

ATTITUDE OF PEOPLE TOWARDS GREEN AFFORDABLE HOMES: A MICRO LEVEL STUDY AT THRISSUR CITY IN KERALA

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Abstract

The concept of 'Green Homes' has been fast emerging because of the vital significance of environment-friendliness as an imperative for long-term sustainability of housing development initiatives. It is largely recognized as an extension of the broader concept of 'Green Buildings', often used interchangeably with the terms 'Sustainable Building', 'High-performance Buildings' and 'Environmentally responsible buildings'. It is most commonly defined as a process that creates buildings and infrastructure that minimizes the use of resources, reduce harmful effects on the environment and provide healthier environments for people. The term 'Affordable housing' is often used interchangeably with the terms 'Low-income housing', 'Attainable housing' and 'Subsidized housing'. As the concept of 'Green Affordable Homes' which combines the two vital ingredients of eco-friendliness and affordability, has got vital significance in the contemporary centrality and is fast emerging in India too as elsewhere in the world, this paper discusses the concept and also makes an empirical study of the attitude of the urban people towards the concept of Green Affordable Homes with reference to Thrissur city in Kerala.

Key Terms: Green Housing, Affordable Housing, Attitudinal Issues, Life Cycle Cost.

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Introduction

'Green Affordable Homes' often refers to single-family or multifamily dwellings that have purchase prices or rental payments affordable to low- to moderate-income individuals, usually with the help of subsidies. For most people, such housing units seek to offer 'sustainable affordability' for single-family or multifamily dwellings, particularly for lower-income individuals. The 'Green' feature that ensures environmental friendliness, adds another desired feature for such houses thus making them a preferred model for housing development efforts across all nations whether developed or developing and across all segments of the population.

The term 'Green Affordable Housing', in the Indian context, is used interchangeably with

the terms 'Sustainable Housing'. The latter term is more common too in India. There is no single definition for the concept of 'Green Building'. The concept of 'Green Homes' has been fast emerging because of the vital significance of environment-friendliness as an imperative for long-term sustainability of housing development initiatives. It is largely recognized as an extension of the broader concept of 'Green Buildings', often used interchangeably with the terms 'Sustainable Building', 'High-performance Buildings' and 'Environmentally responsible buildings'. It is most commonly defined as a process that creates buildings and infrastructure that minimizes the use of resources, reduce harmful effects on the environment and provide healthier environments for people. The term 'Affordable housing' is often used interchangeably with the terms 'Low-income housing', 'Attainable housing' and

‘Subsidized housing’. Of late, promotion of Green Affordable Homes is a top priority item in the development agenda of many a developing nation like India.

Relevance and significance of the study

The concept ‘Green Affordable Home’ is largely recognized as a high-performance building designed, built, operated and disposed of in a resource-efficient manner with the aim to minimize the overall (negative) impact on the built environment, human health and the natural environment. Some examples of green building features are choice of site and orientation, efficient use of materials and resources, indoor environmental quality and innovation. Affordability is commonly defined as not spending more than 30 percent of household income on housing. Given the higher exposure of low-income households and the need for public assistance, the most salient features of green affordable housing are energy use, material use, durability and a healthy indoor environment. Thus, ‘Green Buildings’ in general or ‘Green Homes’ in particular, may be operationally defined as buildings and infrastructure that minimize the use of resources, reduce harmful effects on the environment and provide healthier environments for people. Terms interchangeably used in different contexts are ‘Affordable housing’, ‘Budget housing’, ‘Low-income housing’, ‘Attainable housing’, ‘Subsidized housing’ etc. Irrespective of the term used, they refer to single-family or multi-family dwellings with purchase prices or rental payments affordable to low-income to moderate-income individuals, usually with the help of subsidies.

The origin of the concept of ‘Green Homes’ was in the United States (US). In the US, it has become increasingly common to adopt state and local policies that favor or require green building practices for publicly owned or funded buildings. Benefits of green affordable housing include lower energy cost burden and improved health. In the context of housing design, ‘Green’ often refers to practices that conserve natural resources

in the short and long term, improve the quality and longevity of structures, and promote the health and well-being of occupants. Likewise, ‘Affordability’ here denotes incorporating features like energy-saving appliances and straw bale insulation that reduce utility bills; air quality improvements that reduce health care expenses; and community and personal gardens that provide local, organic produce at little cost.

Of late, in India too, the concept of Green Affordable Homes is fast picking up, as the National Urban and Habitat Policy 2007 (NUHHP-2007)[8] seeks to ‘promote sustainable development of habitat in the country’. NUHHP-2007 [8] has adopted ‘Affordable Housing for All’ as its ultimate goal, and it has given due respect to the concept of ‘Green buildings’ and for development of ‘Green-field townships’ at a reasonable distance from existing cities and towns. Promotion of ‘Green Belts’ around the cities for ensuring ecological balance, and ‘Green’ or ‘Intelligent’ buildings for better energy-efficiency are part and parcel of the NUHHP-2007[8].

