iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** VI **Month of publication:** June 2021

DOI: https://doi.org/10.22214/ijraset.2021.35815

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue VI Jun 2021- Available at www.ijraset.com

Redevelopment of Slum

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Abstract: ***India is on an accelerated path of urbanisation but several Indian cities face the challenge of housing their growing population, especially the urban poor. Much of the population is forced to living in slum settlements, especially in large cities like Mumbai. Undertaking slum rehabilitation/redevelopment schemes (SRS) becomes essential for cities to improve housing conditions of the urban poor. However, the planning of such rehabilitation/ redevelopment schemes tends to focus on physical aspects while ignoring the social aspects, which in turn can affect the living environment and overall development of the community. This paper attempts to makes an evaluation of such SRS projects in Mumbai through a survey of the beneficiary slum dwellers to assess their effectiveness. The results indicate that social infrastructure at community level is not well integrated into the SRS project planning, thereby affecting the overall development and living environment of slum dwellers. Therefore, other Indian cities have to keep it in mind in the planning and design stage of SRS projects.***
Keywords: Urban Poor; Mumbai; SRS; Physical infrastructure; Social infrastructure.

I. INTRODUCTION

With an ever-increasing number of slums emerging almost daily across the metros in the country, it was imperative that the Government took prudent steps to check this occurrence. Due to unavoidable circumstances, the dwellers in these slums, lead an unhygienic lifestyle and have poor standards of living. Keeping this in mind, the Government of Maharashtra has brought an amendment to the Maharashtra Regional and Town Planning Act 56 and introduced a nodal agency Slum Rehabilitation Authority (SRA). SRA brought forth a Slum Rehabilitation Programme that analyses and reviews existing positions of slum areas in the city. The SRA then devises plans for rehabilitation of these identified slum areas and ensures that the slum rehabilitation scheme planned is executed to the best of SRA abilities. The Slum Rehabilitation Authority (SRA), in India enables property developers to rehabilitate slum-dwellers in-situ and compensates the landowner and developer by awarding them with the Transferable Development Rights (TDR) Mumbai city is a large metropolitan city of India with a population of about 15 million. It has a population density of 30,000 persons/ sq. km, which is relatively very high. Housing such a large population is a major challenge for a city. Also, Mumbai's property is known to be one of the highest in the country as well as the world (DNA, 2016).Besides high population, the cost of housing unit/ property is very high in Mumbai due to the restrictive development control regulations that limit the development density to low levels Further, there are multiple regulations imposed on the development of land and housing in Mumbai, which restrict the housing options for citizens Mumbai city is a large metropolitan city of India with a population of about 15 million. It has a population density of 30,000 persons/ sq. km, which is relatively very high. Housing such a large population is a major challenge for a city. Also, Mumbai's property is known to be one of the highest in the country as well as the world (DNA, 2016).Besides high population, the cost of housing unit/ property is very high in Mumbai due to the restrictive development control regulations that limit the development density to low levels Further, there are multiple regulations imposed on the development of land and housing in Mumbai, which restrict the housing options for citizens The slum population in Mumbai city is as high as 55% due to the housing problem, especially for the urban poor who are forced to live in slum settlements. This has been highlighted in the recent India Urban Poverty Report (UNDP, 2009). Slum settlements in Mumbai are not a new phenomenon but they have been present historically for a very long time ever since industrialisation that peaked during 1960s. However, these slums are characterized by unhygienic and poor sanitation conditions; they are also vulnerable natural and manmade calamities. There is also a skewed occupation of slum units by male members, which results in low sex ratio in slums. Table 1 shows the resident population and sex ratio in slum and on-slum areas of Mumbai as per Census (2001).

II. LITERATURE REVIEW

Slum rehabilitation/ redevelopment is essential for improving housing in a large metropolitan city like Mumbai, which has more than 50% of the population living in environment of slum dwellers The income level of slum dwellers has been constant as it was earlier; but the expenditure has increased because of the changed lifestyle and added expenses such as month maintenance charges, increased transportation, education facilities and health facilities.. [1]

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Rapid wall is a low cost and fast track technique which leads to saving of resources, time and money. A boon as it is manufactured from the waste gypsum from the fertilizer companies. Though the money is spent on Rapid wall as a resource, it is 100% reusable and leads to saving of other resources and hence proves economical. Rapid wall is very suitable for low rise and low earthquake zones. Rapid wall technique is ideal for construction of slum rehabilitation projects where low rise building [2]

