

Establishing a Participatory Approach Among Communities and Citizens towards the Urban Development within the Chitar Oli district of Nagpur, Maharashtra

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Abstract— Neighbourhoods play a unique role in India's urbanity. They not only showcase residences but also give character to the cities. Occupation has been an essential representative in defining this character and identity of different areas of the city. These communities narrate individual experiences, as well as accommodate numerous congregational activities, ranging from professional ventures to religious gatherings.

One such community is located in the Chitar Oli region of Nagpur, Maharashtra. The nomenclature of the neighbourhood is derivative of the occupation of its residents – Chitaris, or sculptors, and the lanes – or Oli. Members of the sculpturing community banded together to occupy this neighbourhood, thereby increasing the accessibility and marketability of their products. The most noteworthy aspect of this society is their involvement in the development and maintenance of their locale.

The author examines the relationship between the community lifestyle and sustainability, and its evolution. Sustainability impact or is defined as a function of population, affluence, and technology. These factors are invariably linked to the degree of interconnectedness within the population.

The global trend of the nuclear family style gaining traction in urban communities has undoubtedly made its way to Chitar Oli. The dispersion of families has led to an increase in numbers of households, thus increasing consumption and expenditure. Residents no longer see themselves as the stakeholders of community well-being.

The paper aims to illustrate the experimentations which the author carried out with the intention of establishing the qualitative link between the changing behavioral patterns of human societies and their sustainability impact..

Index Terms— neighborhood, community, sustainable, interconnectedness, population, technology

I. INTRODUCTION

Urban infrastructure today can be conceived as a lattice of different elements that correspond to the different rings of many concentric circles. The outermost layer signifies our global network; the international relationships shared between countries across the world. As we move inward, we discover our national framework – a highly complex dynamic machine dependent on the flow of energy, materials, information, and populace, then our state systems, and finally, the building blocks of many nations – cities. Though there exists some debate regarding the changing definitions of the word, cities today are typically underlined with urbanism, cosmopolitanism, and diversity. Many of the modern-day metropolises coalesced as a result of different socio-cultural communities interacting with each other and the requirement of a common, public space required to do so. Moving further inside, neighbourhoods can be distinguished. Neighbourhoods are often social communities with considerable face-to-face interaction among members. They exhibit higher degrees of interconnectedness, vis-à-vis cities, with the decisions made by individuals, often having an impact on the lives of the community. [1] These

neighbourhoods further accommodate different communities – large groups of people sharing the same ideological beliefs, religion, or occupation.

II. URBAN SUSTAINABLE CYCLE

A. Defining Sustainability:

Sustainability impact or environmental impact is defined as a function of population, affluence, and technology. [2] However, a common gap identified in this model is that it too simplistic for complex problem as it excludes interdependencies between variables. [3] These factors are invariably linked to the degree of interconnectedness within the population and their approach toward sustainable living. Sustainable development is the development that is likely to achieve lasting satisfaction of human needs and improvement of the quality of life under the condition that ecosystems and species are utilized at levels and in ways that allow them to keep renewing themselves. In order to accomplish this, it is vital that the species and the ecosystems function in cohesion with the other at each level of the urban infrastructure. It is necessary to start at the modular level of community relations, and then proceed to work our way outwards. Refer

to figure 1 for a graphical representation of this theme.

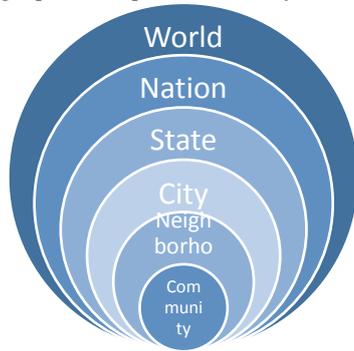


Fig. 1 Diagrammatic relationship between different levels of urban infrastructure

Source: Author

The author attempts to accentuate the importance of community relations and their evolution over time with respect to human behavioral trends under the purview of sustainability and the built environment. These findings are based on participatory research conducted among communities and citizens based on existing urban development practices within the historic core of the city. Fig 1 explains how sustainability is a collective responsibility between communities, neighbourhoods, cities, states, nations, and the world. Sustainability is dependent on these elements.

