

BEYOND SURVIVAL

Building resilient communities through co-creation
for the Rohingya refugees in Bangladesh

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Degree project in Urban Planning and Design
KTH School of Architecture

Beyond survival

Survival - the state or fact of continuing to live or exist in spite of an accident, ordeal, or difficult circumstances such as climate change, rising inequality, warfare etc. With **beyond survival** we mean having the opportunities for aspirations in life in spite of overcoming difficulties and hardships in life.



Author: Jonas Bendiksen

CHAPTER 1

The story of the displaced people

79 Million people or
1% of humanity
are displaced

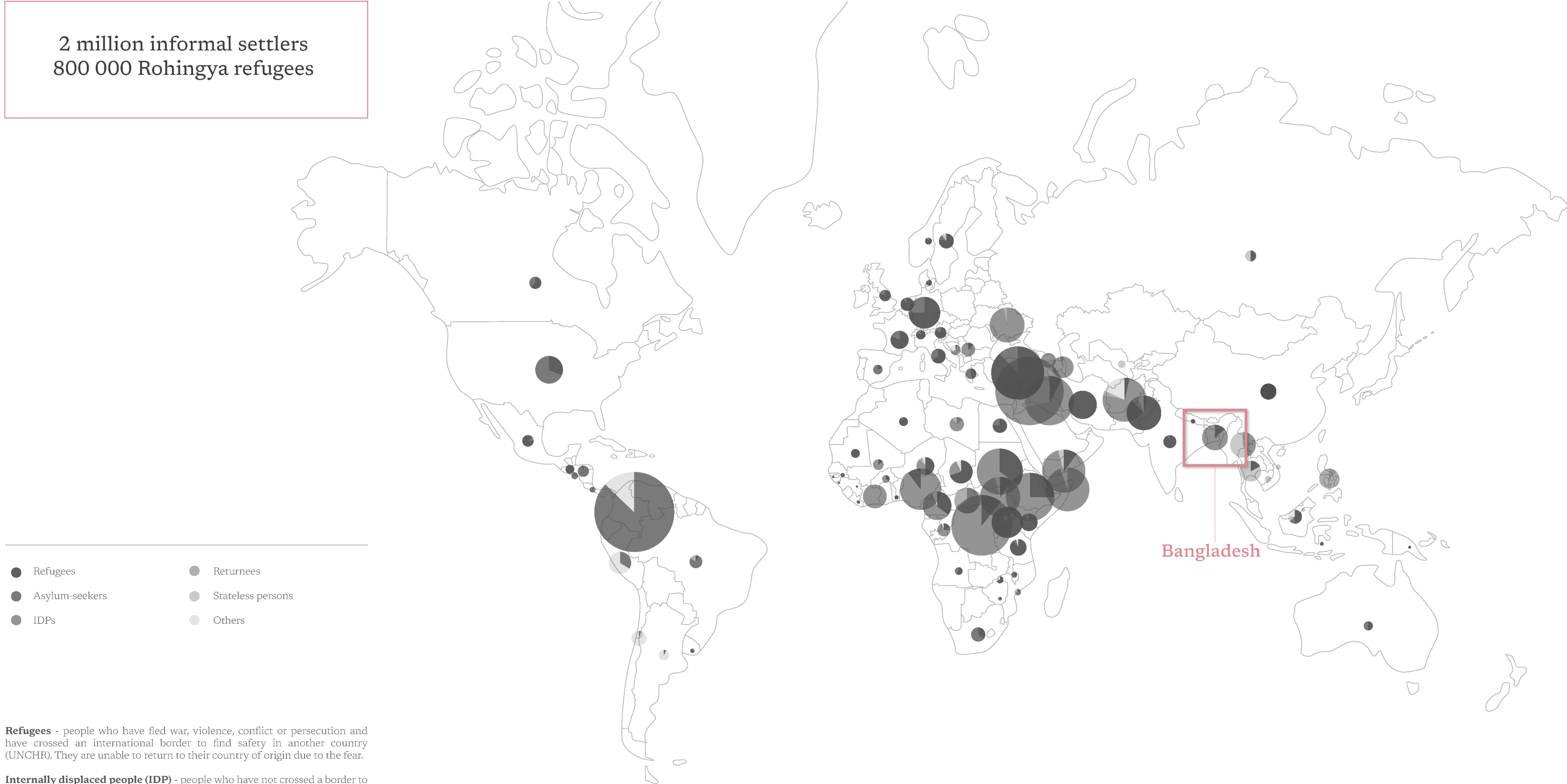


-
- Refugees
 - Asylum-seekers
 - IDPs
 - Returnees
 - Stateless persons
 - Others

Refugees - people who have fled war, violence, conflict or persecution and have crossed an international border to find safety in another country (UNCHR). They are unable to return to their country of origin due to the fear.

Internally displaced people (IDP) - people who have not crossed a border to find safety. Unlike refugees, they are on the run at home (UNCHR).

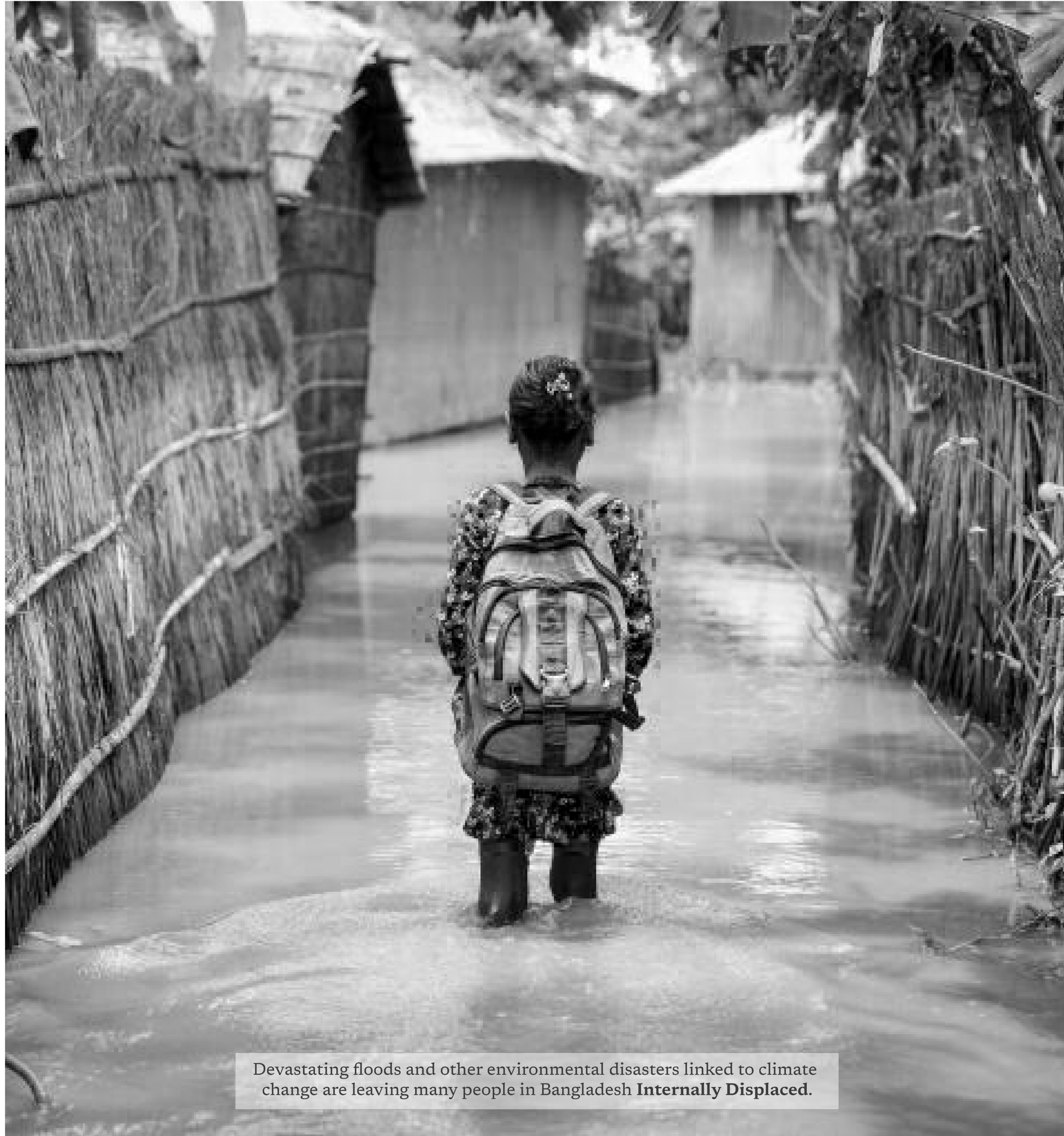
2 million informal settlers
800 000 Rohingya refugees



- Refugees
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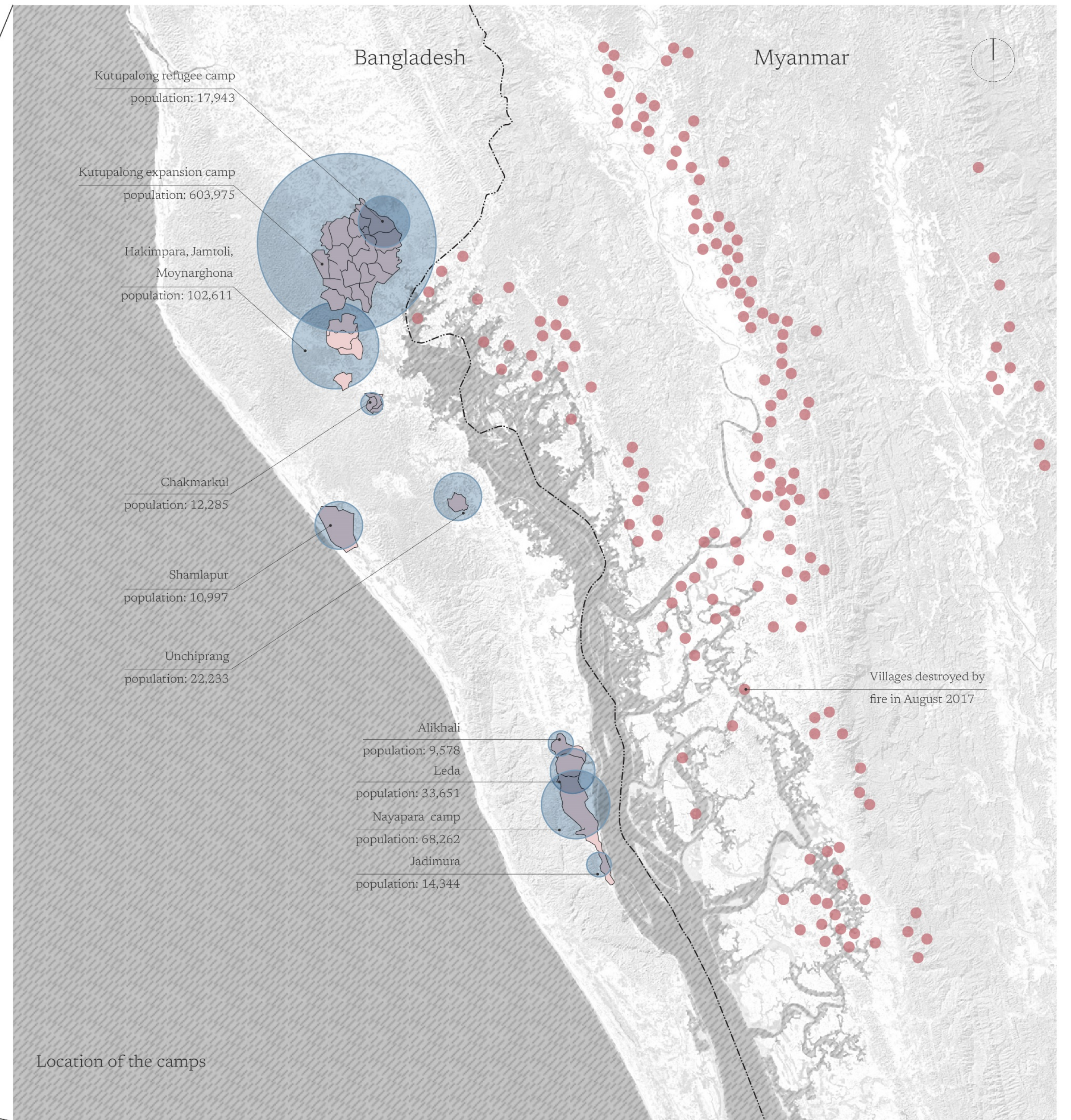
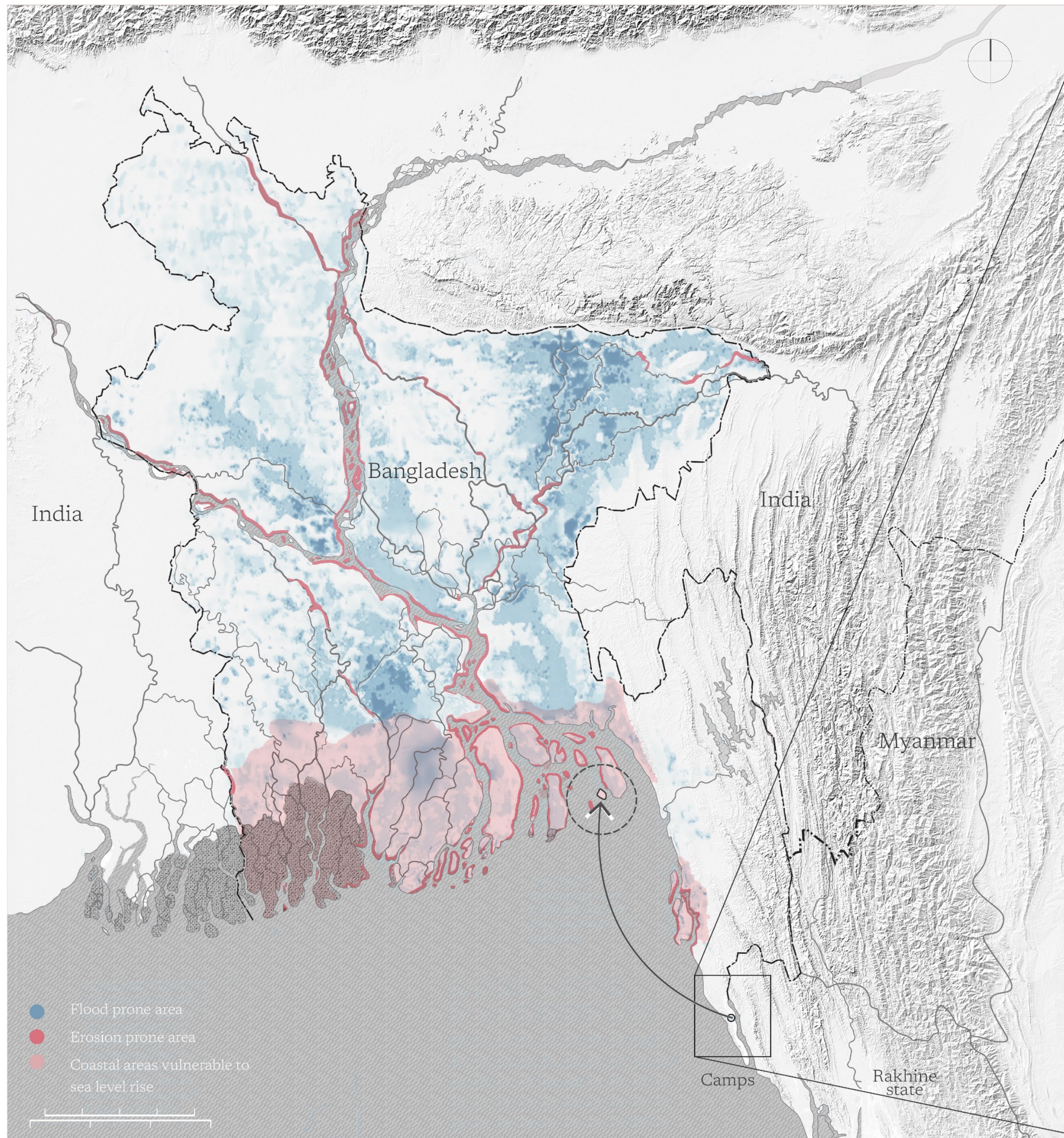
Devastating floods and other environmental disasters linked to climate change are leaving many people in Bangladesh **Internally Displaced**.

Source: UNICEF/UN0286416/Akash



Decades of systematic discrimination, statelessness and targeted violence in Rakhine State, Myanmar forced **Rohingya refugees** to flee.

