

Mithila Architecture: Spatial Planning and Construction Techniques of Mithila Houses

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Abstract

Mithila Architecture, found in the Mithila region of India and Nepal, showcases the rich cultural and artistic traditions of the Maithili people. This paper explores different types of Mithila Architecture, focusing on their unique features and cultural importance. Traditional Mithila houses are known for their distinct features such as mud walls adorned with vibrant wall paintings, thatched roofs, and intricate wood carvings. These houses are not only aesthetically pleasing but also built using sustainable practices that harmonize with the local environment. The findings of this study indicate that Mithila's architectural style is closely linked to its culture and everyday life. The traditional architecture and artistic elements of Mithila houses reflect the daily lifestyle, customs, and cultural identity of the Maithili people.

Keywords: Vernacular materials, Spaces in Mithila architecture, elements in Mithila architecture.

1. Introduction

1.1 Background

Vernacular Architecture is traditional architecture that is designed based on the needs of the locals, climate, materials and culture also. It was developed using local resources and embodies the habits and culture of the local people, their knowledge. These are not professionally designed buildings but ones that have grown up organically in their communities which very sustainable and responsive to their environment.

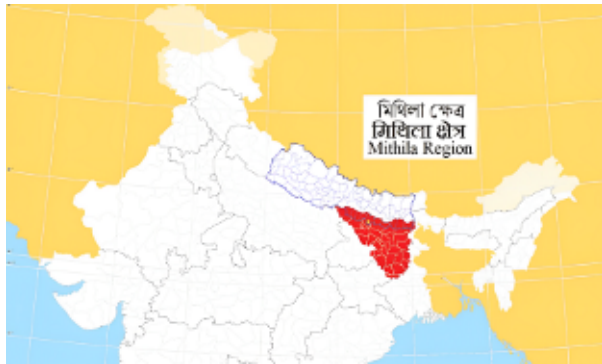


Figure 1. Map of Mithila

The Mithila region is a historical, cultural region located in Bihar, India and is also part of the eastern Terai region of Nepal [1]. In the east, it is bounded by the Koshi River, in the west by the Gandaki River, southwards to the Ganges and at its northern borders to foothills of the Himalayas. Initially, it was written as Videha, and later it got famous in the name of Mithila. This is also recognised in the cultural and religious traditions as the birthplace of Sita, and her father, King Janak. Today, Mithila culture is very much dominant in places like Janakpur of Nepal and parts of the northern Bihar state of India [2].

The Mithila houses are a prime example of vernacular architecture. Typically, these are houses that grow in stages, centred around an open courtyard and adding rooms as the family grows. This kind of coordination meets the functional and social interaction needs of families. They are built from locally produced materials, mud, bamboo and timber ideally suited to the local climate. These natural materials are being used to build walls, roofs and structural components [3]. These houses also include traditional artwork, which reflects cultural beliefs and religious practices. Studying these houses is important because they represent a combination of cultural identity, climate-responsive design, and sustainable construction techniques.

This study focuses on analysing the vernacular architecture of the Mithila region, with special attention to Mithila houses and their cultural expressions such as Mithila art. It aims to study how these houses are planned, how spaces are arranged, and how traditional construction techniques are used.

The study explores the functional planning and construction techniques of Mithila architecture using selected case studies from Nepal and India. It examines how spatial organization such as courtyards and hierarchy of spaces meets social and cultural needs. It also studies how traditional construction methods help buildings adapt to the local climate and environment.

1.2 Research Problem

Many of the techniques for building Mithila houses over time are disappearing in favour of modern approaches and materials, which has made us witness a rapid change in this regard. This means that most of the traditional construction materials, technologies, and spatial planning practices are slowly dying in some places. These old systems have also

not been well documented and studied in detail, particularly their functional planning and construction methods.

1.3 Importance of Research

This study is important because it contributes to the documentation and understanding of the traditional architecture of the Mithila region. By examining these houses, it provides insights into sustainable building practices, cultural values, and climate-responsive design principles. Furthermore, the research supports the preservation of this architectural heritage and can inspire future architectural designs that integrate traditional knowledge with contemporary needs.

1.4 Research Objectives

1) Main Objectives

- The main objective of this study is to understand the functional planning and construction techniques of Mithila vernacular architecture. It focuses on how spaces are arranged, the materials and building methods used, and the artistic elements present in Mithila houses.

