ADB

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Developing Green Affordable Housing In Bangladesh

Sharing Regional Experiences

Hotel Sheraton, Dhaka | December 13th, 2022

Technical Partner:

IIFL HOME LOAN

URBAN CLIMATE CHANGE RESILIENCE TRUST FUND
Asian Development Bank

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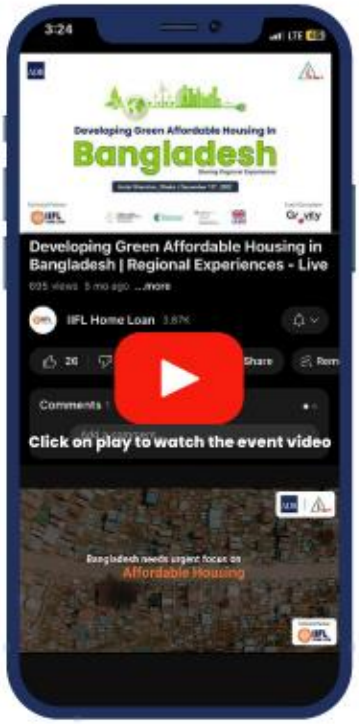
Event Consultant:

Gravity concepts

Developing Green Affordable Housing in Bangladesh

Bangladesh is one of the most vulnerable countries to climate change in the world. With rising threats of climate change in coastal areas and limited income opportunities in rural areas, a huge-scale of people are expected to migrate, many of them to cities. Such massive rural-urban migration will put huge pressure on already stretched urban infrastructure with congested roads, inadequate sanitation and acute housing deficits in urban areas. With the current housing prices being far above the reach of general people, and that the country is struggling to provide adequate housing at a pace that matches its rapid urban growth. ***Click here to view the dossier.***



Asian Development Bank (ADB) and Housing and Building Research Institute (HBRI), Ministry of Housing and Public Works, Bangladesh organised a seminar titled **"Developing Green Affordable Housing in Bangladesh"** on 13 December 2022 at Dhaka.

The event consisted of a diverse range of professionals working in the housing sector in Bangladesh and other nations (ministries, regulators, developers), private and public sector financial institutions (banks and housing finance companies) and practitioners (consultants, architects and academic institutions) engaged in sustainable green buildings and construction who shared their inputs and support on the aforementioned topic.

The event was sponsored by the donor, the Urban Climate Change Resilience Trust Fund and supported by our technical partner–IIFL Home Finance Ltd., a leading affordable housing finance provider in India.

18+ Developers

113+ Participants

20+ Women

27 Experts

OPENING SESSION BY SPECIAL CHIEF DIGNITARIES

EDIMON GINTING
Country Director,
Bangladesh Resident Mission,
Asian Development Bank

MD. TOFAZZEL HOSSAIN MIAH
Principal Secretary,
Prime Minister's Office

MD. ASHRAFUL ALAM
Director General,
Housing And Building Research Institute

MONU RATRA
Executive Director & Ceo,
Iifl Home Finance Ltd.,
India

Technical Partner:

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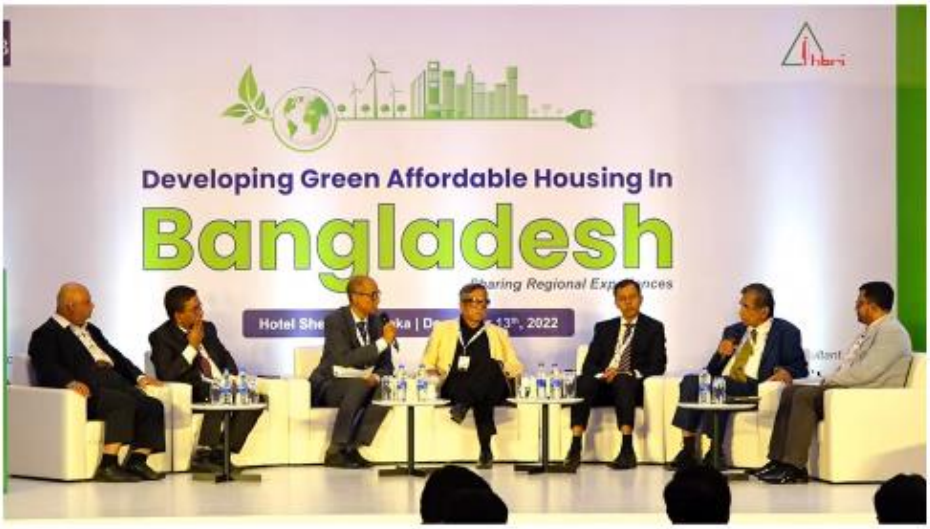
Panel discussion 1: Understanding Green Affordable Housing Ecosystem in Bangladesh

The session focused on the urgent need for green affordable housing in Bangladesh due to a housing supply gap and vulnerability of people to climate change. The government has taken some initiatives to cater to this need which were discussed in the session. It also emphasised the need for green housing construction to adapt to and mitigate climate change. The role of government, financial institutions, and developers in working towards sustainability were discussed.