Author: Adam Dean for The New York Times



Rohingya refugees

IDPs of Bangladesh

Possible Future scenarios

Repatriation to Myanmar

Challenges

- Vulnerability of Rohingya people in Myanmar
- Lack of homes in the newly developed settlement by the government
- New settlement does not correlate with Rohingya's traditional lifestyle

Moving to a new country of relocation

Challenges

- Significant difference in culture and language
- Additional stress for Rohingya people while adjusting in the new circumstances
- Large number of refugees all over the world

Staying in Bangladesh in the camps in Cox's Bazar

Challenges

- Overpopulated areas with lack of infrastructure
- Dependency on provided ration
- Separation from the local people of Bangladesh

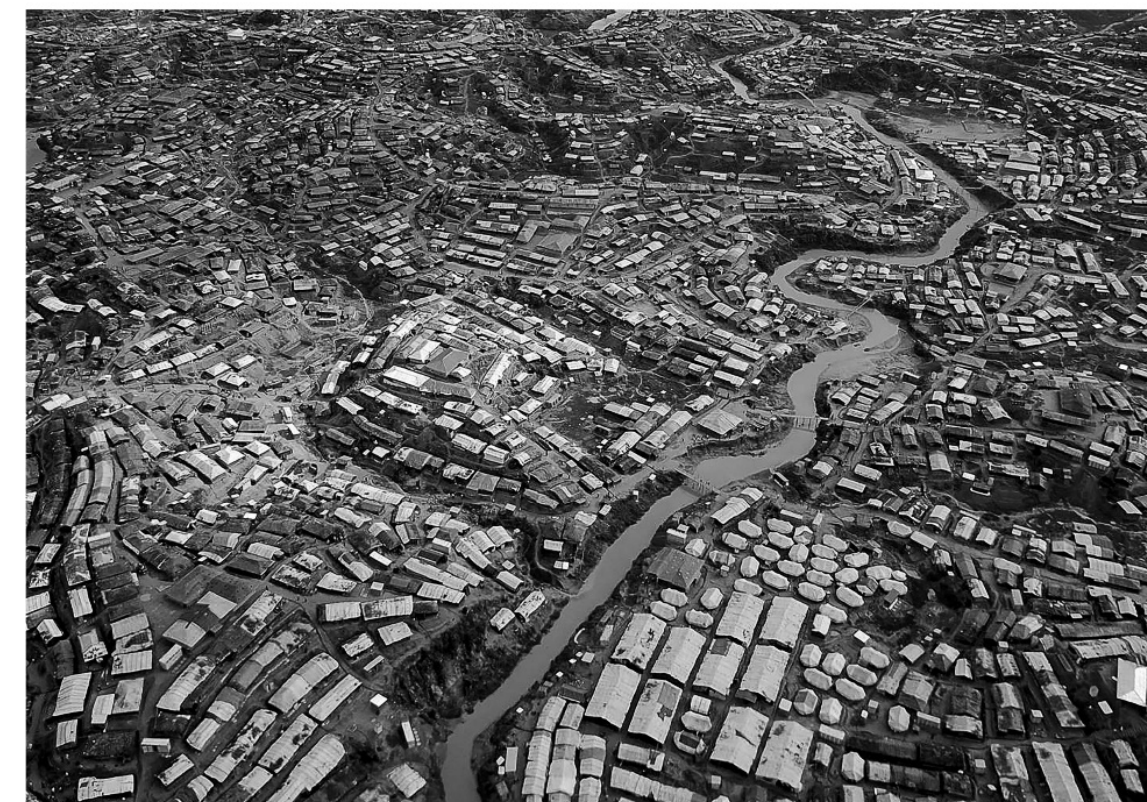
Staying in Bangladesh and becoming a part of the community

Challenges

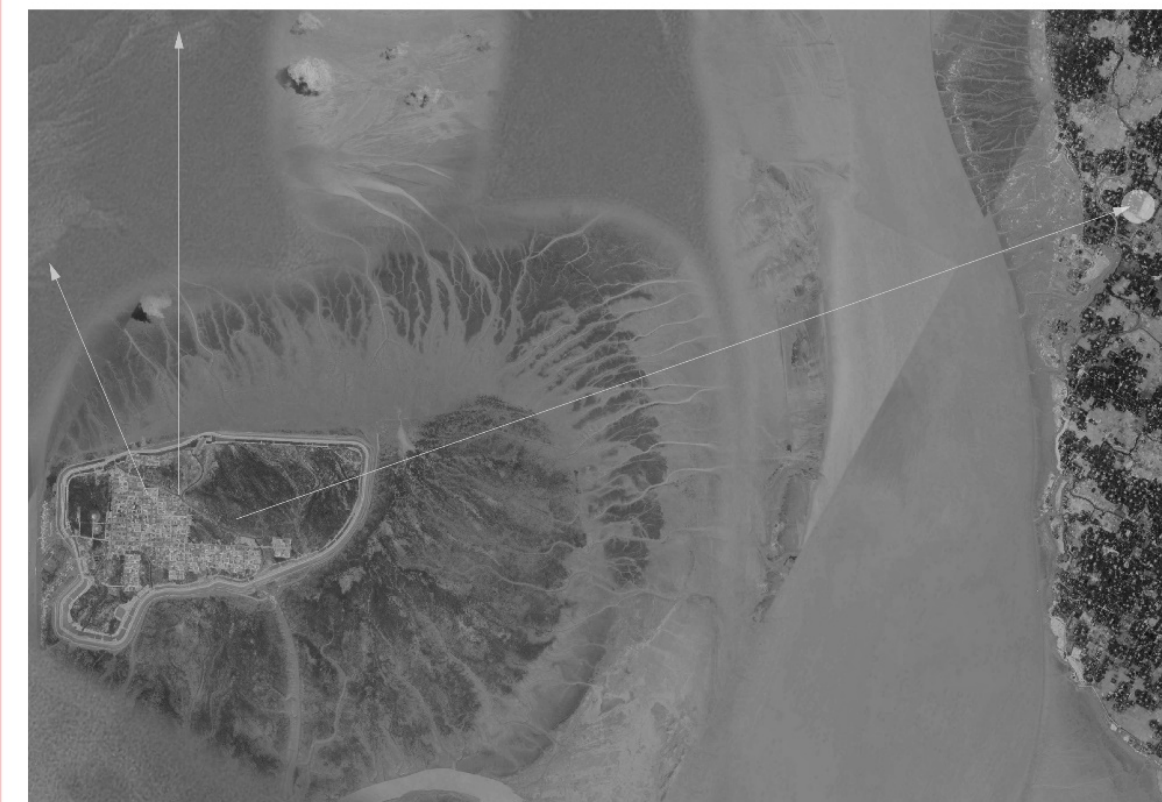
- Different language and traditions
- Lack of knowledge on local agricultural and adjustment to flooding and cyclones
- Lack of lively infrastructure



UNHCR/James Oatway



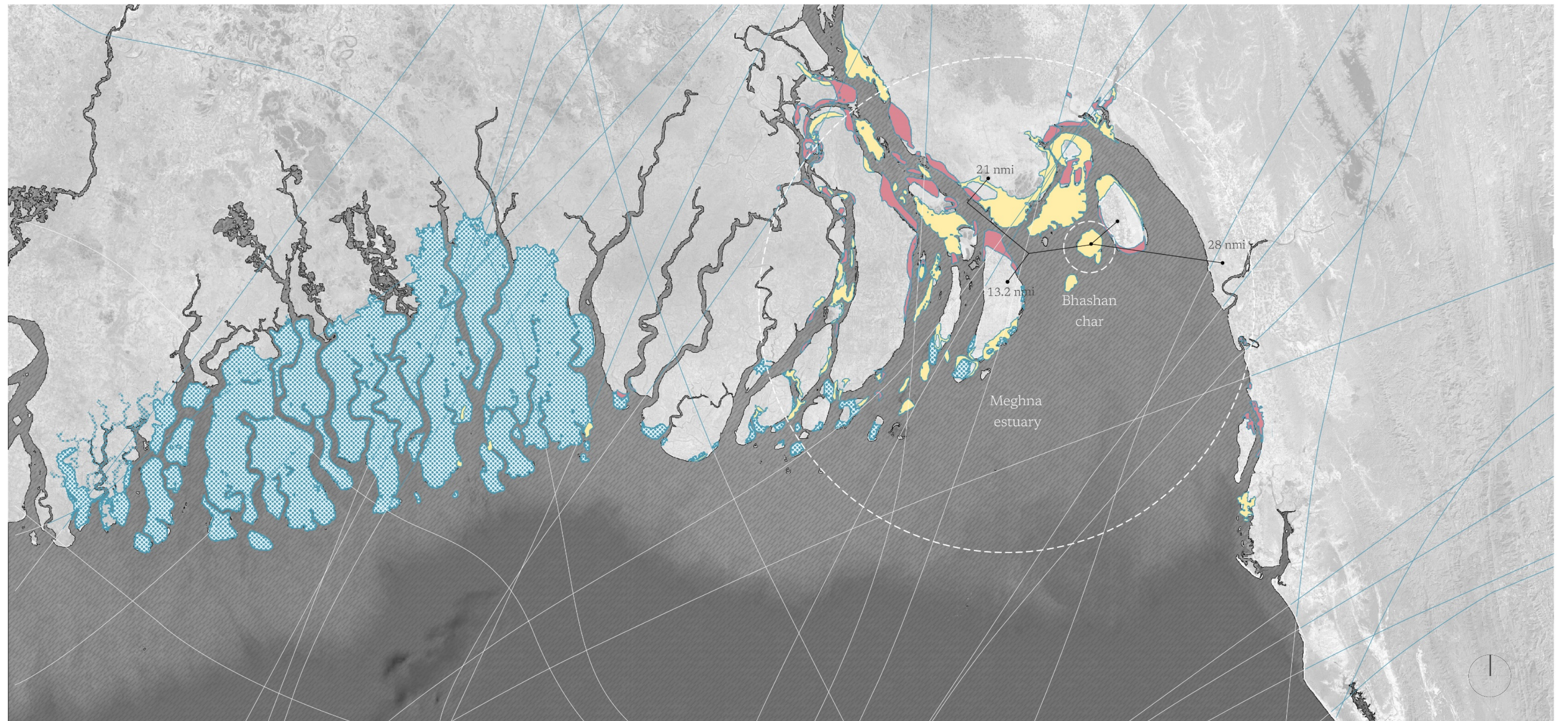
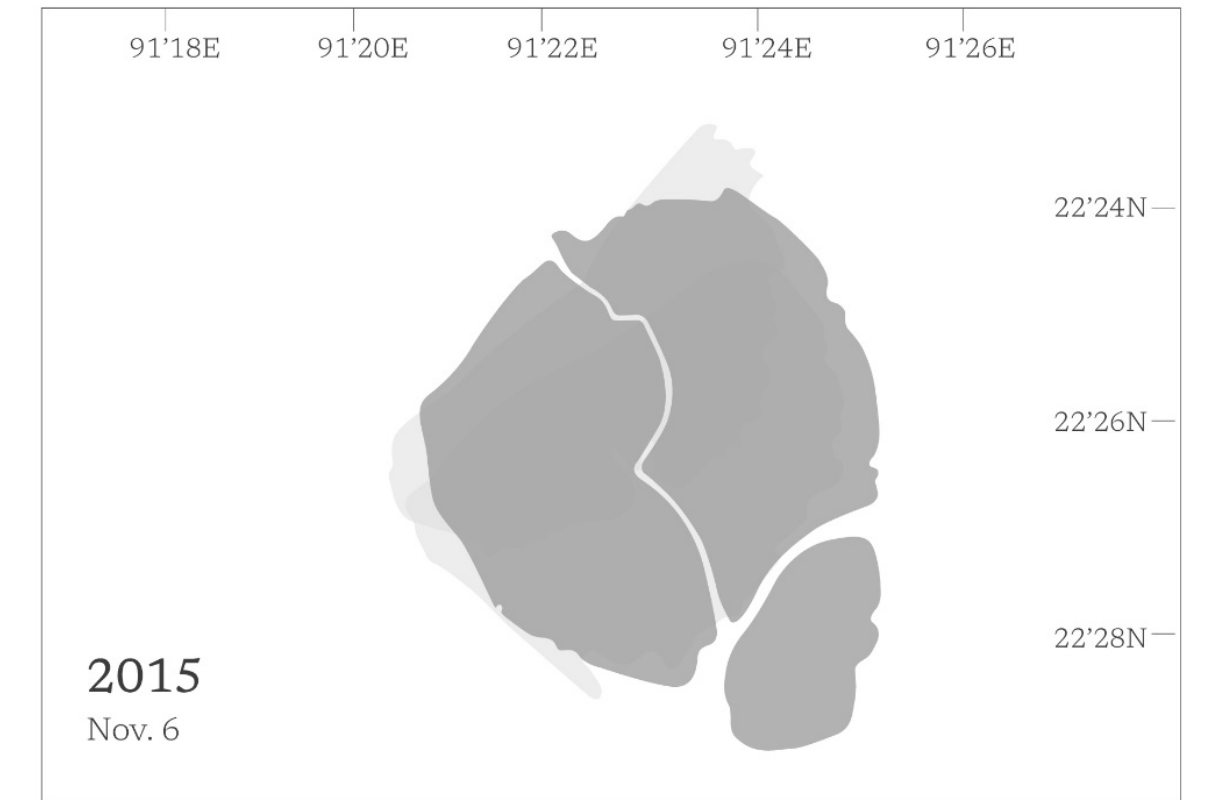
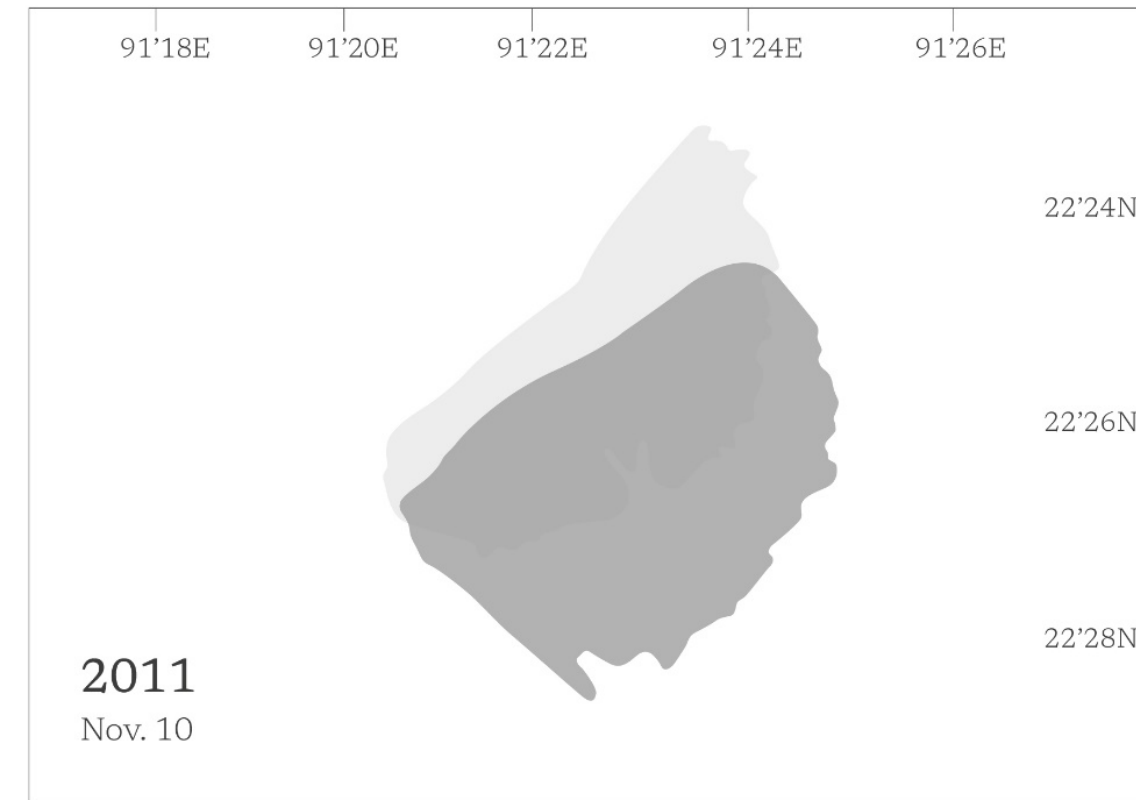
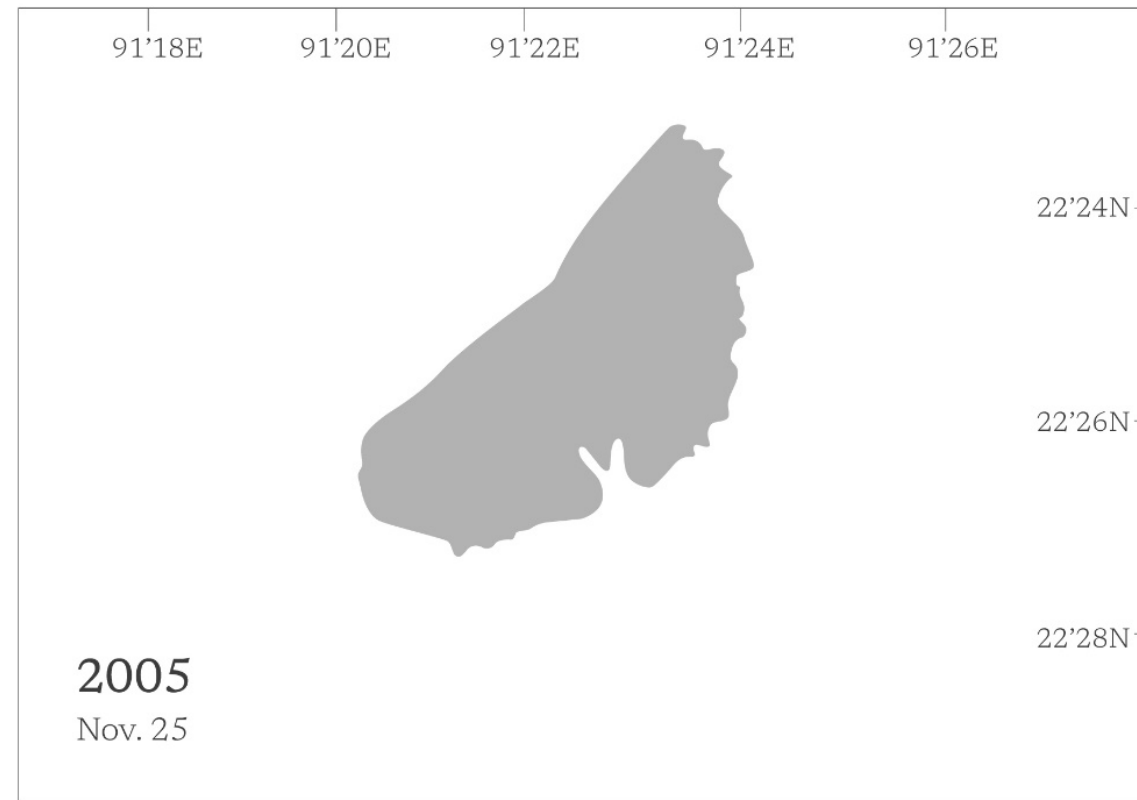
Author: Omar Munna



CHAPTER 2

The story of the disappearing land

Ganges delta



Bhashan Char

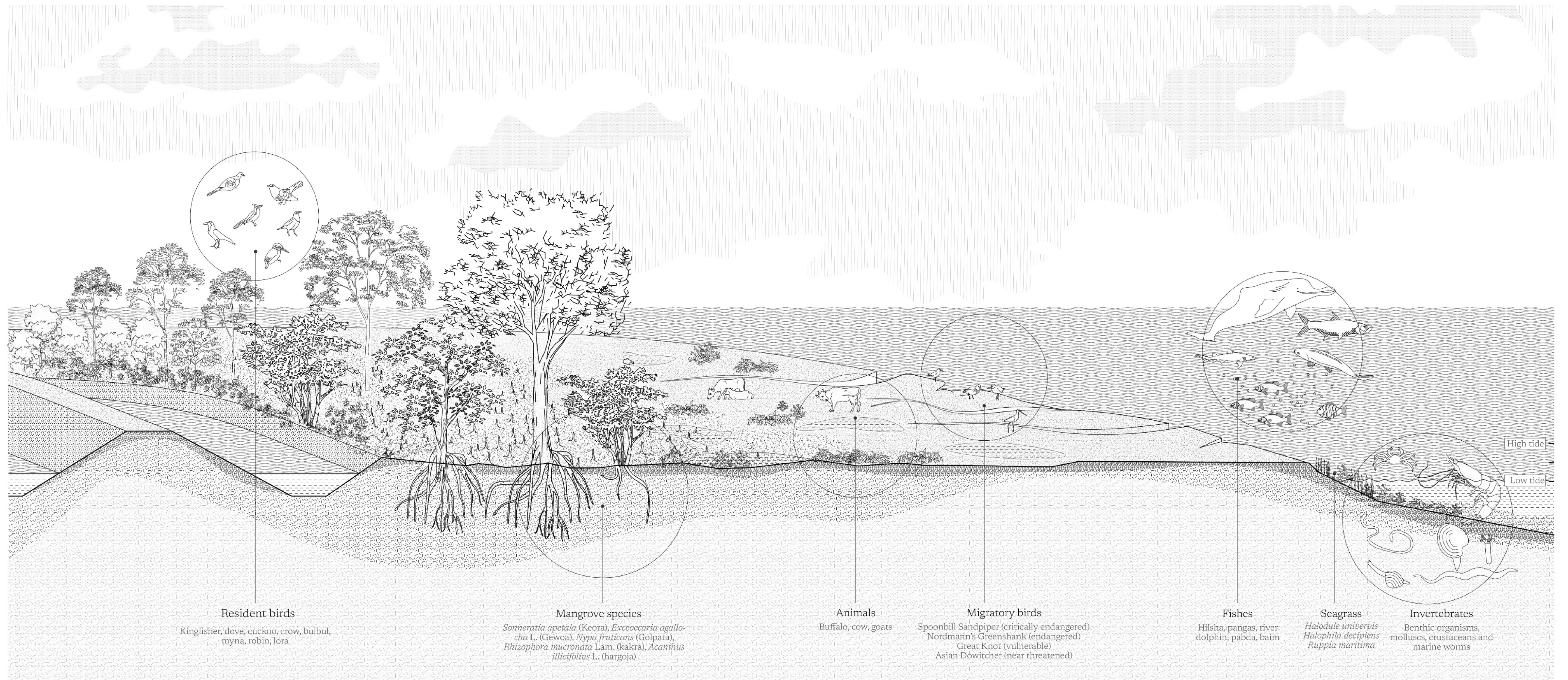
Area: Approx. 13000 acres
 Habitable land: 6427 acres
 Area used for refugee relocation: 1702 acres