2) Specific Objectives

- To analyze how spaces are organized and arranged in traditional Mithila houses.
- To identify the materials and traditional construction techniques used in Mithila architecture.
- To compare the planning and construction methods of selected Mithila houses from Nepal and India.

1.5 Scope of Study

This study focuses on the vernacular architecture of the Mithila region in both Nepal and India. It examines how Mithila houses are planned and how spaces are used within them. It also looks at the use of local materials, traditional construction methods, and how these houses respond to the local climate. Selected case studies are used to understand similarities and differences across regions.

1.6 Limitation

This study does not go into very detailed technical analysis of construction methods. It mainly focuses on general planning, materials, and spatial organization rather than structural design calculations or advanced construction details.

2. Literature Review

2.1 Vernacular Architecture

Vernacular architecture refers to local styles of building that evolve to meet the demands of climate, materials, and culture. These buildings are typically constructed by everyday folks with local knowledge rather than professionals using futuristic techniques. It is appropriately suited to its niche in the ecosystem and often sustainable because local materials are used.

An example of this would be a vernacular architecture found

in Nepal and India, which depicts the lifestyle, tradition, and ethics of the community. It responds directly to climate conditions, for example, using thick walls for insulation or courtyards for ventilation. This type of architecture is important because it shows how people lived in harmony with nature and used simple techniques to create comfortable living spaces.

The relevance of vernacular architecture is all the greater when exploring the Mithila region. Mithila architecture is a functional part of culture, religion and art. It embodies the identity of people and preserves their customs through architectural forms, materials, and decorations.

2.2 Spatial Planning in Mithila Houses

1) Functional Planning

Mithila architecture is a distinctive style characterized by its clustered form around an open courtyard. The houses grow step by step, adding new parts when the owners need more space. This layout creates a strong sense of community and neighborhood because the closely built houses make it easy for people to meet, interact, and support each other [3].

2) Spatial Hierarchy

The planning of Mithila houses follows a clear hierarchy of spaces: Public spaces – Areas like the verandah where guests are received Semi-public spaces – Courtyards or shared areas used by family members Private spaces – Bedrooms and inner rooms used only by the family. This hierarchy helps maintain privacy while also allowing social interaction within the house.

3) Circulation and Zoning

Movement inside Mithila houses is simple and organized. Spaces are connected through the courtyard, which acts as the central point. Circulation flows from public areas to private areas gradually. Zoning is done based on function, ensuring that activities like cooking, sleeping, and socializing do not disturb each other.

4) Courtyard System

The central courtyard is a key feature of Mithila houses. It serves as a private outdoor space for various activities like cooking, drying grains, and social gatherings. It also helps keep the house cool by improving air circulation.

2.3 Construction materials and Techniques

1) Use of Local Materials

The construction of Mithila houses primarily utilizes local materials such as bamboo and mud. This choice of materials ensures sustainability and harmony with the natural environment. Bamboo is a versatile and abundant resource in the region, offering flexibility and strength. Mud, on the other hand, provides excellent insulation, keeping the interiors cool in the hot climate.

- Mud - Mud is widely used for walls and plastering. It provides good insulation, keeping interiors cool in summer and warm in winter. It is also easily available

and cost-effective.

- **Bamboo and Timber** - Bamboo and timber are used for structural support. Bamboo is flexible, strong, and abundant in the region, while timber is used for posts and beams to give stability to the structure.
- **Thatch and Clay Tiles Roofs** are commonly made using thatch (straw) or clay tiles (khapada). These materials protect the house from rain and heat while also providing insulation.

2) Construction Techniques

- **Foundation** -The foundation of Mithila houses is built using a thick layer of compressed mud. This provides a stable and durable base for the structure while also offering insulation against the ground temperature.
- **Structural Framework** - Wooden logs are employed as vertical and horizontal posts to form the structural framework of the house. These logs provide the necessary support and rigidity to the structure [4].
- **Wall Construction** - Thin bamboo layers are woven to create the inner structure of the walls. These woven bamboo panels are then plastered with mud on the exterior. This method not only reinforces the walls but also enhances thermal insulation, keeping the interiors comfortable throughout the year.
- **Roof Construction** - The roof construction involves placing a spun bamboo layer on the inside, which is then covered with straw on top. In some cases, khapada (local tiles) is also used to provide additional protection and aesthetic appeal. The straw and khapada roofing materials are effective in insulating the house and protecting it from the elements. [5]

