INTRODUCTION

The natural sequel of unchecked, unplanned and haphazard growth of urban areas is the growth and spread of slums and squatter settlements which present a striking feature in the ecological structure of Indian cities. The rapid urbanization in conjunction with industrialization has resulted in the growth of slums. There are many factors due to which the explosion of slum occurs such as, the shortage of developed land for housing, the high prices of land beyond the reach of urban poor, a large arrival of rural migrants to the cities in search of jobs etc.

Slums are known by different names in different cities. They are called bustees in Kolkata, jhuggi- jhoparies in Delhi, Jhoparpattis or Chawl in Mumbai and Cheri in Chennai.

Socially, slums tend to be isolated from the rest of the urban society. The lack of integration of slum inhabitants into urban life reflects both, the lack of ability and cultural barriers. Thus the slums are not just huts and dilapidated buildings but are occupied by people with complexities of social-networks, sharp socio-economic stratification, dualistic group and segregated spatial structures.

It has been realized with the time that securing shelter for urban poor and low income groups is a vital aspect of urban development in Indian cities. The living quality of slum dwellers is perceived to be poor and miserable, and they also represent urban destress. (Joshi, R. and Sanga, P. 2009).

Slums are one or two-room hutments mostly occupying government and public lands. The houses in slums are built in mud or brick walls, low roofs mostly covered with corrugated sheets, tins, bamboo mats, polyethenes, gunny bags and thatches, devoid of windows and ventilators and public utility services.

Slums have invariably extreme unhygienic conditions. They have impoverished lavatories made by digging shallow pit in between three or four huts and with sackcloth as a curtain, hanging in front. When the pit overflows excreta gets spread over the surrounding area and is rarely cleaned.

The children cultivate the habit of defecating anywhere in the slum area. Slums have practically no drains and are marked by cesspools and puddles. Piped water is not available to slum dwellers and they mainly depend upon shallow hand pumps for water supply.

Such handpumps are generally dug in the middle of a stale dirty pool. People wash their clothes and utensils under the handpumps. The entire muck around the handpump percolates into the ground and contaminates the ground water. This contaminated ground water is taken out through the handpump which adversely affects the health of the slum inhabitants. The lack of integration of slum dwellers into urban life reflects both, the lack of ability and cultural barriers. Thus the slums are not just huts and dilapidated buildings but are occupied by people with complexities of social-networks, sharp socio-economic stratification, dualistic group and segregated spatial structures.

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dwellers.(Roychoudhari,2013)

It has been realized with time that securing shelter for urban poor and low income groups is a vital aspect of urban development in the urban cities. The living quality of slum dweller is perceived to be poor and miserable, and they also represent urban distress (Joshi & Sanga, 2009). As urban poverty has grown with the time, it becomes difficult to address the issue of the urban poor and additional attention needs to be directed for their betterment of the same; especially access to basic infrastructure services for them is the most prominent concern in developing slum up gradation strategies in the country. (Menendez, 1991).

Urban Poor well-being is dependent on many aspect, one of which is ensuring adequate urban spaces. It plays a significant role and attains considerable importance in their lives. Those open spaces act as ecological assets and contribute to the quality of life in numerous ways.

**Housing Projects by Architects for Urban Poor**

These case studies were selected as they were sensitive towards designing the housing for urban poor with special considerations to design of open spaces.

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**Nagpur city profile**

<table>
<thead>
<tr>
<th>FACT SHEET</th>
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</thead>
<tbody>
<tr>
<td><strong>Population (Census2011)</strong> (Source : Correa, 1997)</td>
</tr>
<tr>
<td><strong>Area</strong></td>
</tr>
<tr>
<td>24.05 Lakh**</td>
</tr>
<tr>
<td><strong>Density</strong></td>
</tr>
<tr>
<td>217.56 Sq km*</td>
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<tr>
<td><strong>Slums</strong></td>
</tr>
<tr>
<td>11,056 persons/ sq.km.</td>
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<tr>
<td><strong>Slum Population</strong></td>
</tr>
<tr>
<td>446*</td>
</tr>
<tr>
<td><strong>Literacy Rate (%)</strong></td>
</tr>
<tr>
<td>8,58,783*</td>
</tr>
<tr>
<td><strong>Urban Local Body</strong></td>
</tr>
<tr>
<td>1,71,645*</td>
</tr>
<tr>
<td><strong>Nagpur Municipal Corporation</strong></td>
</tr>
<tr>
<td>93.13%**</td>
</tr>
</tbody>
</table>

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**Aranya Low Cost Housing, Indore, India. (Source : Doshi, 1995)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Architect</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983-1986</td>
<td>B.V. Doshi</td>
<td>Indore Development Authority</td>
</tr>
</tbody>
</table>

- Housing inclusive of all neighborhood facilities like schools, medical centres and shops.
- Amenities overlapped with open spaces for usage throughout the day.
- Pedestrian network formed by interlinking the open spaces connecting the whole settlement.
- Creation of small clusters in the form of cul-de-sacs or open streets by grouping the dwelling.

**Belapur Housing, Mumbai, India. (Source : Correa, 1997)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Architect</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983-1986</td>
<td>Charles Correa</td>
<td>City &amp; Industrial Dev.Corp. Maha. LTD.</td>
</tr>
</tbody>
</table>

- Possibility for expansion and modification for each unit.
- Housing scheme for a range of income groups; from Rs 20000 to Rs 1,80,000 per unit.
- Formation of community spaces through the arrangement of clusters.
- Hierarchy of open spaces formed with different forms of usage and provision of amenities.
- More open to sky spaces
- Hierarchy of spaces adjoining clusters: 8m x 8m to 12m x12m to 20m x 20m.