Legend

- Mangrove forest (Sundarbans)
- Erosion area between 1989 and 2018
- Accretion area between 1989 and 2018
- tropical storm or cyclone lines since 1970

Ecology

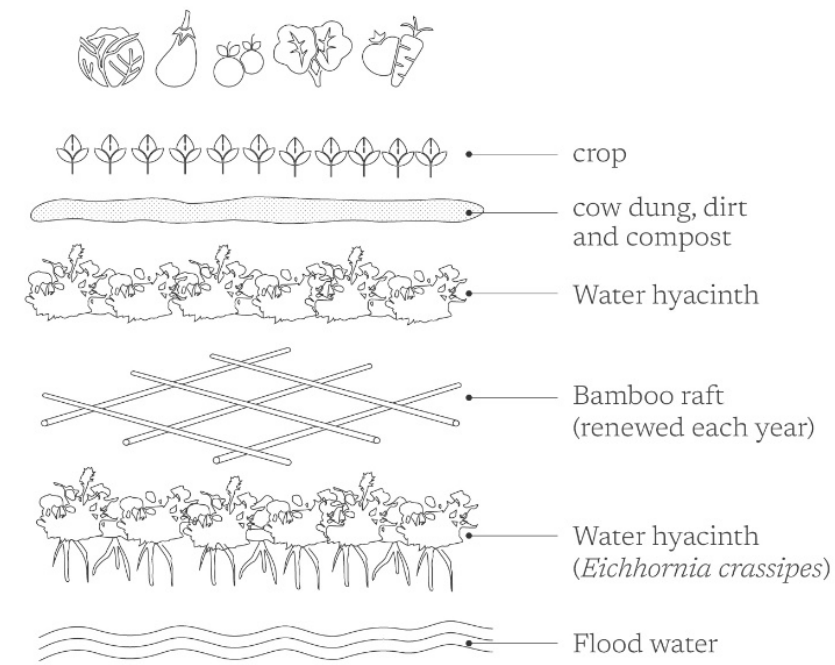
Biodiversity of the estuary



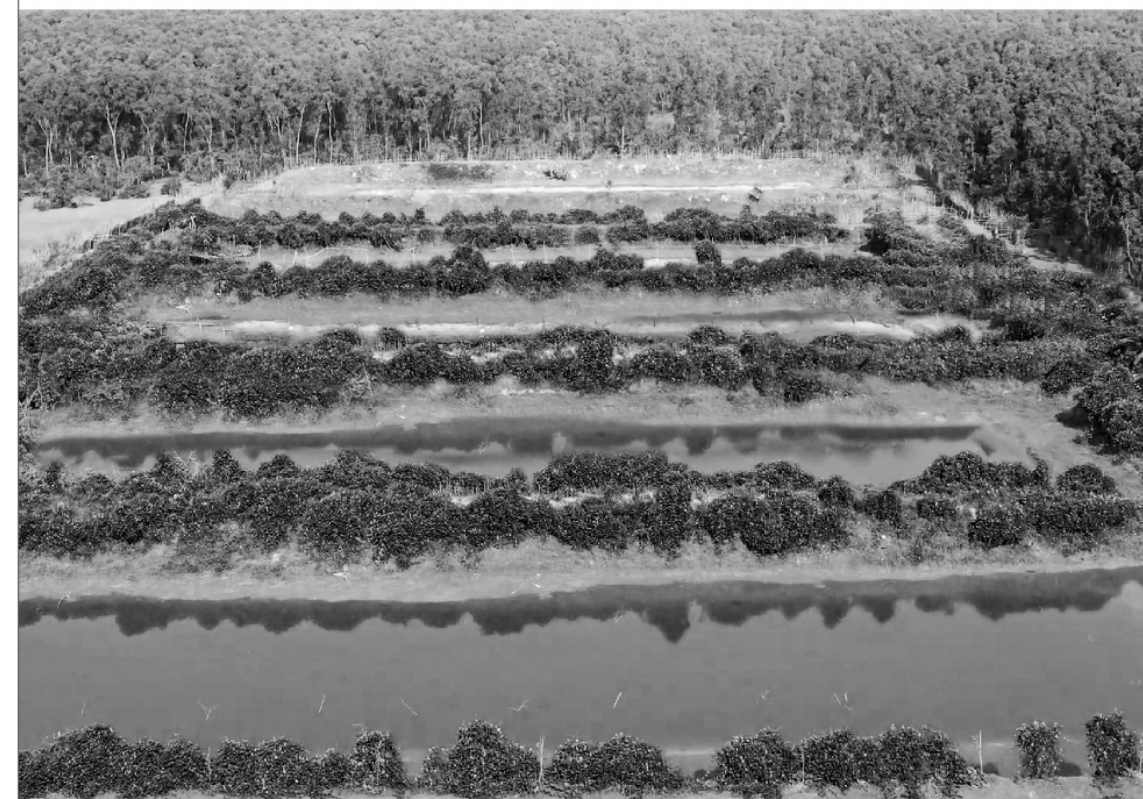
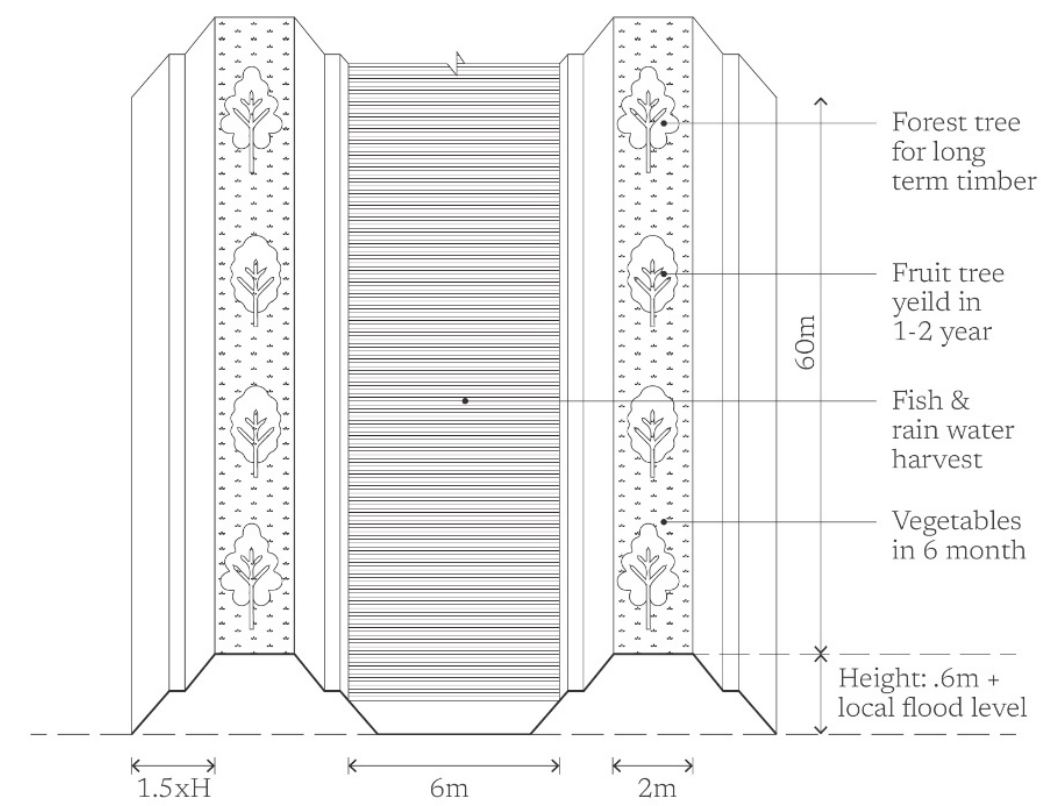
Ecology

Man and nature

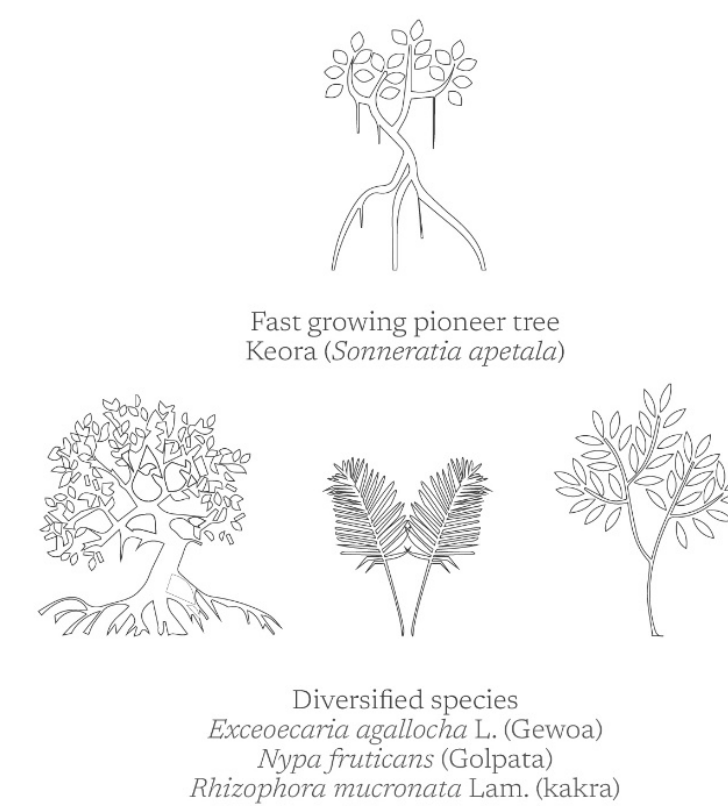
Floating agriculture Globally important agricultural heritage system



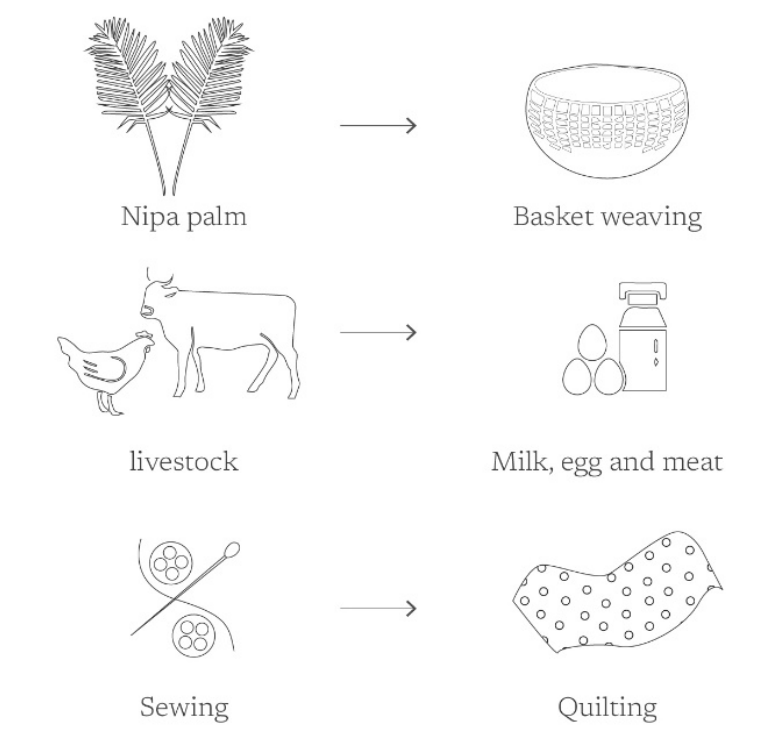
Integrated & diversified livelihood practice (Fish- forest- fruit- vegetable)



Mangrove restoration for coastal protection (Diversified species plantation)



Home based income generation (Using local resources)



Bhashan Char

Settlement



Bangladesh government have been building a lot of projects for homeless people, as a part of a goal of eliminating homelessness in the country since 1997 in three phases. The first one failed because of lack of livelihood options, people abandoned the houses. Bhashan Char is the third phase.

Part of Ashrayan housing Project by Bangladesh government for homeless people

Settlement for 100 000 people

13,000 acres of land, of which 6,427 acres do not go under water



Author: AFP/ Mukta Dinwiddie MacLaren Architects



Source: DD NEWS, 2020



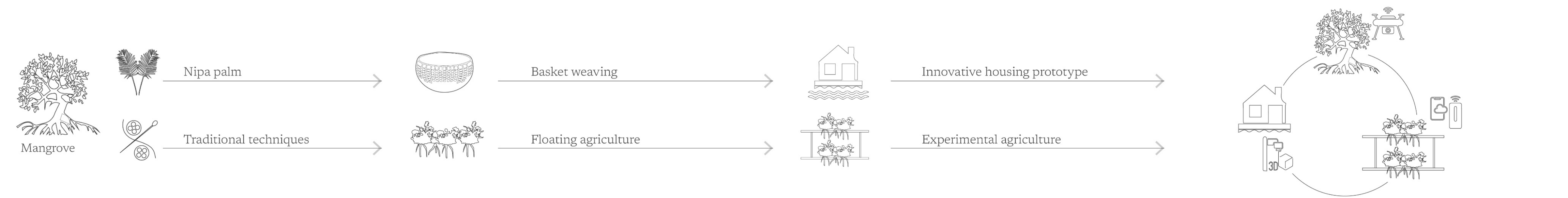
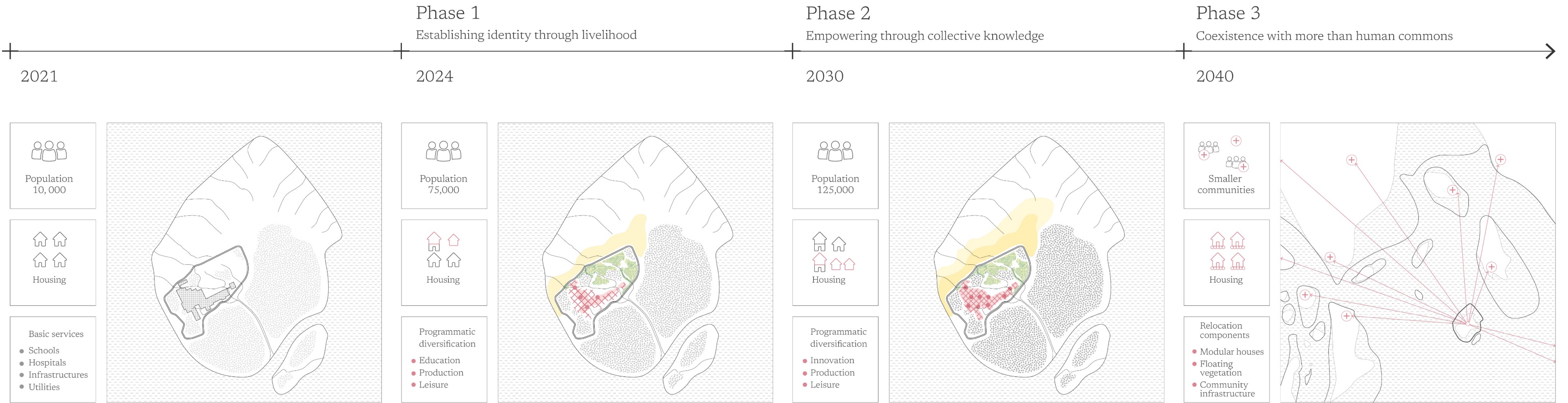
Source: BDUN, 2020