III. NEIGHBOURHOOD AND COMMUNITY OF CHITAR OLI, NAGPUR

One such neighbourhood is Chitar Oli. Chitar Oli is situated in the central-eastern part of Nagpur city of Maharashtra. The nomenclature of the locality is derivative of the most popular occupation (then, caste) of its residents – *Chitaris*, or sculptors, and the lane – or *Oli* (in the local dialect of Marathi language). This community of artisans banded together to create a more marketable product, giving “*Chitar Oli*” brand value.



Fig. 2 Map of India showing Maharashtra and Map of Maharashtra showing Nagpur region.

Source: Government of India

During the reign of the Bhonsalas, trade, and art flourished to a great extent. Chitar Oli came into being around the same time. The land was granted to this community for manifold

reasons, the first being incentive to join the artistic colony. Secondly, the location was given due to its proximity to the banks of the Nag River (source of mud for the sculpting) and the wholesale wood market, Lakkarganj.



Fig. 3 Photograph of lanes of Chitar Oli, Nagpur

Source: Author

In the present day, Chitar Oli is bound by two of the busiest roads in Nagpur, the Mahal and Central Avenue Road. It can be delineated as a lane which starts from the Badkas Chowk, Mahal and merges into the Central Avenue Road. The main street of Chitar Oli also has several small lanes branching out. These streets are home to dozens of traditional artisans practicing the art of idol making.

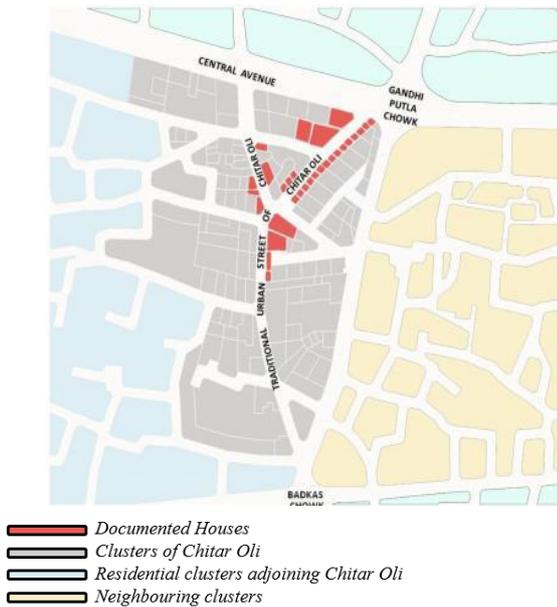


Fig. 4: Map of Chitar Oli, with the clusters within the area and adjoining the area segregated

Source: Parlewar, Prafulla & Ramteke, Abay. (2003). Traditional urban street, Chitar lane: an approach for sustainable urban regeneration.

The map illustrated in *Figure 4* shows the houses of artists in the present scenario. It is surrounded by residential and mixed land use clusters on either side. This community of artisans has, over time, built a model of interactions between intermediate producers, final producers, and consumers. November through March, which is often regarded as the wedding season in India, the artisans are engaged in manufacturing sets and stages for these functions. Similarly, around Ganeshaotsav or Durgotsav (*two festivals celebrated in India by the Hindu community, that revolve around the manufacture of idols of different deities*) This observation is a testament to the fact that the craft of these artisans is invariably linked to our day to day lives[4].



Fig. 5 Photographs of artisans in different stages of idol preparation

(From left to right: dry mixing, wet mixing, and painting)

Source: Author

The residences of Chitar Oli have several distinguishing architectural characteristics. The most common layout observed in these households during multiple site visits have been documented below. Refer to figure 6/7/8 for the schematic plan illustrating these features.

