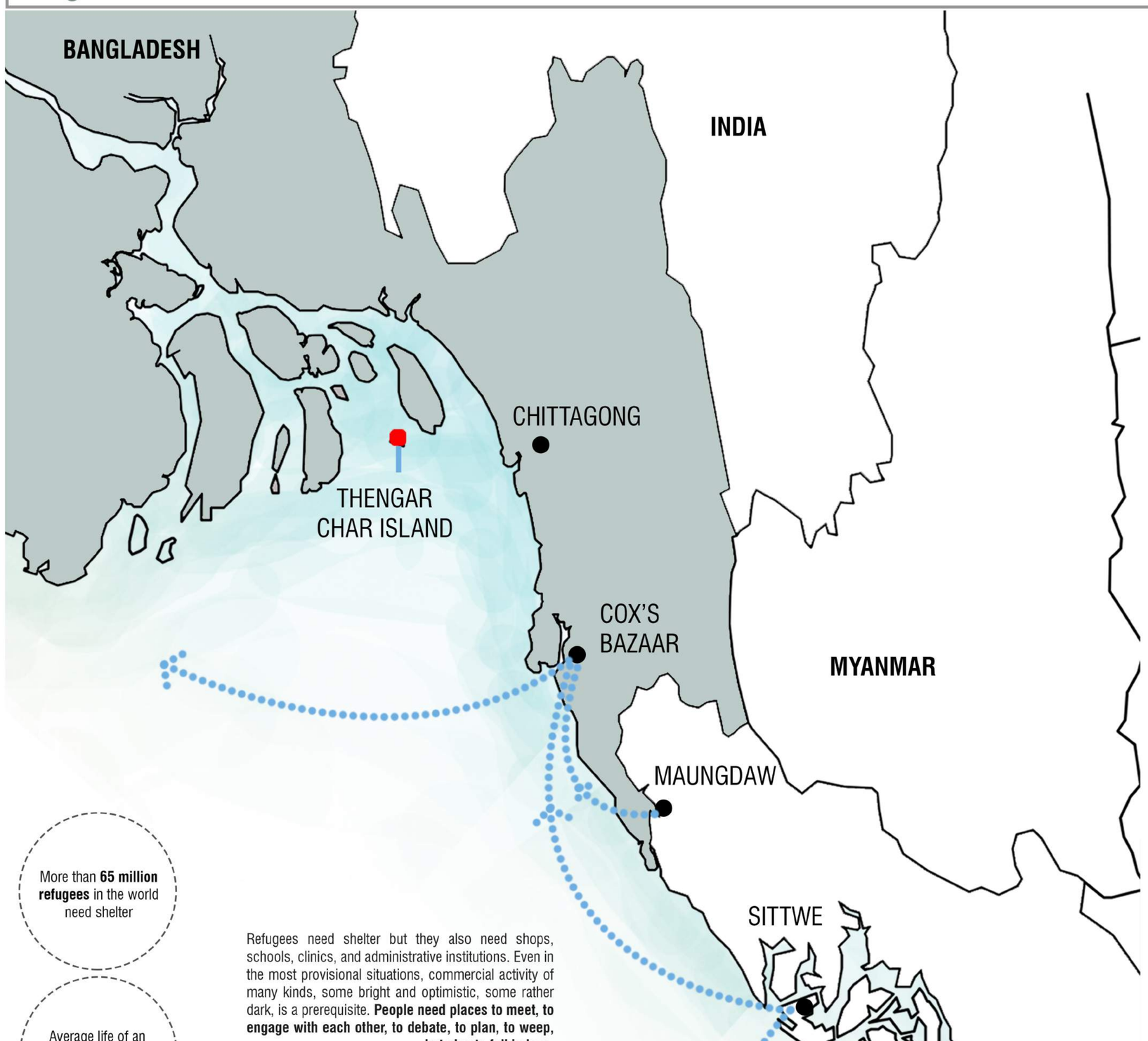
Disaster resilient resettlement of Rohingya refugees in Thengar Char Island, Bangladesh

8th ICBR Lisbon | Nov 2018
Building 4Humanity DESIGN COMPETITION
Category 3: Resilient Projects (**Student Teams**)

