

Sustainable Social Housing

Scope of New Alternative Building Materials

Housing Scenario in India

According to estimates of the Technical Group-12 constituted by the Ministry of Housing and Urban Poverty Alleviation (MHUPA), the urban housing shortage in the country at the end of the 12th Five-Year Plan was estimated to be 18.78 million. It was estimated that more than 95% of this shortage pertains to houses for Economically Weaker Sections (EWS) and Lower-Income Groups (LIG). If shortage in the housing sector continues to increase (KPMG & NAREDCO 2014), it would mean that nearly 110 million houses need to be constructed with an investment of over USD 2 trillion by 2022.

At the same time, it is of significance to know that the housing sector is primarily an energy and resource intensive sector (i.e. given the building materials required, water consumption, energy consumption in construction and operation). With the increasing need for social housing (i.e. mass housing for EWS and LIG), the demand for resources (cement, steel, clay bricks, water, electricity) is also on the rise, all of which have a considerable impact on the environment.

Thus, while this growing housing gap needs to be met, there is a growing imperative to find sustainable housing solutions that will decouple the extraction and use of these resources and at the same time fulfil the housing needs. At present, there is lack of conducive policy environment and awareness generation on driving sustainable practices in large scale housing projects. Given the scale and as well as the nature of social housing projects (i.e., government sponsored mass housing projects), these housing projects provide opportunities to address energy and resource efficient construction practices and devise means to embrace a greener development trajectory, to assure market acceptance of sustainable practices.



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Sustainable Housing

Given the fact that, living in a sustainable habitat is one of the basic premises for a healthier living, it is imperative that sustainable construction practices are given immediate attention. In this regard, Development Alternatives has formed a consortium with The Energy and Resource Institute (TERI), Oxford Brookes University (OBU) and UN-HABITAT. The consortium has further collaborated with United Nations Environment Programme (UNEP) to promote sustainability in terms of environment performance, affordability and social inclusion as an integral part of social housing. The initiative will lead to the development of a decision support tool that will provide guidelines at the conceptual stage to improve the performance of the housing project. The applicability of the tool will be tested in two selected social housing projects to ensure that the environment, social and economic aspects in social housing are addressed and the proposed sustainable construction practices are implemented. As part of the initiative, there is a need for active engagements with policy-makers and practitioners (government officials, developers, architects, building professionals) through policy briefings and regional workshops that address key issues on the barriers to mainstream sustainable social housing in India.

In order to reduce the extraction and consumption of virgin materials in the construction sector, several studies are being conducted in the production of new and alternate building materials. Some of the new alternative options that Development Alternatives in the past few years has conducted studies on are Marble Sludge, Construction and Demolition waste, Foundry Slag and China Clay as viable options depending upon their regional availability. These alternative materials have demonstrated satisfactory performances in production of cement, concrete and concrete based products.

Objective of the Workshop

Given the above context, this workshop aims to explore these new alternative building materials and their scope of use by integrating them with sustainable social housing. The primary focus is to enhance sustainability in the construction of social housing through adoption of suitable construction as well as operations & management practices.

The key concerns that the workshop proposes to address:

- What are the feasible alternative building materials that can be used in sustainable social housing constructions?
- How can the barriers to the market and user acceptance of these materials be overcome?
- What are the important criterion for selecting building materials and construction technologies keeping in mind economic, social and environmental factors?
- How can the policy instruments play an effective role in mainstreaming sustainability in social housing?

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