CHAPTER 3

The framework of co-creating resilient communities



Phasing design

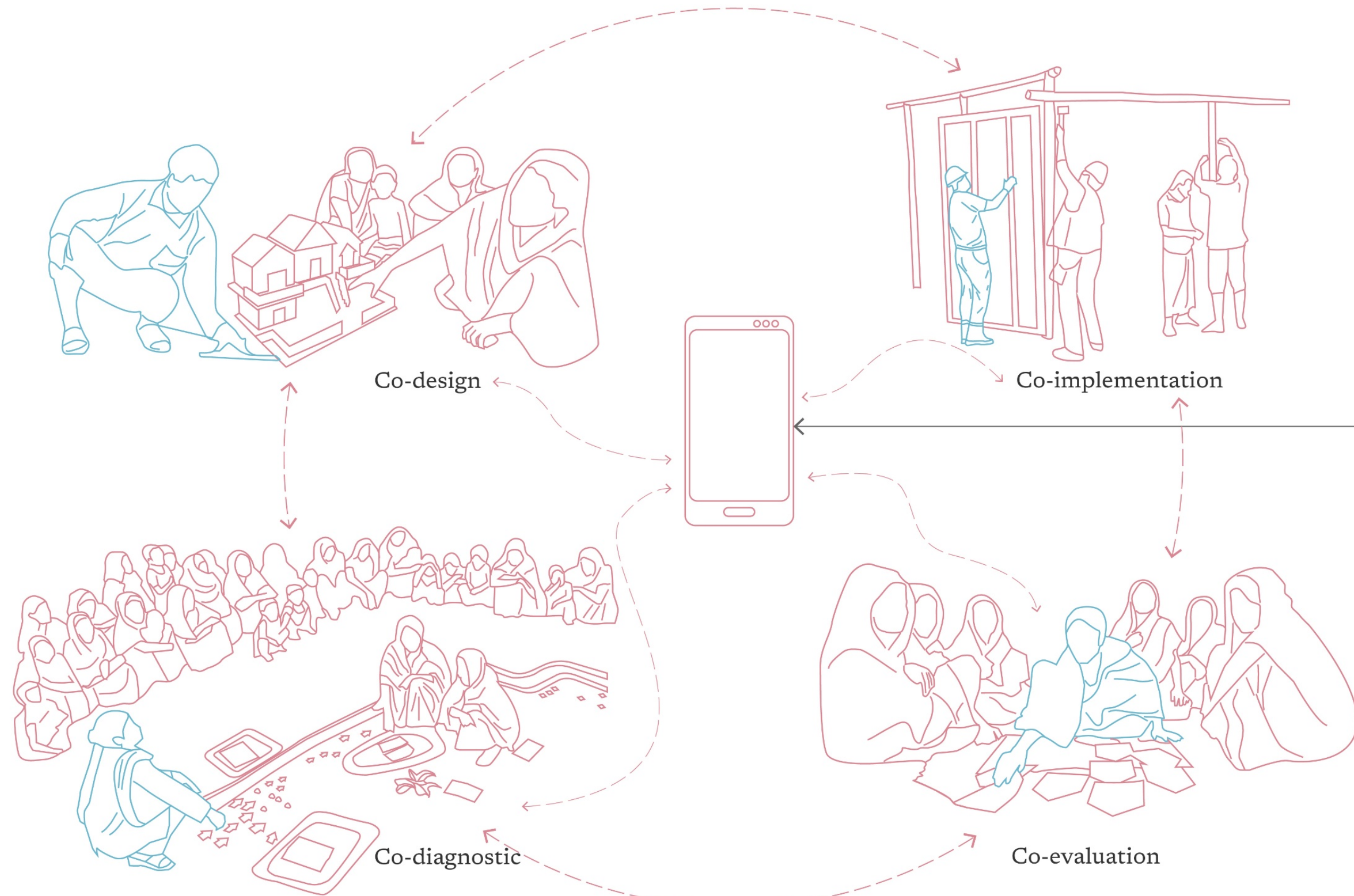


CHAPTER 4

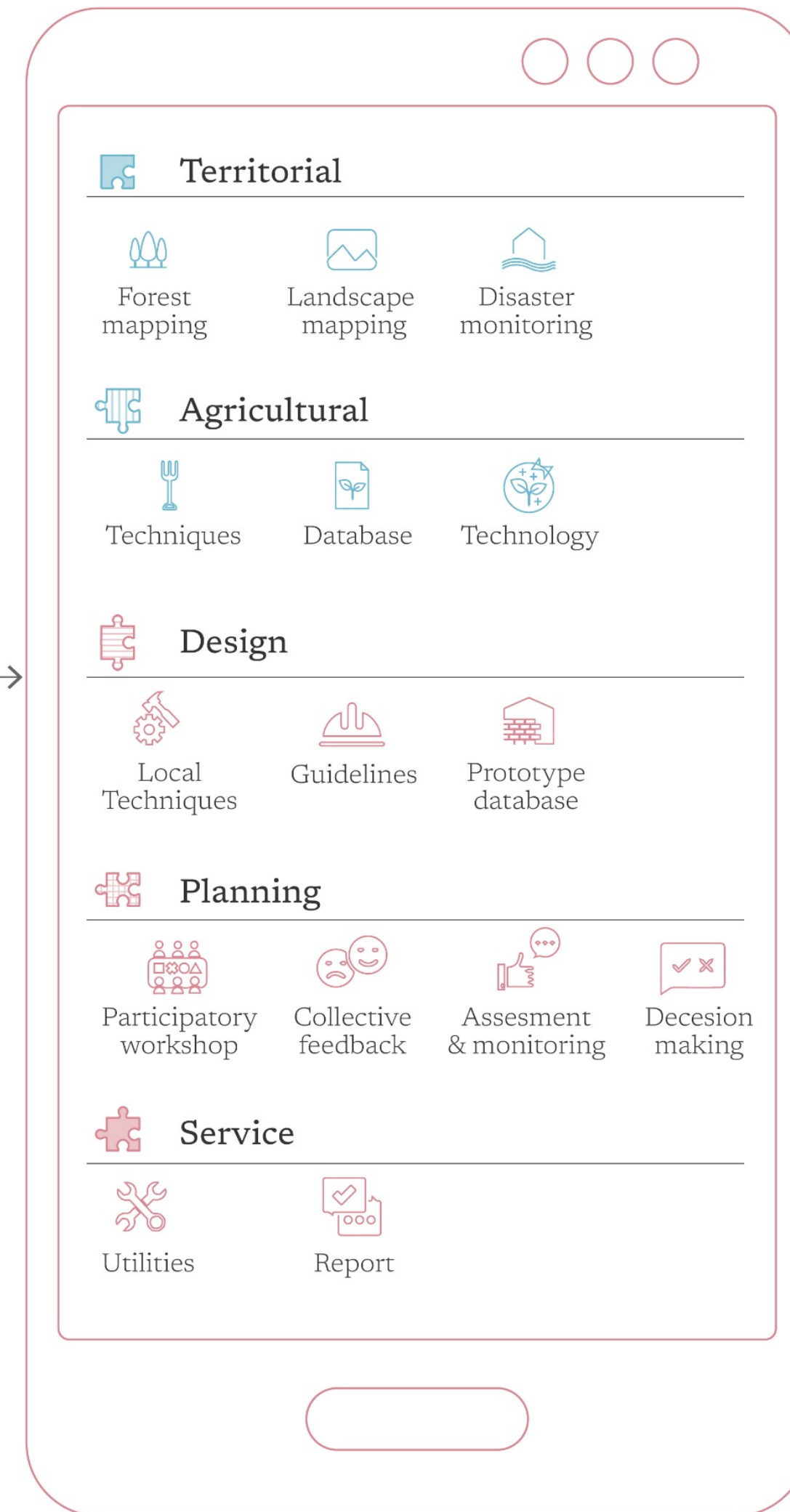
Design strategies for Bhashan Char

Diffusing the edge

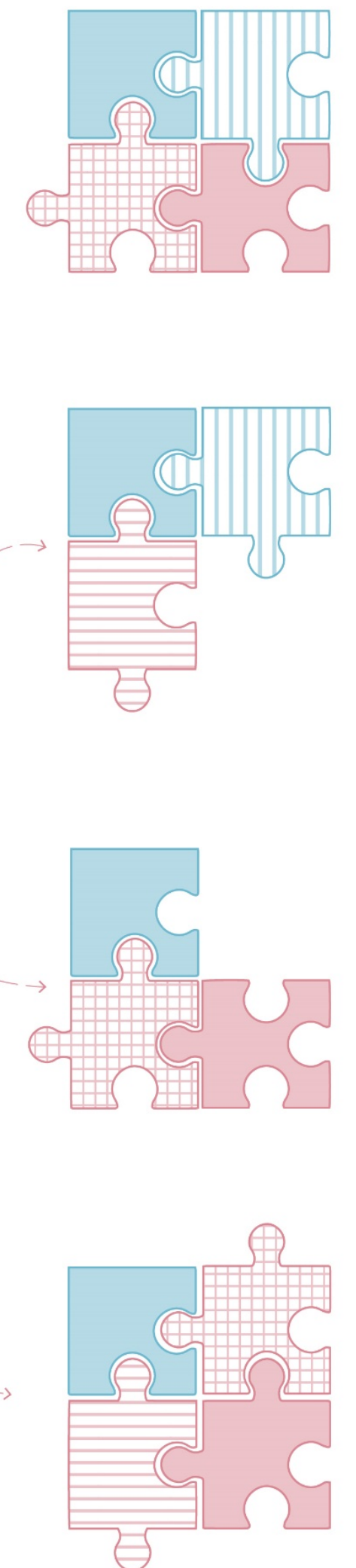
Empowering communities through
co-creation



Collective knowledge
platform (app)

