ABSTRACT: Handicrafts of Varanasi like Banarasi Saree has turnover in Cr. and also has huge export value. But the lackadaisical public policy for long time towards weaver, has led their marginalized population to create slums and live in sub-human environment. All the benefits of the policies has been taken away either by Gaddidars (traders) or Grihasthas (master weavers). The situation of weavers of Varanasi has become very vulnerable. After doing 12hr work, compromising their health, they receive wages less than the construction labour who works for only 6hr a day. Problem of debt from Gaddidars/ Grihasthas lead to cases of committing suicide among the weavers. Many of them had changed the occupation too.

There have been many studies on economic and social aspects of weavers but none of them has focused on the physical characteristics of housing and its impact on weavers, though weaving is a home based activity. So, this report covered all the aspects like physical, social, health and environmental condition of weavers of Varanasi. Surveys have been conducted in notified slum areas dominated by weavers to understand the issues, problems and potential of weavers. Correspondingly their preferences were noted. Based on this, various interventions were developed at policy level and project level. The study includes demonstrative solutions which clearly outline how such interventions can be executed on the micro level in weaver dominated areas.

I. INTRODUCTION

Banaras besides being a holy place also holds the position of world famous center of handmade textiles. The ancient traditions of weaving are more preserved in Varanasi than anywhere else. The major communities involved in this business are Muslim, who are in mostly forefather’s business and are also citizen of Varanasi even more than 100 years old. The young generation belongs are 4th generation of this community. Their fond of love for their work as well as for home is hard to explain but in chorus more hard is to feel their present scenario which has been spoiled due to mid men profit, poor infrastructure and vulnerable living condition. All this has resulted in slum area. Though, some efforts had been made to improve their condition under RAY(Rajiv Awas Yojana). But intervention taken under the scheme does not fulfill the requirement of weavers. Government intervention should be made for weavers specifically, as their needs are different from non HBE(Home based enterprises).

The study is based on surveys conducted in three slum pockets, which are dominated by weavers. The purpose of these studies was to assess the present situation and to understand the priorities and preferences of weavers in such slum areas. Based on their present status, it may be said that broadly two types of interventions at project level (i.e site oriented) may be applied to weavers dominated slum areas namely, cluster redevelopment and regularization of plotted development.

II. CASE STUDIES

A. Selection Criteria

Parameters for the selection of study areas that are weavers dominated areas (Bazardiha, Lallapura and Lohta) and Gaddidar dominated area (Madanpura), which have been identified on the basis of Existing Clusters defined by the Ministry of MSME(Cluster - The area have sizeable number of Home Based Industries), notified slum area under RAY and major environment and health issues.

B. Methodology

Data collection and analysis was done at three levels namely: City level, Cluster level, Dwelling unit level.
Interviews were held to collect information at settlement level, officials of DUDA, revenue department, Varanasi Nagar Nigam, PVCHR(NGO), convenor of Bunkar Dastkar Adhikar Manch(Self organized group), professors of BHU, trader, doctor were interviewed to get the information about backward & forward linkages, identify stakeholders, process of production, problem faced by weavers, issues with government policies, socio- economic & housing characteristics within the settlement etc.  

At cluster level visual observations were made about the building condition, property use, space utilization, built form characteristics and also stratified sampling was used to collect data through prepared questionnaires.  

During the survey, the layout of weavers dominated area were noted and rough maps & sketches were prepared showing the land use plan and physical characteristics of the cluster. With the help of community leaders, different typologies were identified within the cluster for the detail study at dwelling unit level.

A. Analysis

At master plan level: About 70% of the weaver’s population resides in old congested area of the city; even then they are not defined as mix use areas in Master plan. It discuss only about the road widening, no provision for redevelopment or up gradation of environment in those old congested built up areas. Neither any budget nor special regulations are made for such areas. There is no process defined for regulation of land sub division. Neither existing nor proposed ward wise density is defined in the master plan to know the holding capacity.

No standard has been set for the hierarchy of urban development which contains essential facilities & services at different level. Minimum area for the infrastructure required for layout at residential neighborhood level is not defined.

At city level: The weaving sector contributes 14% to industrial production, 4% to India’s GDP and constitutes 13% of the country’s export earnings\footnote{\textsuperscript{3}}. In case of Varanasi, approximately 6% of the total population work in spinning and weaving\footnote{\textsuperscript{4}}, whose turnover is 0.99 cr. and export value is 0.05 Cr\textsuperscript{5}. The weaving sector will also have a boost up through Make in India campaign. But still the situation of weavers is such that majority of them are living below poverty line. They are living in a vulnerable condition and are even committing suicide because of debt. If we want to preserve the heritage of Varanasi i.e Banarasi sarees, there is a need to focus not only on economical aspect but also physical characteristic of housing and its surrounding environment as weaving is a Home Based Enterprises.