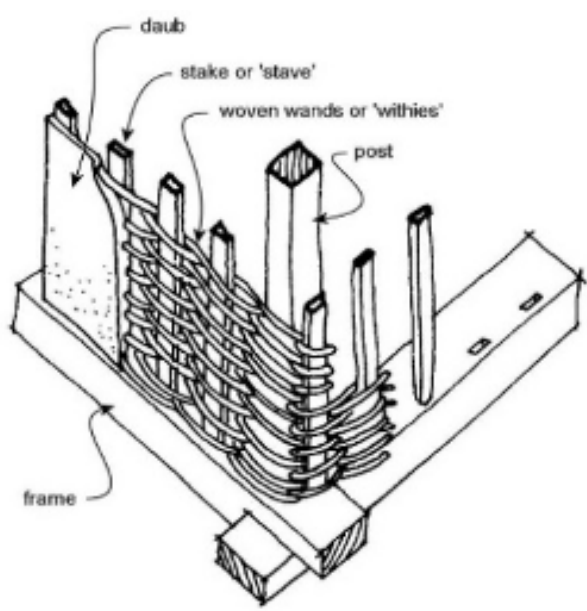


Figure 2. Structural Framework

2.4 Artistic Elements

Mithila architecture is renowned for its integration of art into the built environment. The houses often feature intricate mud reliefs and paintings that depict cultural motifs, religious symbols, and everyday life scenes. These artistic elements are not merely decorative but also serve to reinforce cultural identity and heritage. The vibrant art forms add a unique charm and character to the houses, making Mithila architecture stand out as a blend of functionality and artistry [6].

2.5 Socio Cultural Influence on Mithila Houses

Mithila architecture is deeply intertwined with the cultural traits and lifestyle of the people. The houses are not merely physical structures but serve as a revelation of the long-standing cultural beliefs and customs of the inhabitants. The architectural style is molded around the daily lives, rituals, and traditions of the people, reflecting their socio-cultural identity. This makes Mithila architecture unique in the region, as it seamlessly blends art and architecture to create living spaces that are both functional and aesthetically pleasing [7].

3. Methodology

Methodology are the steps which are involved in the research to fulfill the research objective. Methodology of this report is based on the secondary sources. Secondary sources data are collected from the case studies which was driven from research papers, articles, reports, journals, etc.

Steps involved in methodology:

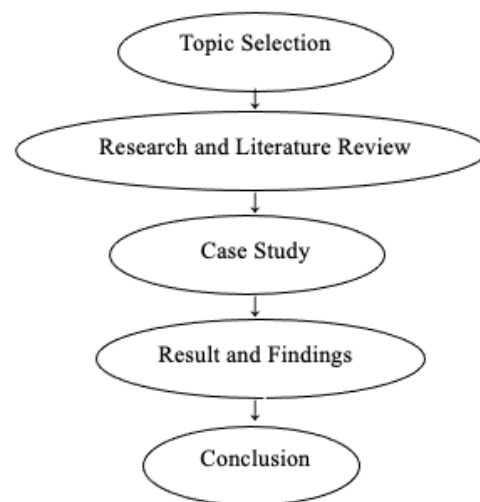


Figure 3. Flowchart of the Research Process

4. Case Studies

Bindhi village is a traditional rural Mithila settlement having strong cultural and spatial characteristics. The Janakpur house is a more developed and urban influenced vernacular form of the same cultural region. As a comparison, the Baiga tribe settlement from Madhya Pradesh is included. It is another example of vernacular architecture where planning, materials

and lifestyle are closely related. Together these case studies contribute to the understanding of similarities and differences in spatial planning, construction and cultural influence.

4.1 Case Study 1: A Case of Bindhi

1) Introduction



Figure 4. Location of Bindhi

Bindhi, a Mithila settlement besides Janakpur – Jaleswor Highway holds a typical rural character despite being few miles away from city core of Janakpur. Though the majority of population is predominantly primary production based there is a tendency of younger people to shift to urban places in search of job.

