

Cyclone-Flood Tolerant Housing

Purba Shridharpur, Nagendrapur, Raidighi, Sundarbans

Initiative By



Issues & Concerns

- Sundarbans Delta areas are highly vulnerable to cyclones
- Each year the destruction due to cyclones in India is estimated at around 2% GDP.
- Sundarbans area witnessed 4 cyclones (Fani, Bulbul, Amphan and Yaas) in last short span of 2 years only
- Damaging the houses and devastating the life of the people.
- Sundarbans villagers can not afford pucca house budget
- Non-availability of the material
- Lack of knowledge to construct cyclone – flood tolerant houses

WAY FORWARD

- Mukti decided to explore on Cyclone Tolerant Houses on prototype basis.



The Aftermath of Cyclone





GOALS AND OBJECTIVES

To provide affordable Cyclone-Flood tolerant housing to Sundarbans people

House would be min of 300 Sqft with two bedrooms

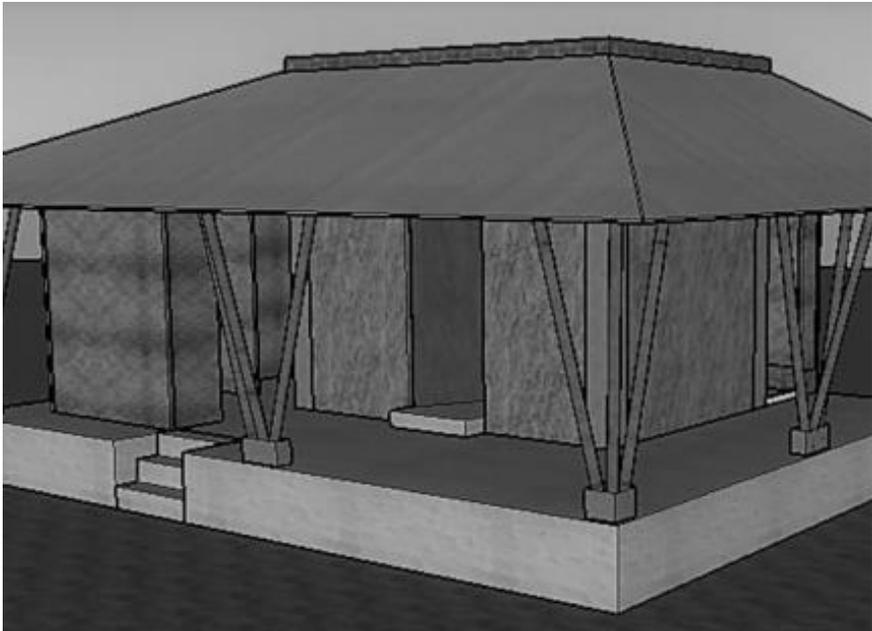
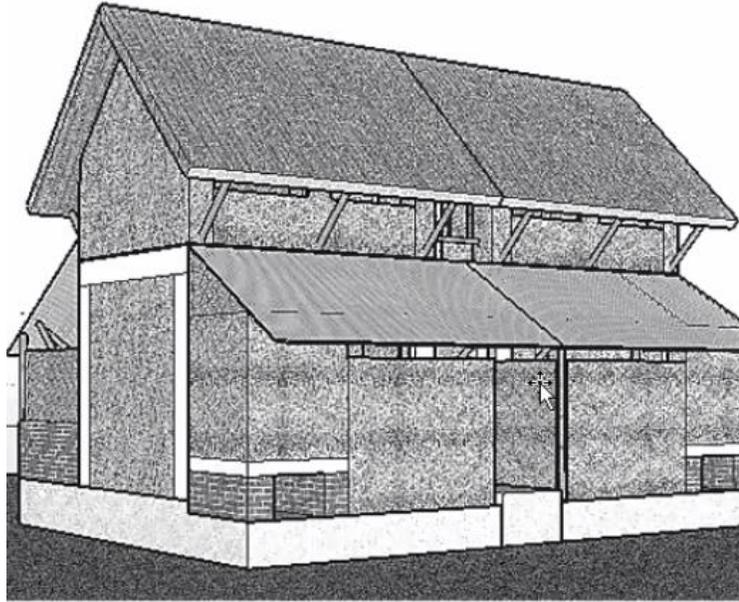
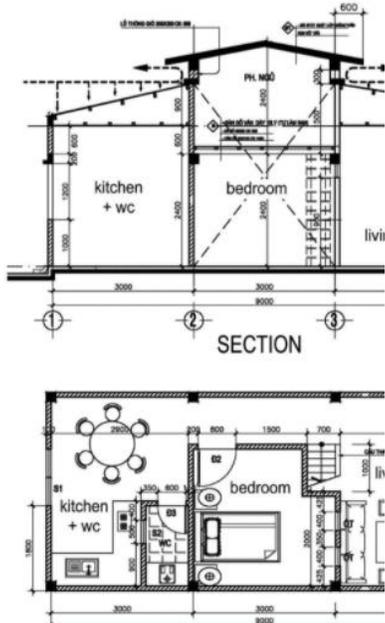
To make sure that people should not leave their home even if there is 15ft of water in the area due to Flood, Every house with 2 story building