Team Members: *Akhilesh Singh, Mohit Arya, Reva Saksena & Vishal Kumar*
Supervisor: *Prof. Sanjeev Singh*
University/School: *School of Planning and Architecture, Bhopal, India*
Project Location: *Thengar Char Island, Bangladesh* Team Code: **B4H-DC3142**



More than **65 million refugees** in the world need shelter

Average life of an refugee camp is **17 years**

Refugees need shelter but they also need shops, schools, clinics, and administrative institutions. Even in the most provisional situations, commercial activity of many kinds, some bright and optimistic, some rather dark, is a prerequisite. **People need places to meet, to engage with each other, to debate, to plan, to weep, but also to fall in love.**

David Turnbull,professor of architecture at The Cooper Union, and design director for PITCHAfrica / Waterbanks

Displaced community **ROHINGYA**

Disaster prone **THENGAR CHAR ISLAND**

Need for **RESILIENCE** in Architecture

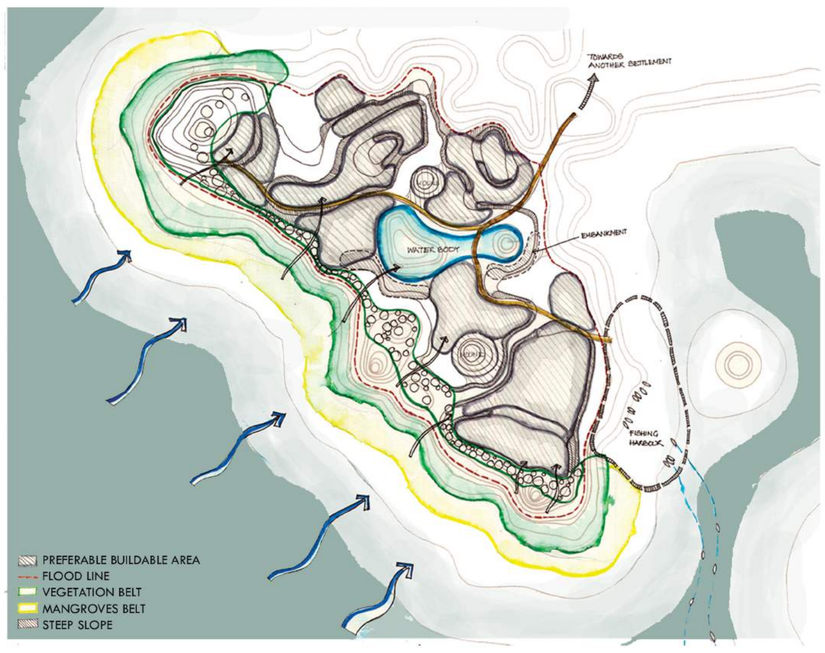
RESILIENCE

ENVIRONMENTAL RESILIENCE

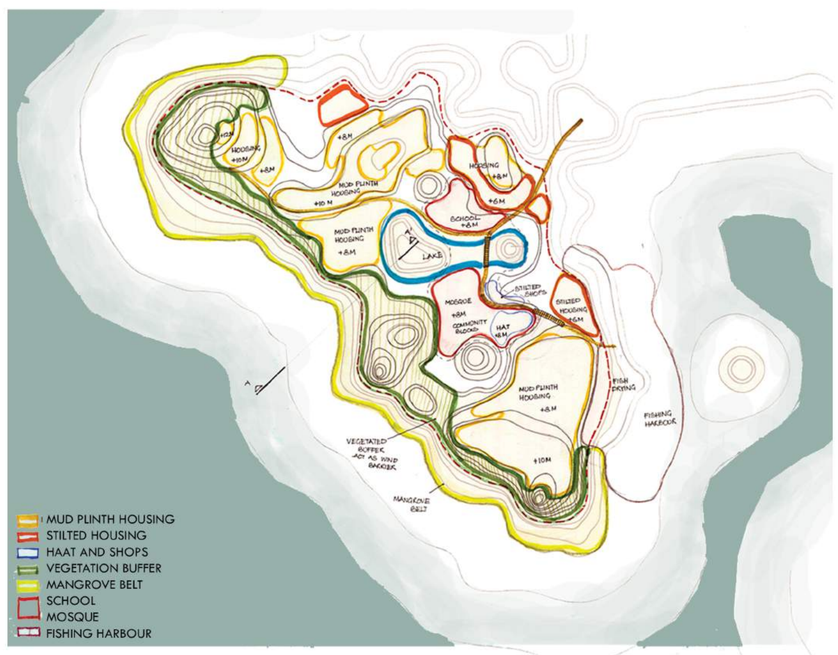
SOCIAL RESILIENCE

ECONOMICAL RESILIENCE

Interaction with users to understand their actual requirements



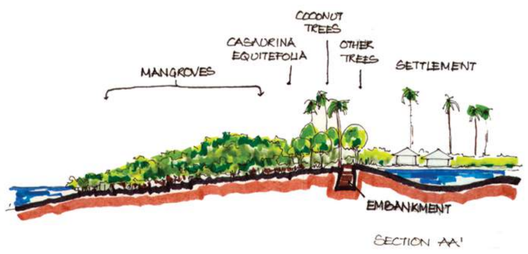
Site synthesis to identify suitable buildable land parcels on site



Site zoning based on site synthesis and community requirements

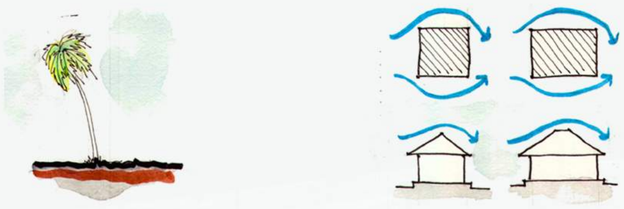
AKIRA MIYAWAKI'S CONCEPT

Creating forest that protect lives. Native plant species can grow faster and can help in cutting down the velocity of winds and waves.



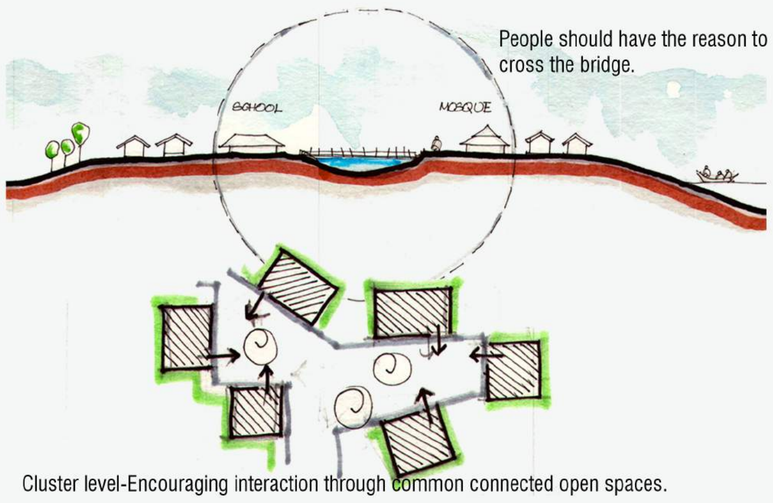
ENVIRONMENTAL RESILIENCE
Vernacular architecture best suits to its climate and environment.

Cluster level-Organisation of buildings and vegetation planning to cut down wind velocity.

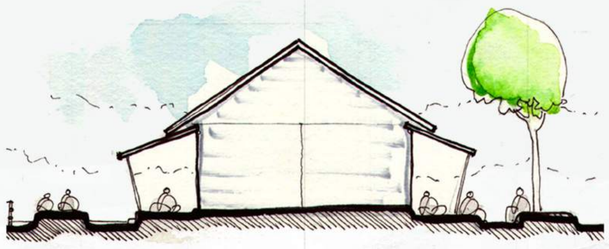


The manner in which trees and plant life adapt to climate hints at ways building might do the same