- i. The ground floor was primarily used as the artisan’s studio. Different areas on the ground floor include working space, space for mud mixing, landing for loading/unloading raw materials, and finished products. Facilitating these areas on the lower level ensures minimum encumbrance with respect to the movement of materials and products.
- ii. The first floor was the residence of the artisans and their families. Areas on the first floor include bedrooms, washrooms, and galleries. Further, many of the first floor slabs in these houses contained “cut-outs,” to improve the wind circulation on the ground floor
- iii. As per the requirement of the residents/family sizes, some houses also contained second floors, which functioned mainly as extensions of the residential spaces of the household. Additional bedrooms and washrooms were located on the second floor.
- iv. The roofs were typically pitched roofs, often with extended eaves offering necessary protection from excessive rain or sunlight to the galleries on the lower floors.
- v. Additionally, artisans often occupied the spaces in front of their stores by installing temporary/permanent sheds to display their creations. These footstalls reduce the effective width of the street, making vehicular movement extremely difficult [5].

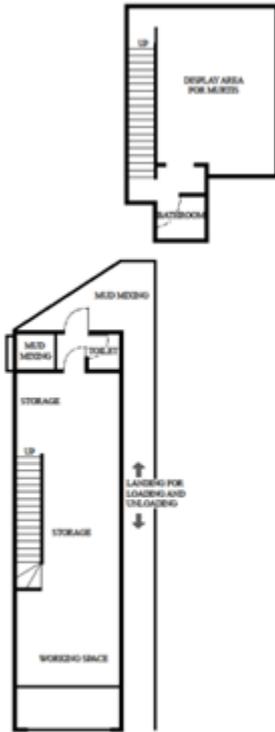


Fig 6: Ground Floor Plan of residence at Chitar Oli



Fig 7: First Floor Plan of residence at Chitar Oli

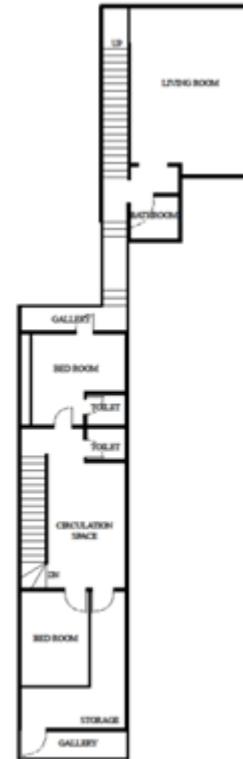


Fig 8: Second Floor Plan of residence at Chitar Oli



Fig. 9 Schematic Representation of original street width (4.5-6 meters)
Source: Author



Fig. 10 Schematic Representation of reduced street width (1.5-3 meters)
Source: Author

during off seasons translates to a loss in revenue and income. Many residents rely on their surplus and savings from the peak months to last them through these months. Being from the unorganized sector, they are often unable to avail benefits from monetary relief schemes. The unethical practice of introducing cheap, unsustainable materials that are harmful to the environment, has led to an unsustainable practice. With the recent introduction of the Metro Rail in the city, the land values have drastically changed, which has further contributed to the problem of growth and development of regressive infrastructure in the area surrounding Chitar Oli [6].

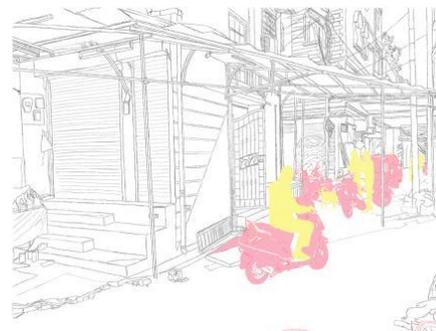


Fig. 11: Sketch demonstrating the excessive vehicular movement in the Chitar Oli district of Nagpur, Maharashtra
Source: Author

The seasonal nature of these festivals is a significant issue faced by the artisans of Chitar Oli. The decrease in demand

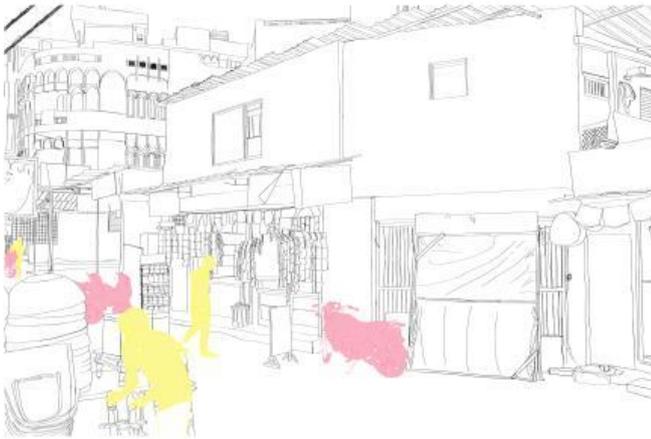


Fig. 12 Sketch demonstrating the excessive vehicular movement in the Chitar Oli district of Nagpur, Maharashtra
Source: Author