Bangladesh is the 32nd largest Economy in the world with a GDP of 416 billion in 2021. However, the housing sector contributes to only 3.2% of the total GDP. There is a housing supply gap of 93% in urban Bangladesh and about 90 million of Bangladesh's population are vulnerable to high climate exposure. Therefore, there is an urgent need for green affordable housing in the country.



The Bangladesh government took the initiative to cater to this need through a draft circular for affordable housing in the lower and lower-middle income group sector with the help of the Central Bank of Bangladesh. Affordable housing was defined as a housing unit with a carpet area of up to 600 sq. ft. and a ticket size of up to 30 lakhs BDT in the circular. Despite the efforts of the government, a huge gap between housing demand and supply remains. This gap can only be fulfilled along with the help of the private sector. In this regard, the government is proposing FAR (Floor area ratio) incentives to private developers for affordable housing and also planning to acquire land for housing development under Public Private Partnership (PPP) model in some areas of Dhaka to facilitate private sector intervention in the sector. This approach helps to address one of the major challenges faced by real estate developers in affordable housing construction: the high cost of land. The subsidised price of land helps in the supply of centrally located housing projects making them truly affordable for homeowners.

With the increased vulnerability of the population to high climate exposure, the viewpoint of climate adaptation and mitigation must be considered, which brings the picture of green housing. To encourage the developers to go for green housing construction, government needs to plan the incentive schemes to balance the higher initial cost of green building construction. Even financial institutions like BRAC, which work on green bond initiatives, are getting ready to start funding green affordable housing projects to encourage developers to work towards sustainability with the help of many developement institutions (e.g. BII, IFC & more). The role of government and financial institutes is crucial in the development of green affordable housing in Bangladesh. Considering the learnings from India, the government may consider acting as a mediator in the process, making banking, non-banking finance companies, and housing finance companies the catalyst to uplift the green affordable housing sector in the country.

Technical Partner:

Moderator	Mr. Bidyut Saha Senior Investment Officer, Private Sector Operations, Asian Development Bank (ADB)
Panelists	Mr. Ashraful Islam, Chief Town Planner, Rajdhani Unnayan Kartipakkha (RAJUK) Mr. Sridhar S, Chairman & Independent Director, IIFL Home Finance Ltd., India Mr. Shaheen Iqbal, Deputy Managing Director, BRAC Bank Ltd. Mr. F.R. Khan, Managing Director, Building Technology and Ideas Ltd.; Arun Kumar Chowdhury, Deputy Managing Director, House Building Finance Corporation Mr. Morshed Millat, Chief Advisor, Sustainable Finance Green Tech Foundation Bangladesh.

MD. ASHRAFUL ISLAM *Chief Town Planner, Rajdhani Unnayan Kartipakkha (RAJUK)*

"Government is trying to incentivize private sector to construct affordable housing by allowing the maximum (Road) FAR instead of the base FAR, additional 0.75 FAR is also given to affordable housing projects following the guidelines of central bank. Another suggestion is government to give construction finance at 4-5% rate of interest to entrepreneurs."

S SRIDHAR *Chairman and Independent Director, IIFL Home Finance Ltd., India*

"Formation of NHB, fiscal policy for affordable housing, foreclosure law SARFAESI Act 2002 and Real Estate Regulation RERA were some of the developments that created an ecosystem, in India, that enabled finance to be extended. Without a proper ecosystem there can be undesirable consequences."

MD. SHAHEEN IQBAL *Deputy Managing Director, BRAC Bank Ltd.*

We initially explored the possibility of a Green Bond for financing Green Affordable Housing, but we ran into some challenges: no ecosystem for measuring whether a project is green and affordable and limited supply for green materials. For these reasons, we decided to first go for Affordable Housing Bond.

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Panel discussion 2: Financing and Policy Advocacy for Green Affordable Housing

The session emphasized on the present green affordable housing policies in Bangladesh and the role of climate finance in the overall ecosystem. The session talked about using Green Bonds, or bonds that signify a commitment to exclusively use the funds raised to finance or re-finance "green" projects, assets or business activities and Social Bonds as a tool to finance green affordable housing. It also took stock of the current situation in Bangladesh around housing finance and the challenges this sector faces in scaling up and targeting lower income groups to finance affordable housing.

