

Study and Analysis of Low Cost Housing

Mr. Sanskar Ramchandra Jadhav and Prof. Soniya Kadam

Atma Malik Institute of Technology and Research, Shahapur, India

Abstract: *Housing is the major sector of urban infrastructure. Government of India has launched the scheme “Housing For All by 2022”. for urban areas for the purpose of Government providing subsidy to the urban poor upto Rs. 1 lakh per house which causes huge burden over country’s economy. But then too, many houses are not affordable to the urban poor due to high land & construction cost. This scenario can be improved if the land or construction cost can be reduced to some extent without compromising with the quality of structure. “Low cost housing” offers the use of various low cost material & technique which reduces the overall cost of construction. In this project an attempt is made to find the best combination of low cost material & techniques which can be used for rural and urban areas. A comparative study of various material & technique is done & then the cost estimation is carried out for different combinations of low cost material & technique. The comparison of estimated costs is done and the best suitable method is found out for urban housing & rural housing..*

Keywords: Low cost housing

I. INTRODUCTION

House or shelter is one of the basic necessities for a human being. evolution of houses from huts and mud brick houses to G+1, cement plastered, multi-storey housing colonies has witnessed a great change in lifestyle and housing needs of individual. It is evident from past that there was a large difference between standard of housing of high income group and low income group. Due to less overall population of the country as compared with today and less population density in cities before independence of India, housing was not a big problem at that time but today due to the availability of jobs and business opportunities, education healthcare in urban areas and enhanced lifestyle, the population has increased drastically and is projected to rise much more in future. Large part of this population comes from the rural areas and cannot afford a house in the city. So, they choose to live in rented houses or sub-standard houses.

If this situation is not handled with proper planning, haphazard growth of buildings or slums can take place. Provision of low cost houses can be the solution for this problem. Low cost housing can be defined as a concept which deals with effective budgeting and following of techniques which help in reducing the cost of construction through the use of locally available materials along with improved skills and technology without sacrificing the strength performance and life of the structure. It is deemed affordable to those with low income as rated by governing authorities.

The aim of this project is to study different aspects of low cost housing and to identify the best techniques and low cost materials for urban and rural housing which can help the governing authority to implement the most strategic and appropriate method for the provision of affordable houses through public private partnership or through the government organizations or undertakings like MHADA, CIDCO(Mumbai)etc.

II. LITERATURE REVIEW

HUDCO and National Housing Policy, 1988

The Ministry of Urban Development formulated a National Housing and Habitat Policy in 1998, which also covered issues relating to rural housing. The ultimate goal of this policy was to ensure that basic need of “shelter to all” is fulfilled by correcting excessive dependence on the public agencies and creating strong public – private partnerships for tackling housing and habitat issues. The policy also indicated the role of government and identified specific action areas. Subsequently efforts were made to operationalise the policy particularly in the context of urban housing. Still, in the area of rural housing, HUDCO stepped up its lending substantially since 1998. Recently, the Ministry of Urban Development has again drawn up a housing policy, which is meant only for urban areas

National Housing and Habitat Policy 2007”, Ministry of Housing and Urban Poverty Alleviation, Government of India.

This is an important Policy framework document for housing and integrated habitat development. The Role of the Government has been shifted from that of a provider to that of a facilitator and enabler and housing development to be taken up as a participatory process with individuals, private sector, public sector, community sector, cooperative sector, corporate sector and NGO's. The Policy

Rajasthan Affordable Housing Policy, 2009” – Government of Rajasthan

This is a very Progressive State Affordable Housing Policy and attempts to reduce the housing shortage especially for EWS and take up construction of Affordable Housing through cost reduction options. The Policy is also geared to promote investments in housing and urban development on PPP model. The thrust is also for creation of Rental Housing and transit accommodation as well as to deal with the problems of slums and provide for integrated Slum Housing solutions. The Policy further opens up with options of Public and Private Sector to develop on land owned by them, on acquired land, government land. The Policy also covers the incentives through development control regulations for enhanced development for support to EWS/LIG and nature of fiscal incentives.