<table>
<thead>
<tr>
<th>Year</th>
<th>Architect</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-1998</td>
<td>Raj Rewal</td>
<td>City &amp; Industrial Dev.Corp. Maha. LTD.</td>
</tr>
</tbody>
</table>

- In harmony with social stratum.
- Different types of spaces created by fragmenting large no. of dwelling units into smaller aggregations.
- Creation of dense residential clusters to facilitate social interaction.
- Concepts of housing units opening to an outer space.

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**Snapshots**

Source: Devashree Roychoudhary, March 2013, Value Of Common Open Spaces For Urban Poor: A Case Of Ahmedabad

“In slum, open space, covered space or courtyards plays an important role."

It may be act as an additional room to them.

The function is not defined, in night they may used it for sleeping, in day time they may used it as a washing space or they may used it for cooking or bathing also.

Separate open space or courtyard can be provided to each house OR it can be shared with the group of 4-5 houses or may be two houses with one courtyard.
Overview of Poverty Alleviation/ Slum Improvement Programmes

Government schemes implemented in Nagpur

Slum Improvement Program (1972 to 1994)
Its main objective is to bring basic infrastructure into the city's poor settlements. Water supply, provision of latrines, sewer lines, roads, drainage and street lighting. Total Rs.982.55 lakhs has been spent on these basic infrastructure facilities. (Source: SDCO 2000).

Integrated low Cost Sanitation
Under the "toilet for every house" vision of the Government of Maharashtra, the Nagpur Municipal Corporation has constructed 7500 individual toilets in all zones across the city. Individual toilets are being provided to individual households against a payment of Rs.365 per toilet.

Pay and Use toilets
With the support of HUDCO and the state government, the NMC is building 51 community toilets. These will be owned by the Nagpur Municipal Corporation and sub-contracted to organizations to be operated on a pay and use basis.

Swarna Jayanti Shahari Rozgar Yojna (SJSRY) and National Slum Development Scheme (NSDP) - These are centrally sponsored schemes with a mix of loans and grants for urban poverty alleviation.

BSUP under JNNURM in Nagpur City
Under the JNNURM, the BSUP scheme is being implemented in Nagpur Municipal Corporation Area through Slum Rehabilitation Authority Nagpur.

Research tool and technique
- Site visit
- Photographs
- Questionnaire
- Having conversation

Introduction to Study Area
Selected City For Study : Nagpur
Selected Slum : Mini Mata Nagar
LOCATION : Near Old Pardi Naka,
behind Haldiram’s Factory
Site Significance : Settlement started growing besides the water body around 30 years back gradually the water body got dry that helped the settlement to expand.
Social Groups : Mixed societies include Maharashtrians and Chhattisghari
Dominant Occupation : Maximum dwellers are Hawkers.
Few are having jobs at places like Brick Kiln, MIDC, Steel Factory, Ara
Machine, construction sites, etc.
Rest few are Self Employed.

Data Collection

Figure 2 Map Showing Zones of Nagpur City

Figure 3 Selected Site, Mini Mata Nagar, Nagpur Source: google map

Figure 4 Plan of Study Area (Slum site), Mini Mata Nagar, Nagpur

Figure 5 Showing The Present Scenario of Space Used.
**Questions / observations** | House No. 1 | House No. 2 | House No. 3 | House No. 4
--- | --- | --- | --- | ---
Types of space available | Open & covered | Open & covered | Open & covered | Open
Open space used by single family or by a group of families | Single family | Single family | Group of families | Group of families
Is there any house hold business? | Yes | No | No | No
Which space are you using for business? | Inside house in rainy season Outside open space in summer & winter season. for playing | for playing washing – separate space provided used for sleeping in summer & winter, Storage, drying clothes, parking vehicles. | for playing washing – separate space provided used for sleeping in summer & winter, Storage, drying clothes, parking vehicles. | for playing washing – separate space provided used for sleeping in summer & winter, Storage, drying clothes, parking vehicles.
How do children use the open space? | washing – separate space provided used for sleeping in summer & winter, Storage, drying clothes, parking vehicles. | for playing | for playing | for playing
Activities performed in the open space? | Yes, placed under covered space. | Inside house & front open space | Inside house | Inside house & front open space
Do you have any pets, if yes then where are they placed?? | No | No | No | No
Where most of the time is spent in the day by a lady in at home?? | Inside house & front open space | Inside house & front open space | Inside house & front open space | Inside house & front open space
Any other recreation spaces? | No | No | No | No
Which duration of the year is uncomfortable for using open space?? | In April-June more heat is there. In July – September, because of rain. | In April-June more heat is there. In July – September, because of rain. | In April-June more heat is there. In July – September, because of rain. | In April-June more heat is there. In July – September, because of rain.

**Analysis of Data**

**Covered space**-mostly used for storage purpose, used for keeping cycle, cooler, pets, etc.

**Open space**-used for drying clothes, keeping food in sun for drying, some houses using for washing clothes & utensils, storing water, parking vehicles, etc.

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**CONCLUSION**

Both covered and open spaces are used as multipurpose space used for sleeping in night time during summer which are acting as an additional room to Urban poor. At the same time open space is acting as an recreational space for the urban poor.

**References**

2. Neha Hardikar, Nagpur City Profile.
5. Neha Goel, Squatter Settlements: The Urban Vernacular?

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**How to cite this article:**


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