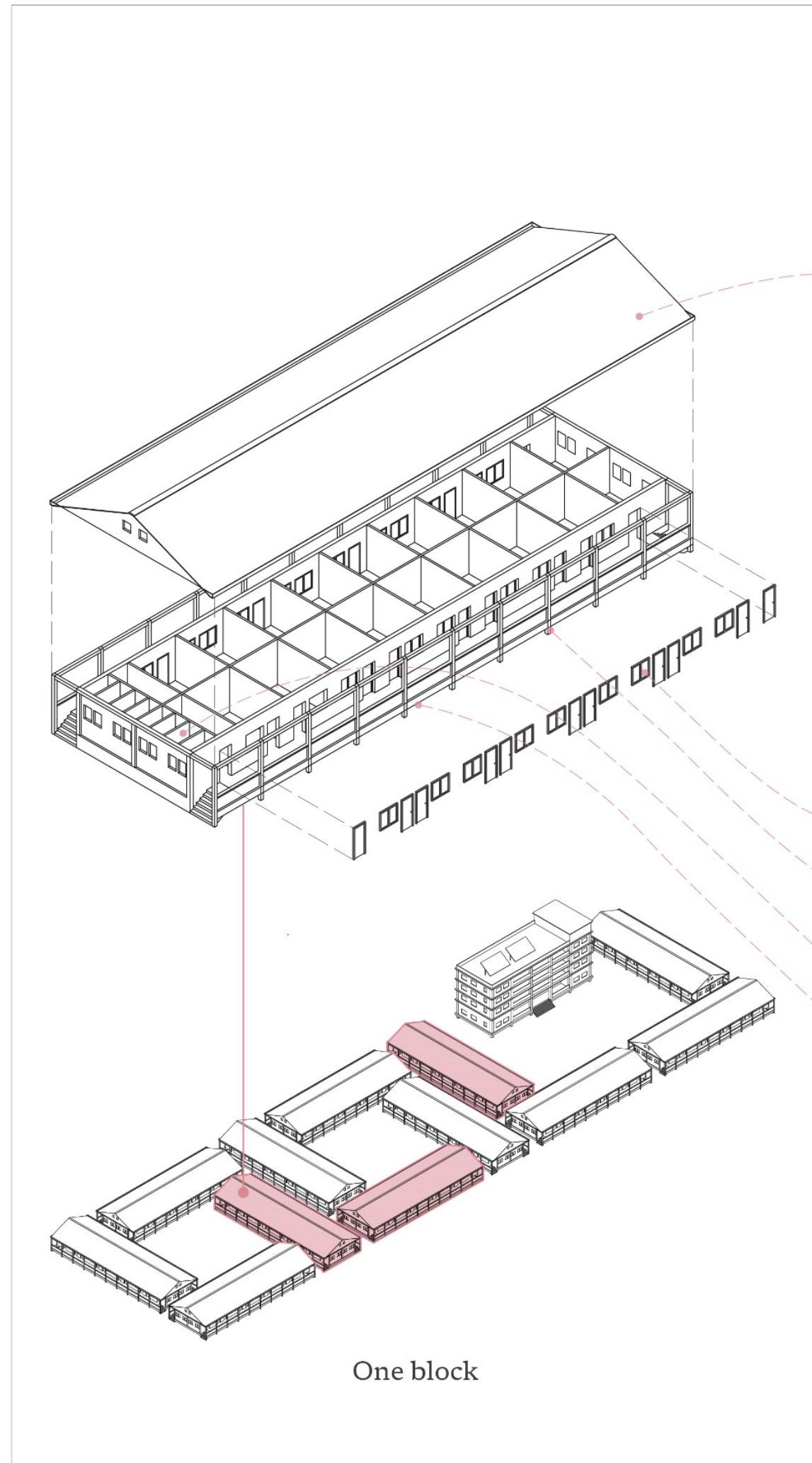


Organic growth

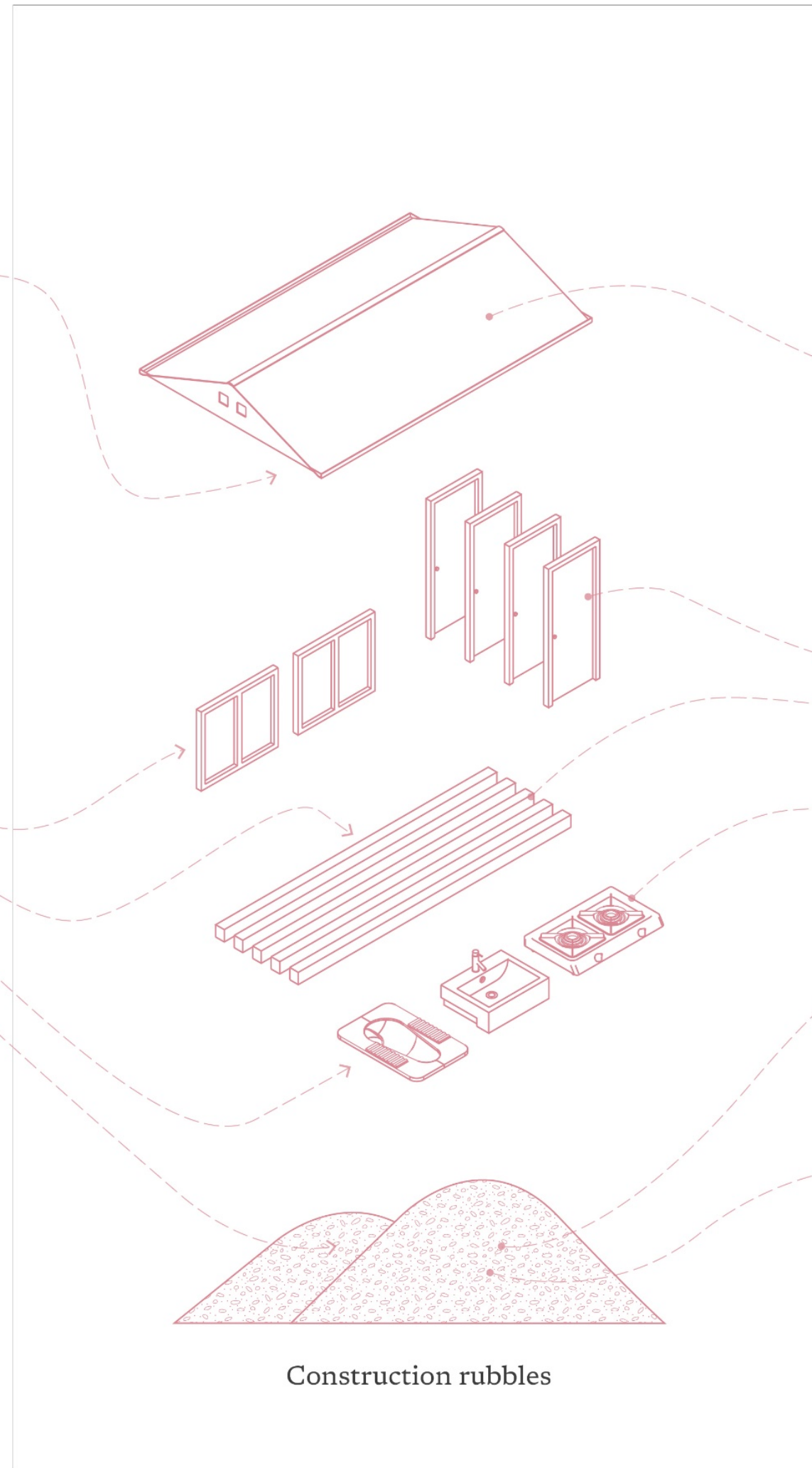


Breaking the monotony

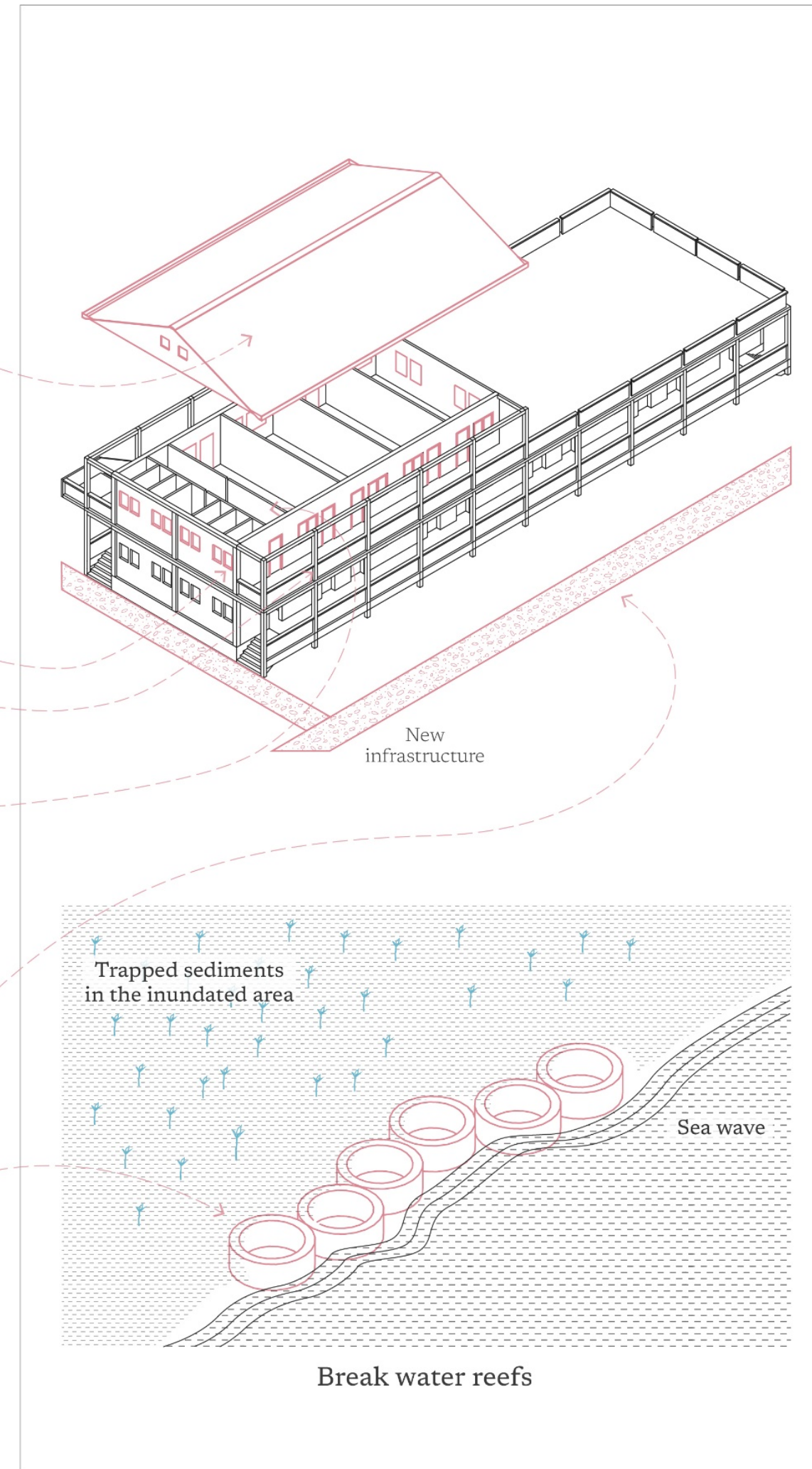
Blocks to be reappropriated



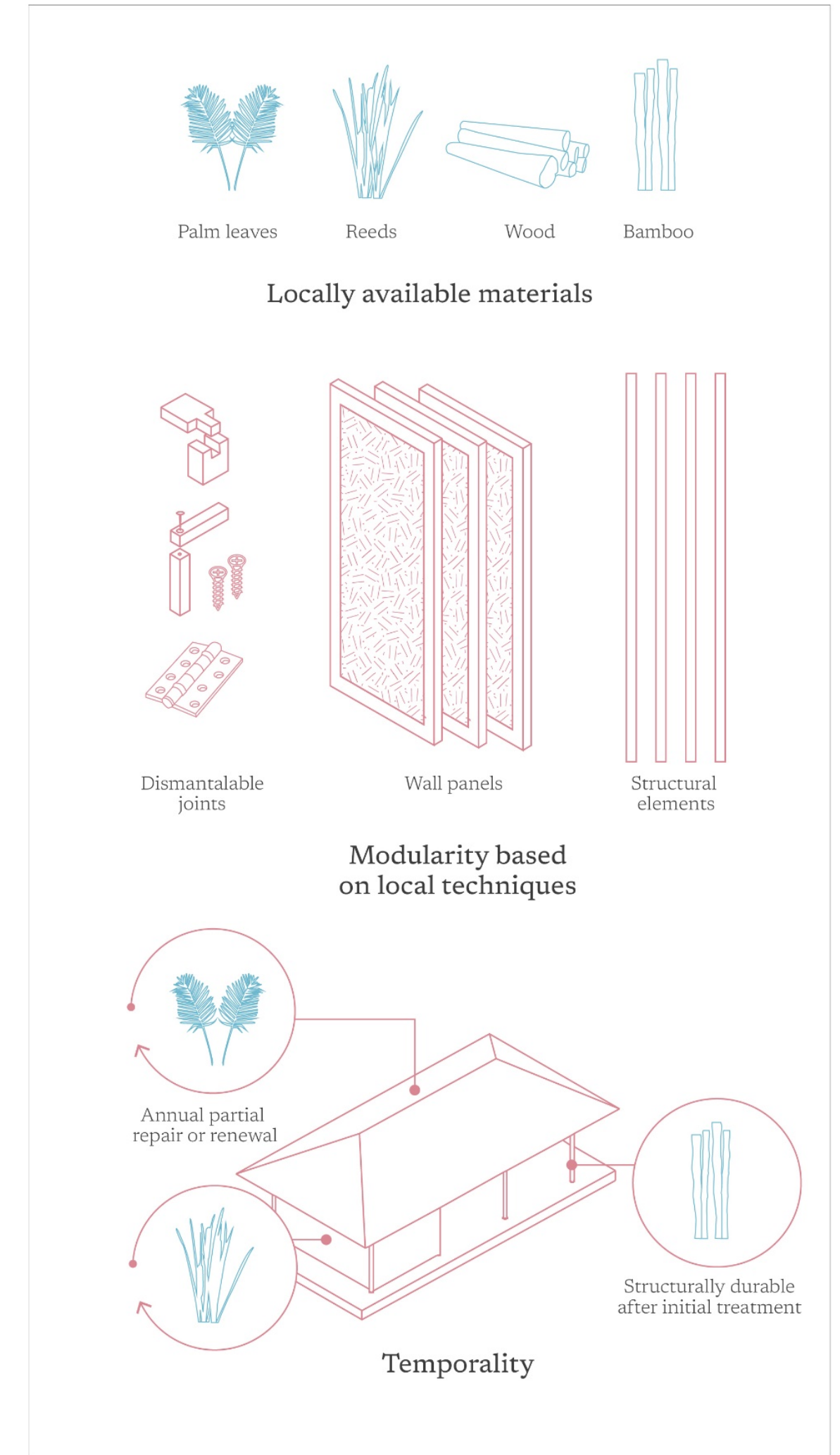
Elements to be reused



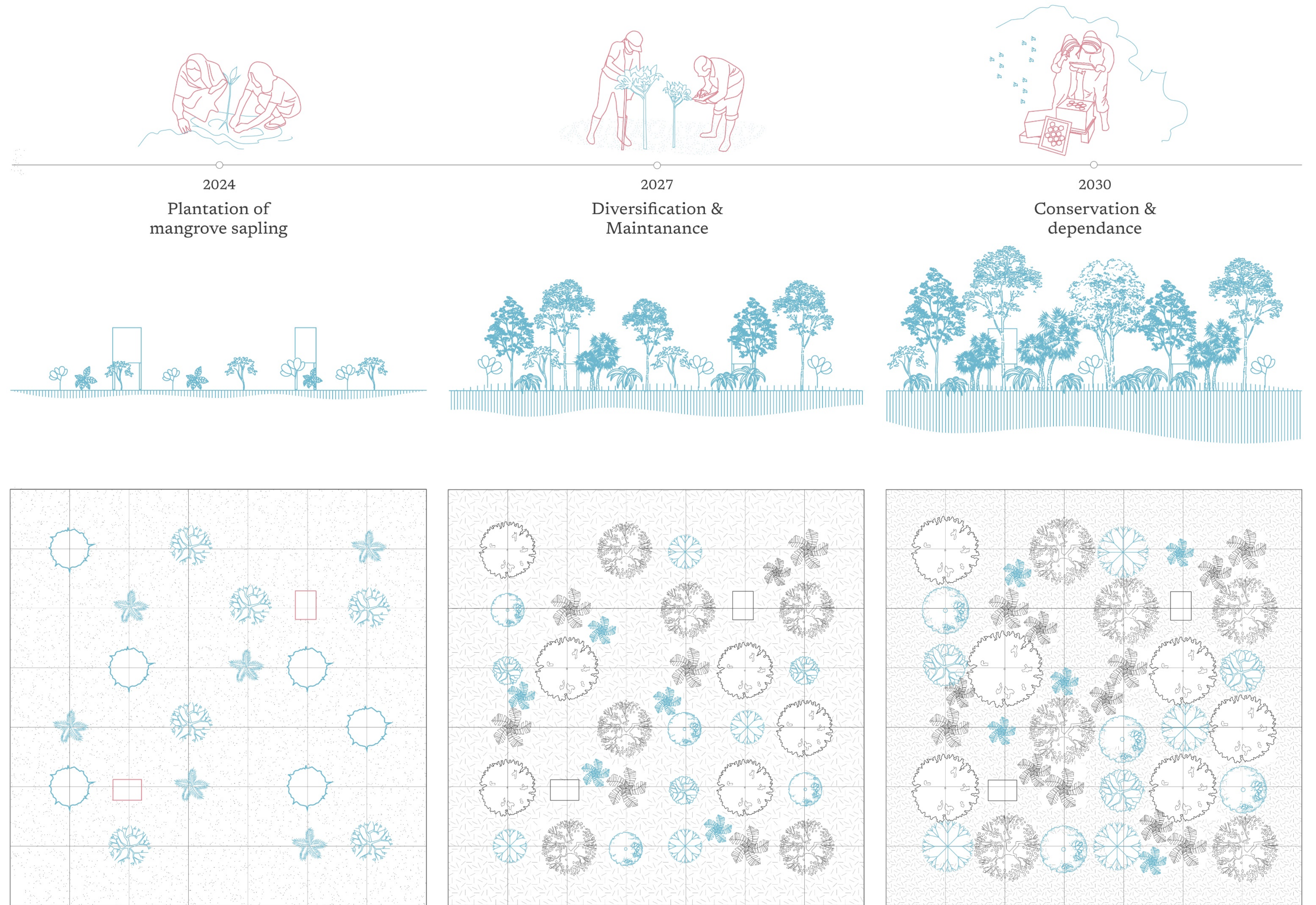
Reused elements in further expansion

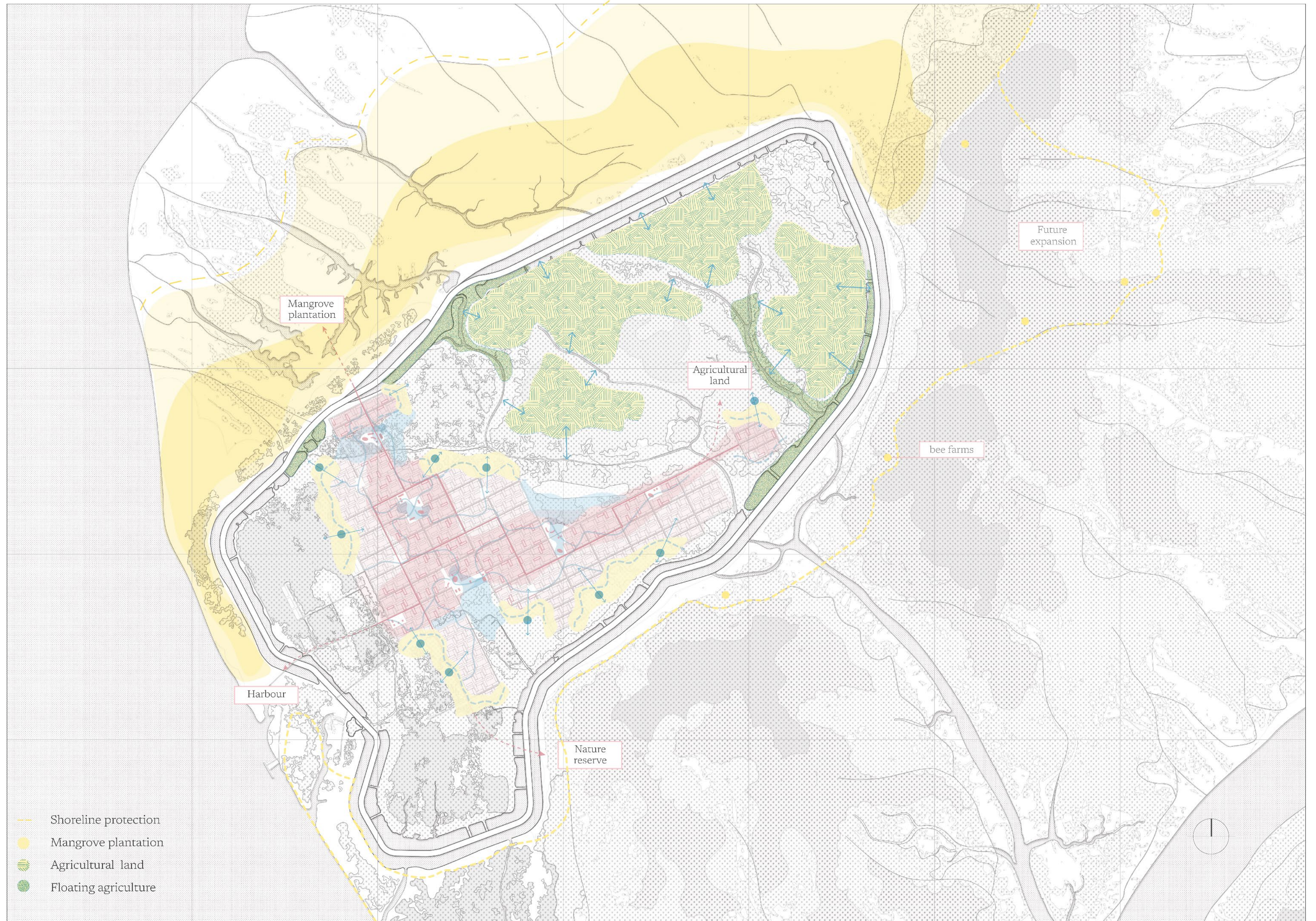


New structures for the settlement



Mangrove forestation

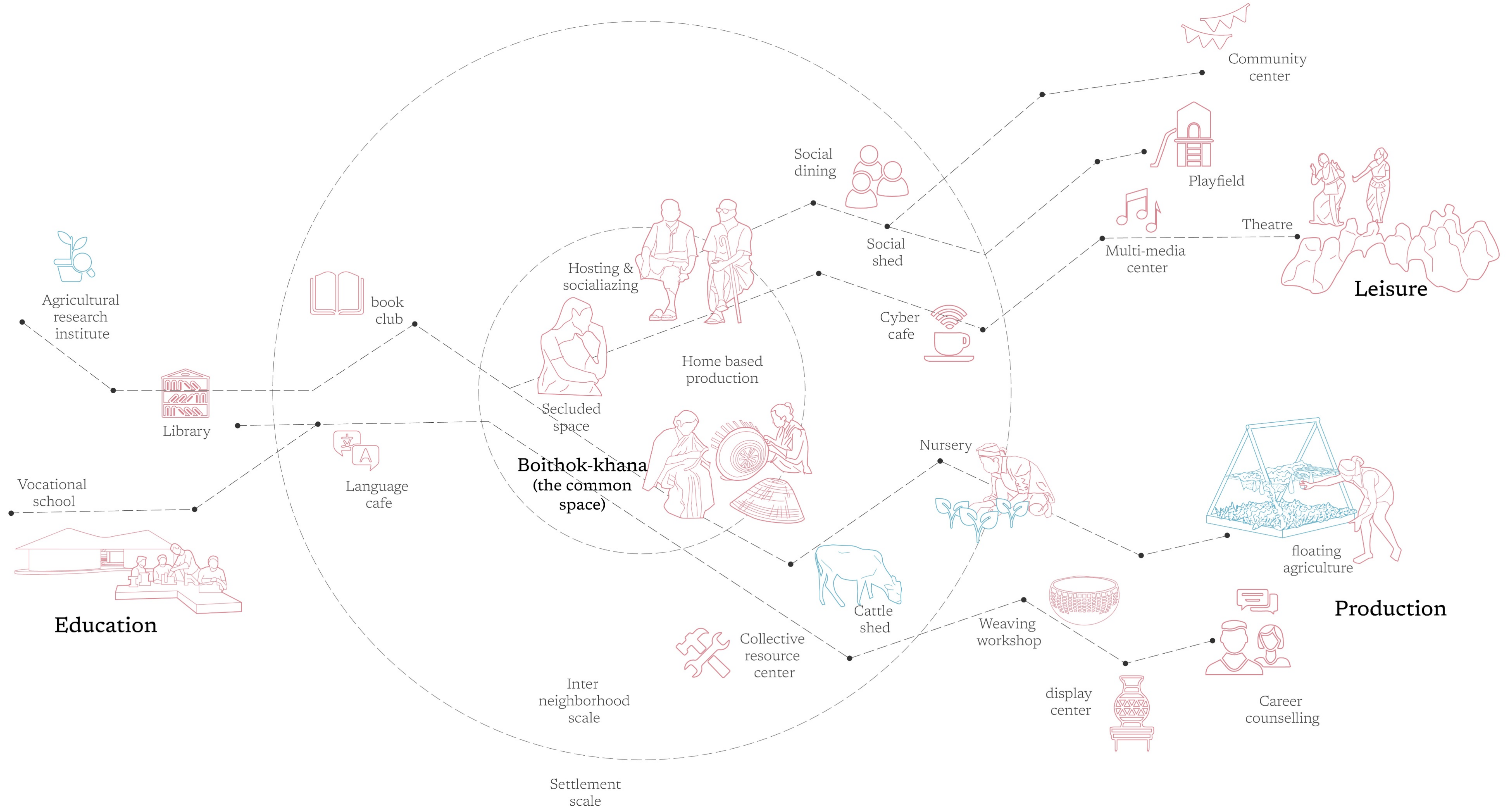




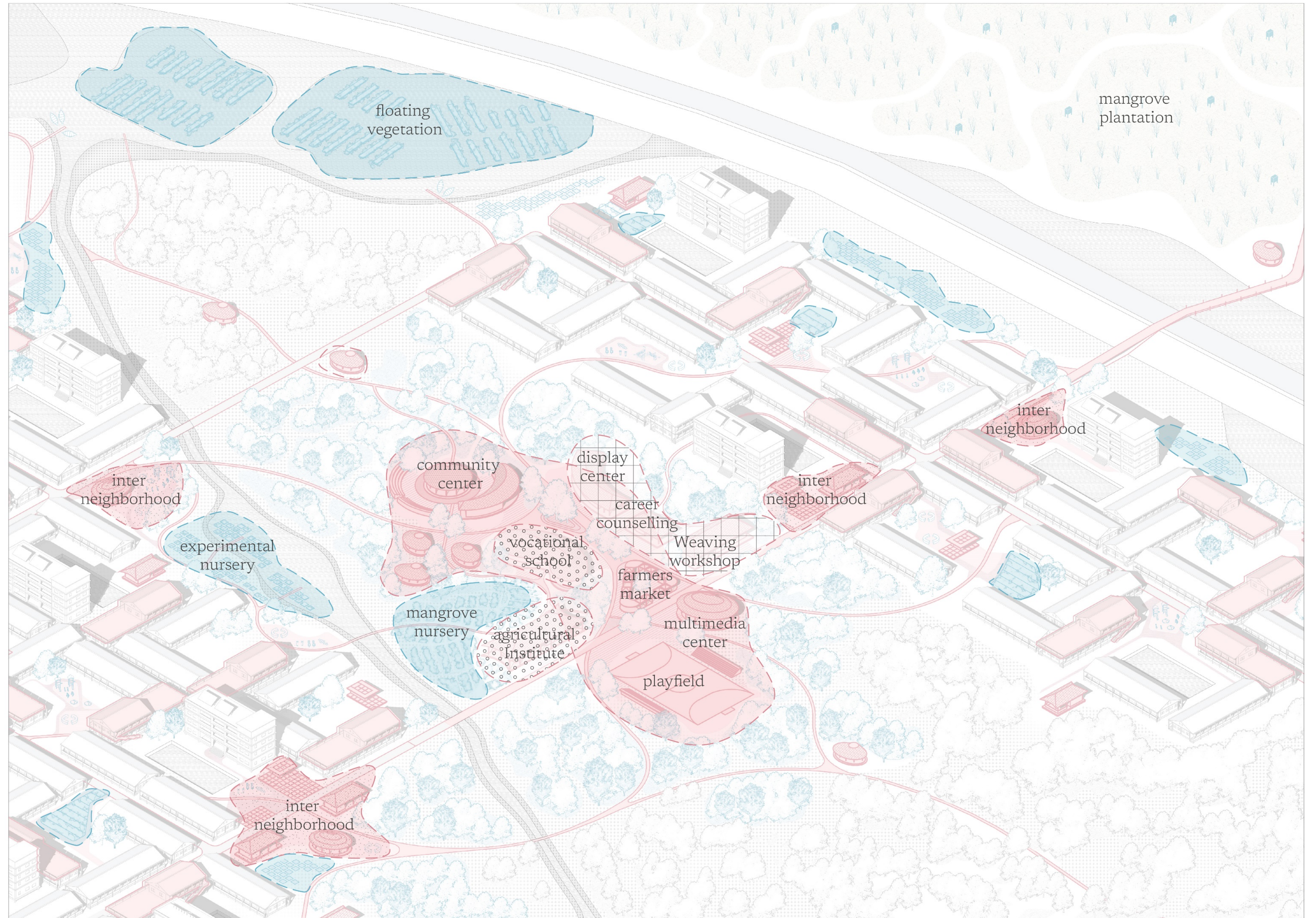
CHAPTER 5

Phase 1: Establishing identity through livelihood

Programmatic proposal



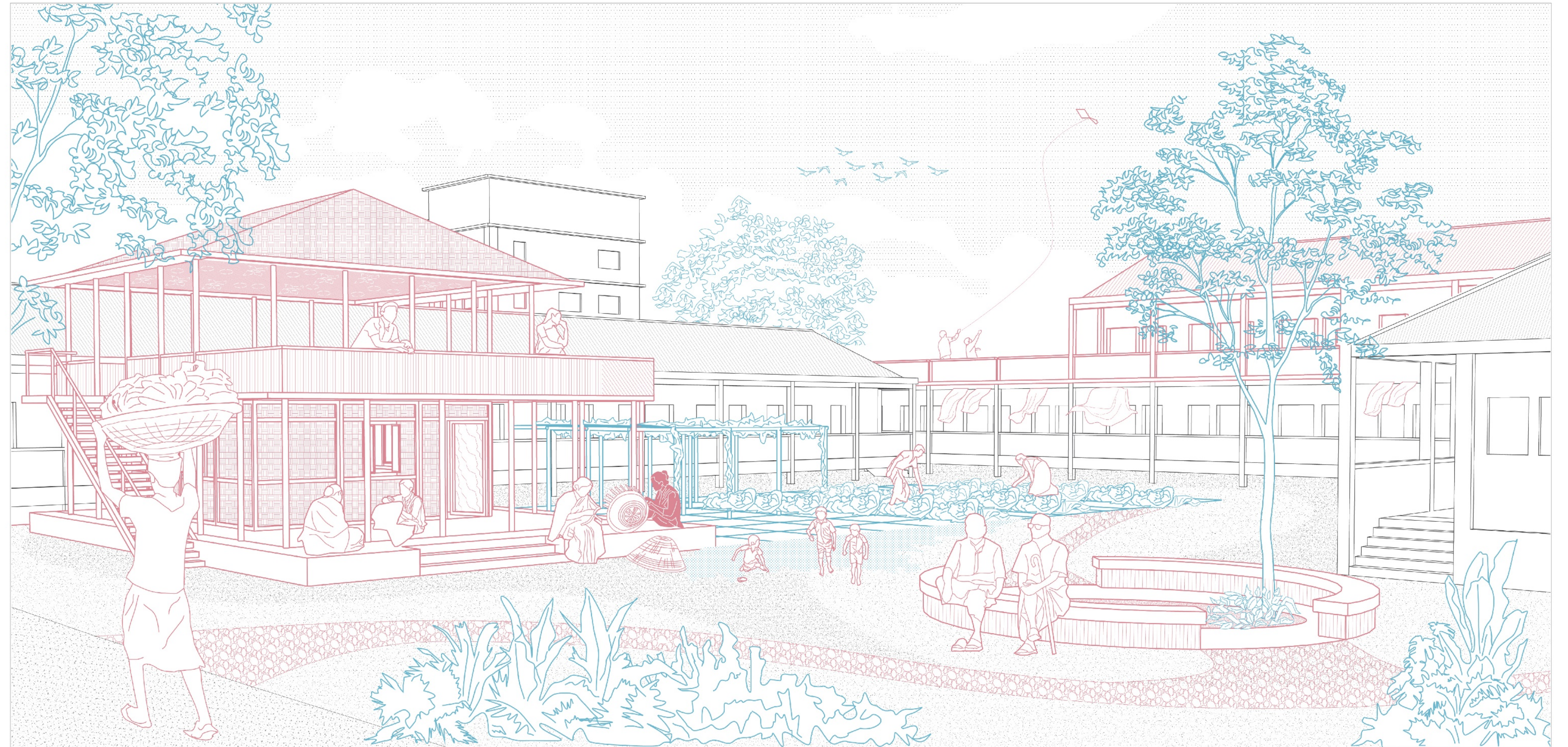
Heirarchy of spaces



Boithok-khana

Fatema (Age 15)

