

Fostering Climate Resilience

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Background

Climate change is an inevitable and urgent global challenge with long-term implications for the sustainable development of all countries. Impacts of climate change are visible in Bangladesh in the form of temperature extremes, erratic rainfall and increased number of intensified flood and flash flood, drought-like situation, cyclone, sea level rise and salinity intrusion. Moreover, in terms of economic impacts of climate variables on per capita economic growth, Bangladesh is the most vulnerable country.

Ensuring that people and communities are resilient to climate variability and changes is a key development priority as described in the United Nation's Paris Agreement and Agenda 2030. Combating the impacts of climate change and the challenges ahead require our collective efforts. BRAC acts as a catalyst, creating opportunities for people living in poverty to realise their potential. "Building resilience to climate change" has been set as one of BRAC's eight programmatic priorities in its five-year strategy 2016-2020. BRAC intends that all its programmes synergistically work towards overcoming the effects of climate change through a holistic approach that best serves the community. It is persistent on its endeavours to establish community based adaptation practices and challenges itself to find integrated resilience building solutions. Some such initiatives are being highlighted in this article.

Climate Change Education for Children

To sensitise and enhance knowledge on climate change through the education system, BRAC developed a Teachers' Guide and Activity Calendar for students of BRAC primary schools and BRAC supported non-government secondary schools in Bangladesh. BRAC's other existing platforms Gonokendra (multi-purpose Community Learning Centre) and Medhabikash (scholarship) are being utilised to promote climate change knowledge among children. Source: BRAC Education Programme (BEP)



Climate Resilient Crop Agriculture

BRAC introduced various kinds of climate resilient crops, including rice crops of short duration varieties, high yield varieties, inundation resistant and saline tolerant varieties for the southern region. Other crops such as summer tomatoes, maize and sunflowers have been promoted among farmers to help adapt with changing crop seasons, water scarcity and uncertain climate scenarios across the country.

Source: Agriculture and Food Security Programme (AFSP)



Climate Resilient Housing

In May 2009, the devastating cyclone Aila hit the southwestern coastal region of Bangladesh and washed away many homes and livelihoods. BRAC partnered with UNDP to rebuild the entire village of Paddapukur under Shyamnagar upazilla in Satkhira district, with 43 climate resilient houses and a primary school. All of these act as individual cyclone shelters because they have a specific architecture to provide protection to that particular family, and few more members of the neighborhood, against strong winds and storm surges.

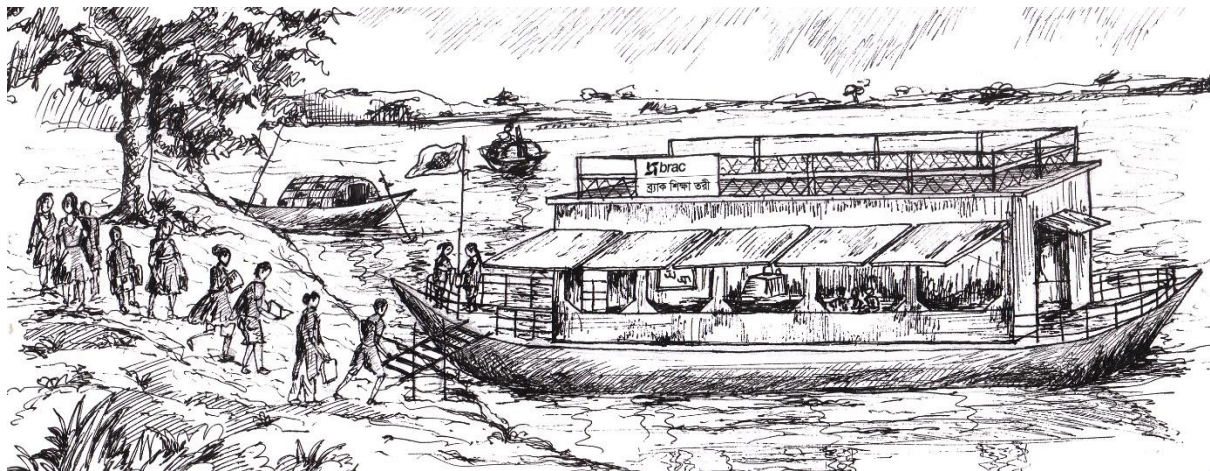
Source: Disaster Management and Climate Change Programme (DMCC)



Boat Schools for Children

In 2011, BRAC introduced boat schools to demolish barriers of accessing education for children residing in remote and hard to reach areas. The boat school that serves as a mobile classroom is an adaptive measure for children living in the wetlands of the northeastern region of Bangladesh. During the monsoon season, the boat picks up and drops off the children from their respective areas.

