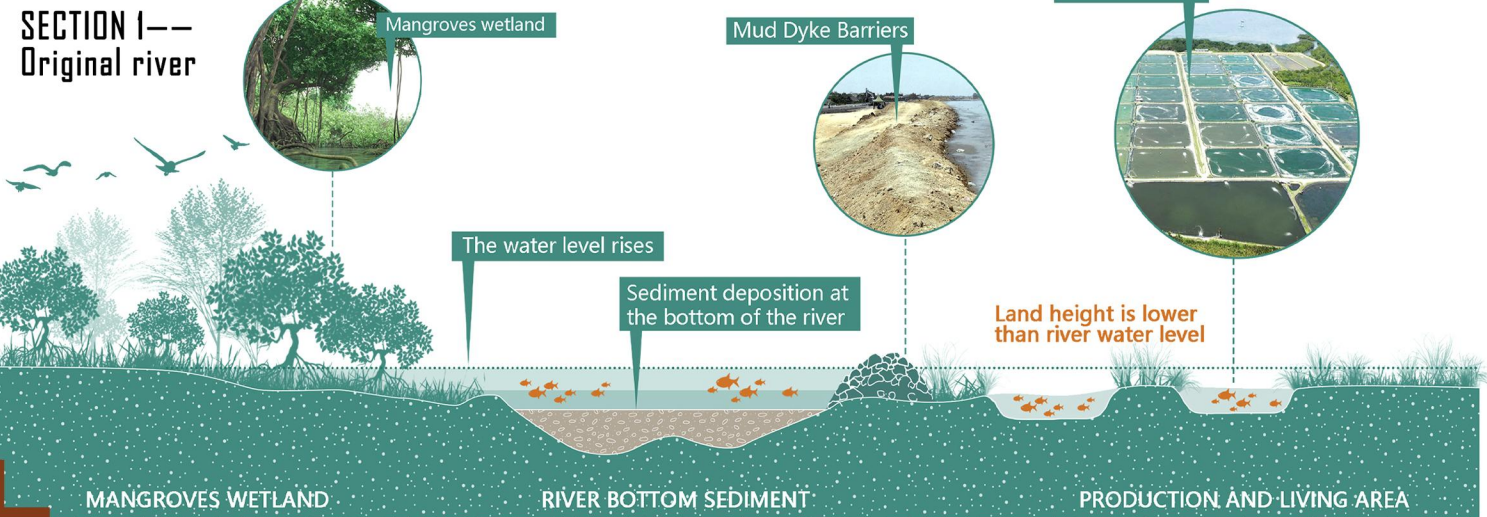
Mud Dyke Barriers
Rebuild the mud dyke barriers and move it back. Collect a large amount of garbage for processing and treatment, and reinforce the mud dyke barriers. Mangroves grow on it.



Blocking in the river
Block in the middle of the river channel dug at the boundary of the site. Due to the tide in and out of the site, a large number of fish, shrimp, garbage and floating wood can be collected.

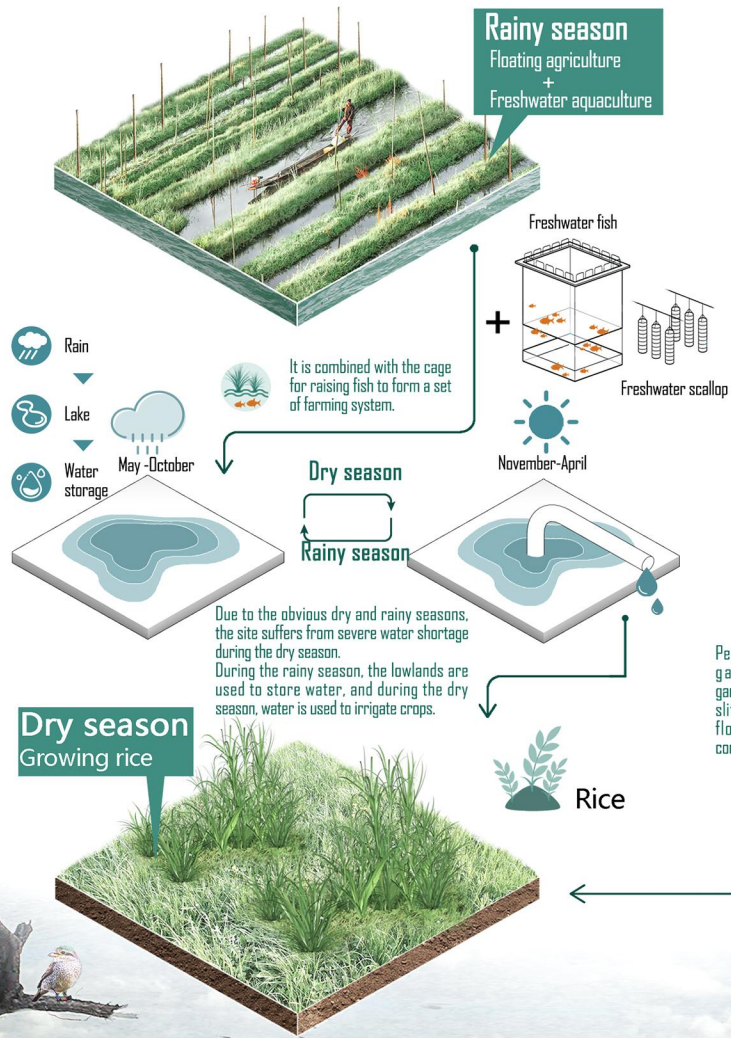
Collect floating debris
Collecting fish and shrimp can be used as food, and collecting floating wood can get economic source, and collecting garbage can be used as material for strengthening mud dyke barriers.