Pradhan Mantri Awas Yojana (PMAY)

Pradhan Mantri Awas Yojana (Urban) Mission launched on 25th June 2015 which intends to provide housing for all in urban areas by year 2022. The Mission provides Central Assistance to the implementing agencies through States/Union Territories (UTs) and Central Nodal Agencies (CNAs) for providing houses to all eligible families/ beneficiaries against the validated demand for houses for about 1.12 cr. As per PMAY(U) guidelines, the size of a house for Economically Weaker Section (EWS) could be upto 30 sq. mt. carpet area, however States/UTs have the flexibility to enhance the size of houses in consultation and approval of the Ministry. In continuation to this Government's efforts towards empowerment of women from EWS and LIG unlike earlier schemes, PMAY (U) has made a mandatory provision for the female head of the family to be the owner or co-owner of the house under this Mission. Verticals of PMAY (Urban) A basket of options is adopted to ensure inclusion of a greater number of people depending on their income, finance and availability of land through following four options.

R. Mathiyalakan & R. Ramkumar (2016) shows here new concept which deals with effective budgeting & techniques. In this paper, they explained cost effective, innovative & environmental friendly housing technologies for construction of houses & buildings for enabling the common people to construct houses at affordable cost. They also explained material selection criteria & some of the major construction techniques to achieve low cost housing by low income group people. In this paper, they explained to reduce the cost construction through use of locally available materials along with improved skills & technology without sacrificing the strength, performance & life of structure.

III. METHODOLOGY

Government Schemes,

Pradhanmantri Awas Yojana

Prime Minister's Housing Scheme - Rural (PMAY) Department: District Rural Development Agency Introduction Among the basic needs of humans, food, clothing, and shelter are essential, with shelter being the most crucial. Citizens who have their own homes receive social security benefits and are recognized in society. To provide shelter to those who do not have one, the central government initiated the Home for All scheme from the financial year 1985-86, which was later incorporated into the Jawahar Rozgar Yojana from April 1989. From January 1, 1996, it has been started as an independent Indira Housing Scheme. The naming of the Indira Housing Scheme has been changed to Prime Minister's Housing Scheme - Rural from the financial year 2016-17. In the rural areas of the district, 6684 households were sanctioned under the Prime Minister's Housing Scheme from 2016-17 to 2020-21, out of which 6429 households have been completed. Accordingly, 96% of the households have been completed, and 255 pending households are planned to be completed soon. Additionally, for the financial year 2021-22, 2818 households in Thane district have been targeted under the Prime Minister's Housing Scheme - Rural, out of which 2210 households have been sanctioned. Action is underway at the taluka level to sanction the remaining 608 households promptly. Under the state-sponsored Primitive Housing Scheme, Ramai Housing Scheme, and Shabari Housing Scheme, 4718 households have been targeted from 2016-17 to 2021-22, out of which 4276 households have been sanctioned. Accordingly, 3416 households have been

completed. Action is underway at the taluka level to promptly sanction the remaining 442 households. Additionally, 860 households have been identified at the taluka level for completion, and meetings have been held with beneficiaries, village servants, and rural housing engineers to complete the current households on time, which is being coordinated by the District Rural Development Agency, Thane. Amount for construction of house: Rs. 1,20,000/-