IV. Changing citiES and neighbourhoods

The city plan of Nagpur has changed drastically since the advent of Chitar Oli, broadly the railway line of Nagpur divides Nagpur into two discrete sections – the old city and the new. Any development in the new city region, mainly residential development, is increasingly disconnected from the historic parts of the city, including Chitar Oli. These lead to a complete collapse in the model established by the artisans. The link between the producers and consumers is driven by demand and relies heavily on consumer awareness and communication. Later generations of Nagpur residents have little to no cognizance of communities such as Chitar Oli; hence, they migrate to cheaper or more convenient sources.

Further, this disconnect has led to a shift in cultural practices as well. The global phenomenon of the nuclear family trend gaining traction in urban communities has undoubtedly made its way to the lanes of Nagpur as well. The dispersion of families has led to an increase in numbers of households, thus tipping the scales of consumption and expenditure. Over some time, the residents of the neighbourhoods have stopped seeing themselves as the stakeholders of community well-being. The current notion of “resident” is analogous to that of “consumer.” Whereas, Chitar Oli is still heavily

engaged in a community lifestyle. The devaluation of the traditional handicrafts is a natural consequence of this consumerist lifestyle.

V. Need to re-establish a dialogue among heritage and community, through the educative and participative initiative

Heritage walks are an instrument to investigate the unexplored and neglected richness of a locality. They play a significant role in the advancement of the history and character of the city by garnering interest and association within the local communities in the urban conservation movement. They are becoming increasingly popular as methods of generating heritage awareness among citizens. By adding the element of interaction, the author intends to establish a unique model of heritage walks aimed at establishing a platform for dialogue between:

- i. Students
- ii. Professionals
- iii. Local residents
- iv. Heritage property owners
- v. Scholars
- vi. Academicians

The walks are supplemented by information brochures and postcards amongst other souvenirs, which accentuate interest among the participants about the heritage which they are going to experience [7].

The model expands the walks from being conduits to narrate history, to a study that can be used as a basis for futuristic development of the localities covered. These walks were reimagined, and further renamed as “Heritage Dialogues.” Details of the series of such heritage dialogues conducted at different historical sites in Nagpur, Maharashtra are tabulated below

Serial Number	Location	Date	Remarks
1	Chitar Oli, Nagpur	2 nd September 2018	The Chitar Oli Heritage Dialogue was attended by over 110 participants, including students, professionals, and local occupants and artisans.
2	Gond Palace, Nagpur	14 th October 2018	This walk aimed at highlighting historic tales from the Gond’s era in the city.
3	Juni Shukravari	13 th January 2019	Delivered a narrative upon the city’s traditional market culture.
4	Mominpura	2 nd June 2019	The area populated by handloom artisans was selected for this initiative.

5	Golibar Chowk	11 th August 2019	The chowk of old city, famous for the brutal incident of public assassination of citizens by British policemen, during the struggle for independence. Following the incident, the Indian National Congress met in Nagpur, passing the resolution to call for the Non-Cooperation movement in 1920.
6	Sitabuldi	13 th October 2019	Street markets of the contemporary age and historically a place for of residence for the <i>Gwali</i> (milkman) community.
7	Empress Mill	12 th January 2020	This initiative aimed to establish an overview on the mill culture of Nagpur, the industrial heritage of city and its identity.
8	Ajni Railway Quarters	01 st March 2020	Citizens explored the established railway that travels north-south and east-west, and adjoining residential quarters.

The Nagpur Tale is held in academic association with IDEAS (Institute of Design Education and Architectural Studies) Nagpur, which distributes certificates for participants, in an attempt to incentivize scholars from various fields of study. This model of Heritage Dialogues attempts to fill the cognitive gap between citizens of modern-day Nagpur city and characteristics of the sustainable lifestyle exhibited by these age-old communities, as identified in earlier sections of the research. Apart from generating awareness, the study creates a cohesive approach towards sustainability by increasing participation on the community level [8].