Slums in Uganda have been given very low priority in the national development for slum redevelopment following strategic approach used 1Forced Evictions: 2 Clearance and Relocation: 3Comprehensive Upgrading in place 4Comprehensive Upgrading in place [3]

Recycling construction waste workshops and basic techniques are part of the slum development center activities as well other provide incentives to the slum dwellers to promote better waste management and recycling mechanisms in exchange with landownership for example. This tackles and solves many problems all at once, by providing job opportunities to the slum dwellers, enhancing the waste management mechanism and reducing the wastes sent to landfills hence moving towards the realization of the zero waste concepts. [4]

Solid construction waste management and slum formation are two major problem worldwide

It seems that both problem are interrelated by using by using learn to earn model(LEM

The Learn to Earn Model is considered as a human development model which helps the slum dwellers learn a skill by which they can generate income to sustain their daily living costs. It is designed to serve the community on the bigger scale by employing the slum dwellers on many activities which has positive social and economic impacts Recycling construction waste workshops and basic techniques are part of the slum development centre activities as well other simple women activities SolidAAAS construction waste management and slum formation are two major problem worldwide

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Kolkata previously Calcutta is the capital of state West Bengal per the 2011 census of India about 16.79% of the urban area of 185 Square. Km Under the Kolkata Municipal Corporation has been slum area with 37.89% Slums census 2011Government of India launched Jawaharlal Nehru ru National Urban mission for an integrated and focused development of cities and towns in the year 2005

III. METHODOLOGY

As we know that the success of Slum Rehabilitation/Redevelopment Scheme is seen in terms of bringing some major improvements to the living of slum dwellers, the same has been attempted to be captured through a questionnaire survey of the beneficiary slum residents based on the following factors:

1) Improvements in the levels of physical infrastructure (water, sanitation, waste management, power etc)
2) Improvements in the level of social infrastructure (education, healthcare and recreation facilities)
3) Improvement in the income, quality of life and living environment
4) Physical infrastructures
5) Social Infrastructure
6) Change in income/ livelihoods
7) Change in quality of life and living conditions and validated Physical Infrastructure

Use of Expanded Polystyrene Core (EPS)

a) Expanded Polystyrene (EPS) core Panel system is a modern, efficient, safe and economic construction system for the construction of buildings. These panels can be used both as load bearing as well as non-load bearing elements. Therefore it is very suitable for slum redevelopment
b) EPS panel includes welded reinforcing meshes of high-strength wire, diagonal wire and self-extinguishing expanded polystyrene uncoated concrete, manufactured in the factory and shotcrete is applied to the panel assembled at the construction site, which gives the bearing capacity of

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The Mathematical Approach To Design Roads

- Road connect all part of the city we need easy path to travel from one place to another for me material supplies and services but in Slum that is not happening
- Some cant reliably get their mail get to work you and get the hospital in emergency dress remove and sanitation difficult
- There is mathematical approach to our urban design called topology
- Slum can be broken down into two component infrastructure like design infrastructure like home and Store And other access network roads and connection
- In one of two neighbourhood most essential service provided by city water toilet electricity and trash removal only outsider houses s exist but inner portion of settlement are completely cut off

IV. RESULT AND DISCUSSION

Expanded polystyrene (EPS) is an innovative building material that lends to the design and structural integrity of many building projects. Since the 1950s EPS has been recognised as a main stream insulation material, however over the past decade, new applications have rapidly developed. The Finite Element model of a G+3 building constructed in the North Indian city of Sonipat using the

EPS core panels has been developed in SAP 2000 and has been subjected to live loads according to Is

A. In slum rehabilitation scheme redevelopment slum ,houses, street's ,electric system ,drainage system so it efficient to work.
B. By using rapid walls and expanded polystyrene core EPS'S system speed of re development scheme is increase.
C. The rapid wall is waste from gypsum and it is 100% reusable so it is economical.
D. Good aesthetic appearance to slum.

V. CONCLUSION

The EPS panel system is a new construction system that could be a good alternative for the traditional masonry and wood Construction. Previous experience and application of the EPS panel system in different regions that were subjected to large earthquakes show that the EPS panel buildings are strong enough to resist large earthquakes.