Ramai Awas Yojana

The Ramai Awas Yojana (Ramai Housing Scheme) is a government initiative aimed at providing quality housing to people belonging to Scheduled Castes and Scheduled Tribes who are living in dilapidated or temporary houses. In rural areas, many people reside in temporary shelters made of mud. Therefore, the state government has implemented the Ramai Housing Scheme to elevate the living standards of these marginalized communities. Under this scheme, the Maharashtra state government has approved the construction of permanent houses for 1.5 lakh people living in poverty. The scheme targets marginalized communities, with a goal of providing housing to one lakh households. The Social Justice Department provides assistance for this scheme, facilitating the construction of houses for eligible beneficiaries. The selection of beneficiaries is done through a transparent process based on the 2011 Social, Economic, and Caste Census (SECC-2011). The scheme is specifically for Scheduled Castes (SC) and beneficiaries who do not have a house in their name. The beneficiaries are selected through a Gram Sabha (village council) process and further validated by a committee at the district level. To apply for the scheme, the beneficiaries need to submit various documents, including property documents, income certificate, bank passbook, voter ID card, Aadhar card, and PAN card. The entire construction process is closely monitored and includes geotagging of houses, mapping job cards, and distribution of funds through the Public Financial Management System (PFMS). After completion, the beneficiaries receive a direct transfer of funds to their bank accounts. The Ramai Awas Yojana aims to improve the living conditions of marginalized communities by providing them with safe and permanent housing, thereby empowering them to lead better lives. The Ramai Awas Yojana in Maharashtra is a government scheme aimed at providing housing for the economically weaker sections of society. Under this scheme, approval has been granted to accommodate 1.5 lakh people in their homes. This scheme is especially beneficial for marginalized communities under the Scheduled Caste and Scheduled Tribe categories, with a goal of providing housing to 1 lakh households. Assistance from the Social Energy Department is provided to make homes available to people. The list of beneficiaries is being issued online under the state government's online Ramai Housing Construction Scheme. The financial assistance provided for the construction of houses is limited to a maximum of Rs. 2,50,000/-.

Awareness Among People Around Rural Areas:

- Host community workshops: Organize workshops or information sessions to educate people about the availability and benefits of low-cost housing options.
- Utilize local media: Partner with local newspapers, radio stations, or community bulletin boards to share information about low-cost housing opportunities.
- Collaborate with local authorities: Work with local government agencies or housing authorities to disseminate information about housing programs and initiatives.
- Engage with community leaders: Reach out to community leaders, such as village elders or religious figures, to help spread the word about low-cost housing options.
- Provide informational materials: Create brochures, flyers, or posters detailing the features and eligibility criteria of low-cost housing projects, and distribute them widely in rural areas.
- Utilize social media: Use social media platforms to share information about low-cost housing options and engage with rural communities online.
- Conduct door-to-door outreach: Mobilize volunteers to conduct door-to-door outreach campaigns to directly inform residents about low-cost housing opportunities.
- Organize awareness campaigns: Plan events or campaigns focused on raising awareness.



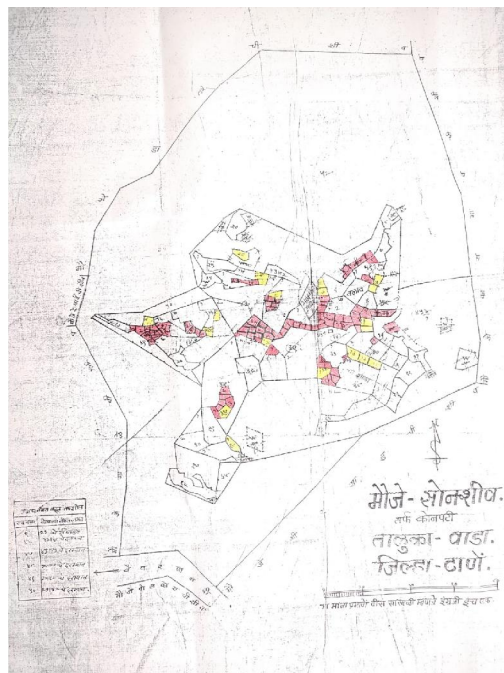
Beneficiary



Name of Beneficiary:- Dinesh KantiBhoir
AGE:- 42
Address:- Mokhada Village, Jwar Road, At. Post. Jawhar, Maharashtra.
Scheme:- Pantapradhan Awas Yojana
Cost of Building a House:- Rs.1,15,000/-

