

Low-cost housing for slums

Nishtha Jain

Sunder Deep College of Architecture, Ghaziabad, U.P

Abstract

A severe architectural issue is the lack of cheap housing in emerging countries where the urban population is growing swiftly and fueling the growth of slums and informal settlements. Poor living conditions are common in slums due to inadequate housing, a lack of necessary amenities, and limited access to healthcare and education. This research paper will investigate India's opportunities and design challenges for low-cost housing in slums. The article looks at a variety of architectural ideas, elements, and construction techniques used in cheap housing and makes design recommendations for both environmentally and financially sensible housing options.

Keywords: Housing financial subsidies and support, accessibility, slum dwellers, urban facility

Date of Submission: 02-05-2023

Date of acceptance: 14-05-2023

I. INTRODUCTION

Slums and informal settlements are typical in developing countries where housing is scarce and poverty is rampant. In India, there are already close to 65 million people who live in slums, and this number is expected to grow as more people move into metropolitan areas. Slums have awful living conditions because there is a lack of sufficient housing, basic amenities, and easy access to healthcare and education. Architects must offer solutions for inexpensive housing that are environmentally friendly, useful, and aesthetically pleasing in order to address this issue.



Fig. 1. Showing a slum area

1.1. Design challenges for low-cost housing in slums

Affordable dwelling in slums involves unique and difficult design issues. It is the responsibility of architects to handle the issues of limited space, subpar materials, and inadequate infrastructure. When creating housing solutions, architects must also consider the neighborhood's cultural and social environment.

1.2. Design approaches for low-cost housing in slums

Slums now provide affordable dwelling options thanks to a range of architectural techniques. One such technique is the use of prefabricated elements that may be quickly assembled on site in modular construction methods. This approach reduces construction time and costs while providing a durable and sustainable dwelling choice.

Another tactic is to use sustainable building materials like bamboo, which is widely available in India and is both economical and long-lasting. Because it is lightweight, strong, and has good thermal insulating properties, bamboo is the ideal material for low-cost housing options in slums.

1.3. Design approaches for low-cost housing in slums

To design sustainable and cost-effective low-cost housing solutions for slums, architects must consider the following strategies:

- **Participatory design:** To make sure that housing options suit the needs and preferences of the community, involve them in the design process.
- **Innovative construction techniques:** Investigate cutting-edge building methods that lower construction costs and time while keeping high standards.
- **Use of sustainable materials:** Use sustainable materials like bamboo, recycled materials, and natural building materials that are locally available and cost-effective.
- **Optimize space:** Use modular construction and adaptable layouts to make the most of your available space.
- **Consider climatic conditions:** Provide housing options that offer enough natural ventilation, shading, and insulation while still being suitable for the local climate.

II. LITERATURE STUDY

A more familiar term, SLUM, is generally used to describe informal settlements. Slums have changed over time from being a term used to describe criminal activities to a specific area of a city that is typically characterized by great poverty.

SLUM REHABILITATION SCHEME

- The slum restoration program was started by the state government in 1995, and it is largely regarded as the most forward-thinking initiative to date.
- The program is open to everyone who lived in a slum structure before January 1, 1995.
- They can receive a 225 square foot house for nothing.
- The finance for the plan is quite creative.

III. BASIC SERVICES PROVIDE FOR RECOLATED SLUMS

3.1 Supply of Water

The slum redevelopment program has been quite successful in supplying the relocated households with regular and adequate water. One amenity about which none of the respondents had a complaint was the availability of water.

3.2 Toilet

The availability of a private lavatory for every household is a second SRS feature that has proven to be highly successful. As a result, it has become forbidden for slum people to urinate in public. As was already mentioned, the program covers private bathrooms in each apartment. The idea of a shared or public loo is gone. Cleaning the public restrooms on a regular basis is never guaranteed. Additionally, it maintains the families who live there in a clean and hygienic manner.

3.3 Sewerage and Drainage System

The majority of respondents showed no interest in the sewerage issue. However, some of the respondents' complaints were heard. All year long, according to the participants, there is occasional water logging. One of the responses said that the narrow pipeline, which is insufficient for water movement, is the root of the problem.

3.4 Electricity

Power outages and electricity costs have been evaluated as two characteristics of electricity or power supply. No respondent has voiced any issues regarding power outages.

3.4. Participatory Slum Upgrading.

The participatory slum improvement strategy includes empowerment and may build on knowledge gained through pro-poor planning. The goal is to support the current efforts being made by those who live in slums to improve their housing or the overall physical environment. These efforts may also involve using holistic strategies that incorporate social or economic empowerment. The purpose of NGOs or civic organisations is to mobilise funding to offer slum dwellers who want to make these changes technical or material support.

Table1. Models of Slum Improvement/Creating Affordable Housing

Model	Activities	Impact	Result
Reactive approach			
Slum clearance	Slums should be demolished. eviction and evacuation of slum residents	Slums were relocated to better neighborhoods Old slums are converted to a higher or better purpose occupants are occasionally dispersed residents' conditions and needs are concealed or easier to ignore	Negative effects Slums endured or got worse as a result of declining social cohesiveness and integration.
Adaptive approaches			
Technical and social support program	Support for resident-driven upgrading slum residents offer technical advice for renovating their dwelling	Government organizations or NGO's heavily involved in the beginning but absent later The lives of slum dwellers who are targeted for assistance are improved via covert projects.	Scale of effort too small to make a significant impact
Proactive approach			
citywide renovations with a sustainability emphasis	City-wide upgrading makes all-encompassing efforts to upgrade current slums: empowerment, poor-friendly planning, and assistance with the transfer to the formal economy	guides global sustainability efforts utilizing slum dweller ways, which involves creating new dwellings	An endeavor of a larger scale would be more appropriate to turn slums into decent neighborhoods with wholesome living conditions

IV. CONCLUSION

In conclusion, architects are essential in solving the problem of affordable housing in slums. Innovative design methods, the use of eco-friendly materials, and participatory design techniques that involve the community in the design process are all necessary for creating sustainable and affordable housing options. The living conditions of slum inhabitants can be improved by architects by developing housing options that are practical, visually pleasant, and sustainable.

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