Some analysis has been done on the basis of case studies, focusing on the physical vulnerability of areas dominated by marginalized weavers.

- **Lack of property document**: Originally weavers dominated areas like Bazardiha and Lallapura were villages. The land there belongs to a king of Varanasi. He used to give land to the bunker/weaver in the form of gift whenever they were in need. Because of this which the weavers living there do not have any kind of property documents. And with the increase in family size or disputes among the family lead to shifting of weavers in fringe areas like Lohta. This is the reason weavers dominated areas are unidentified by municipality, which can also be seen through number of voters i.e in case of Bajardiha and Lallapura it is only 13% of the total population. For such a small vote bank, politicians are also less interested and are left unnoticed.

- **The problem which the weavers face because of the negligence by municipality**: Poor drainage system, lack of individual water connection (Most of the dwelling unit has their own summer sable, while some weavers has shared summer sable also, like in the image above single summer sable is having 5-6 connections, Use of shared summer sable on rental basis is most prevalent because of the poor quality of municipality water and lack of individual water connections.), lack of sewage connectivity with main line (Sewer line is there but its connectivity to individual plot is poor, because of which sewage from many DU’s are disposed in open drains, leading to unhygienic conditions. Drains are blocked by wastes.), narrow lanes without street light, sub-division of plots is unnoticed because of the inadequate waste collection system, HBEs is exacerbating the problems.

- **Low literacy level**: Low literacy is also one of the reasons for their negligence not only by Gaddidars but also government authorities, as they themselves are not aware about their right to citizen as per Constitution of India, which includes right to life, right to education, right against exploitation etc. Only 50% of the population are educated upto Primary level and 1/5th of the population are illiterate. This lead to dependency of marginalized weavers on Gaddidar/Grihasthas and they are exploited by them.
Lack of government interventions: All the interventions at central level are made for the economical up gradation and none of them focuses on the housing sector of weavers though weaving is a home based enterprise. Even the in situ development under RAY (proposed in 2009) will be a failure in weaver dominated areas because of three major reasons:

Table 1: Change in plot sizes, before and after 1995.

<table>
<thead>
<tr>
<th>Area</th>
<th>Before 20 years</th>
<th>After 20 years</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madanpura</td>
<td>More than 100sqm</td>
<td>50-150sqm</td>
<td>Sub-division result in small plot size</td>
</tr>
<tr>
<td>Bazardiha</td>
<td>50-150sqm</td>
<td>25-150sqm even in some cases less than 25sqm</td>
<td>Sub-division result in small plot size</td>
</tr>
<tr>
<td>Lallapura</td>
<td>25-80sqm</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Lohta</td>
<td>25-60sqm</td>
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</tbody>
</table>

The three slum areas were identified under RAY in 2009, but it is yet to be implemented. And six year old survey data (2009) will be utilized for the implementation of scheme though the situation has changed.

- No integration of slum MIS with GIS though it is required as per the guidelines of RAY 2013-22
- Common DU layout for HBE and non HBE, though both has different requirements.

At Cluster level: Encroachment and sub division of plots has increase the congestion and reduce the plot size to less than 25sqm (Fig. 2).

At Dwelling unit level: During the primary survey, main focus was done on the issues related to weaving activity on housing and its surrounding, also its impact on health of marginalized weavers in Bajardiha.

Impact of weaning on housing:
1. Less circulation area within the cluster and more than 90% of the ground coverage on plots, lead to indoor pollution through poor light and ventilation and results in many diseases.
2. Unhygienic working condition: Lack of ventilated rooms and poor access to sunlight affects the working condition. As proper light is required in case of working on handloom.
3. Lack of house maintenance: It lead to shifting of weavers to other location as because of dilapidated and semi pucca housing, water seeps inside the DU and get collected into the pit made for weaving purpose within the working area.
4. Air & Ventilation: There is absolutely no ventilation in the workspaces. Weavers work in a dark condition, which lead to weak eyesight because of continuous work in dim lights. Lack of air circulation leads to easy transmission of disease from one person to other, creating health risks.
5. Health risk of Handloom silk weavers: Around 30% of the weavers is infected with TB. Is easy for the weavers to get infected because they work in poorly ventilated rooms for hours, and that spreads germs very fast.