Silt → Mangroves
Block in the middle of the river channel dug at the boundary of the site. Due to the tide in and out of the site, a large number of fish, shrimp, garbage and floating wood can be collected.

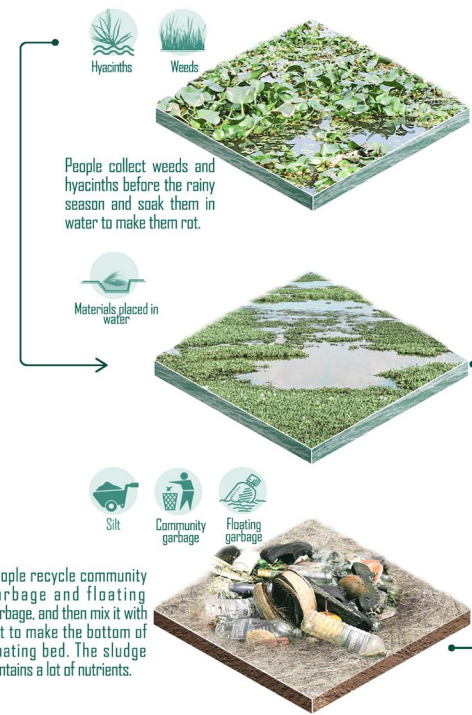


STRATEGY 2—INCREASE PRODUCTIVITY

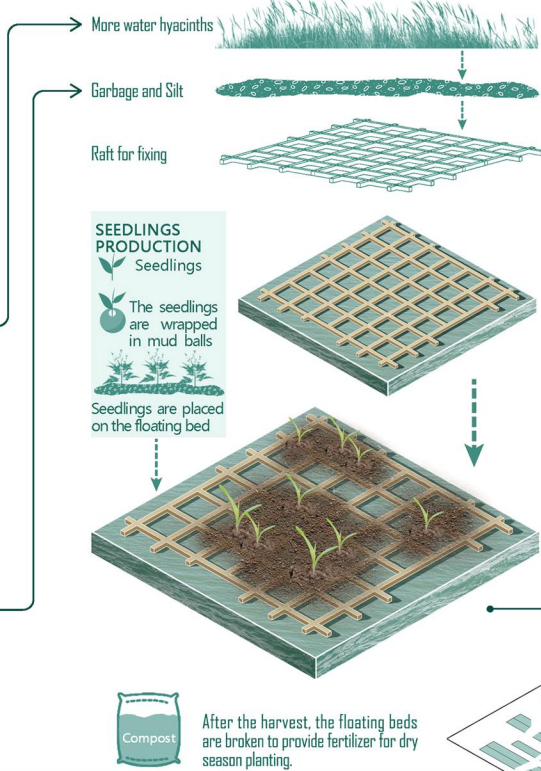
A. CROP ROTATION AND FLOATING AGRICULTURE



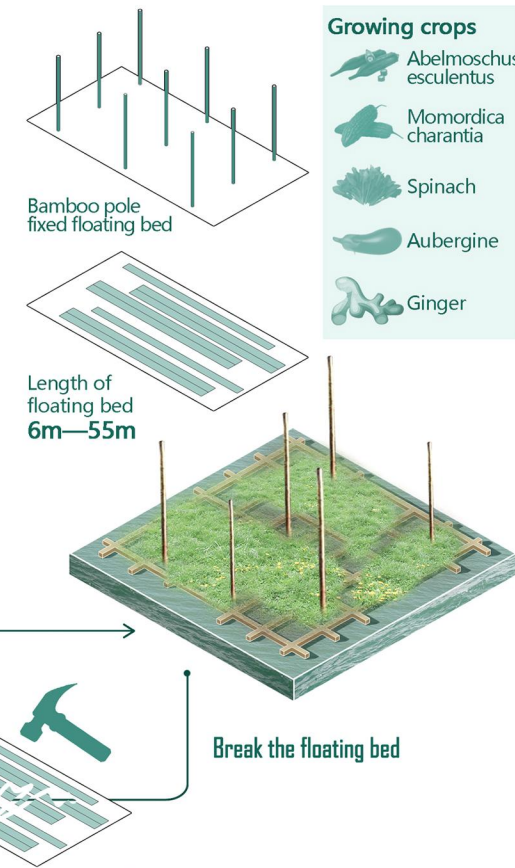
I Manufacturing materials



II Making floating bed



III Floating agricultural production



B. ECONOMIC FOREST BELT AND BEE FARMING



C. MANGROVE RETREAT MANAGEMENT