SOCIAL RESILIENCE
Strenthening the community

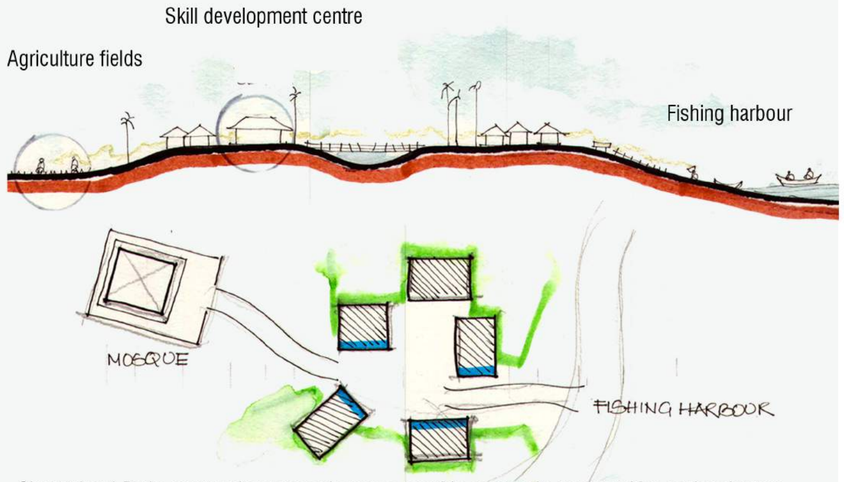


Cluster level-Encouraging interaction through common connected open spaces.

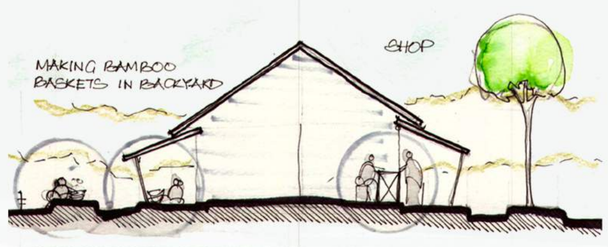


In-out spaces make dwelling and surrounding more lively

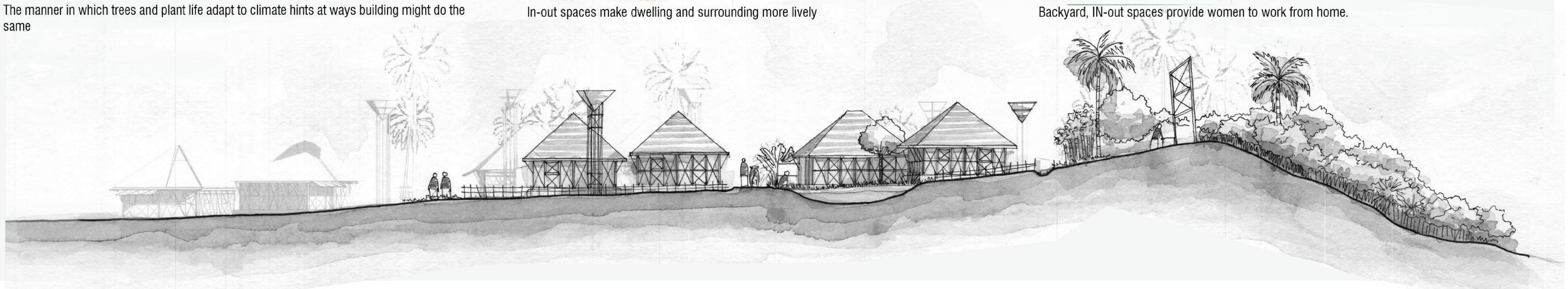
ECONOMICAL RESILIENCE



Cluster level-Paths connecting two major areas provide economic opportunities to the clusters



Backyard, IN-out spaces provide women to work from home.