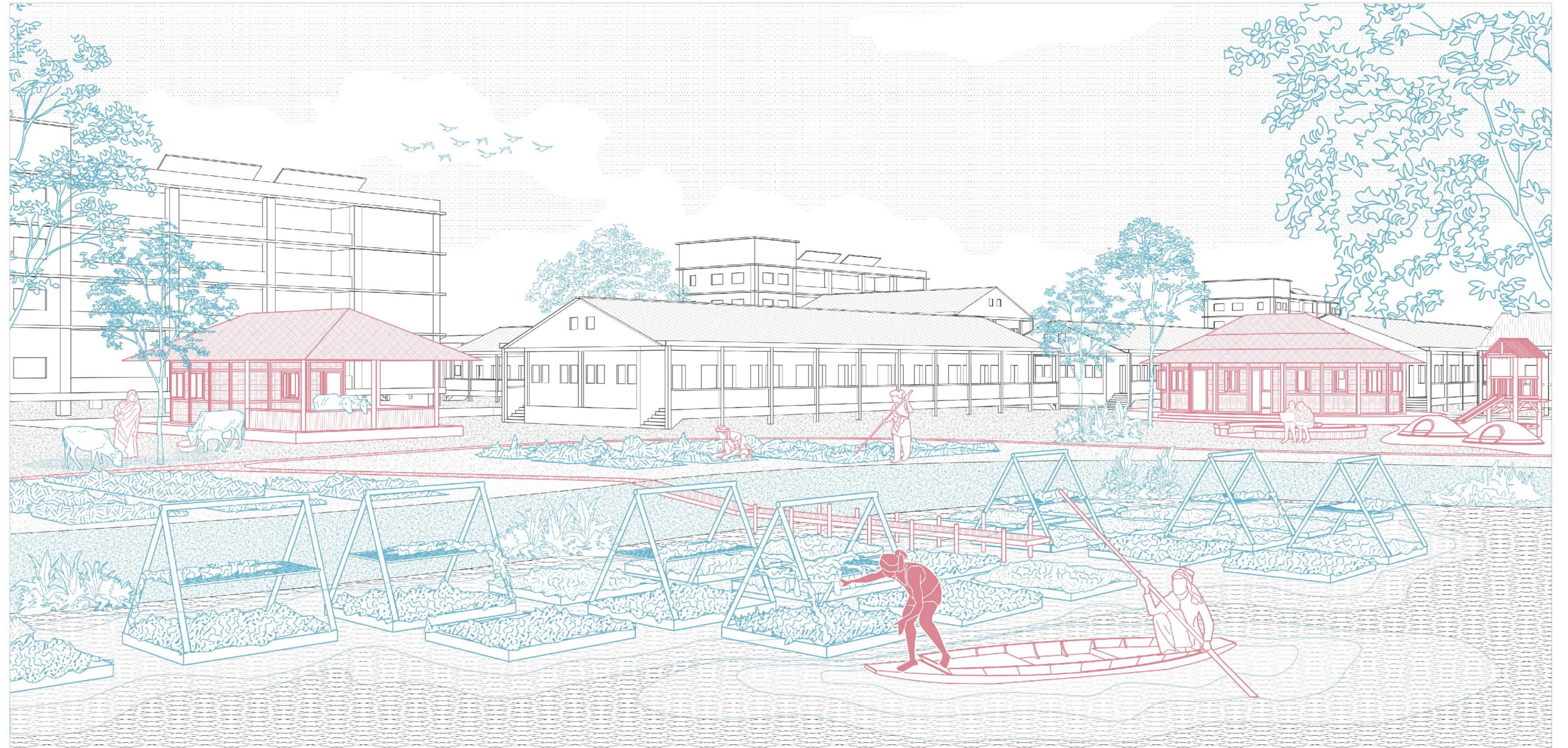
Fatema, a 15 years old girl is currently living in Bhashan char with her family. She helps her mother in her spare time to weave the baskets with nypa palm leaves, just like they used to do when they were living in Myanmar. It's one of the things that makes her feel connected to her roots. They have made this structure in their neighborhood which they call "boithok-khana" means the living room. Here, they spend their leisure time with other families and sometimes she just goes to the upper floor to get some quiet time on her own.



The in-between

Karim (Age 28)

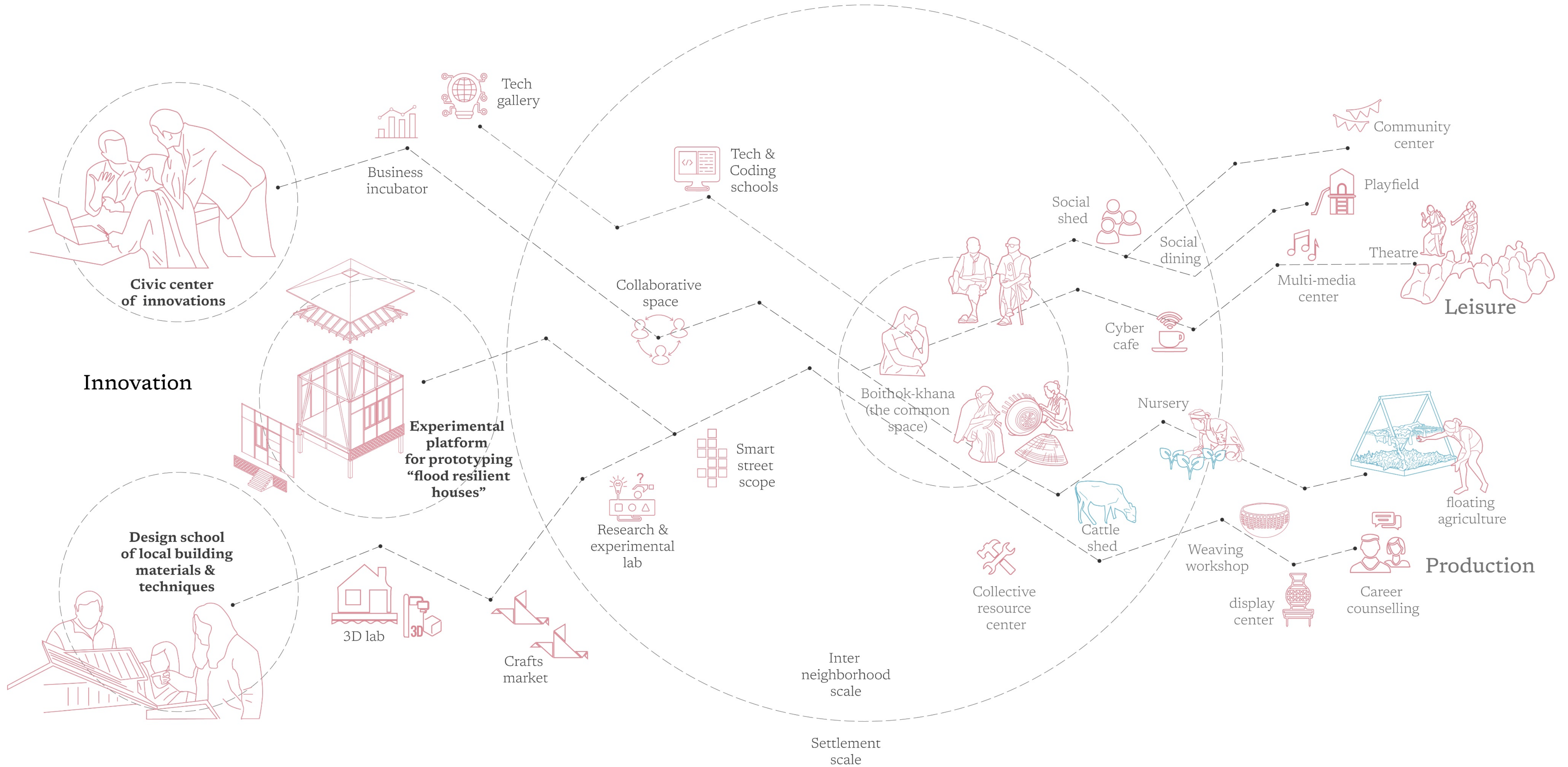
Karim, an young adult, who is currently associated with the experimental floating vegetation model in Bhashan Char. They are trying to figure out an adaptive approach for growing vegetables in the water. It has helped him learn new techniques and collaborate with other farmers. He really enjoys his work since it also gives him the scope to be creative. Now he is becoming more self reliant in his life and he is no longer dependent on the ration provided by the humanitarian organizations.



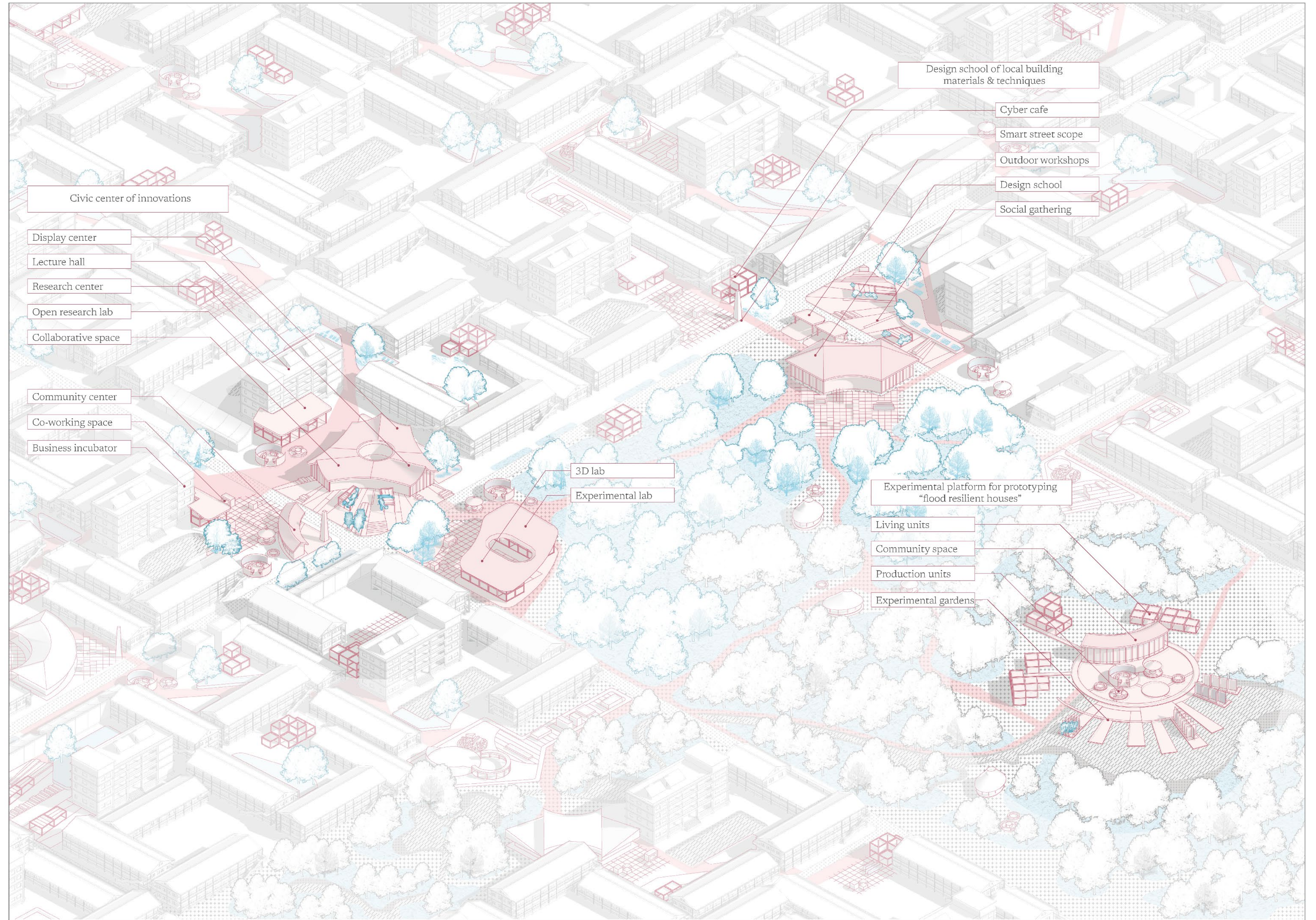
CHAPTER 6

Phase 2: Empowering through collective knowledge

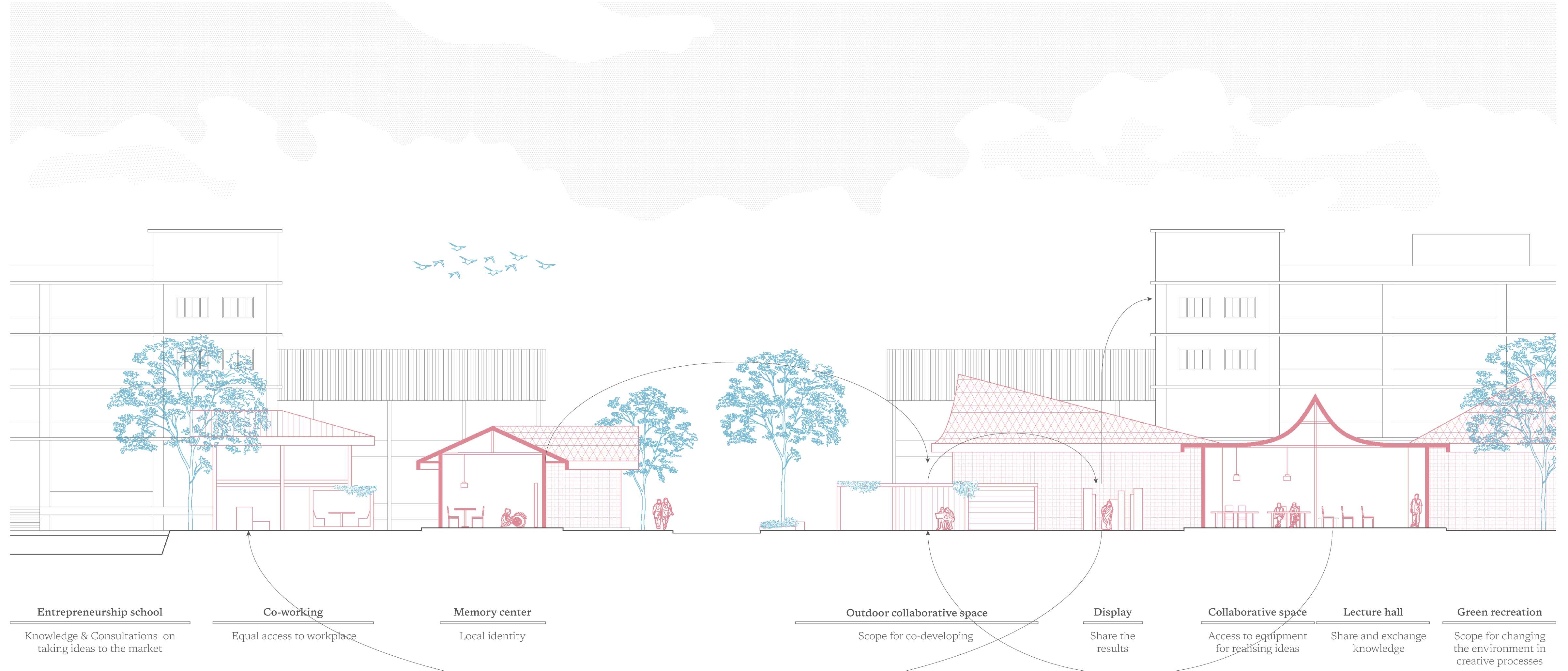
Programmatic proposal



Core programs



Civic center



Experimental platform



CHAPTER 7

Phase 3: Coexistence with more than human commons



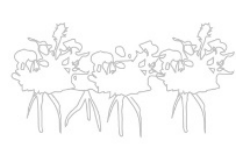
Nipa palm



Traditional techniques



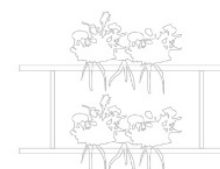
Basket weaving



Floating agriculture



Innovative housing prototype

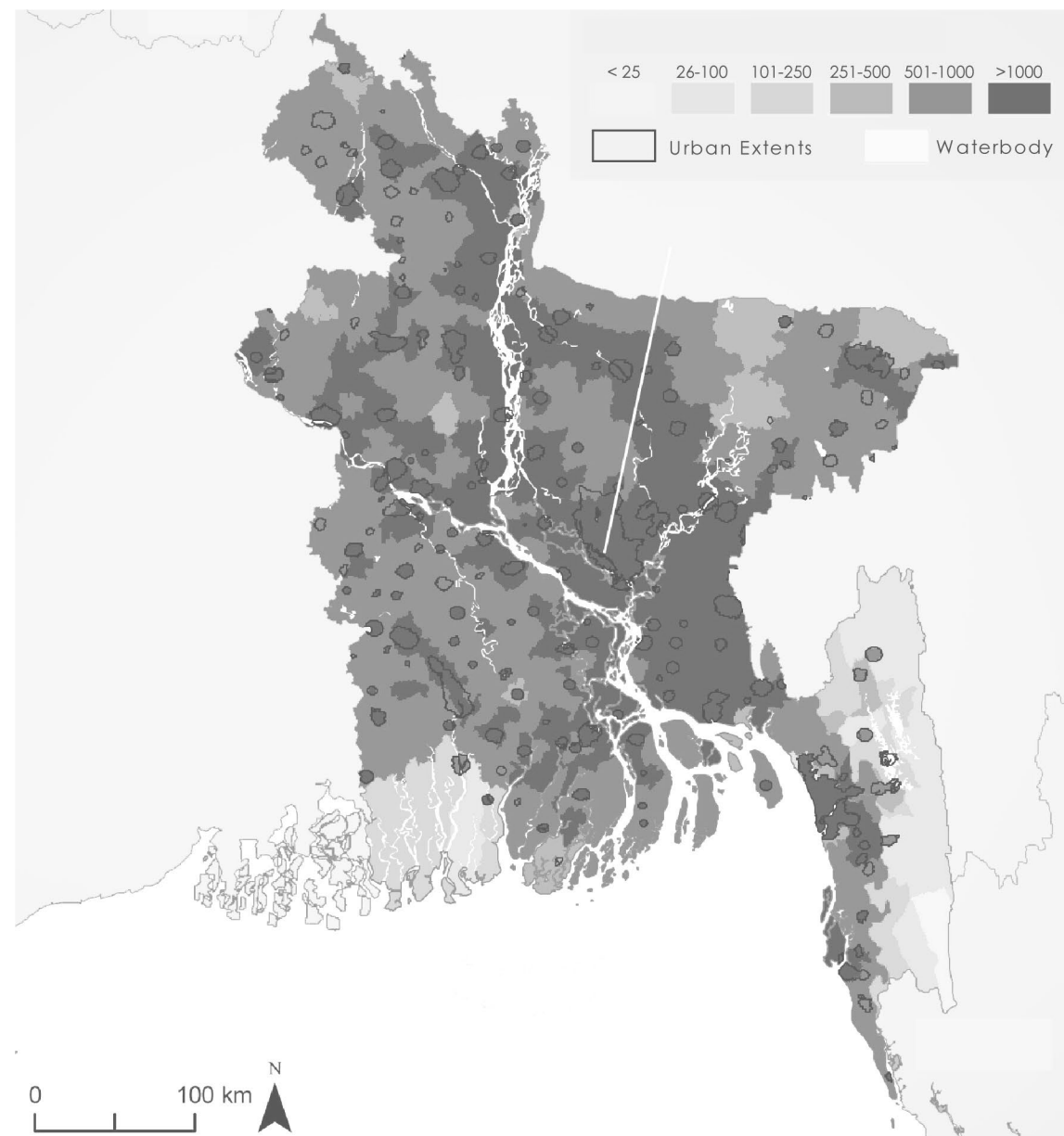


Experimental agriculture



Projected sea-level rise by 2050

Population Density (per km2)