2) Settlement Pattern

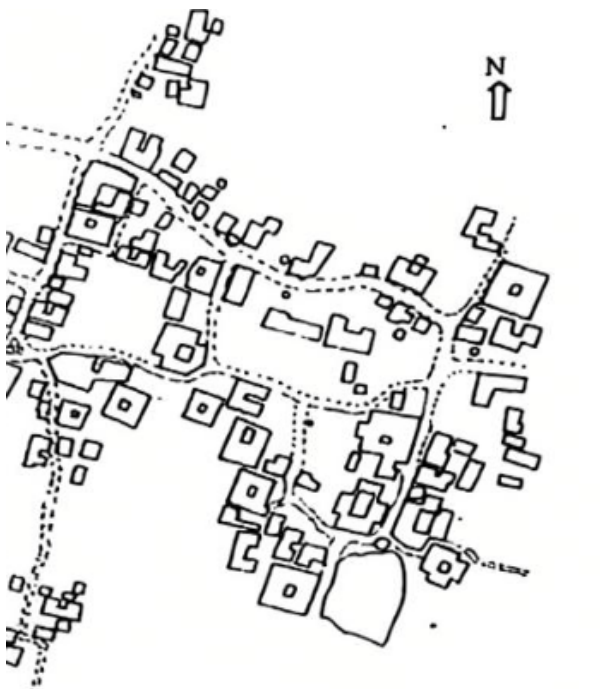


Figure 5. Map of Bindhi

The spatial form of the settlement is clustered and nucleated unlike the dispersed settlement we observe in hilly area. The Mithila village is a mix caste community and is nucleated

settlement reflects a higher differentiation of class of people within the society. The prosperous landlord occupies the central position and lower-class people is shifted toward the peripheral areas [3].

3) Spatial Planning

In Mithila village low scale semi- pucca or even kachha dwelling units as a pile up of material available on the immediate vicinity. The houses are clustered to create a sense of strong neighborhood feeling. The architecture is molded around the way of life of people and their cultural traits. the houses are a revelation of long-lasting cultural belief and custom of people residing in them. The houses have mud relief and painting, which is associated with the use of space either as completely private, semi private or public space. It must be the only architecture in our region that has strong blend of art and architecture.

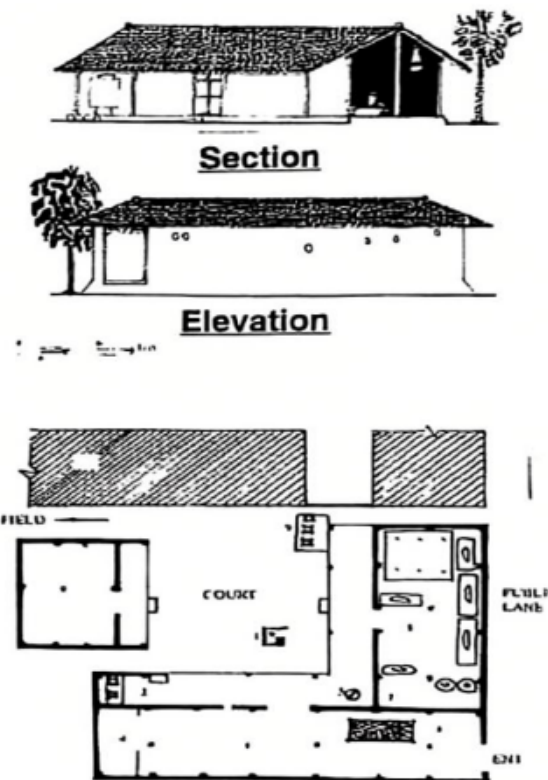


Figure 6. House of Bhumihar Brahmin

This house form has been planned to suit the socio-cultural requirements of its people. The houses are aligned along the side of main street and mostly they face east. The house are built in clustered around an open court in piecemeal with the increasing space requirement of the owner.

(i) Functional Planning

- **Courtyard:** It is an important feature of the Mithila house. It serves as a private outdoor area with multiple uses like cooking, drying grains, washing utensils and other activities. Climatically in a hot humid region like Janakpur it offers a passive cooling effect through

air circulation. Houses face towards the courtyard with minimum opening on the outer peripheral wall. A colonnaded verandah surrounds the courtyard. The sky reaches the house through the courtyard and houses receive the inside outside dialogue through sky.

- **Dalan:** Dalan is a living unit of the house where guests are received and is only accessible for male members of the family.
- **Dura:** Dura, an open space in front of the house is a common public space where one meets guests and interacts with the villagers. People of the village also shares a large open space called Kaliyan for multiple uses as wedding party and agricultural activities.
- **Kothi:** Kothis are storage units used for storing agricultural produce. They are often placed in verandahs and are considered a symbol of prosperity. Separate storage units are also sometimes constructed near the dwelling.

Mithila also termed as Tirbhukti means settlement along the water body. The pond are prominent landscape features of the village. These are the part of the life of people where they take daily bath before lunch. The life of Maithili people is dependent on agriculture. The Kothis, decorative agricultural storage are exposed in the verandah of every, as they are symbol of prosperity. Also, there are separate private storage units beside the dwelling units as a part of units as a part.