Review of literature and research gap

Mathur, G C (1980) [3] in his paper ‘Housing the Poor’, has studied the underlying reasons for the housing shortage and the very slow pace of housing development in India. He has observed that to improve the housing conditions of the poor, it is essential to have a realistic approach in view of the scarce resources and that the most effective strategy is to go for self-help to the possible extent, construction of houses in stages and provision of essential services, community facilities, public utilities. The vital significance of low cost houses for the rural and urban poor is highlighted. Buckley, Robert M. (1996) [4] in his book ‘Housing Finance in Developing Countries’ has examined in detail the housing policy in developing countries, at a time when their systems have started facing unprecedented changes; particularly because of the wide-spread economic liberalization the world over, and also in the backdrop of the failure of many centrally

planned economies. He has pointed out the utmost significance of the role played by non-budgetary Government policies on the provision of housing. Nair, Tara S. (1999) [5] in her commentary 'Housing: The Missing Concerns' has pointed out that the unfortunate part of Indian housing scenario is the financial imprudence of the political leaderships in the country which has taken the dream of a shelter further away from the poor. She argues that the real gainers of the budgetary sops offered by the government are the urban middle class, middle-income housing projects and housing finance institutions; not the poor who really need housing finance.

Harvard University (HMF Report) (2000) [6] has reviewed housing micro finance (HMF) initiatives of various countries in Asia, Latin America and Africa. The report has highlighted remarkable growth of HMF initiatives worldwide in the last two decades. It gives some vital background information for those who are involved in (or planning to enter into) HMF activities. Manoj P K (2004) [7] in his paper 'Dynamics of Housing Finance in India' has systematically traced the growth and development of the housing finance system in India. The significance of housing to the economy, prospects of the industry, the risk factors and challenges to housing finance (along with remedial measures) are discussed. It has also been suggested that HMF models should pick up in India also for faster and inclusive housing development.

National Urban Housing and Habitat Policy 2007 (NUHHP) [8], is the Official policy on urban housing and habitat of the Ministry of Housing and Urban Poverty Alleviation, Govt. of India. It gives a detailed account of the status of urban housing in India, the problem of housing shortage etc. NUHHP intends to promote sustainable habitat in the country and delineates specific areas of action and an action plan towards achieving 'Housing for All' – its ultimate goal. IFMR (Research Report on HMF in

India) (2007) [9] discusses the potential of HMF in providing housing finance to the poor and also the risk factors involved in it. Using a demand assessment made at an MFI named ASP (in AP), the paper discusses as to as to how an MFI can design an HMF product as per the client's socio-economic status.

Manoj P K (2008) [10] in his research paper, "Learning from Cross Country Experiences in Housing: A Microfinance Approach" gives an overview of inclusive housing finance systems of various countries (like, social housing, public housing etc.). Based on global experiences and the Indian realities, the HMF model that is relevant in India is suggested. The same author in his (edited) book "Emerging Technologies and Financing Models for Affordable Housing in India" (Manoj P K, 2009) [11] gives a detailed picture of the various technologies for affordable housing that are picking up in India and elsewhere in the world, and also the various financing models for low cost housing. A very recent paper of the above author, "Prospects and Challenges of Green Affordable Homes: A Study with reference to Ernakulam, Kerala" has made an empirical study of the attitudinal factors of the urban dwellers at Ernakulam city in central Kerala towards Green Affordable Homes; apart from an overall review of the relevance and significance as well as prospects and challenges of such homes. Suggestions have been made for the promotion of Green Affordable Homes, based on the study findings. (Manoj P K, 2013) [12].

It is noted from the above discussions that there are many studies in India and elsewhere in the world regarding the significance of promotion of low cost housing and affordable housing, including encouraging specialized and time-tested models like housing microfinance (HMF). However, studies that focus on Green Affordable Homes are very scarce, particularly in the Indian context. The only exception being the study by Manoj P K (2013) [12] that involves an empirical study at Ernakulam in central Kerala. This study

seeks to bridge this research gap and makes another micro-level study at Trichur in northern Kerala, to gain better insight into the attitude of people and to check the difference, if any, in their mindset across the two cities.