VI. OBJECTIVES

It is imperative to establish a link between the past, present, and future. This can only be achieved through contextual and participatory planning. The author adopted the following measures to achieve the desired results under these three paradigms, as discussed below:

- a. **Past initiatives:** Understanding the historical context, the heritage, and the demographic of the region as well as the evolution of these factors over time. This involves a thorough literature study regarding the history of the place. Ancillary aspects like politics, economic bearing, and technological advancement must also be discussed. Further, to expedite the program, categorization of the user base according to the research, as well as identification of action zones and preparation of the survey must be done.
- b. **Present initiatives:** Documenting the current scenario, interacting with the occupants and establishing the narrative through them, and validating it through photographs and videos. Visit the place to further gain an understanding of how the context has changed over the years and how the area and its occupants have evolved accordingly.

Surveying and mapping are integral to this facet. “Heritage walks” must be repurposed to “Heritage Dialogues” to establish two-way communication. This phase forms the basis of the qualitative analysis done by the author [9].

- c. **Future initiatives:** Identification of issues faced by the different users or inhabitants of the area, possible points of action. Promoting change within the society, tackling the struggles brought to our attention by the occupants, as well as implementing the knowledge acquired in our undertakings. Increasing the levels of participation from governing authorities, advocating the cause using the surveys, documentation, and analysis done.

VII. QUALITATIVE ANALYSIS EXPERIMENTATION USING HERITAGE DIALOGUE SITE INTERVIEWS AS BASIS

Qualitative research methods are focused on understanding experiences. They are, therefore, instrumental in the sustainable heritage context because they can provide new insights and knowledge in complex areas. (*Crowe et al., 2015*) While quantitative and statistical research methods enable deduction and prediction irrespective of context, participatory qualitative research enables contextualized understandings of subjective experiences.

A. Preliminary Study

The preliminary study involves understanding the historical context, the heritage, and the demographic of the region as well as the evolution of these factors over time through literature study. In order to be able to identify the action zones, the area was mapped with respect to the land use, with particular emphasis on the residences/workshops of various artisans. (*Refer figure 4*)

B. The selection of participants :

As determined by preliminary context and historical research, the participant sample selected for the survey and interviews were predominantly male, young (within the ages 20 and 35), and practicing artisans based in Chitar Oli for a minimum of two generations.

C. Interview Process

Data was collected using various means, such as observations, textual constructions, and questionnaires, but the primary basis for the analysis was the interviews. Preparing for these interviews includes the design of the questions, identifying the unit user groups, and ensuring that the sample contained representation from each of these groups.

Within the demographic to be interviewed, we were able to identify primary and ancillary occupations. The primary user groups were as follows:

- i. *Chitrakar*, or painters
- ii. *Murtikar*, or sculptors
- iii. *Dukaandar*, or vendors
- iv. *Grahak*, or customers

The ancillary user groups identified were as follows:

- v. *Pahanara*, or audience
- vi. *Thelewala/hamaal*, or the group of people transporting the finished product out of Chitar Oli, primarily on non-motorized vehicles
- vii. *Gadiwala*, or the group of people transporting the finished product out of Chitar Oli, primarily on motorized vehicles
 - o *Transcribed Data*

The transcribed interviews became the raw data and unit of analysis. These were read, and information related to sustainability was identified.

Author: Right now, with everyone talking about sustainability, the talks of a more permanent form of sculptures are making rounds, such as marble and continuing the same sculpture for the following years. How does that impact the lifestyle here?

Interviewee (Sculptor): That is not how it should be. The topic of global warming is being spoken about. It is up to us to make changes to make the future better for the coming generations. The sculptures made of Plaster of Paris take a very long time to dissolve. Some are made of metal. They do not dissolve at all. However, the ones conventionally made of mud dissolve easily, reducing the impact.

Author: How has the demand for these sculptures evolved?