House should stand against 150 km/hour cyclone

Use of local material as it is more eco friendly and local economy boost.



PERSPECTIVE



Housing – Design

Housing – Prototype -1

- Double Level Small Home on Stilts
 - Built up Area - 200sft (ground level) + 100 sft (upper level)



Housing – Prototype -2

- Twin Compact Home

- Total Plinth Area - 475 sft

- Built up Area -

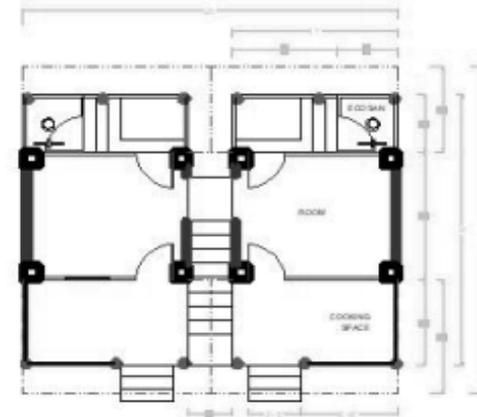
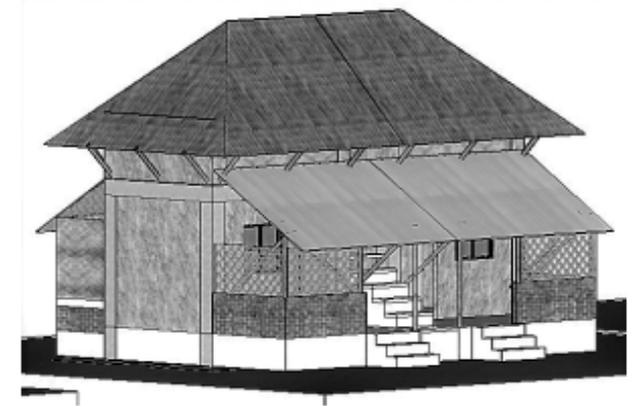
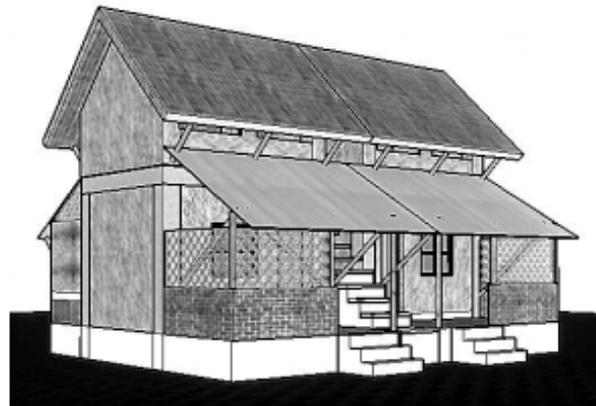
- **Total Plinth Area** - 25ft x 19ft - 475 sft