(ii) Spatial Hierarchy

Living in a Mithila village is more than the use of a small room. It is one element in whole system of spaces people need in order to live. This system is hierarchical consisting of space needed by the family for exclusively private use such as cooking and sleeping. Then, the intimate area in front of the house as verandah has a lesser degree of privacy.

- **Public space – Dura** (front open space for interaction with villagers and guests)
- **Semi-private space – Verandah and Dalan** (used for social and guest-related activities)
- **Private space – Rooms arranged around the courtyard** (used for family activities like cooking and sleeping)

This hierarchy reflects both privacy needs and social structure within the household.

(iii) Circulation

The movement inside the house follows a clear linear sequence:

Entrance → Verandah → Courtyard → Inner Rooms

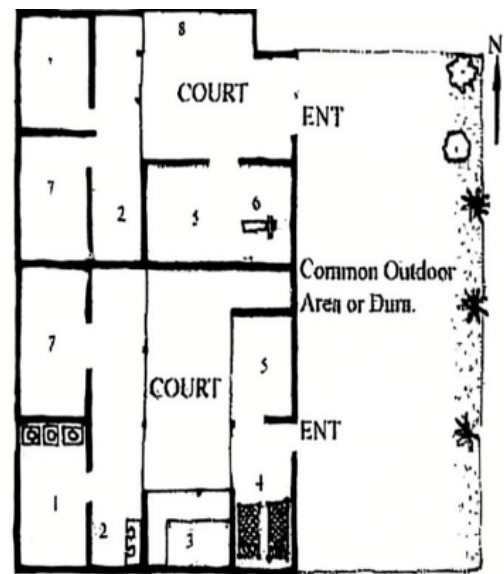


Figure 7. General Floor Plan of the House

In a house one enters through the front door, intentionally placed off center on the main façade. Then moves along an axis to arrive at the courtyard which is the central focus bring the wonderful bounce of light and ventilation to the rooms that surround it.

4) Construction Materials and Techniques

The houses are made of locally available materials like mud, bamboo and timber. The walls are woven from thin strips of bamboo and then plastered with mud. Structural supports are of wooden logs. Roofs are thatched or tiled with clay. Openings are small and bamboo lattice windows, Jafadi, are used for ventilation and privacy. The buildings are proportioned to the scale of the people. One can view through the small openings from inside without the notice of anyone from outside. The size of openings varies and those having bamboo latticework are called Jafadi.

5) Climate Responsiveness

The houses are suitable to the hot and humid climate. Thick mud walls insulate and small openings limit heat gain. The courtyard provides for air circulation and natural cooling. The design, in general, helps in maintaining a comfortable indoor environment without the help of mechanical systems.

6) Artistic Elements

Bindhi houses of Mithila are adorned with paintings and mud relief work. These pieces are frequently decorated with religious symbols, cultural motifs, and images of everyday life. This art is very much related to the use of space and the cultural identity of the people.

7) Inferences / Key Observations

- Strong relationship between architecture, culture, and daily life

- Clustered settlement promotes community interaction
- Clear spatial hierarchy and organized circulation
- Efficient use of local materials and climate-responsive design

4.2 Case Study 2: Vernacular House of Janakpur

1) Introduction



Figure 8. Location of Janakpur

Janakpur, also known as Janakpur Dham, is a historic city located in the southeastern region of Nepal. It is situated in the Terai plain near the border with India and serves as the administrative headquarters of the Dhanusa District in the Province No. 2. Janakpur is part of the ancient Mithila region, known for its rich cultural heritage and traditions. The city is renowned for the Janaki Mandir, a grand temple dedicated to Goddess Sita, also known as Janaki. According to the Ramayana, Janakpur is the birthplace of Sita, and the temple is a major pilgrimage site.

2) Settlement Pattern

Janakpur has a mixed rural and urban type of settlement pattern. Houses are more closely packed together and more orderly. In urban areas, buildings with shops or workspaces on the ground floor may indicate a mixed-use pattern.

3) Spatial Planning

(i) Functional Planning



Figure 9. Typical Vernacular House

Traditional houses are typically rectangular in shape and three stories tall, with the top floor enclosed by

large pitched roofs. In rural areas, they are raised to a 450mm pedestal to prevent water ingress. To keep the sleeping and storage areas above warm, the kitchen and livestock are housed on the ground floor. Porches serve as outdoor living and working spaces. In cities, the ground floor of a timber-frame basement often houses a shop or workspace.