The green bond market is very huge around the world with a stake of around USD 300 billion and countries around the globe are taking advantage of it. Institutions like ADB provide technical assistance and make people understand the concept of affordable housing and make them adhere to the internationally recognised standards. Developing countries like India, Bangladesh, etc. are slowly accepting the green bond market and creating awareness to the people about it with the help of the technical assistance schemes.

In the case of Bangladesh, the government is taking steps to provide housing to all. But it is not possible for the government alone to solely meet the necessity. This is where financial institutions like House Building Finance Company (HBFC) come to play the role in financing for people to build homes. HBFC concentrates not only on major cities like Dhaka and Chattogram but also supports people from remote areas where finance is otherwise not available. Supply-side constraints in green affordable housing in Bangladesh are a major limitation for the housing financing institutions that want to invest in this sector. Land rates are very high in Bangladesh, which pushes the developers back not to concentrate on affordable housing. An additional barrier that stops developers to concentrate on affordable housing is people's aspirations of wanting to live in larger houses keeping in mind their future needs. Government may consider taking steps to allot lands to prominent developers at subsidised prices. It will encourage the developers to invest in the affordable housing sector. Government may provide a common definition of affordable housing thorough policy and incentivise the construction of affordable housing as this would help ease the supply.

In the current scenario, non-banking financial institutions (NBFIs) in Bangladesh have their funding sourced from the deposits which constitute almost 90% of the total liabilities. This puts them at risk and inhibits them to scale up to the larger aspect. There is a need for the government to set up a nationwide housing bank institute to support the NBFI and HFC to scale up their support to the people. Refinancing schemes are the need of the hour. Setting up refinancing institutions will give broader confidence to the financing institutions to lend to the people. These institutions should also work as a bridge between policymakers and lending institutions to understand the existing scenarios and implement the policies accordingly. Government can also promote affordable housing by giving fee waivers to stamp duty and registration costs.

Three key starting steps for Bangladesh to create an ecosystem for financing the green affordable housing sector is the availability of long-term financing in place either with the help of a scheme or institution, maintaining a database for the scheme/institutional operation required to support the progress of an initiative. And finally, a collaborative and partnership approach is required in which even the multilateral institution come in to play.

Moderator	Mr. Monu Ratra, Executive Director & CEO, IIFL Home Finance Ltd., India
Panelists	Mr. Nasimul Baten, Managing Director & CEO, DBH Finance PLC Mr. Mohammed Nazrul Islam, Asst. General Manager,House Building Finance Company Mr. Sean Kidney, CEO, Climate Bond Initiatives MR. Vishal Goyal, General Manager, National Housing Bank, India Mr. Arifur Rahman Shazal, CEO, Assure Group Mr. Syed Javed Noor, Deputy Managing Director, IDLC Finance Ltd.

MONU RATRA *Executive Director & CEO, IIFL Home Finance Ltd., India*

"The situation in Bangladesh and India is similar, presently. Non-banks and banks are trying to target the same customer which affects the feasibility of NBFCs adversely because the cost of fund is an issue, and the customer has the option of choosing a bank. The place for NBFCs is the economically weaker section (EWS) / Lower income group (LIG) segment and not to compete with Banks. NBFCs and banks need to complement each other's target customer base only then can NBFCs scale up."

Vishal Goyal *General Manager, National Housing Bank, India*

"Three starting steps to finance (green) affordable housing for Bangladesh: Availability of long-term finance through some scheme or setting up of new institutions akin to NHB, developing and maintaining a robust database that would then influence policy, collaborative and partnership approach is required in which even the multi-lateral institutions can also come into the picture."

Sean Kidney *CEO, Climate Bonds Initiative*

"There is a need for developing countries to leverage green bonds. To make this work we need to use international protocols for what qualifies as grade in getting international verification like Bureau Veritas or KPMG international. This is an incredible opportunity to reduce capital cost and increase the availability of investor appetites provided they meet the standards like IFC's EDGE."

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Panel discussion 3: Sustainable Design & Green Construction Techniques

The session focused on sustainable design & green construction techniques. It emphasized the significance of incorporating climate-resilient and sustainable strategies while concentrating on affordable housing. The discussion highlighted the good practices in sustainable designs and green construction techniques from Bangladesh, India, and Malaysia. The discourse aims to contribute a step towards promoting sustainability in the housing sector.

Given the importance of sustainable design and green construction techniques, as we experience the effects of climate change, this session discusses the good practices from the Asian countries: Bangladesh, Malaysia, and India, through short presentations by each panellist. Each panellist also shared their insights on how developers can adopt these design strategies and construction techniques for constructing green affordable housing in Bangladesh.