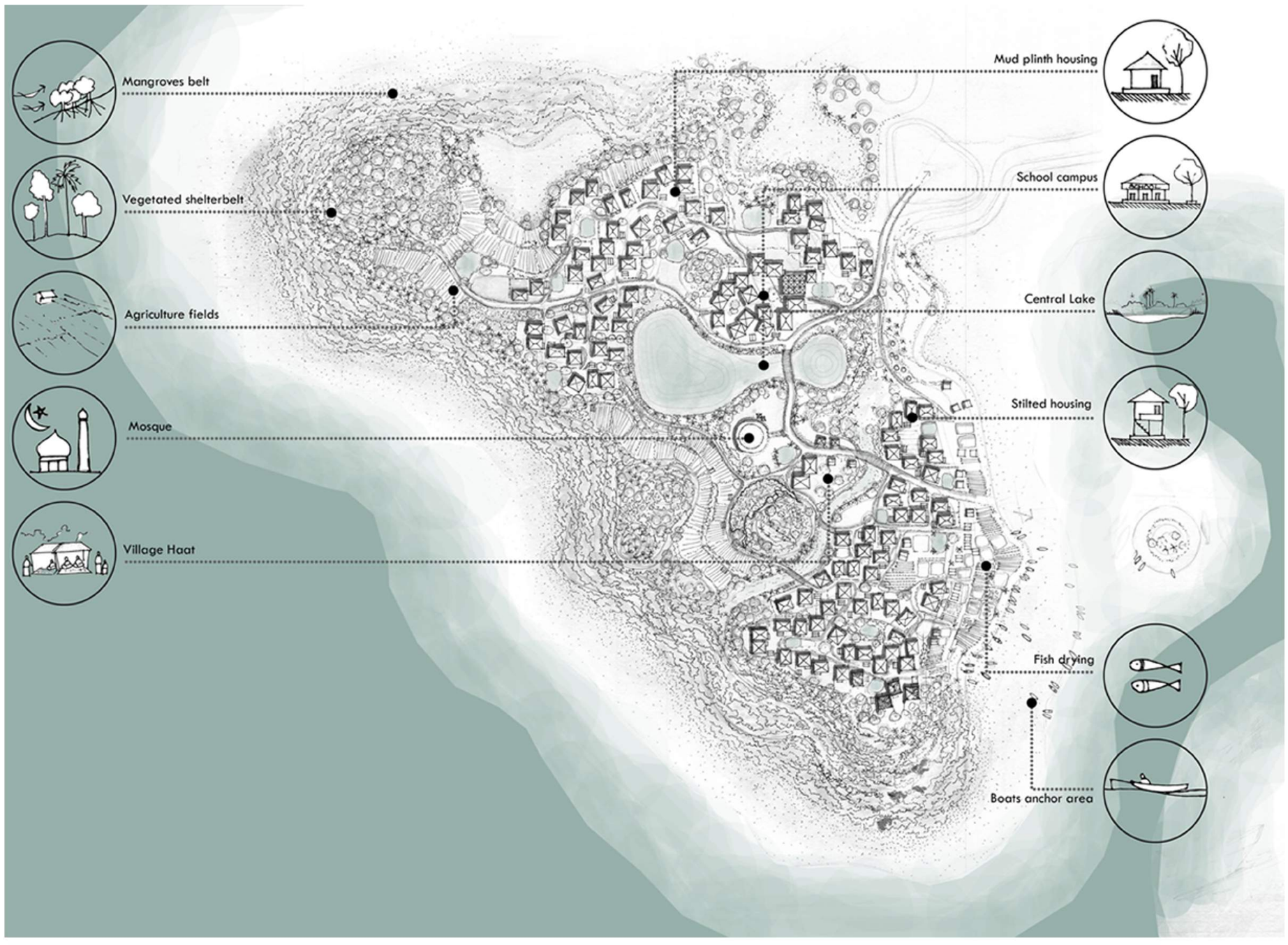


Disaster resilient resettlement of Rohingya refugees in Thengar Char Island, Bangladesh

8th ICBR Lisbon | Nov 2018
Building 4Humanity DESIGN COMPETITION
Category 3: Resilient Projects (**Student Teams**)

Team Members: *Akhilesh Singh, Mohit Arya, Reva Saksena & Vishal Kumar*
Supervisor: *Prof. Sanjeev Singh*
University/School: *School of Planning and Architecture, Bhopal, India*
Project Location: *Thengar Char Island, Bangladesh* Team Code: **B4H-DC3142**

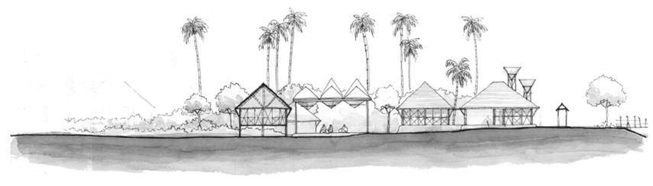
The project explores the possibilities of implementing architecture as a tool for sustaining humanitarian aids in terms of disaster resilient resettlement for the displaced Rohingya communities on the flood and cyclone-prone silt island of Thengar Char, Bangladesh.