(ii) Spatial Hierarchy

Public space – Street-facing areas or shops
Semi-private space – Verandahs and porches
Private space – Inner rooms and upper floors

(iii) Circulation and Zoning

Movement is both horizontal and vertical. Spaces are organized based on function, and circulation flows from public to private areas. Zoning separates living, working, and storage spaces effectively.

4) Construction Materials and Techniques

The construction technology which has been used in the past were mostly made of bamboo frames supported with mud and lime mortar or lime-mud mortar etc. supported by roofs made of up of hay or clay tiles and Khapada (locally called). The houses had plinth raised by bricks and thick mud slab reinforced by hay or rice husk etc to create a thermal mass and insulation at the same time which kept the interior spaces cold enough even in the high summer heat. The buildings didn't have much openings, and used narrow openings or no openings at all. Some houses used a circular kind of ventilation window, which worked both for the air circulation and also created the stack ventilation effect [8].

5) Climate Responsiveness

The construction of houses varies depending on the available local material resources, geography, and climate. To keep the heat at bay, windows are typically small and walls are thick. Clay and clay tile roofs also provide insulation against the elements. The walls are protected from torrential rain by sloping roofs and wide eaves; exterior wall surfaces are regularly applied with fibre mud plaster to keep them watertight; and drains remove water from the foundations. As a result, the buildings are well designed for cold winters and wet summers, while also providing the necessities for daily living in a confined space.

6) Artistic Elements

Decorative elements such as plaster work and traditional paintings are present, though slightly less prominent compared to rural Mithila houses.

7) Inferences / Key Observations

- Combination of traditional and urban features
- Strong adaptation to climate conditions
- Efficient use of vertical space
- Cultural identity still visible.

4.3 Case Study 3: A Case of Baiga Tribe, Madhya Pradesh

1) Introduction

Baiga Chak is a group of 52 forest villages in the Achanakmar Biosphere Reserve, home to the Baiga and Keonchi tribes. These villages are spread out in the forest, blending naturally with the environment and causing minimal harm to it. Their lifestyle is closely connected to nature, and their architecture reflects sustainability and cultural traditions.



Figure 10. Baiga House

2) Settlement Pattern

The settlement is dispersed, with houses spread across the forest. Open spaces are important for social gatherings, rituals, and community activities. Open spaces are important for social events, rituals, and gatherings, helping build a strong community bond. People walk on footpaths that connect the houses, encouraging interaction. Sacred groves are used for cultural ceremonies and festivals.

3) Spatial Planning

(i) Functional Planning

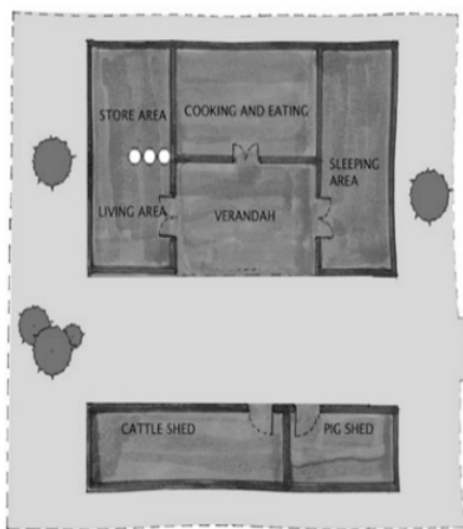


Figure 11. Floor Plan of Baiga House

The dwellings are usually rectangular in shape with the verandah (semi-covered space) in the centre and rooms arranged around it. There is a small pigsty as well as

open space in the centre that divides the dwelling and the pigsty. The built form addresses basic human needs.

As the family expanded, dwellings became compact with the courtyard in the centre and rooms arranged around it. The space segregation was achieved with partition walls which resulted into number of rooms. The pigsty was attached to the backside of the dwelling. Domestic animals like pigs, goats, dogs and hens were part of their lives which is slowly disappearing.

(ii) Spatial Hierarchy

- Public space – Open community spaces and gathering areas
- Semi-private space – Verandah and front areas
- Private space – Inner rooms

(iii) Circulation Zoning

Movement occurs through footpaths connecting houses. Inside, spaces are arranged logically around central areas. Zoning is simple and based on daily needs.