Housing building research institute (HBRI) is an autonomous research organisation under the Ministry of Housing and Public Works. Some important roles of HBRI are the research and development of sustainable building technology, the Development of the National Building Code (Bangladesh National Building Code or BNBC), and policy preparation for housing and building construction. Another of their research areas is disaster-resilient housing. HBRI is also designing Bangladesh's indigenous green building code: Building Energy Efficiency and Environmental Rating (BEEER). HBRI presented pilot projects implemented around Bangladesh to showcase green building concepts and materials. Under HBRI's research, Bangladesh has developed various sustainable materials and construction techniques that are also cost-effective such as hollow blocks and ferrocement domes. HBRI thinks Bangladesh needs entrepreneurs to venture into this segment, create awareness, and mainstream sustainable materials and practices in housing construction.

CREAM is also a research organisation like HBRI that works in the field of affordable housing. It researches standard design and quality affordable housing for low- and middle-income groups, productivity measuring tools, and construction 4.0: digitization in housing. They are developing pilot projects with different design and construction strategies like Design for Low-Income Group Housing through Technology (DeLIGHT) which looks at flexible home designs to meet the needs of humanising diverse demographic groups, family units, and other challenges; MyIOS or Malaysian Open Industrialised Building System which allows for flexibility of design as per budget and preference, IHSAN Homes focused on sustainable design for tropical climate, and Divergent Dwelling Design (D3) inspired by traditional 'Kampung' house.

POCAA is a group of professionals from different backgrounds who work with low-income communities. They enable the process of housing by co-designing the house with the stakeholders. Then the construction takes place incrementally and cost-effectively. POCAA presented their process of working with the communities: "Mapping together with the community and Community saving together." These activities unite the community. POCAA's whole approach is participatory, and they go beyond housing by involving people in urban design interventions. They observe the use of certain sustainable materials by informal settlements when these are readily available and cost-effective.

The session ended with Mr. AB Lal enumerating some commonly used sustainable design strategies and construction technologies in Indian affordable housing: He emphasized on proper ventilation, given the heatwaves and urban heat-island effects Indian cities experience, Along with suitable lighting for energy efficiency. Insulation, especially on the roof, protects against heat waves. Finally, shading – bringing back deep verandas, sunshades, and solid shutters for windows. These strategies provide resilience against heat and reduce the potential cooling demand by 30-40%. Building materials should have low embodied energy, such as non-fired soil/concrete blocks with correct thermal properties. Bamboo is also an excellent material, and it can be used to replace wood in doors, windows, and interior finishing.

Technical Partner:

Moderator	Mr. Santhosh Ramkumar, Lead, Green Value Partner, IIFL Home Finance Ltd., India
Panelists	Ar. Ashok B Lal, Principal Architect, Ashok B Lall Architects, India Dr. Mohd Khairolden Ghani, Construction Research Institute of Malaysia (CREAM), Malaysia Ar. Md. Nafizur Rahman, Principal Research Officer, Housing & Building Research Institute (HBRI),Ministry of Housing and Public Works Ar. Mahmuda Alam, Co-Founder & Architect, Platform of Community Action & Architecture (POCAA).

Santhosh Ramkumar, *Lead - Green Value Partner, IIFL Home Finance Ltd., India*

"Easily replicable design which is constructed using the right technology and complemented with the local building materials, can make the construction of the project affordable."

Ar. Ashok B Lal *Principal Architect, Ashok B Lall Architects, India*

"We are in throes of climate change that means our vulnerability to extreme events grow enormously. Temperatures are rising, 75% of India has experienced a stronger heatwave in the last 2-3 years. Cities are most vulnerable to extreme weather events; they experience urban heat island effect and because they are paved, they experience urban flooding."

Dr. Mohd Khairolden Ghani *CREAM, Malaysia*

"In Malaysia we are looking aggressively in terms of pre-cast technology to replace conventional construction. In affordable housing sector Malaysia is government lead and not industry led. The Construction Industry Development Board (CIDB) has taken a bold step in this direction adopting digitalization, robotics, and semi-automation program to cater to the demand."

Ar. Mahmuda Alam *Co-Founder & Architect, POCAA*

"Aspiration shapes from looking at other examples and like any income group (the aspiration is) my house should not say I am poor, and I am actually elevating my economic status."

