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Socio-Cultural Dimension of House Form of Magar Community:

A Case of Thabang Village, Rolpa

by

Manisha Yogi

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DECLARATION

I hereby declare that the thesis entitled “Socio-cultural dimension of house form of magar community: a case of Thabang village, Rolpa” which is being submitted to the Department of Architecture, Pulchowk Campus, Institute of engineering, Tribhuvan University in partial fulfilment of the requirements for the degree of Masters in Architecture (M.Arch.) is a research work carried out by me, under the supervision of Associate Professor Dr. Sanjaya Uprety, between April to September. I declare that the work is my own and has not been submitted for a degree of another University.

……..

Manisha Yogi (076march008)

Department of Architecture

IOE, Pulchowk Campus

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The undersigned certify that they have read, and recommended to the Institute of Engineering for acceptance, a thesis entitled **" Socio-cultural dimension of house form of magar community: a case of Thabang village, Rolpa"** submitted by **Manisha Yogi** (076march008) in partial fulfillment of the requirements for the degree of Masters in Architecture.

……

Supervisor:
Dr. Sanjaya Uprety
Associate Professor
Department of Architecture

...……

External Examiner:
Ar. Lushan Nakarmi
Architect/Urban Planner
Vriksha Architecture

……

Program Coordinator"
Dr. Ashim Bajracharya
Associate Professor
Department of Architecture

Date:

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Manisha Yogi (March 008)

Department of Architecture

IOE, Pulchowk Campus

Abstract

Thabang is a village which carries deep and strong political and social history. Previous studies were more focused in its political development and agricultural knowledge. Other aspects of this settlement are not given much attention. Thabang has unique settlement pattern and dwellings. The ecological factors of temperature, nature and environment helped shape the traditional architecture of Thabang. In addition to analyzing the effects of modernization processes on Thabang villages from the perspectives of geographical region, cultural spirit, socio-economic condition, and time dimension, it is necessary to discuss how the traditional social structure of Thabang village is reflected in the spatial distribution of dwellings. Finally, it is important to summarize the importance of the spatial environment and architectural spatial structure of Thabang traditional settlements. Magar settlement is a bounded ecological system where missing a single element will break this chain. Festival is one of the most important elements of this ecosystem. Festival is a thread which connects tangible and intangible aspects along with the elements of ecosystem of Thabang village. The major objective is to study magar settlement as an ecological system. Examine the socio-cultural practice of magar community with respect to house form and festivals. The research method combined a qualitative approach with a descriptive interpretative strategy. Through observation, interview, literature review, and conversation with resource people, primary and secondary data collection was carried out. Thirty respondents were purposively selected for questionnaire survey. Questionnaire survey was conducted for data collection. For qualitative analysis interview was conducted. Desired direction for transformation of the settlement needs to be in ecologically responsive architecture which is inspired from its traditional surrounding architecture. Keeping rural people involved in transforming and managing the landscape. A community's streets, sidewalks, parks, buildings, and other public spaces can all be improved through place creation. This includes both private and public locations.

Keywords: Traditional architecture, Festival, Society, Culture

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Acronyms and Abbreviations

CBS	Central Bureau of Statistics
CLT	Centre Limit Theory

CHAPTER 1. INTRODUCTION

1.1 Background

One of Nepal's historically most predominate indigenous communities is the Magar, which is today the third largest ethno linguistic group in the country. These people are rich in cultural practice and religional activities. The Magar peoples are one of the major indegenous groups. However, they still don't have much cultural recognitin like other indegenous group.

Traditional magar vernacular architecture includes the cultural building techniques that have been passed down through many generations. This design has a strong sense of place and is aware of the specific geographic and cultural characteristics of its environment, both of which have a significant influence on it. As a means of confirming one's identity, they are distinctive and always changing. Ghisleni, (2020) states that beyond sustainability, Vernacular architecture serves as a representation of the cultural identity of a particular ethnic group and serves as a technique for fostering a sense of community among residents of a certain area.

The Maoist insurgency is centered in the old Magar village of Thabang in the Rolpa region. Maoist commanders and fighters were housed in a clustered village of about 274 homes. Thabang is a peaceful town with excellent tourism prospects. It features beautiful natural scenery and a rich cultural heritage. The town is filled with rustic artifacts, including cottages with wooden plank roofs, the traditional spinning wheel and loom, the dhiki, and the makai ko thankro (a method of preserving ears of corn). as described by (Dangi, 2020).

Magars today practice a wide variety of religions. At a fundamental level, the early religious practices were founded on ancestor worship, shamanism, and animism. Today, they are known to practice Buddhism and Hinduism, with a small percentage also becoming Christians. Magars worship a wide range of gods, including those found in nature, idols, spirits, and otherworldly forces. They bury their dead and have their own beliefs regarding life after death. Among the most popular festivals of Magar are the Maghe Sankranti (first day of Magh), Bhume Parba (falls in Asar), Dashain and Tihar (the primary Hindu holidays), Chaite Dashain, Saune Sankranti, and other celebrations.

