BACKGROUND

Green Affordable Housing: Lessons from Practice

Current Scenario in Urban India

India is currently undergoing an unprecedented movement of urbanisation, with a projection of 50% citizens living in urban areas by 2041. This radical transformation entails tremendous changes at both individual and collective levels, not only in terms of demography, but also lifestyle, culture, social and economic structure.

The Technical Group on Urban Housing Shortage, 2012, pegged the urban housing shortage at 18.78 million homes with the Lower Income Groups (LIG) and Economically Weaker Sections (EWS) bearing 96% of the deficit. Monitor Inclusive Markets reports that the cheapest houses are found affordable by only the top 15% of the urban population, while the next 30% income segment mostly rents rooms in slums and low-income neighbourhoods.

In 2011–2012, India's construction sector contributed 8.2% to the GDP and is poised to become the world's third-largest construction sector by 2018. The sector is predicted to increase its footprint to 8.32 trillion sq.ft. between 2005 and 2030. In this vast ocean of construction sector, green buildings are just a tiny drop. Presently the registered footprint of green buildings is just 2.44 billion sq.ft. According to Indian Green Building Council, by 2017, green building footprint in India will cross 4 - 5 billion sq.ft and it is anticipated that by 2100, there will be about $402 million worth of green buildings in India. 'Green' however is mainly seen in the context of energy efficiencies and concerns of resource efficiencies are not necessarily integrated into the equation.

Going Green

It is crucial that the context of sustainability is integrated in India's growth path. While attention is being paid to economic and social sustainability, pressing environmental concerns fair low on the political agenda. As much as it is a challenge, the upcoming urban housing boom is also an opportunity to embrace a greener development trajectory.

Worldwide, the construction sector accounts for over 30% of the material use. The share of construction materials in project costs ranges from 40% to 60%. In India 70% of the construction needed in 2030 is yet to be built, this in itself sounds alarm bells. Annually 350 million MT of top soil are lost to brick making competing with agricultural yield exerting pressure on food security. Conflicts of use of organic rich soil between agriculture and brick making, aggregate mining and sand dredging of rivers for concretes, mortars and plasters have already reached a point where mafias and spiraling costs need to be dealt with. Implementation of environmental regulations and research for new alternatives are not able to manage the pace of soaring demand and related desperate measures.The construction sector contributes around 24% to the total national CO_2 emissions, roughly using around 40–45%of steel, 85% of paint, 65–70% of glass, and considerable amounts of output from automotive, mining and excavation equipment industries. Cleaner technologies and practices exist, and could substantially reduce the ecological footprint of the sector if mainstreamed. Scaling up is stagnant due to cumbersome regulatory procedures of accessing finance, inadequate information, incentives and consumer demand. Moreover regulation is not strictly enforced by state agencies due to shortage of manpower and knowledge on appropriate technology and legislation.

Lack of supply of affordable housing in India in significant quantities means that there exists an opportunity to incorporate a green dimension into affordable housing. There are several entry points ranging from strengthening the regulatory framework to building awareness and developing capacities; which need to be simultaneously activated to mainstream green building in the affordable housing space in India.

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TARAgram Yatra 2014

The theme of TARAgram Yatra 2014 is ***India – Post 2015: A Country in Transition – To Choose Our Future.*** The formulation of the Sustainable Development Goals for a Post-2015 framework offers us an opportunity to redefine India's development by not only focusing on the ends but also on the means to achieve it. In order to transition to a sustainable future, one of the objectives of the Yatra is to focus on accelerating action points and pioneer solutions through the lens of ***Sustainable and Smart Cities*** focusing on ***Green Affordable Housing***. Adopting green affordable housing maximises efficiency and minimises waste throughout the life cycle of the building. Not only is it healthier for the people, but also the planet. Evidence shows that use of appropriate design and technology can bring down costs of construction to cater efficiently to affordable housing. This study offers a sustainable and smart solution to the new urbanisation in India.

On 14th October 2014, the Yatra will explore examples from Thiruvananthapuram, Kerala, which is a rapidly urbanising city and showcase good practices. This is an urban landscape consisting of multiple agglomerations, originally villages, now growing into small towns. This transformation towards urban living style of rural Kerala emphasises the urban trend of growth.

The Round Table Conference in New Delhi on 16th October 2014 following the Yatra to Thiruvananthapuram will highlight perspectives from three key stakeholder groups i.e. practitioners, experts, and decision makers to address the aspects of

- *Quality and sustainability of affordable homes*

  The quality and sustainability of affordable homes must address the inherent issues of social integration, economic viability and environmental repercussions. There is a need for deeper understanding to answer;

  ➔ How can we ensure that environmental sustainability is mainstreamed into policy objectives?

  ➔ What systems and mechanisms do we need to maintain the quality of green construction?

- *System viability and efficiency of delivery of homes*

  There is a lack of integration between various stakeholders involved in the supply chain for green construction. The market for green materials is underdeveloped and lacks a sense of coherence, thus making it seem like a difficult task to take up. Hence there is a need to address;

  ➔ How can the supply chain be strengthened to maintain the affordability of green houses?

  ➔ How can we promote better convergence between the government and private sector for efficient delivery of green houses?

- *Access and availability for end users*

  Consumers are the most crucial stakeholders in affordable housing projects. They are the end target users and hold vital tacit knowledge that's essential for the success of housing units. Thus it is important to answer;

  ➔ What are the key elements of technical and financial models that respond to their needs and aspirations?

  ➔ How can innovative tools and instruments help enhance financial inclusion of EWS and LIG?

The efforts of 'market-makers', in developing alternative models of green affordable housing have exhibited its value and potential. This transition needs to be scaled up and scaled out to reach economies of scale. Thus, TARAgram Yatra envisions to come up with actionable strategies for key decision makers in the public and private sector.

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