Statement of the problem

In spite of the fact that many low income urban population can afford to construct or purchase only low cost houses (alternatively called budget houses, affordable houses etc.) they often prefer the conventional type dwelling units which are costlier. Likewise, every urban dweller would like to live in greener, eco-friendly and energy-efficient homes. However, when it comes to their own houses the choice is often not in favour of locally available, eco-friendly, low-cost and also energy-efficient building materials and processes that can help construct 'Green' as well as 'Affordable Houses'. Rather, they prefer the conventional, relatively costlier, less eco-friendly and less environment-friendly structures, materials and processes. Even the low and moderate income households would not often prefer Green Affordable Homes, and would go for the traditional houses. The reasons for the above sort of attitudinal issues toward 'Green Affordable Homes' need to be identified, so that remedial measures for effective promotion of such houses could be framed. This would support long-term sustainability of housing development and also the broader interest of preserving the environment and ecology. Thus, policies for sustainable and equitable housing development could be framed meaningfully for a emerging nation like India.

Objectives of the study

- (i) To study the contemporary relevance and significance Green Affordable Homes with a focus on the Indian housing and real estate sector;
- (ii) To assess the affordability and to identify the attitudinal issues toward Green Affordable Homes from the perspective of urban, low and moderate income people of Thrissur city;

- (iii) To suggest appropriate strategies for sustainable and equitable housing development of the nation through promotion of Green Affordable Homes, based on the findings of this study.

Methodology, data sources and sampling frame

As already noted the study area is Thrissur city in northern part of Kerala, and the areas of focus for this study is the issues of affordability, sustainability and mental makeup (attitude) toward the adoption of Green Affordable Homes. Accordingly, the study seeks to analyze the awareness level and identify the attitudinal issues of the urban low and moderate income people for the adoption of such houses. Thus, dwellers of such homes, including prospective ones (ie. the home-less population or those living in dilapidated houses who are in need of better dwelling units) form the target population for this study. Since it is noted that there is a general tendency among the urban populace to move from the centre to periphery in search of greener, cleaner and healthier environment, purposively families who are residing at the heart of Thrissur city for the last 25 years or more alone are considered for this study. Popular tools of statistical analysis are used to analyze the data collected as noted above. Thus, 38 urban households (under low and moderate income category) who have residing at the location for 25 years or more are selected using Purposive Sampling methodology from whom primary data are collected. Using a descriptive-cum-analytical approach, data collected from both primary and secondary sources are suitably assimilated, analyzed and meaningful conclusions are drawn. For collection of primary data, a pre-tested and well-drafted Interview Schedule has been used.

Green affordable homes: sustainability and other features

Green features need not necessarily be cost-saving, rather they contribute to community goals of being environmentally friendly and are more

sustainable in the long-run. Low-income families often have to struggle for balancing the costs of shelter, food, health care, and utilities. Here comes the relevance of green affordable homes which aim at balancing the cost (affordability) and 'green' features (environment-friendliness).

The development of green affordable homes involves several green features such as waste minimization and recycling of materials during the construction phase, landscaping with native plants, high-efficiency drip irrigation, extra building insulation, and energy-efficient appliances and fixtures. Most of such initiatives incorporate green features like energy-efficient appliances and straw-bale insulation that reduce utility bills; air quality improvements that reduce health care expenses; and community and personal gardens that provide local, organic produce at little cost. To be truly affordable over the long term, residents must be able to afford the monthly mortgage or rent payment and various costs on utilities and transportation. Homes must be energy-efficient and located close to public transportation. Residents of green-built housing can realize long-term savings through efficiencies incorporated in the design of the home. As per a 2005 Report by the Federal Home Loan Bank of Atlanta, in addition to lower utility rates, green building practices improve occupant health and comfort through the use of better ventilation systems and better construction materials. The end result is cleaner indoor air and a reduction in the occurrence of asthma, respiratory diseases and other ailments. Some common green features used in affordable housing projects are as follows: (Manoj P K, 2013) [12]

1. compact fluorescent lighting,
2. energy-efficient appliances,
3. low-flow fixtures and dual-flush toilets,
4. environmentally preferable products,
5. use of local sources for materials,
6. recycling of construction materials, and
7. Home-owner awareness education.

Scope of green affordable homes: the Indian scenario

Green home has certain special features. It is one that is ideally constructed with a smart design, and requires minimal maintenance. Besides, overall harm that it does to the environment is kept minimal and the residents remain healthy. In a country like India where the population is ever increasing, the demand for houses is also on the rise. Accordingly, it has become an imperative to 'go green' in respect of housing for an emerging economy like India. In India, IGBC (i.e. Indian Green Building Council) is the authority that promotes and regulates all activities related to green buildings and green houses in India. IGBC defines green buildings as follows, "A green building is one which uses less water, optimizes energy efficiency, conserves natural resources, generates less waste and provides healthier spaces for occupants, as compared to a conventional building". The first rating programme developed in India is Green Homes and it exclusively for the residential sector. Energy efficiency is quite important for Green Homes, particularly in Indian scenario. Because, as per the Planning Commission of India estimates, India will need to generate at least 700000 MW of additional power by 2030 to meet its growing electricity requirements. Accordingly, IGBC insists on energy efficiency as a major pre-requisite for Green Affordable homes along with considerations like low cost, local availability and environment friendliness.