Source: BRAC Education Programme (BEP) and Integrated Development Programme (IDP)



Empowering Ultra-Poor Women through Climate Resilient Livelihood

BRAC supported women belonging to the ultra-poor population to enhance their resilience to climatic hazards and natural disaster events through secured and sustainable livelihood options. The livelihood options included life skill development training, adaptive agricultural, fisheries, livestock and poultry efforts, subsistence allowance, tailor-made health support and tailor-made community mobilisation activities.

Source: Ultra Poor Graduation Programme (UPGP)



Solar Powered Piped Water System

One of the major challenges being faced by community people living in the coastal districts of Bangladesh is the increasing scarcity of safe drinking water due to salinity intrusion. BRAC introduced a pipe network of 42,000 feet in three villages under Paikgacha upazilla of Khulna district, which distributes fresh water from a solar run 1,200 Watt solar panel motor. Total 81 tapping points are being shared between 321 households and can support up to 500 households.

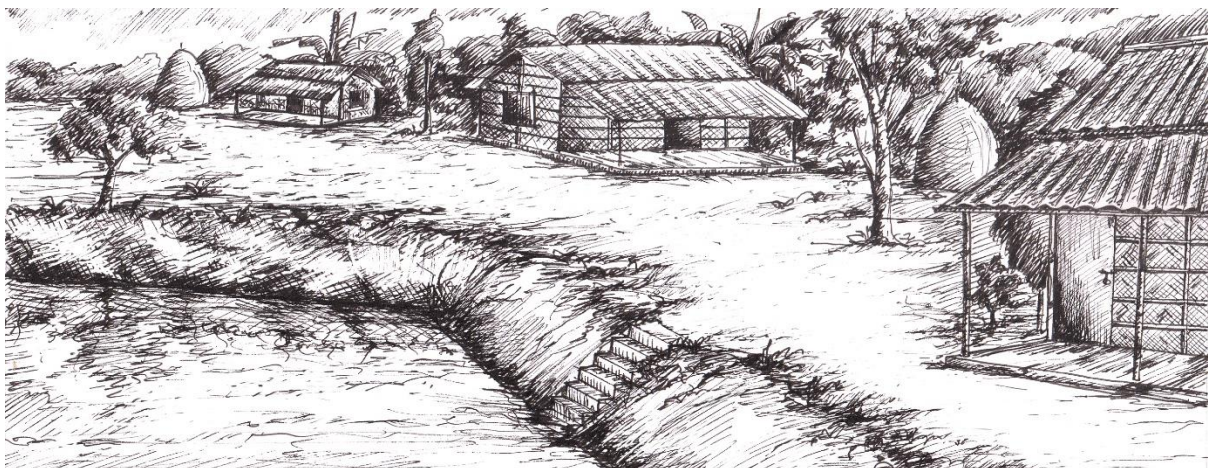
Source: Water Sanitation and Hygiene Programme (WASH)



A Green Village Model

In May 2016, cyclone Roanu hit the coastal region of Bangladesh. BRAC's flagship green village model was designed to help build back better the affected communities and reduce natural disaster risks. Features of the model village integrated best practices of resilient housing that is cool, aerated, water-resistant, and on raised plinths as flood protection; elevated pond dykes to prevent tidal surges and promote vegetable crop growth; desalinated ponds to access fresh water; elevated sanitation facility; provision of agriculture and aquaculture inputs towards long term food and nutrition security; and, approach roads to access and commute to these remote communities.