Source: SEDACMaps, 2011



Source: coastal.climatecentral.org, 2021

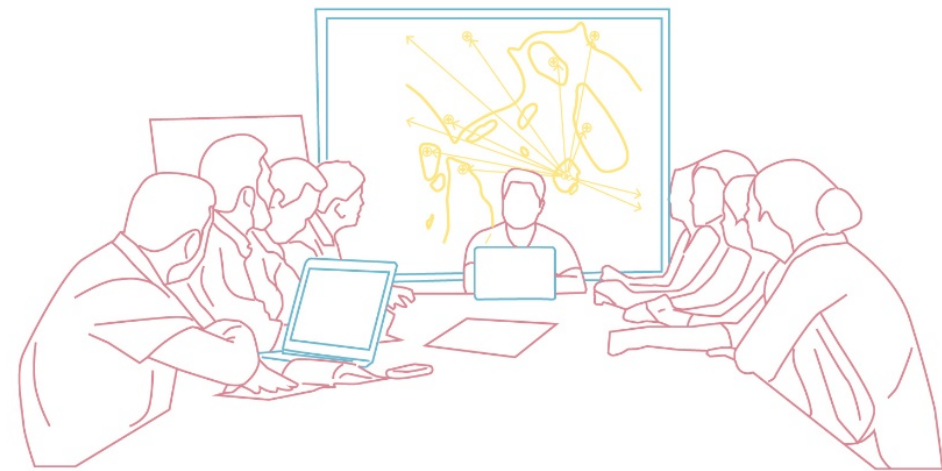
Co-processed relocation

from 2030

Preparation for future relocation from Bhashan Char

Relocation planning

- Finding places for possible relocation
- Evaluating topography, land area and surroundings
- Economic planning



Negotiation & consultancy

- Meeting with community representatives
- Voluntary selection process of people willing to move
- Skills and value assessment



from 2040

Relocation of smaller communities to safer locations in phases due to partial submergence of Bhashan char.

Site planning

- Choosing site for relocation
- Scope assessment
- Leasing land
- Site visit
- Data collection



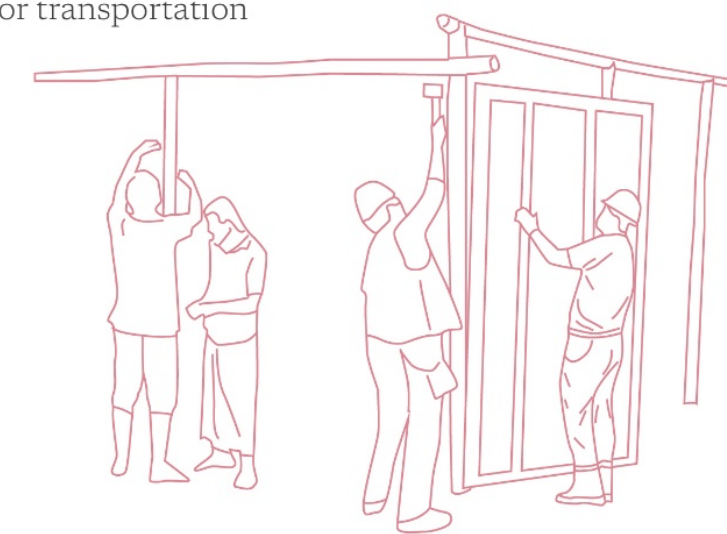
Route planning

- Evaluating the routes and transportation logistics
- Assessing manpower and cost
- Selecting relocation methods



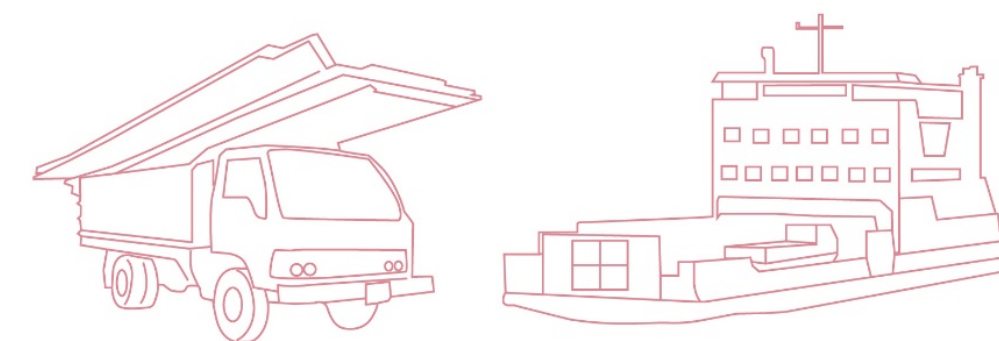
Disassembling structures

- Engaging manpower
- Dismantling structural elements
- Co-ordinating the logistics
- Preparation for transportation



Transportation

- Translocation on moving device
- Engaging manpower
- Co-ordination of the whole process

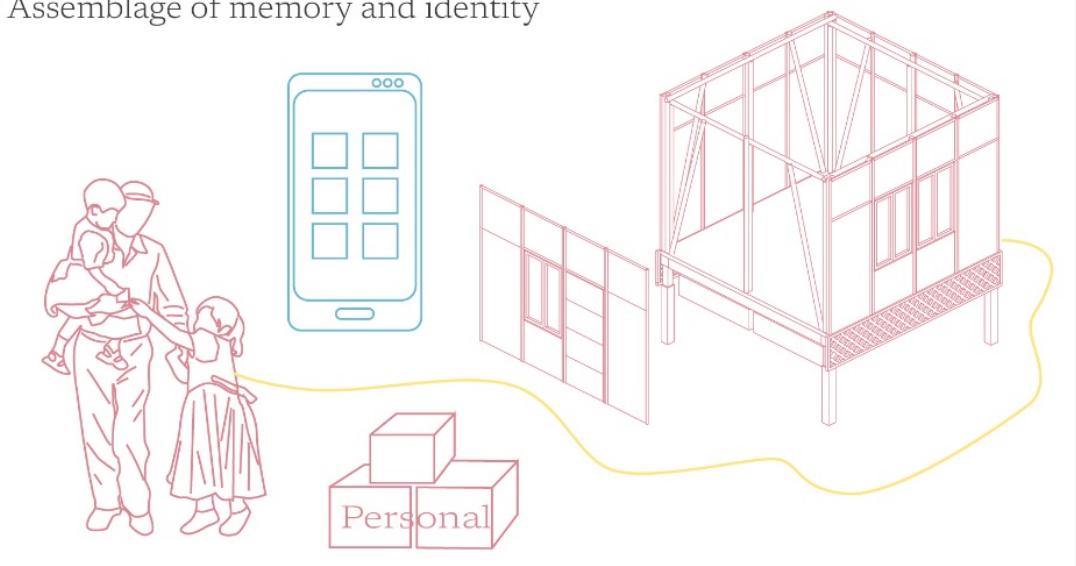


from 2050

Relocation of large share of the population from Bhashan char as most of Bhashan char island is submerged

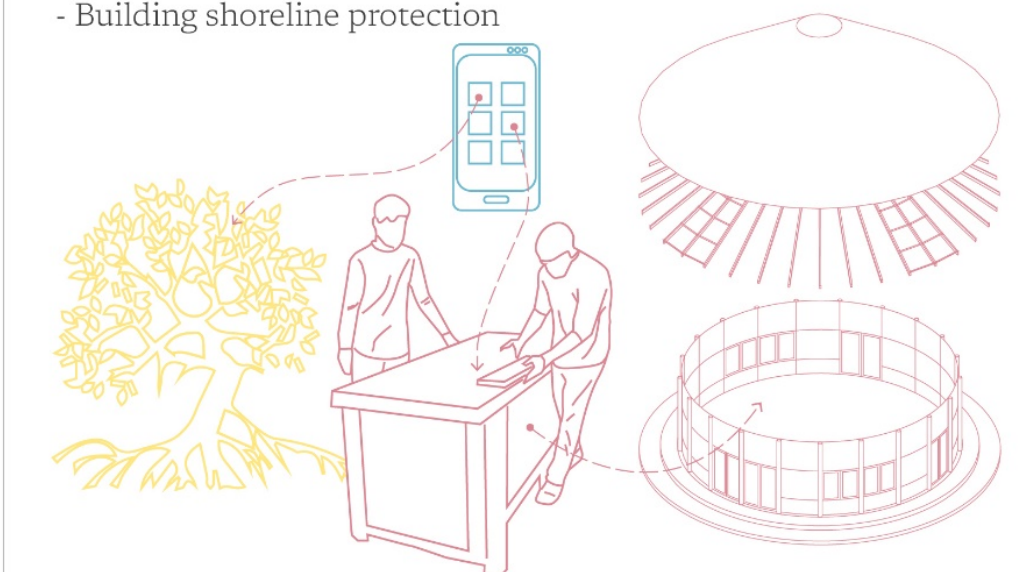
Assembling structures

- Underpinning the structures and site
- Construction of the house
- Assemblage of memory and identity

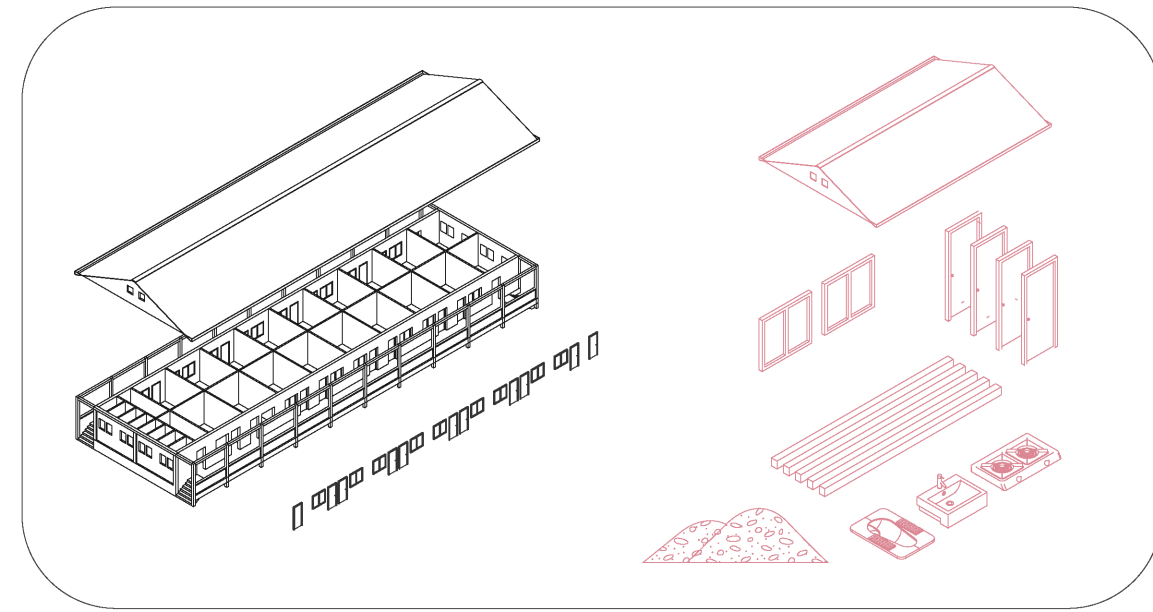


Co-creation of community hub & shoreline protection

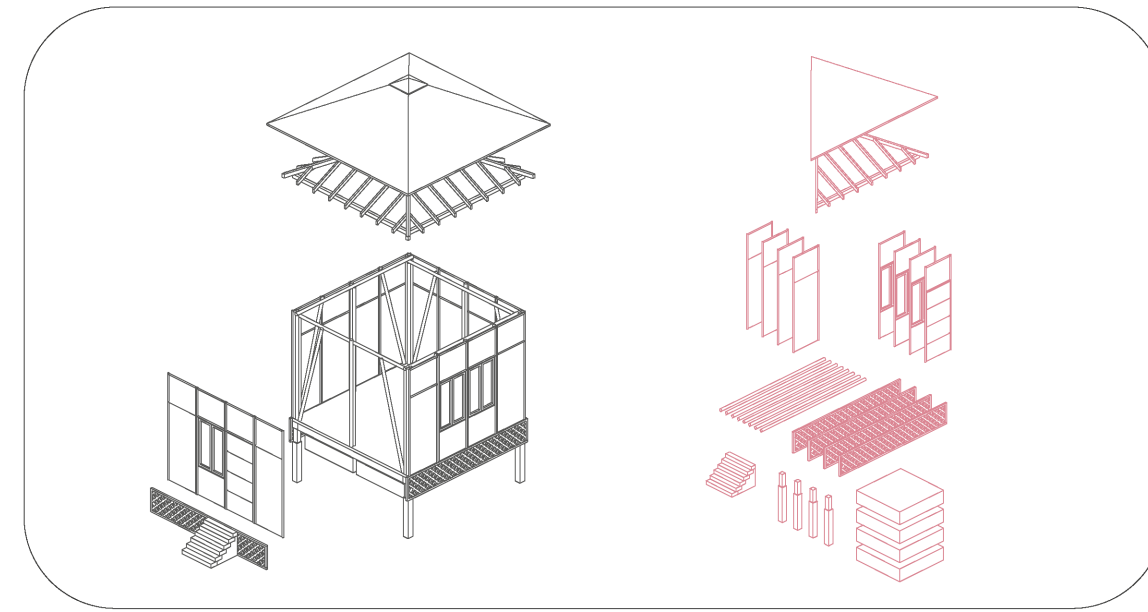
- Rebuilding the community programs with association from locals
- Planting mangrove trees
- Building shoreline protection