Findings of the study and discussions

Profile of the Population under Study

1. All the households were belonged to Thrissur city (Corporation area).
2. There are 38 low and moderate income households in the sample chosen.
3. Of the 38 households, 34 households have male member as the head of the family.
4. Only 4 households alone have female member as head of the family.

5. Almost 80 per cent (i.e.30 households or 78.94 per cent) families are nuclear families.
6. More than 50 per cent of Families had only 4 members

Major Observations of the Study

1. All the families have got own house, even though very small(in 2 cents' land or so)
2. In fact, 97 per cent of households prefer to move from centre to suburban areas.
3. All 97 per cent of households wish to move to suburban areas prefer areas having enough transportation facility.
4. All of them (100 per cent) admitted unhealthy situations faced by them in the city
5. As high as 90 per cent has pointed out that polluted atmosphere is their main problem.
6. All of the households (100 per cent) admitted that they are not happy with the neighborhood of other state labourers, though labor become cheap
7. As high as 76 per cent household prefer to live in calm and quiet place
8. Only 9 per cent of the households are aware of the concept of Green Houses
9. As high as 94 per cent of households are not bothered about price hike of houses(if they move from centre to periphery, on disposal of their houses to purchase new ones)
10. All of the households (100 per cent)are unaware of the concept of Green Finance.
11. As high as 91 per cent of households are not ready to bear initial cost of energy efficient houses.
12. As high as 88 per cent of households like natural ventilation as against artificial ones.
13. As high as 70 per centof households are interested in rain water harvesting and other water reduction technologies.

Findings Relating to the Attitudinal and Affordability Aspects of the Users

1. Not even one household has got the ability to own a conventional-type house (Table I) and all of them (100 percent) have to use houses under affordable segment or have to be satisfied with dilapidated or inadequate housing facilities. As high as 78.95 percent (30 households) have replied that affordability has been the primary reason to opt for such houses, while 13.16 percent (5 households) have opted for the same because of the availability of housing finance under specialized schemes and the rest 07.90 percent (3 households) have inherited from their parents or relatives.(Table II).
2. It is observed that out of the total 38 respondents, just 2 households (i.e. 5.26 percent) have evinced interest in owning affordable houses. The rest 36households have either disinterest or a neutral attitude toward such a proposition. (Table III).
3. Majority of respondents believe that green affordable homes can improve their physical security. So also, majority of them believe that affordable homes can improve their living standards too.
4. A vast majority of the respondents associate poor quality and lower utility with affordable homes (Table IV). Besides, they associate only lower resale value for such homes because of poor public awareness regarding affordable homes (Table V). The above are major deterrents to the faster acceptance of affordable homes.

Suggestions for promotion of green affordable homes

Based on the findings of the study as given in the foregoing paragraphs, it is observed that the findings of this study at Thrissur (northern Kerala) are quite in conformity with those of the recently done Ernakulam-based (central Kerala) studyas already mentioned under the Literature Review part of this study (viz. Manoj P K, 2013)

[12]. Accordingly, it appears that green finance is still in its infancy in India, but some innovative financial institutions are developing an arsenal of green products and practices that are being supported by government incentives for resource efficiency in development. It is also noted that banks and financial institutions are also not very keen on the promotion of green affordable buildings and houses.

1. It is suggested that the Government should take measures to foster sustainable development of green homes. Either through grants and rebates, tax credits, fast track permissions or other strategies, the public sector must encourage green building.
2. Besides, it is advisable that housing finance institutions or housing loan providers, including banks should stipulate on green finance. As policymakers come to grips with hard questions about the sustainability of our current approaches to development, new strategies like promotion of green finance appear inevitable.
3. Green compliance be included as one of the essential pre-conditions for regulatory clearance of all types of construction projects, both residential and commercial by relevant authorities like development authorities, corporations, municipalities etc.

4. As a general policy, Governments should take measures to enhance the level of understanding of the common man on the need and relevance of green construction activities and green finance; because as of now their awareness is virtually nil, as is evident from this study or similar other studies. Thus, efforts in the direction of creating 'green awareness' through mass awareness programmes are quite necessary now.

Concluding remarks

As the interests of businesses, governments, builders, consumers and financial institutions are gradually converging to make green development the central part of their mainstream agenda in the contemporary centrality, 'Going Green' appears

to be a natural corollary as well as the only remedy for the innumerable number of sustainability issues that surmount the civic society. In order to ensure long term sustainability, and contain problems like environmental degradation, depletion of energy sources etc., it is high time that policy makers, governments and regulatory authorities insist on more stringent and more elaborate compliance norms, and also mass awareness programmes to educate the stakeholders regarding the urgency of 'Going Green' in all developmental initiatives, particularly construction of buildings—both residential and commercial.

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