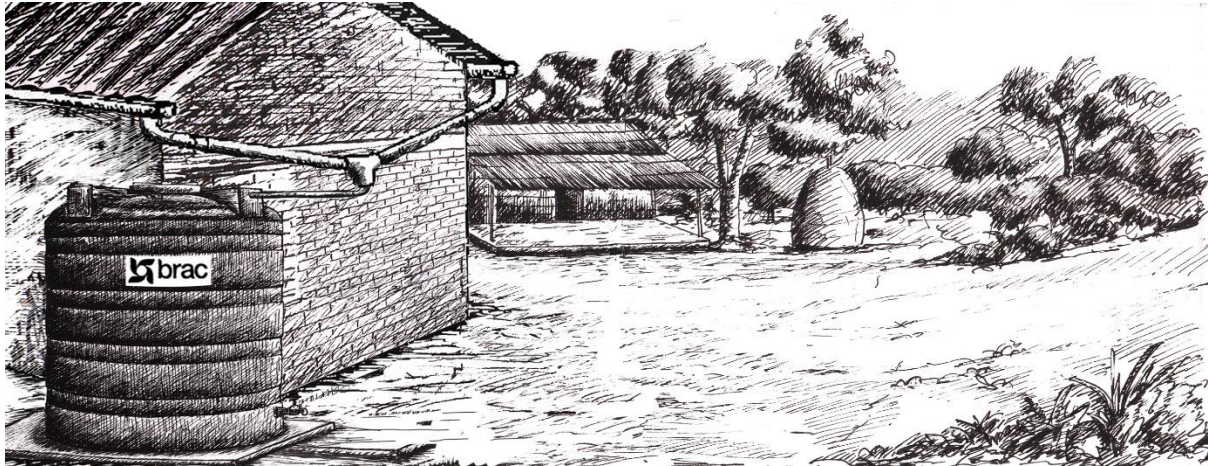
Source: Disaster Management and Climate Change Programme (DMCC)



Climate Adaptive Water Technology

The rainwater harvesting system is a process of accumulating and subsequent storing of rainwater for later use. BRAC has primarily introduced this method in the hard to reach areas of the southwestern region of Bangladesh. The harvested water is used for drinking or for longer-term storage.

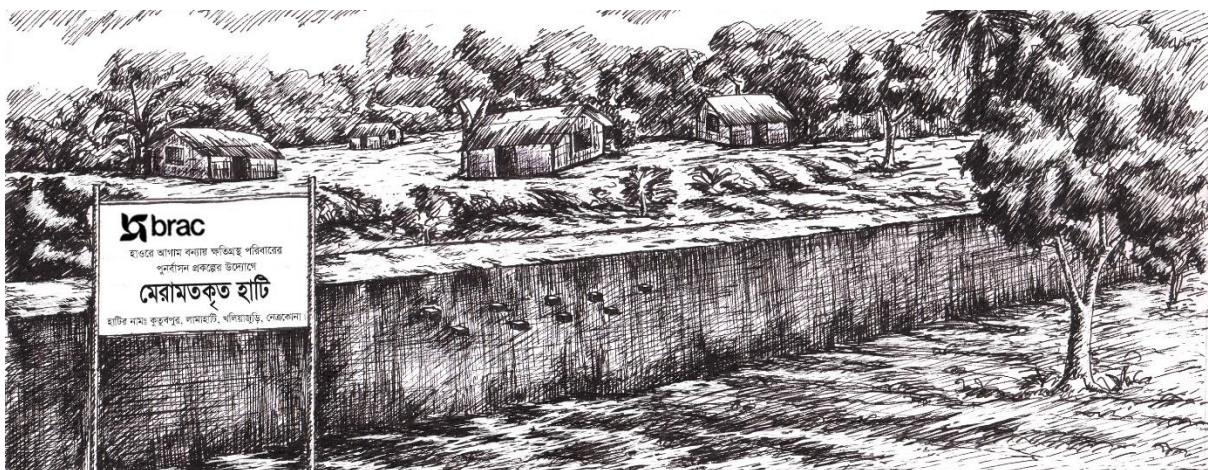
Source: Water Sanitation and Hygiene Programme (WASH)



Climate Resilient Infrastructure

After the devastating early flash floods of 2017, BRAC planned to protect many of the *hatis* (small village clusters) of the affected haor areas by raising their plinths and by planting *koroch* trees along the sides of each *hati* three rows deep to prevent erosion. As a more permanent solution, BRAC also designed a 335ft long and 7ft high concrete wall for some *hatis*, which was constructed with the voluntary participation and sharing of cost by the community people.