Interviewee (Sculptor): The typology and size of statues are changing with time, with the competition of sculptures increasing. The 20ft statues being made are of magnificent proportion and in no way in scale with the spaces available, resulting in newer typologies of spaces, like the workshops and footfalls to house the larger sculptures and to store larger quantities due to the increasing demand.

Author: Have there been any significant changes in the domestic lifestyle lead by the residents of Chitar Oli? If yes, how have they affected the surrounding infrastructure and means of production?

Interviewee (Vendor): Growth has been very unplanned and chaotic. Earlier, the family size used to be large, so the houses also used to be large. But over time the houses kept getting divided based on the number of children in each family. This is why most housing is linear and congested with wall to wall construction and no setbacks.

Interviewee (Painter): The respect given to traditional art is being lost. Residents have degrees and professional qualifications but choose to work here to keep up the tradition. But if I people are earning more than us, there is no use of trying so hard. The reason for people to do business is to earn money, and if that is not happening, then people are bound to shift to more lucrative operations.

D. Content Analysis

On the basis of observations, questionnaires, interviews, and literature studies, the following is a condensed analysis, including inferences establishing the link between the findings and previous knowledge.

The author makes the following inferences:

- i. Chitar Oli presents multiple instances of compromised sustainability, many of them stemming from the disrupted traffic patterns; A consequence of the lack of space.
- ii. Profiteering investors/vendors/residents have overexploited the existing situation. The community as a whole has strength and willingness to retain the occupation with the existence of the available market; however, their efforts are often impeded by the consumerist approach shown by the consumer as well as producer.
- iii. The unsustainable infrastructure development in and around Chitar Oli, combined with the loss of respect exhibited by the citizens towards traditional art forms, has led to a steady decline in the demand for merchandise. This, in turn, further widens the gap between sustainable

heritage and a modern way of life.

E. Prospects

In order to ensure a more cohesive growth pattern for the region, the following opportunities and changes can be availed:

- i. Revitalizing urban infrastructure be re-establishing the links that help sustain the new and the old portions of the city. Ensuring that the historic sites, such as Chitar Oli, are deemed as urban landmarks, duly credited with imparting the city character and heritage.
- ii. All conservation efforts must involve the use of appropriate technology and ideological sustainability measures to improve the overall quality of life
- iii. There must be increased participatory planning, making sure that the decisions made by the policymakers are validated by the stakeholders/final users.
- iv. Early intervention; these decisions involving users should be made in the early stages of redevelopment to ensure contextual planning.
- v. Attention towards loss of architectural vocabulary amongst citizens [10].

F. Sustainability, Resource Conservation, and Energy Conservation plans from Chitar Oli

All proposals regarding the city and historical districts must prioritize environmental vitality. Conservation efforts must involve the decongestion of the urban fabric by relocating and re-planning the urban infrastructure in such a way that the interconnectedness between different sections of the city is maintained.

Chitar Oli has facilitated growth around the region. This has led to significant vehicular congestion, proposals to remediate this include:

- i. Increasing the physical interface between the consumer and vendors
- ii. Facilitating uniform growth and a new network of transportation routes
- iii. Introducing exclusive corridors for pedestrian circulation

The findings of this research also look into resource and conservation. Making the habitat with locally available materials like bamboo, Guna tiles, mud and fly ash has proven beneficial to the residents of the locality, and these construction materials can be locally sourced to a great extent, thus reducing the embedded energy costs. These materials are also climate-responsive and help facilitate

passive cooling.

VIII. Conclusion

Nagpur, as a city, is an amalgamation of different civilizations, as a result of which it lacks a singular, prominent identity. Throughout history, numerous rulers provided patronage to the artists and sculptors of Chitar Oli. The functioning neighbourhood community system was compatible with the socio-economic scenario of the time. However, with an increase in industrialization and globalization, sustainable traditions have been unable to keep pace.

Sustainability and heritage are not mutually exclusive constructs. When we confer the decision-making ability from an individual to a community, we attain a more democratic approach to sustainable living in which the residents become stakeholders of the well-being of the community. Once we let the community's appropriate spaces and services that previously belonged to individuals, the consumption per individual metric now becomes the consumption per community, thereby lessening the environmental impact [10].

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