- **Total Built up Area** - 673 sft

Lower Level: 19ft x 11ft - 209 sft x 2

Upper Level: 9ft x 11ft - 99 sft x 2

Shared Space: 19ft x 3ft - 57 sft



Housing – Prototype -3



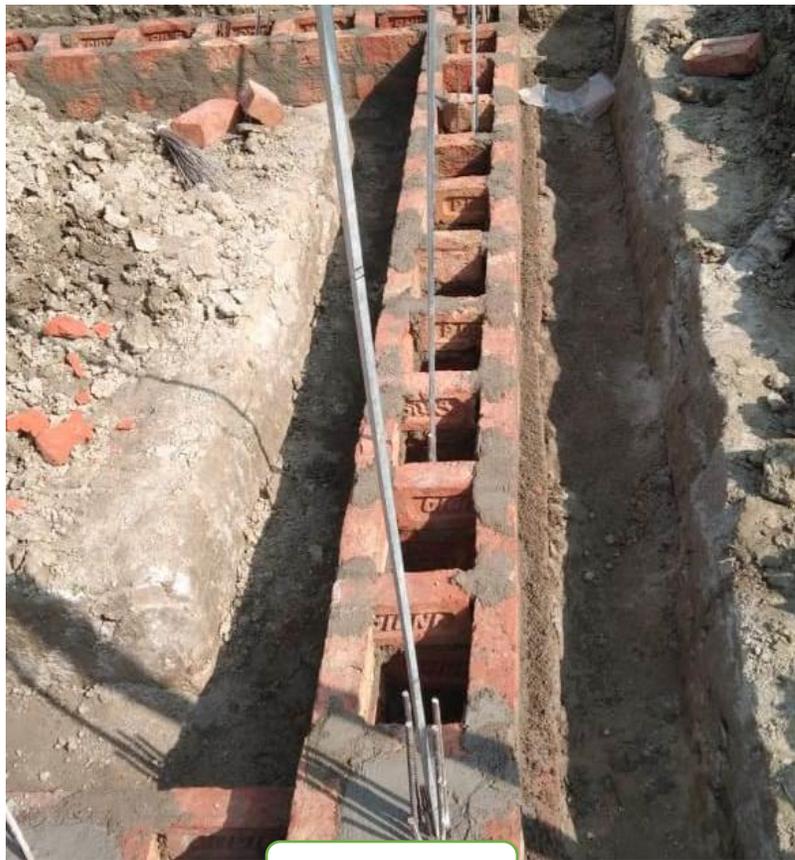
blue planet

Project By : Blue Planet
Sustainability Consultancy
Name of Programme : Design Exposition
Date of Presentation : 2nd and 3rd October 2020

Type of Unit : Prototype 6 – Single Family Unit
Name of Project : Design and Build Project for
Disaster Reconstruction &
Rehabilitation, Sundarbans



1st House – Prototype



STEP - 1



STEP - 2



STEP - 4



STEP - 3



1st House- Progress



STEP - 5



STEP - 6



STEP - 7

**1st House-
Construction
Progress**

STEP - 8





1st House – Final
Constructed Model



2nd House – Prototype



STEP - 1



STEP - 2



STEP - 3



STEP - 4

2nd House - Progress



2nd House – Construction Progress



2nd House –
Final Constructed
Model



3rd House Prototype



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STEP - 1



STEP - 2



STEP - 4



STEP - 3

3rd House- Progress



STEP - 5



STEP - 6



STEP - 7



STEP - 8



STEP - 9

3rd House – Construction Progress



3rd House – Final Constructed Model

Inauguration





Happy Faces





Shot on Y91
vivo dual camera





Shot on Y91 vivo dual camera



Shot on Y91 vivo dual camera



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Way
forward
plan for
next 12
months

Oct 2021- Sep 2022 Plan

- ✓ Support 200 housing to adopt the model. Each Housing will be getting 50000 INR plus Architecting/ Engineering support
- ✓ An Engineer and Architect team will be on site to guide and complete all these 200 House in a year.
- ✓ New build from scratch and already built house would be retrofitting to confirm Cyclone and Flood tolerant

Cost and Funding Breakup

#	Items	Amount
A	Cost of build up 350 Sft Cyclone - Flood tolarent House	₹2,40,000
1	Materials	175000
2	Meson/ Skill labour	25000
3	Labour	40000
B	Funding Brakup for 350 sft of Housing	₹2,40,000
1	Pradhan Mantri Awas Yojana	145000
2	Owner Contribution (mostly labour part)	45000
3	Donor Support needed	50000

C	Funding requirment for 200 units in 2021-22		₹1,50,00,000	
		Rate	No	Total
1	Support to villagers to adopt new model house	50000	200	10000000
2	Architecting and programme supervising	15000	200	3000000
3	management, training, promotion, Accouting and Contingenc	10000	200	2000000



Thank You

An illustration showing several hands holding up large, colorful, 3D-style letters that spell out "Thank You". The letters are: 'T' (red), 'h' (orange), 'a' (light blue), 'n' (yellow), 'k' (purple), 'Y' (blue), 'o' (green), and 'u' (orange). The hands are positioned below each letter, appearing to hold them up from underneath.