30m 10m 0 **SITE PLAN**

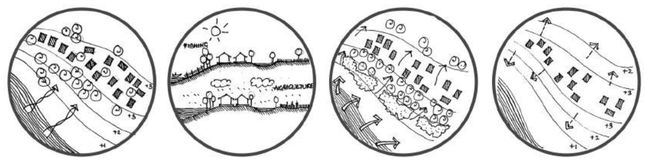
AASHA CAMPUS-CAMPUS OF HOPE
(SCHOOL/SKILL DEVELOPMENT CENTER/ ORPHANAGE/ OLD AGE HOME)

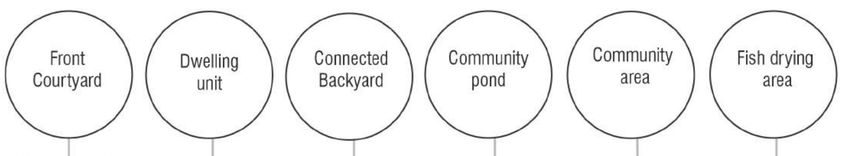
Section AA'



Section BB'

Disaster resilient strategies at settlement level



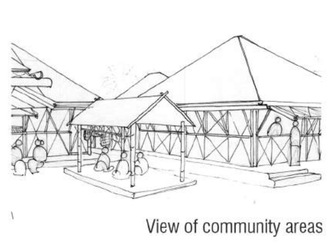


6m 2m 0 **CLUSTER LAYOUT**

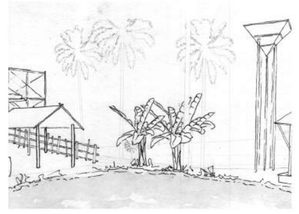
6m 2m 0 **CLUSTER SECTIONS**

CLUSTER DESIGN

Understanding of Rohingyas social order to give importance to privacy in design, whole cluster has emerged to balance interaction and privacy. Entrance to the units is through shared and interconnected courtyards to achieve social resilience. Front courtyards are mostly used by male members and Backyards are used mostly by female members of the community and women also use front courtyard when men used to fo for fishing or agriculture.