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Panel discussion 4: Building Green Ratings System for Housing in Bangladesh

The session focused on green rating systems for housing in India, Malaysia, and Bangladesh. While the green rating systems of Bangladesh covers the Commercial and Industrial sector, it does not cover the residential sector. Hence, it is the need of the hour to devise a green building rating system for housing. The process requires a good local understanding and input from various stakeholders. For more insights into the subject, there were presentations on the Indian and Malaysian cases.

In India, a policy-level movement towards energy-efficient buildings started in 2001 with the implementation of the Energy Conservation Act. Since then, India has made progress in this sector by establishing the Bureau of Energy Efficiency (BEE) in 2002, specifying the performance of electrical equipment through the 'Standards and Labelling' scheme in 2006, and publishing the Energy Conservation Building Code (ECBC) in 2007. India also has their own green building rating systems like Indian Green Building Council (IGBC) and Green Rating for Integrated Habitat Assessment (GRIHA).

In recent years, the focus has shifted from commercial buildings to the residential sector: Energy Conservation Building Code (ECBC) for residential projects was published in 2018 to adopt energy savings in the residential sector. Both GRIHA and IGBC launched a rating variant for Affordable Housing in 2017.

Like India, Malaysia has also aligned its Environment Goals with its Nationally Determined Contributions (NDCs) and commitments made in COP26 & COP27. They are constantly making policy-level changes to have a sustainable future for their building sector. Malaysia has an indigenous Green Building Rating System called Green Real Estate (GreenRE). Malaysia's Real Estate and Housing Developer Association (REHDA) established GreenRE. This rating system is tropical-centric and based on Singapore's Greenmark. Projects certified under GreenRE are eligible for tax incentives by the Malaysian government. Due to a lack of awareness and misconceptions, very few (less than one percent of) buildings are certified.

Presently, Bangladesh has an indigenous rating system called Building Energy Efficiency and Environmental Rating (BEEER). However, BEEER caters to the industrial and commercial sectors and does not have a residential variant. After studying the case of India and Malaysia, it is clear that Bangladesh needs an indigenous rating system for affordable housing to support its vision of having sustainable development and housing for all. While preparing such a rating system for affordable housing, stakeholders like developers, policymakers, architects, sector experts, and representatives from diverse communities should be consulted. The rating should incorporate all relevant suggestions.

Learning from the experience of India and Malaysia, Bangladesh can implement its green building rating for affordable housing in alignment with its Nationally Determined Contributions (NDCs). The rating system should undergo performance monitoring and be constantly updated. Another essential task is creating awareness of the rating system among the people and developers for scaling the effort.

Moderator	Mr. Mohammad Hossain, Director General, PowerCell
Panelists	Prof. Shaleen Singhal, Dean, TERI SAS, India
	Prof. Zebun Nasreen Ahmed Bangladesh University of Engineering and Technology
	Mr. Ashwin Thurairajah, Executive Director, GreenRE, Malaysia.

Prof. Shaleen Singhal *Dean TERI SAS, India*

"Almost a decade back, there was the Energy Efficient Housing Refinance Scheme in India, which was focused on the energy efficiency in the residential sector. Then (in 2018,) the Energy Efficient Building Code to Residential buildings came into being. (Thus) there has been a lot of emphasis on the residential sector (in India) itself."

Prof. Zebun Nasreen Ahmed *Bangladesh University of Engineering and Technology*

"We (Bangladesh) have attempted to make our own rating system and it's known as BEEER. This system is more geared towards commercial and industrial buildings. Housing is not really a focus here. This is where we are lagging. We need something which will address naturally ventilated, passive scale of architecture."

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EXECUTIVE SUMMARY

The four key takeaways that were resultant from the discussions are:

- Role of the private sector: There is a need to involve the private sector – developers and financial institutions in the affordable housing sector. This could be done through giving incentives to the private sector for creating affordable housing and through public private partnerships in this sector.

- Need for finance: Bangladesh needs to create an ecosystem that enables housing finance to be extended to green affordable housing. In India this involved, formation of National Housing Bank, a fiscal policy for affordable housing, as well as through the passage of a foreclosure law and real estate regulations. This could be a lesson for Bangladesh as well because without a proper ecosystem there can be adverse effects in the economy. Without proper finance no initiative can be scaled.

- For affordable housing, NBFCs in both India and Bangladesh, need to play an important role in targeting customer base in the lower income groups. They need to complement banks in providing housing finance.

- Need for local green housing ratings system: Given the increased vulnerabilities of urban-dwellers due to climate change, there is a need for sustainable design and green construction techniques to be mainstreamed. In this regard, research institutions need to collaborate with entrepreneurs and community architects to mainstream sustainable design and construction practices. Bangladesh also needs to look at green building rating for residences.

Group picture of Green Masters at conclusion of the event

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