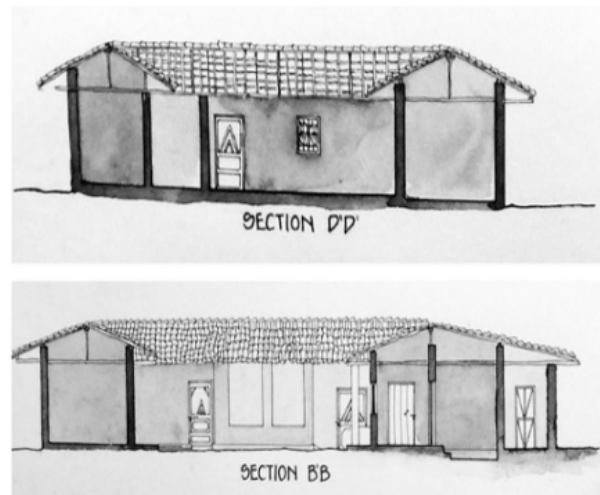


Figure 12. Section of Baiga House

4) Construction Materials and Techniques

Homes are built together by the community using natural materials like mud, bamboo, wood, and handmade tiles, which are eco-friendly and suit the local climate. This style of building reflects the tribe's culture and sustainable way of life. (Shikha Patidar, 2020).

- Flooring: Mud flooring with cow dung layer applied on the floor. During festivals celebratory floral designs patterns were made and decorated with natural colours for the floors.
- Walls: Traditionally houses were temporary structures. The walls consisted of bamboo, mud, wattle and daub. Wattle and daub are a composite building material in

which a woven lattice of wooden strips of wattle is then covered with daube, a sticky material like cow dung, wet soil, sand and straw.

- **Roofs:** Roof coverings originally consisted of thatch tied/braced with bamboo or fine timber branches. Hand-made tiles were subsequently developed and had evocative individuality in their uneven coverage as well as texture which brought about a unique aesthetic quality. Wooden trusses supported these tiled covered roofs.



Figure 13. Thatch Roof House

- **Doors:** The dwellings originally had a single unprotected opening for the doorway. Therefore, at night, in order to protect themselves from wild animals, a woven matting was placed in front of the opening as a make shift obstruction.



Figure 14. Open Entrance of a Traditional Mithila House

- **Windows:** The dwellings traditionally didnot have windows. There is a gap between the walls and roof which permits ventilation.
- **Plaster:** Plaster consisted of cow dung applied to wattle and daub, cob walls. This gave uniformity to the wall base. Earthen colours such as yellow ochre, red and white ochres bring a distinctive character to the built form. Lime plaster replaced the cow dung which then transitioned to a cement plaster.

5) *Climate Responsiveness*

Natural materials provide insulation. Gaps between walls and roofs allow ventilation. Thatched roofs protect from heat and rain.

6) *Artistic Elements*

Walls and floors are decorated with earthen colours and artwork providing an attractive aesthetic.

7) *Inferences / Key Observations*

- Strong connection with nature and sustainability
- Simple but efficient spatial planning
- Use of eco-friendly materials

4.4 Comparative Analysis

Based on the comparative analysis of the three selected case studies on Mithila architecture, the key findings are summarized in Table 1.

The table no. 1 compares case studies of three traditional architectural styles from Bindhi (Nepal), Janakpur, and the Baiga tribe in Madhya Pradesh, India.

Bindhi is characterized by a clustering of villages with strong traditional planning with courtyard spaces such as dura, dalan, and kothi. The houses in Janakpur have a semi-urban layout with planned spaces and can sometimes be multifunctional, with shops. Baiga settlements are dispersed and intimately related to nature.

Spatial planning: All three communities have courtyards, but the Bindhi community has a highly developed traditional approach. Janakpur houses are relatively compact and might have more than one story. Baiga houses are primitive and simplistic.

Material and construction: Local materials such as mud, bamboo, timber, and thatch are used in all three constructions. Traditional techniques are used extensively by Bindhi and Baiga communities, whereas Janakpur communities exhibit slightly advanced techniques such as brick, lime mortar, and elevated plinths.

Climate response: The houses of all three communities are highly responsive to their respective climates. Thick walls, small windows, courtyards, and inclined roofs provide good ventilation and protection against heat and rain.

5. Findings and Discussion

5.1 Spatial Planning

(i) Functional Planning

Bindhi Village: Functional planning is well-developed and strongly influenced by culture. Spaces such as courtyard, dalan, dura, and kothi distinguish functional zones and social conduct.