Homes built by Magars are built in the regional architectural style, which varies depending on where they located. The typical architecture is a two-story stone house with a slate or thatch roof. In western communities, many of the smaller structures have an oval or circular

shape and are painted with ochre or reddish clay.The magars are skill-full to build houses, cutting stones and finishing (Bista, 1967). The climate, nature, and surroundings were taken into consideration when creating Thabang's traditional architecture. For the traditional community, particularly Thabang, to create its architectural structure for the sustainability of culture that was passed down from the ancestors and needs to be continued in new buildings, the ecological considerations can be stated to be fundamental.

It is crucial to talk about how Thabang village's traditional social structure is reflected in the spatial distribution of residences and to examine how modernization processes have affected Thabang villages. It is necessary to discuss the general characteristics of these settlements and their architectural spatial form from the perspectives of geographical region, cultural spirit, and time dimension in order to summarize the spatial context and architectural spatial structure connotation of Thabang traditional settlements. In order to understand how climate, geography, and magar folk culture affect the characteristics of Thabang homes and village layout.

Dictionary (2021) defines an ecosystem is a place where plants, animals, and other organisms interact with the environment, weather, and other variables to form a bubble of life. In an ecosystem, biotic components like plants, animals, and other living things live with abiotic elements like rocks, temperature, and humidity. Each element of an ecosystem depends on every other element, either directly or indirectly. An ecosystem's temperature changes frequently have an impact on the types of plants that can thrive there, which eventually has an impact on the ecosystem as a whole. The Magar hamlet is examined in this study as an ecosystem, with individual people, society, buildings, culture, socioeconomic situation, nature, animals, water source, building materials, etc. as components. A change in one aspect frequently has an impact on another, and finally, everyone is impacted. A single missing component in the Magar settlement's bounded ecological system will cause this chain to fail. The festival will be thoroughly examined for this study. The festival serves as a connecting thread for the ecological components of Thabang village's ecology as well as its tangible and intangible characteristics.

1.1.1 Statement of the Problem

Magar is one of the oldest ethnic groups in Nepal, yet little is known about them or their towns. Magar settlements in western Nepal have not been the subject of any meaningful architectural research, from that point of view. The foundation of the area's social and cultural

structure is its traditional architecture. The integrity of this architecture must be maintained. Instead of disturbing it, modern architecture should be skillfully incorporated with old architecture. Even the town of Thabang resembles an ecological system. To uncover the ecological components of structures and towns, this research is essential. Thabang, widely known as the Maoist epicenter, has already encountered various difficulties. Locals are worried about restoring the settlement's vernacular architecture, which is deteriorating due to the haphazard construction of conventional buildings. This research is crucial in order to comprehend the complex cultural practices of the Magar, including their festivals and rituals. This study examines festivals through the lenses of individuals, community, settlement, and nature. Future buildings can be greatly improved by taking inspiration from the traditional knowledge of earlier generations through the teachings of traditional architecture.

1.2 Rationale of the Research

1.2.1 Need of Research

The diversity of Nepalese culture may be seen in traditional vernacular architectural works as well as in the country's traditional values. Nepal is rich in cultural values due to diverse culture and tradition according to which vernacular architecture developed. Traditional architectural works are rich in meaning and embody regional characteristics that are considerate of their surroundings. Traditional societies have a wealth of unwritten, well-documented local knowledge that has been passed down from generation to generation and is in harmony with the environment. These approaches to vernacular architecture have room for growth and could be modified to meet modern requirements. These approaches to vernacular architecture have room for growth and could be modified to meet modern requirements. With the development of technology and changing lifestyle, requirement, we can see how modern architecture is taking the place of old traditional architecture. Thabang is one of the ethnicities found in the western Nepal whose local knowledge and wisdom needs to be identified. This area has yet to be discovered, significant, ecologically and locally valuable architectural and settlement patterns that can be built in modern life.

1.2.2 Importance of Research

Understanding significant design principles from vernacular architecture is the aim of this study. A new set of design strategies that will be climate-responsive, ecologically responsive, culturally responsive, and development-oriented must be proposed in order to extract the ecological qualities of traditional architecture for the construction of better future architecture. This study examines how festivals can be used as a lens to examine the relationship between ecology and citizen and question whether this is fixed through time, or has been transformed as a response to changes in the modern conditions. The aim is to reveal how rural spaces are utilized through festival to represent magar settlement as an ecological system. In this study, the home architecture within the Magar community is examined as it changes as a result of sociocultural processes.