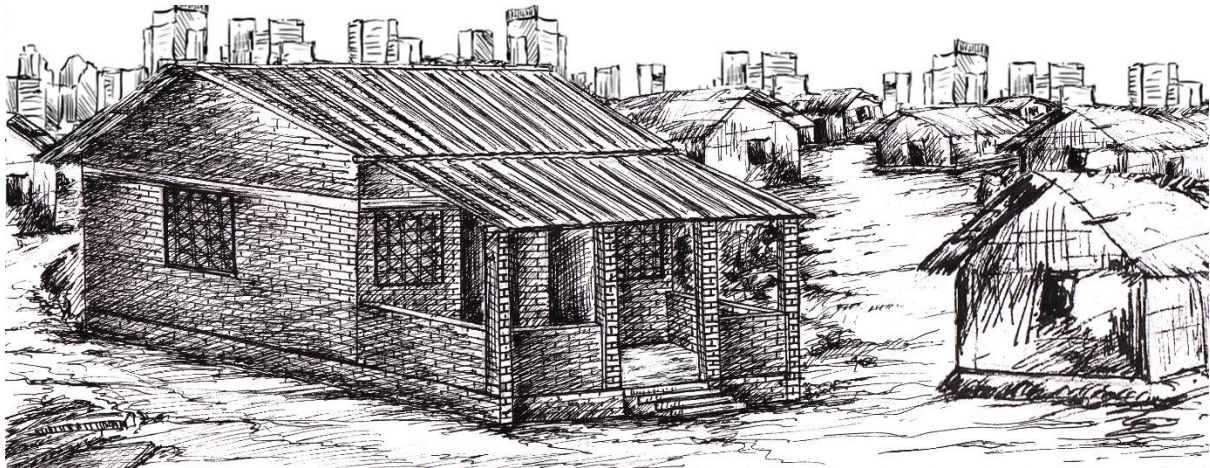
Source: Disaster Management and Climate Change Programme (DMCC)



Community-led Low Cost Climate Resilient Housing in the Urban Context

BRAC Urban Development Programme (UDP) has introduced community driven low-cost climate resilient housing. UDP has developed a community-led business model of resilient housing in Satkhira and Khulna. This intervention allows urban poor communities, climate migrants and particularly women to access finance for affordable climate resilient housing.

Source: Urban Development Programme (UDP)



Pond Dyke Farming

In the southern coastal districts of Bangladesh, farmers are in need of another source of income because of the increasing salinity intrusion into agricultural crop lands. Since poor farmers have very little land to consider and because fish farming is a well adopted form of livelihood, BRAC introduced the pond dyke system which allowed farmers to grow seasonal vegetables along the dyke of fish pond enclosures all year round, and proved to be very profitable for the farmers. Eco-friendly systems such as sex pheromone traps were encouraged to biologically control pests on the vegetable farms.

Source: Agriculture and Food Security Programme (AFSP)



Strength of Women Groups

BRAC developed a network of women living in the cyclone, flood and drought prone areas of Bangladesh to form groups in their communities. The women received leadership training with the aim for them to be able to address and combat adverse climatic conditions. Skills development training and seed capital grants were provided to assist in their livelihoods.

Source: Disaster Management and Climate Change Programme (DMCC)



Conclusion

Climate change puts BRAC to find out a comprehensive strategy to address its causes and find solutions to enable its programmes to combat and adapt to its effects, as well as to mobilise its financial resources, and to choose cleaner technologies for sustainable development. Considering the extent of complex climate change vulnerability, integration of relevant programmes interventions is necessary where BRAC programmes synergistically work towards overcoming the dynamics of climate change impacts that best serves the community, partners and all other stakeholders through a holistic approach. BRAC designed a resilience package for the vulnerable communities to enhance their adaptive capacity to climate change. BRAC's resilience package includes arranged or used physical and financial assets during times of hardship, strengthening adaptive capacity, access to services, income, food and safety nets, livelihood viability, institutional capacity strengthening and governance, natural and built infrastructural context to which coping, adaptation and transformation is facilitated.

BRAC is committed towards improving sustainable development in the living conditions of marginalised people. Aligned with this, BRAC incorporated climate change specific activities in its core programmes' activities - thus ensuring that maximum reach to beneficiaries can be made enabling them to become more adaptive to climate change impacts. This not only make the beneficiaries resilient to climate change shocks but will also ensure that BRAC, as an organisation, delivers comprehensive services to its beneficiaries through its core programme activities.

Note: The Agriculture and Food Security Programme (AFSP) has been redesigned to extend services through BRAC's Social Enterprises and the Disaster Management and Climate Change (DMCC) programme has been reformed as two separate programmes: the BRAC Humanitarian Programme (BHP) and the Climate Change Programme (CCP).