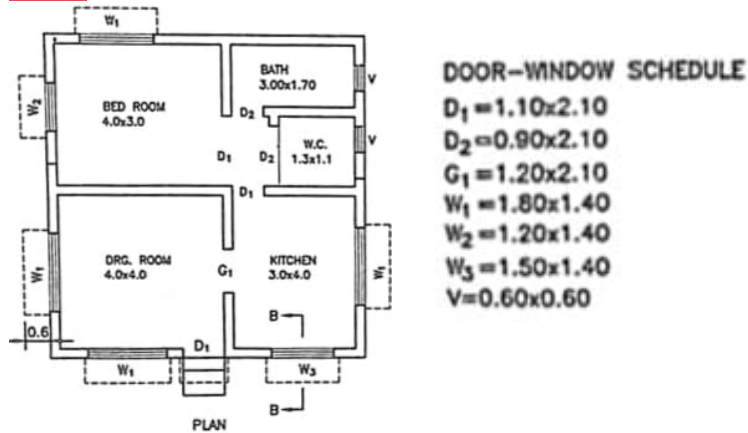
IV. RESULT AND DISCUSSION

MAP



Plan

	Determines Families Below Poverty Line
	Determines Middle Class Families



Estimation And Costing

Estimated Costing For Dwelling Unit Of families below poverty line:-

- Bricks= 8rs x 5000 quantities=40000rs
- Cement= 400rs x 45bags=14000rs
- Sand=1.5 tractor= 15000rs
- Rock=3000rs
- Steel= 2000rs
- Plaster=65rs x 60bags = 3900rs
- Colour= 2000rs
- Window=2000rs x 2nos=4000rs
- Door=4000rs
- Roof=450x12
- Cement Sheet for Roof(10 feet x 1m)= 5400rs
- Electricity Works=7000rs
- Plumbing=4000rs
- Toilet=15000rs
- Labour=40000rs

TOTAL= 1,59,300rs

Government gives 12000rs for Toilet

Pradhan Mantri Avas Yojna gives 32000rs for house

GRAND TOTAL= 1,15,300rs

Estimated Costing Of Dwelling unit for middle class families:-

- Bricks= 8rs x 6500 quantities=52000rs
- Cement= 400rs x 55bags=22000rs
- Sand=2 tractor= 20000rs
- Rock=5000rs
- Steel= 3000rs
- Plaster=65rs x 80bags = 5200rs
- Colour= 4000rs
- Window=2000rs x 4nos=8000rs
- Door=4000rs x 2 nos =8000rs

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Roof=450rs× 20

Cement Sheet for Roof(10 feet x 1m)= 9000rs

Electricity Works=10000rs

Plumbing=7000rs

Toilet and Bathroom = 15000rs

Sewage Tank (1000L Tank) = 10000rs

Labour=60000rs

TOTAL= 2,38,300 (Use of Intrest subsidy scheme provided by government)

V. CONCLUSION

- The Project helps poor people by building their houses by using the Government Schemes/Yojanas.
- The project 'Low Cost Housing' has tackled the critical issue of affordable shelter solutions.
- Through innovative design and construction methods, it aims to provide cost-effective housing options.
- Sustainable materials have been prioritized to ensure long-term viability and environmental responsibility.
- Collaboration with stakeholders has been key to ensuring the success and sustainability of the project.
- Community involvement has been leveraged to address specific needs and preferences, fostering a sense of ownership.
- By optimizing resources and minimizing costs, the project seeks to make housing accessible to a wider demographic.
- Attention to quality and safety standards ensures that low-cost housing remains a viable long-term solution.
- The project's impact extends beyond housing provision, contributing to broader societal goals such as poverty alleviation and social equity.
- Ultimately, 'Low Cost Housing' represents a tangible step towards addressing housing affordability challenges and improving overall quality of life for communities in need?

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