EPS panels have standard dimensions

Wall- width -1170mm; core- thickness 40 to 150

Roof -width- 1000mm; core- thickness 40 to 150

Slum rehabilitation/ redevelopment is essential for improving housing in a large metropolitan city like Mumbai, which has more than 50% of the population living in slums. It is required for uplifting the living conditions and improving the living environment of slum dwellers. However, in the process of slum rehabilitation/ redevelopment it is important to consider wider aspects of rehabilitation for the improvement of the welfare and bringing about the The Physical Infrastructure provided to slum dwellers has improved remarkably, in terms of Water Supply, Sanitation, Solid Waste Management, Public health protection, and Electricity

By providing proper waste collection system ,sewage collection system , water purification plant reduce the disease spared.

Provided social infrastructure like public park, Hospitals , educational buildings so as improve skills and way of living.

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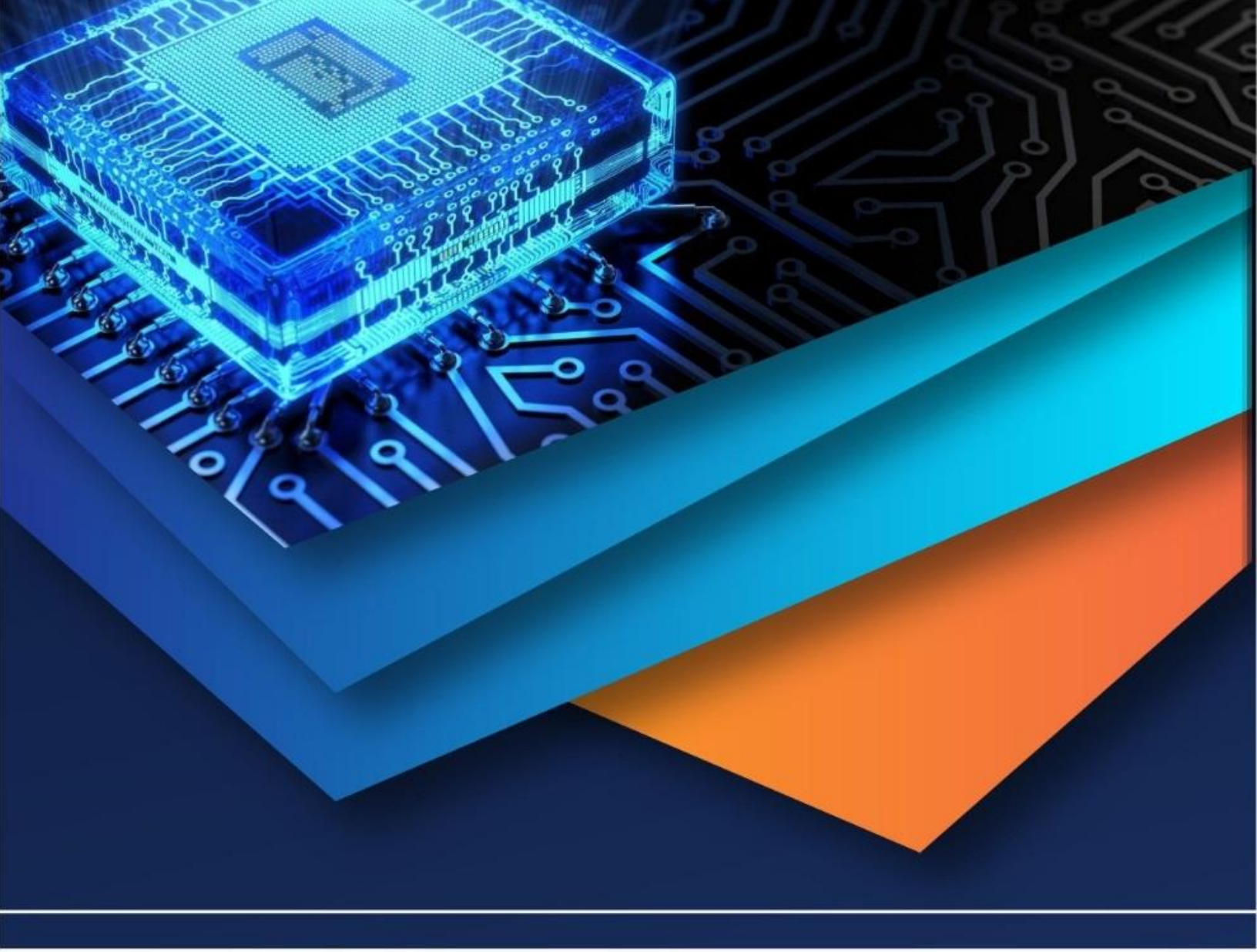

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