‘Green and Disaster Resilient Housing- BRAC Experiences’

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Bangladesh Country Context

DIRECT AND INDIRECT ADVERSE IMPACTS ON BANGLADESH

- Excessive Fossil Fuel Burning
- Greenhouse Gas Emission
- Increased Greenhouse Gases in the Atmosphere
- Greenhouse Effect Causes the Atmosphere to Retain Heat

Seasonal pattern change
- Heat and cold wave
- Erratic rainfall
- Thunderstorm and Lightning
- Drought like situation
- Salinity intrusion
- Sea level rise

- Flash flood
- Riverbank erosion
- Landslide
- Tornado
- Cyclone and storm surge

- Water Scarcity
- Adverse Human Health Impact
- Food Insecurity
- Climate Induced Migration

- Ecological Imbalance
- Social Insecurity
- Loss and Damage
- Poverty

Legend:
- Severe drought prone area
- Flash Flood
- Normal Flood
- Surge Height above 1 meter
- Surge Height less than 1 meter
- Keppal Island
- District headquarters

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Climate risks and impact on housing in the coastal areas of Bangladesh

<table>
<thead>
<tr>
<th>Climate Risks</th>
<th>Damages identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclones/ Storms</td>
<td>Damage to roof due to high winds, roof leakage, wall seepage,</td>
</tr>
<tr>
<td>Coastal flooding, Inundation, water logging</td>
<td>Stagnant Water around the house, mold, damage to foundation</td>
</tr>
<tr>
<td>Sailinity Intrusion</td>
<td>Wall erosion, seepage, mold</td>
</tr>
<tr>
<td>Extreme heat</td>
<td>Very hot and humid inside the house</td>
</tr>
</tbody>
</table>

![Weak roof structure](image)

![Stagnant water around the house](image)

![Erosion on walls and columns](image)

![Poor quality of construction](image)

![Plinth erosion](image)
The Need for Climate Resilient Housing

About 40% of the total global storm surges are recorded in Bangladesh across the world. Since 1990 deaths from storm- 749, cyclones- 151,422, floods- 5,163 in Bangladesh

The inhabitants of the polder regions are protective of their assets and livestocks. They are reluctant to leave their land/house during natural disasters or take refuge in the community/cyclone shelters. This results in death of livestock and people.

Low cost climate resilient housing is an ideal solution to protect these vulnerable and marginalized people; eventually saving lives, assets, infrastructure and livelihoods

GOB’s on going initiatives are commendable ; Much needs to be done to exploit the potential of housing to save lives and assets during natural disasters; Majority of population has little or no access to formal sector housing finance

There’s a huge pent up demand for affordable but good quality, climate-resilient housing in Bangladesh. Active participation of private sector is critical along with government driven initiatives
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- Post-disaster rehabilitation/reconstruction of housing in situ to the higher natural hazard safety and climate adaptation standards so far mostly as grant.
- Cyclone shelter to Individual housing (1 cyclone shelter = 42 individual resilient housing)
- People invest mostly in maintenance
- BRAC’s experience in house loan in the past - a mixed experience
- MF disburse regular loan to be used in house construction
- SIDR 2007 as a realization and reconstruction
- 43 Resilient Houses and 1 school built in Padmapukur, in Satkhira District after Cyclone Aila
- 135 Resilient housing built through BRAC Construction in Kutubdia and Banshkhali sub-districts after cycle Roanu
- Ultra-Poor Graduation Programme Housing in the coastal region
- Keshobpur, Jessore housing (36) with RWH to combat waterlogging
- 163 individual housing as recovery and resilience after Northern flood 2018
- Resilient housing by Urban Development Programme
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Limitations and Challenges

• Government is trying but the financial institutions are not ready to invest for rural housing
• Collateral and loan tenure are still a challenge for rural housing particularly who are at the risk and need it most
• Green materials are introduced but availability at scale at the local market is still a challenge
**Objective:** The project is designed to deliver technical assistance to BRAC (MF and CC) programmes to develop its microfinance business and to generate its Climate Resilient Housing Finance portfolio.

- **Project Tenure:** 3 years
Areas and Polders

People vulnerable to climate-induced slow and rapid onset events

Target Areas

Khulna, Satkhira, Bagerhat, Patuakhali, Borguna, Pirojpur, Noakhali, Laxmipur, Chattagram
Green and Resilient

• Intersection between “green” and “resilient” building construction is still a long way to go in Bangladesh

• Green Building in industrial sector is an issue of ‘honor’

• Unavailability and high price of green materials

• Resilient housing should use green materials if available at scale and at local level as well.
Vision and Aim of BRAC for low cost housing going forward

- Establish a progressive development process for building climate resilient habitat.
- Introducing low cost climate resilient housing models for the vulnerable as microfinance products.
Thank You