Janakpur Houses: Functional planning is flexible and

Table 1. Comparative Analysis of Case Studies

S.N.	Parameters	Case Study 1: A Case of Bindhi	Case Study 2: Vernacular House, Janakpur	Case Study 3: Baiga Tribe, Madhya Pradesh
1.	LOCATION	Bindhi, Nepal	Janakpur, Nepal	Madhya Pradesh
2.	DESIGN	Clustered settlement with Courtyard System and Spaces like Dura, Dalan, Kothis are built	Courtyard system, Three stories, Dura as outdoor space and Ground floor as shop or workshop	Courtyard system, Ground floor with living room and store
3.	ROOF	Pitched roof with Khapada or Thatch	Pitched roof with Khapada or Thatch	Pitched roof with Khapada or Thatch
4.	WALL	Woven lattice of bamboo strips is plastered with mud	Woven lattice of bamboo strips is plastered with mud	Woven lattice of wooden strips is plastered with mud
5.	OPENINGS	Doors are placed off center	Windows are typically small	No fixed door and a gap between the walls and roof which permits ventilation acts as window

incorporates vertical planning as well. Ground levels can be used for livelihood and livestock, while upstairs areas are occupied by living spaces.

Baiga Settlement: Functional planning is basic and rudimentary. The spaces are built solely for necessities like living, food preparation, and housing livestock.

(ii) Spatial Hierarchy

Bindhi Village: Distinct spatial hierarchy exists, which consists of public space (dura), semi-private space (dalan/verandah), and private space (rooms around the courtyard).

Janakpur Houses: Spatial hierarchy exists, but it is slightly modified because of urban influences, which include public space (street/shop), semi-private space (verandah), and private space (inner rooms).

Baiga Settlement: Spatial hierarchy exists but is not distinct; open public space, verandah as semi-private space, and inner rooms as private space.

(iii) Circulation and Zoning

Bindhi Village: Movement follows a linear pattern from the entrance to courtyard to inner rooms, with the courtyard serving as the connecting zone.

Janakpur Houses: Movement occurs horizontally and vertically. Zoning is according to functionality, such as living, working, and storing.

Baiga Settlement: Movement is through open pathways. Interior spaces are interconnected, and zoning is simple.

5.2 Construction Materials and Techniques

Bindhi Village: Mud, bamboo, and timber are used with traditional techniques such as woven bamboo walls coated with mud. The construction process is relatively simple and locally adapted.

Janakpur Houses: Combination of traditional and semi-modern materials including bricks, lime mortar, timber, and tiles. Raised plinth and thick walls indicate enhanced construction techniques.

Baiga Settlement: Use of entirely natural construction materials including mud, bamboo, wood, and thatch. Construction

techniques like wattle-and-daub and cow dung plaster are commonly practiced.

5.3 Climate Responsiveness

Bindhi Village: Strategic courtyard planning, mud walls, and smaller opening sizes facilitate cooling and ventilation.

Janakpur Houses: Sloping roof design, extensive eaves, small windows, and raised plinth aid in protecting against heat and heavy monsoon rainfalls.

Baiga Settlement: Thatched roof structure, natural ventilation openings, and lightweight materials aid in adapting to the forest climate.

5.4 Artistic Features

Bindhi Village: High level of incorporation of Mithila art through mud reliefs and wall paintings, intrinsically linked to culture and the built environment. Janakpur Houses: Artistic features exist but are less emphasized compared to rural Mithila house structures.

Baiga Settlement: Natural color schemes and simplistic decorations prevail, particularly during festivals.

6. Conclusion

A comparative study of three cases of Mithila architecture from Nepal and India reveals that the settlement is clustered and mainly follows the principles of Vastu. The study also shows that the spatial organization of these settlements reflects the traditional social hierarchy, with higher-status families residing in the central areas of the settlement and lower-status families living on the outskirts of the city. Houses are built in courtyard system for doing daily activities like washing, drying agricultural products, etc. and only used by the family members. Other spaces like Dura which is used for welcoming guests and mainly greeted by the male members of the family. Other space is Dalan which is used by the community for weddings and Kothis are used for storing agricultural products.

For structure of the Mithila house local materials like bamboo, mud, timber, thatch, khapada, etc are used. Wattle and daub system is used for wall where wooven bamboo

strips are plastered with mud. Sometimes timber is also used as the post and for doors and windows. Large pitched roof is used covered with thatch or handmade clay tiles called khapada.

This study underscores the importance of these traditional Mithila houses and how different spaces are introduced according to its function and passive strategy is also used in courtyard system, and these technique needs to be preserved.

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