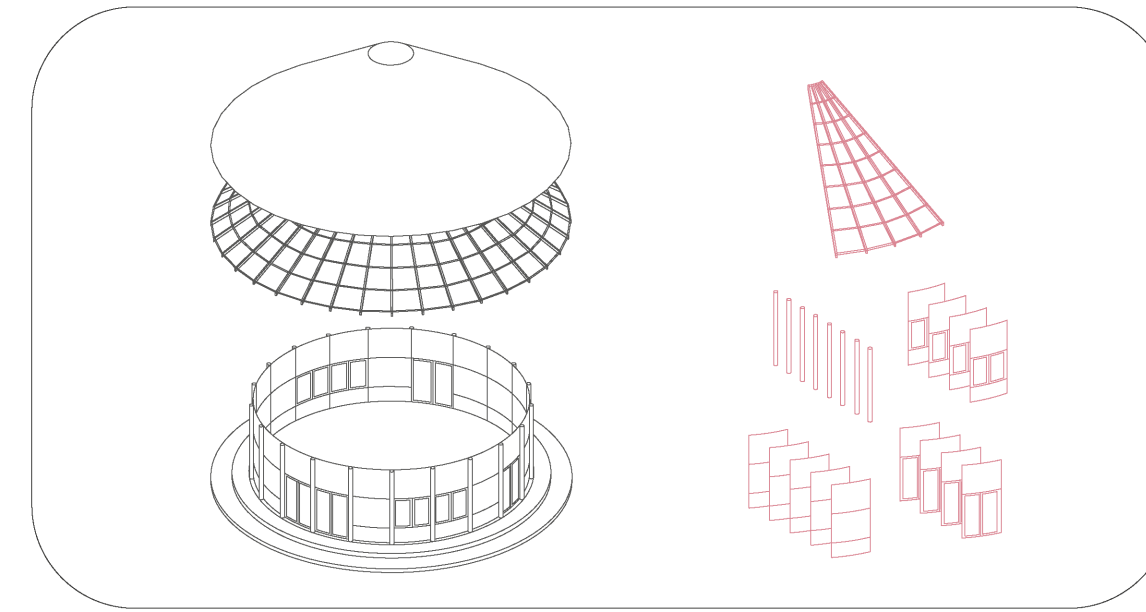
Structures for disassembly



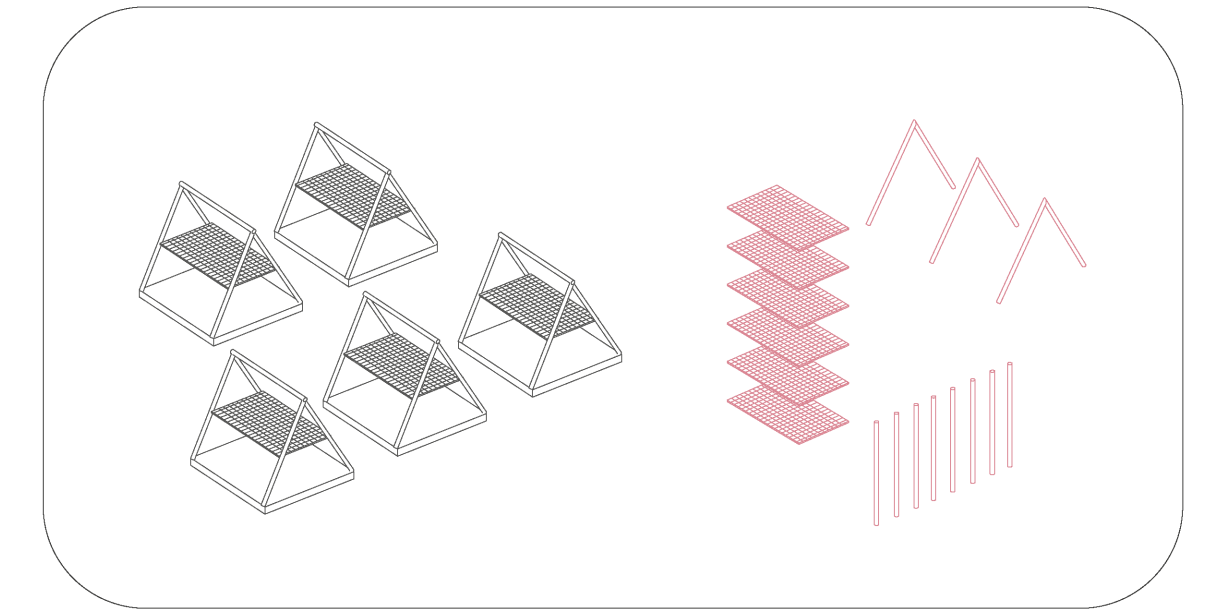
Monolithic buildings



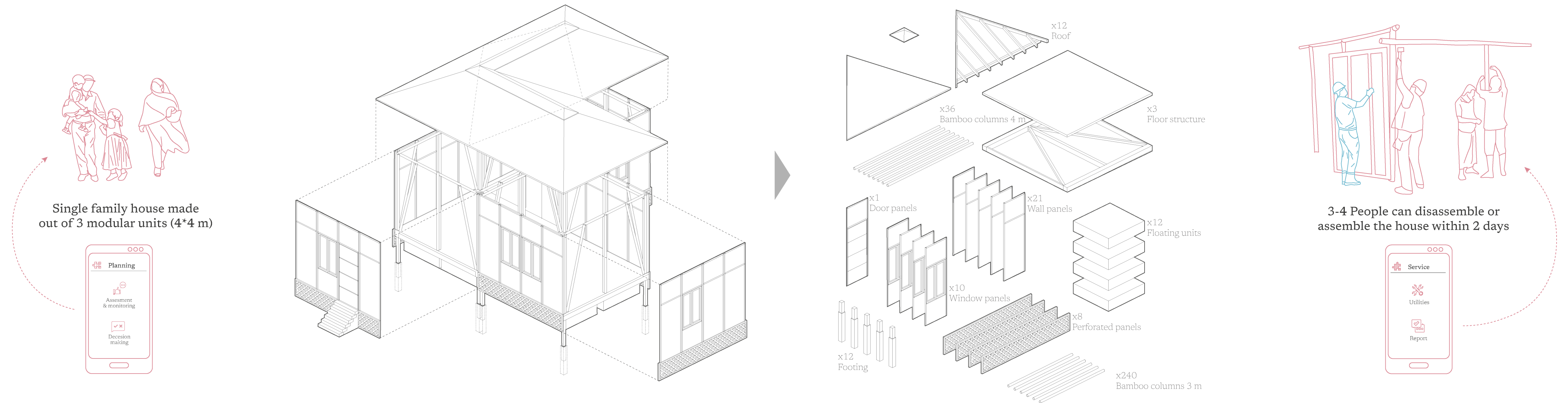
Modular units



Unique buildings



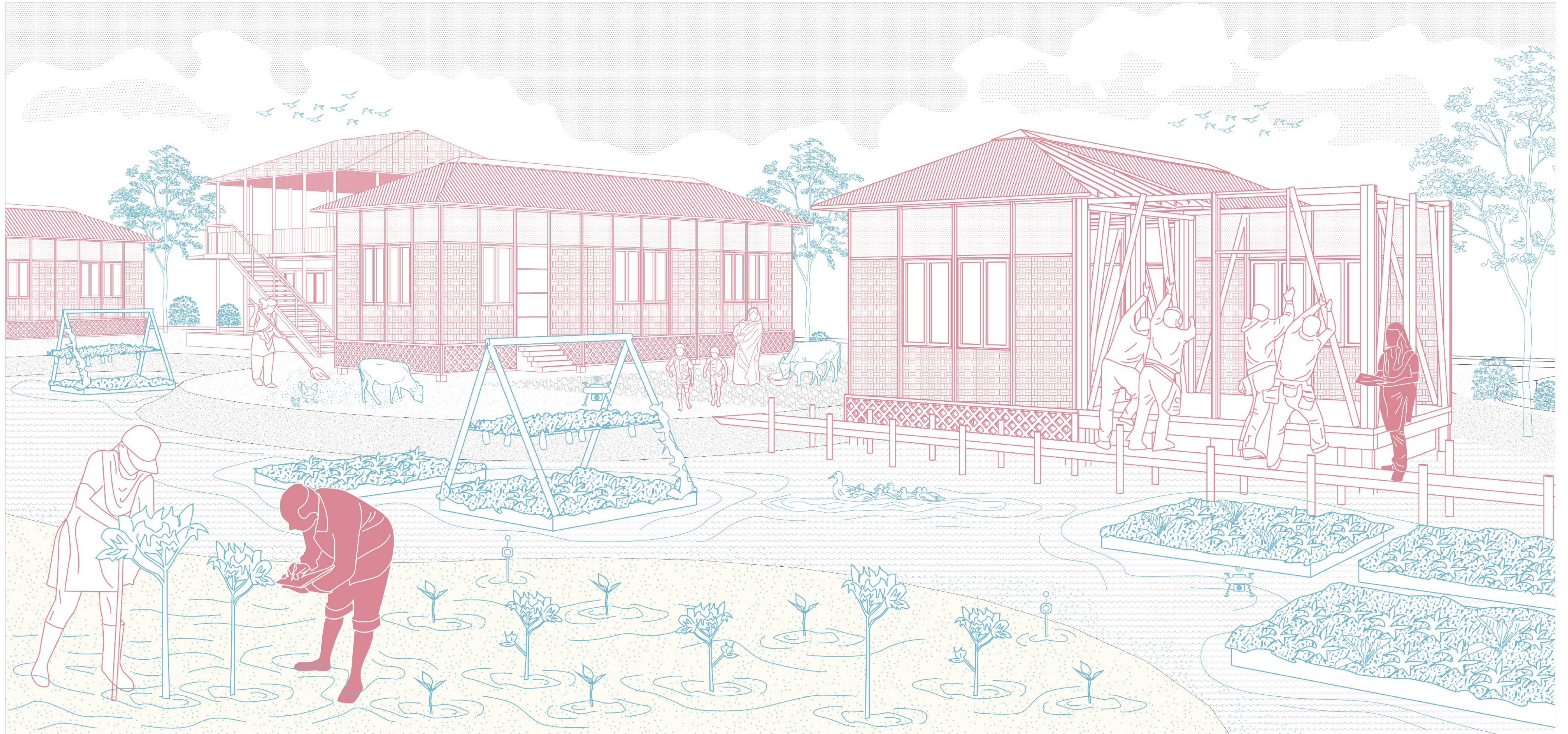
Floating vegetation



Single family house made out of 3 modular units (4*4 m)

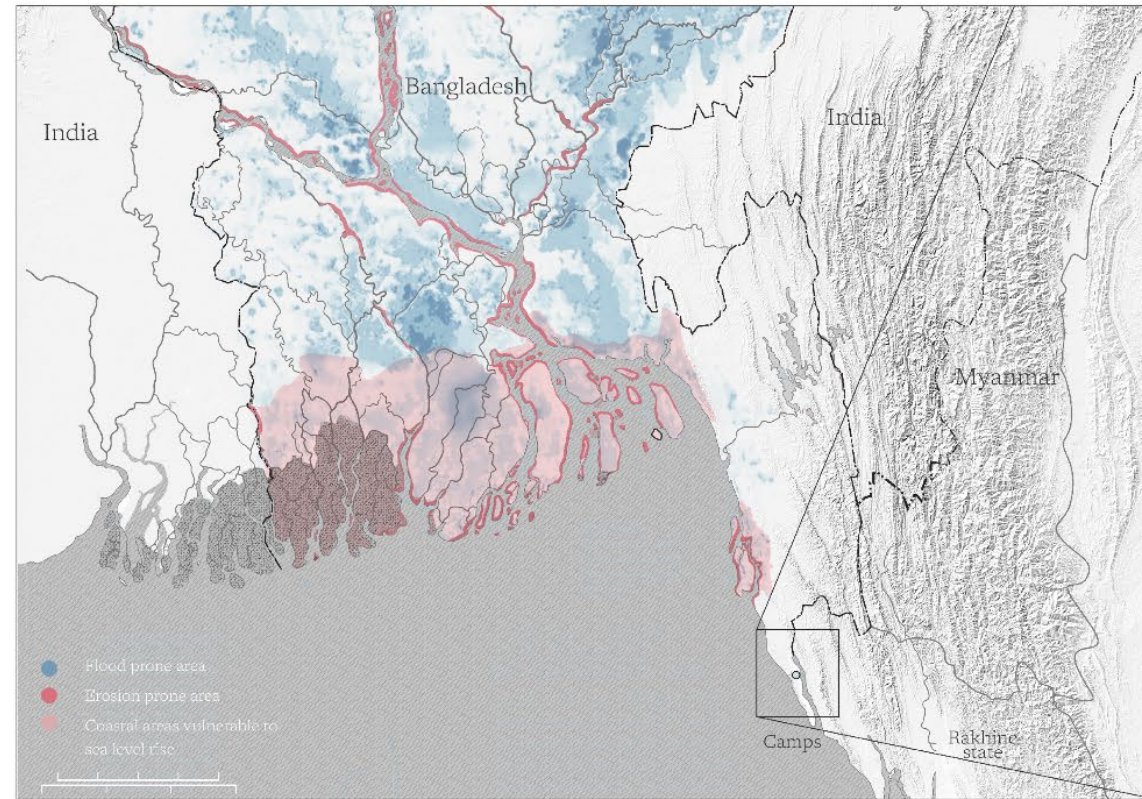
3-4 People can disassemble or assemble the house within 2 days

Plug-in



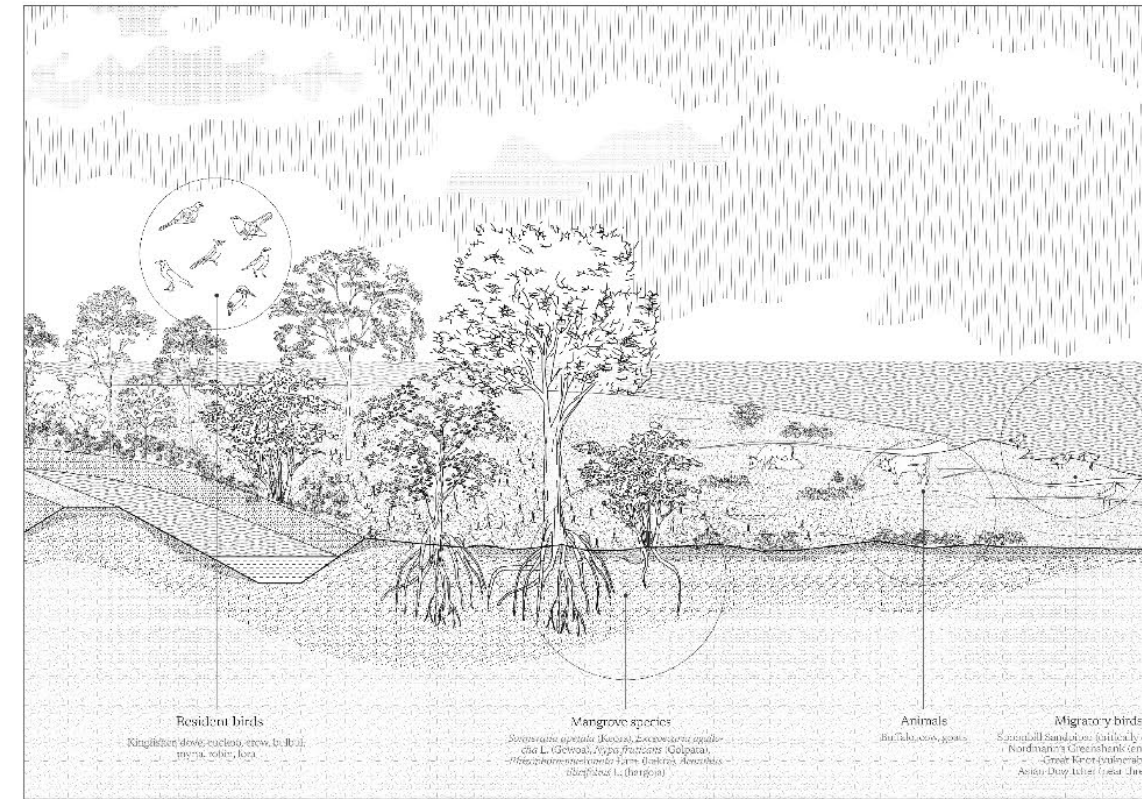
Chapter 1

The story of displaced people



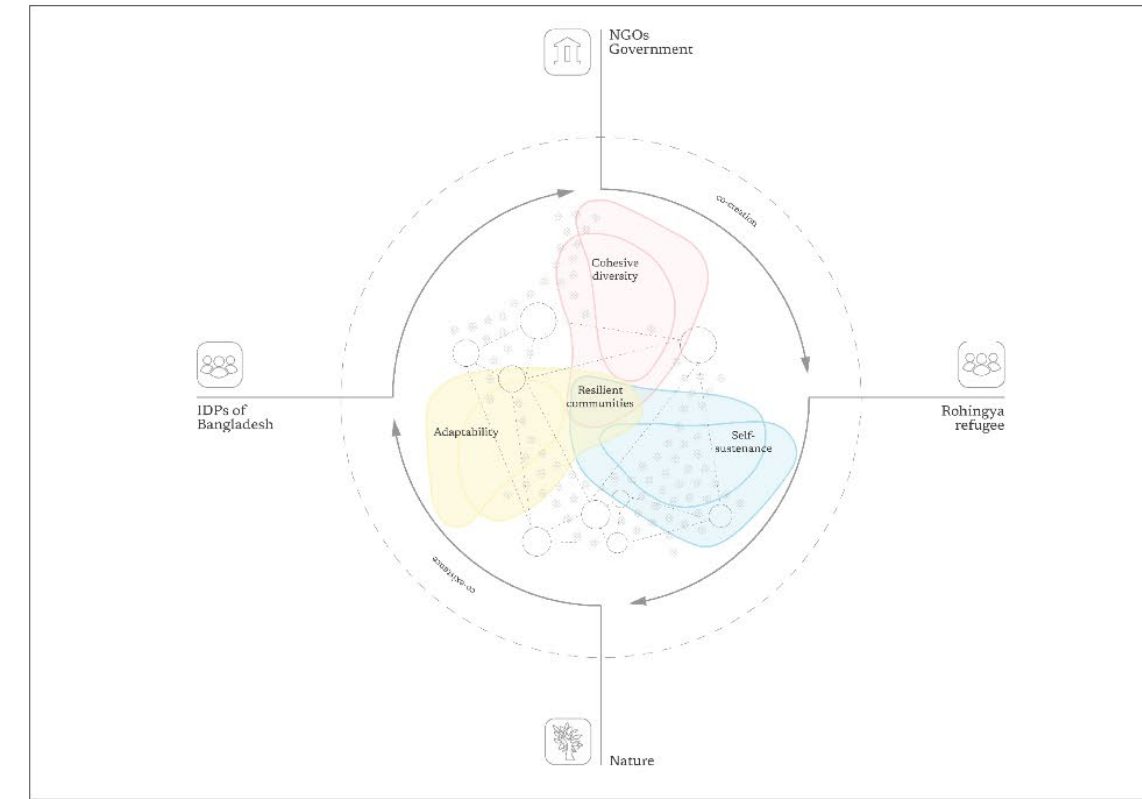
Chapter 2

The story of the disappearing land



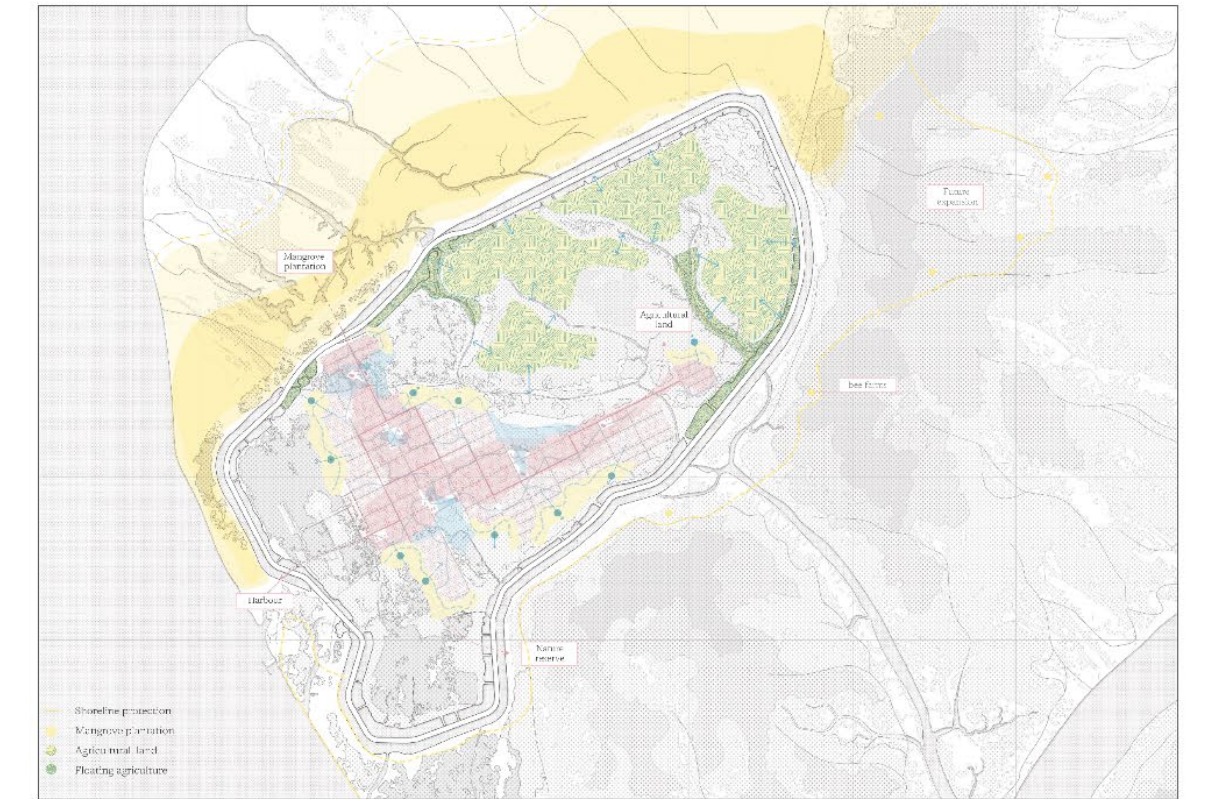
Chapter 3

The framework of co-creating resilient communities



Chapter 4

Design strategies for Bhashan Char



Chapter 5

Phase 1: Establishing identity through livelihood



Chapter 6

Phase 2: Empowering through collective knowledge



Chapter 7

Phase 3: Coexistence with more than human commons