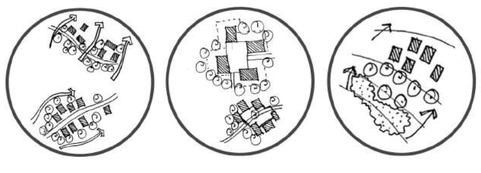


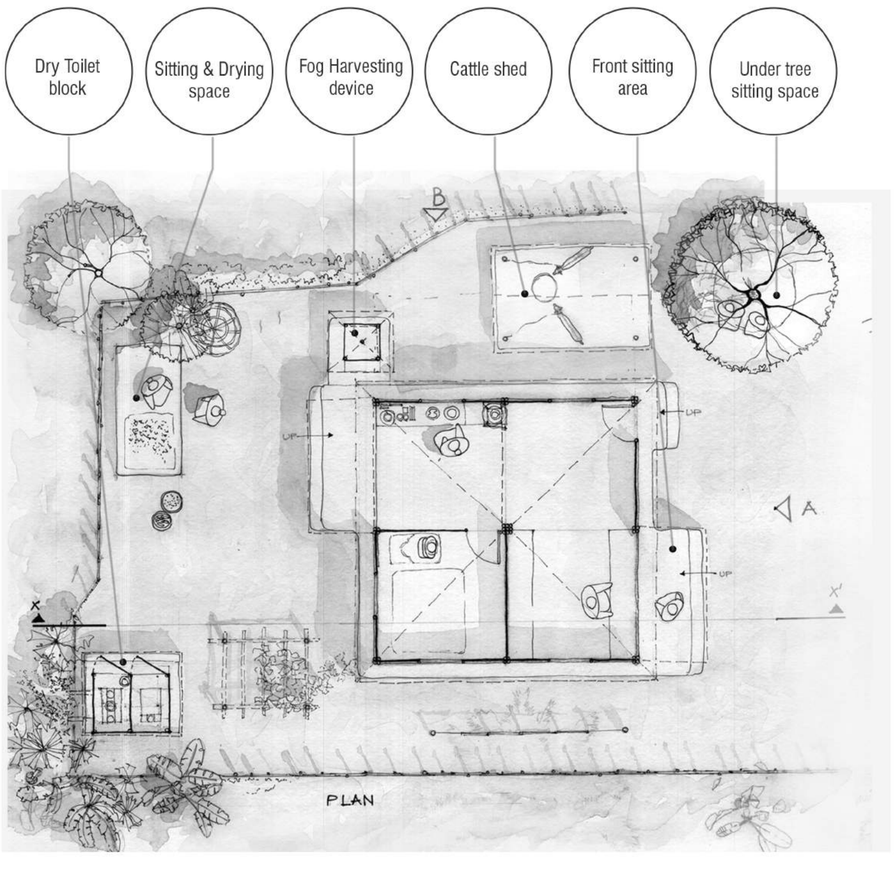
View of community areas



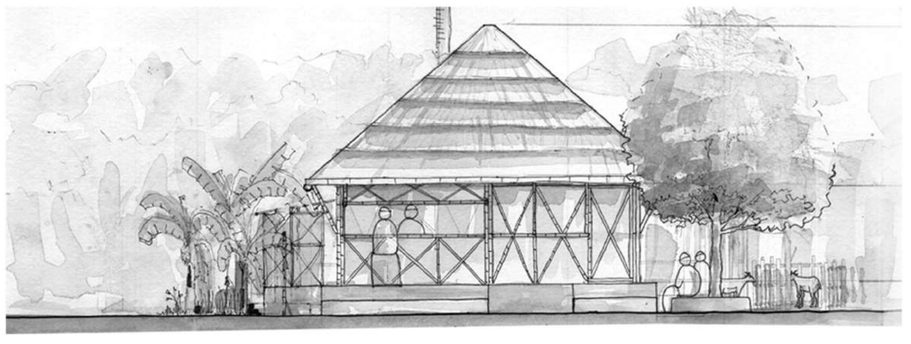
View of community ponds

Disaster resilient strategies at cluster level

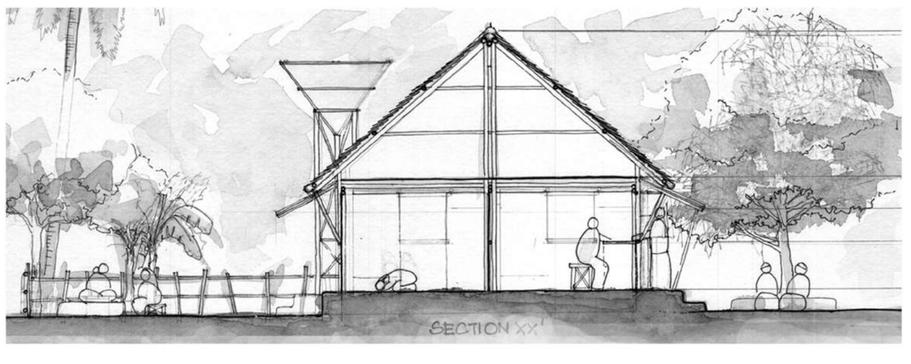




2m 1m 0 **DWELLING LAYOUT**



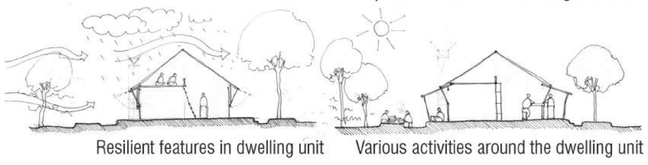
FRONT ELEVATION



2m 1m 0 **DWELLING SECTION**

DWELLING DESIGN

Spaces required for various activities by the Rohingya familes are designed along with disaster resilience approach in Dwelling design. Flexility of space use, affordability by incorporating local materials and techniques and User adaptability by understanding user space requirements are key design parameters for the design of unit.



Resilient features in dwelling unit Various activities around the dwelling unit

Disaster resilient strategies at Dwelling level