Several health hazards are associated with weaving and related activities which may cause stress and strain to weavers and pose several health related risk factors to them like eye sight weakness etc.

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Fig. 1. Waste generation in weavers dominated areas and its impact.

Fig. 2: Transformation in plot sizes within 10 years (1995-2015)
Fig. 3: Floor plan and 3D view of the DU(area: 50sqm) having household size 10.

Fig. 4: Floor plan and 3D view of the DU(area: 15sqm) having household size 5.

Fig. 5: (a) DU of weaver in vulnerable, (b) Toilet below staircase, (c) Lack of natural light condition in working area.

Table 2: Shruti Raghuvanshi, Social Activist, PVHCR.

<table>
<thead>
<tr>
<th>Weavers suffering from T.B</th>
<th>2011</th>
<th>12900</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td></td>
<td>13700</td>
</tr>
</tbody>
</table>

Aspiration: They want wages at least more than the construction labour, who is getting 250 Rs on the daily basis for working 6hr. They want the government to increase the subsidy on raw material. Some govt. agent must give the knowledge about the various govt. schemes beneficial for them either through camp or door to door campaign. They want the government to provide some financial help to upgrade his living condition.

Work: Net space per person within the room is 2.3sqm. 50% of the total built up area is used for HBF. At night same area is used for sleeping purpose for the males of the family.

Domestic: Net space per person within the room is 1.6sqm for three female and three children. 24% of the total built up area is used for residential purpose.

Priority: For the weavers, work is the main priority. So, in case of weavers any government scheme without considering work place within the dwelling unit will be a failure.

Fig. 8: Health Hazards in weavers dominated areas (Lohta, Bajardiha, Lallapura).
III. RECOMMENDATION

In case of Varanasi weavers there is a need of resolving the problem regarding physical, economic, social, ownership, health improvement and also awareness about the negative impact in absence of all on their life. This can be done through: Minimum dislocation, Community participation, integrated approach for sustainable improvement

“Provide access to inclusive, sustainable and adequate housing for all” under urban themes of UN Habitat

Housing need in case of weavers is different from non-home based enterprises as well as other home based enterprises. In case of weavers, introduction of weavers improvement programme in a specified weavers dominated settlement by central government can be useful in upgrading the condition of weavers living in slum areas. Central government must introduce a special programme for the marginalized weavers of Varanasi i.e weavers improvement programme.

![Fig. 8. Priority distribution of weavers based on primary survey.](image)

**Option 1: Cluster redevelopment**

The municipal corporation must have a bare land to start with. This will be built to a design that the members agree to move in. They give up their land and buildings that are to be redeveloped in the dense city area

**Benefits of cluster approach: Redevelopment**

1. Weavers will have property document, which will help in taking credit from financial institution.
2. Separate kitchen and toilet with proper light and ventilation, which is absent in the current scenario.
3. It will solve the congestion problem in the Dwelling unit up to larger extent
4. Extra housing stock will come up.
5. Person will have its own pucca house.

**Option 2: Regularization of plotted development**

Plot area less than 65sqm of area should not be permitted for mix use i.e residential and weaving activity.

There should be an open courtyard of mm 15sqm (mm 3m wide), if setbacks are not given. 25sqm is the minimum living area norm specified in national housing code. We cannot challenge the nationally accepted norms, but can made some addition of separate work space of min 10SqM for the weavers and also inner open space of min 15sqm, as the weavers settlement area is based on courtyard planning.

b. Infrastructure improvement and maintenance of land records

TP scheme can be used for the road widening process, maintaining land records and providing infrastructure.

b. At Project level

**Option 1: Cluster redevelopment**

The municipal corporation must have a bare land to start with. This will be built to a design that the members agree to move in. They give up their land and buildings that are to be redeveloped in the dense city area

![Fig. 9. Transformation after redevelopment.](image)
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c. Infrastructure improvement and maintenance of land records
TP scheme can be used for the road widening process, maintaining land records and providing infrastructure.
- it is impossible for it to access the settlement.

<table>
<thead>
<tr>
<th>Living Area</th>
<th>Working area</th>
<th>Total area</th>
<th>20% Wall area</th>
<th>20% Circulation area</th>
<th>Inner open courtyard</th>
<th>Total Plot size</th>
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<tbody>
<tr>
<td>Area(Sqm)</td>
<td></td>
<td></td>
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<td>25</td>
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<td>7</td>
<td>7</td>
<td>15</td>
<td>65</td>
</tr>
</tbody>
</table>

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