1.3 Research Objectives / Research Questions

The major objective is to study magar settlement as an ecological system

- To examine the socio-cultural practice of magar community with respect to house form and festivals.
- To study festival relationship with interior spaces of homes and extended outside spaces like streets, open spaces, agricultural land, forest, water source.

1.4 Validity of Research

The extent to which a survey collects the necessary data by measuring the appropriate variables is referred to as research validity. "How accurately an instrument has measured what it is supposed to measure is referred to as validity."(BRM). Literatures were reviewed related with the Festivals, traditional dwellings and settlements and ecosystem. Due to the lacking study in the field of magar settlement and architecture, this study is necessity. To understand the culture, tradition, architecture of different ethnicities of Nepal these kinds of studies are helpful. Like in magar community, festival is an event which brings the community, cultures together and plays an important role to prove traditional settlement as an ecological system. Williams (2007) explains that Environmental quality can be improved through ecological design of architecture, community design and regional quality. The

ecological design makes the positive impact on planet. According to Tiwari (2011) Traditional knowledge can be gained from natural phenomena and ecology, traditional architecture and how it responds to contemporary ideas of sustainability, ecology, and efficiency, as well as material characteristics and energy inclusivity.

The research is valid since very limited research has been conducted on this field and helpful for future reference. The research will be done based on interviews and questionnaire survey based on the purposive sampling. Since the questionnaire to be formulated will basically measure the perception and experience of people, the conclusion drawn out of it will be of probabilistic nature and may not be 100% true to all kind of magar settlements. However, the research will be helpful for the architects, anthropologist, designer and policymakers to adopt the appropriate strategy and guidelines for construction new buildings in the settlements.

1.5 Conceptual Framework

The research comes under non-exact sciences category, where human and social sciences are studied in detail, Human behavior, space, social relation that connect all together. As qualitative analysis deals with the subjectivity of humans which cannot be converted into numbers such as interviews, notes, video and audio recording, images, and text documents that qualify this research.

The ontological claim of this research is “the role of festival in traditional magar settlement establish Thabang village as an ecological system”. The source of valid knowledge data comes from literature study, field visit & questionnaire survey, maps, topography, climatic data, existing (architectural and structural) data of houses and traditional settlements obtained from direct observation and resource persons etc. People’s perception and ideas also matter for this research. Face to face interviews can also be conducted.

Epistemological assumptions are based on the adequacy and legitimacy of different kinds of knowledge that are possible (Blaikie & Priest, 2018). This research intends to know festival its relationship with interior spaces, relationship with their social life, cultural life, its relationship with their spaces not only inside the house but extended to outside spaces like agricultural land, forest, water source.

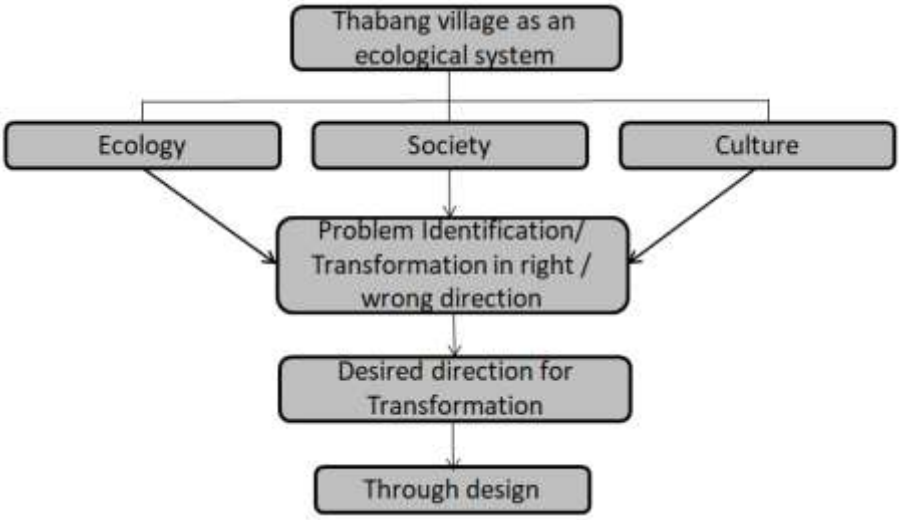


Figure 1 Framework of the Study

1.6 Research Methodology

The research is an interpretative qualitative research, i.e. In order to understand and interpret phenomena in terms of the meaning that humans give to them; researchers investigate things in their natural environments. The research in a field study, researcher goes into the fields to observe the phenomenon in its natural state or in situ. The researcher collects in-depth field notes, which are later coded and subjected to various types of analysis. The study focuses on the various ways that individuals view and interact with the world. The steps in qualitative research are:

- Data collection
- Data reduction/coding
- Data display
- Conclusion drawing/ verifying

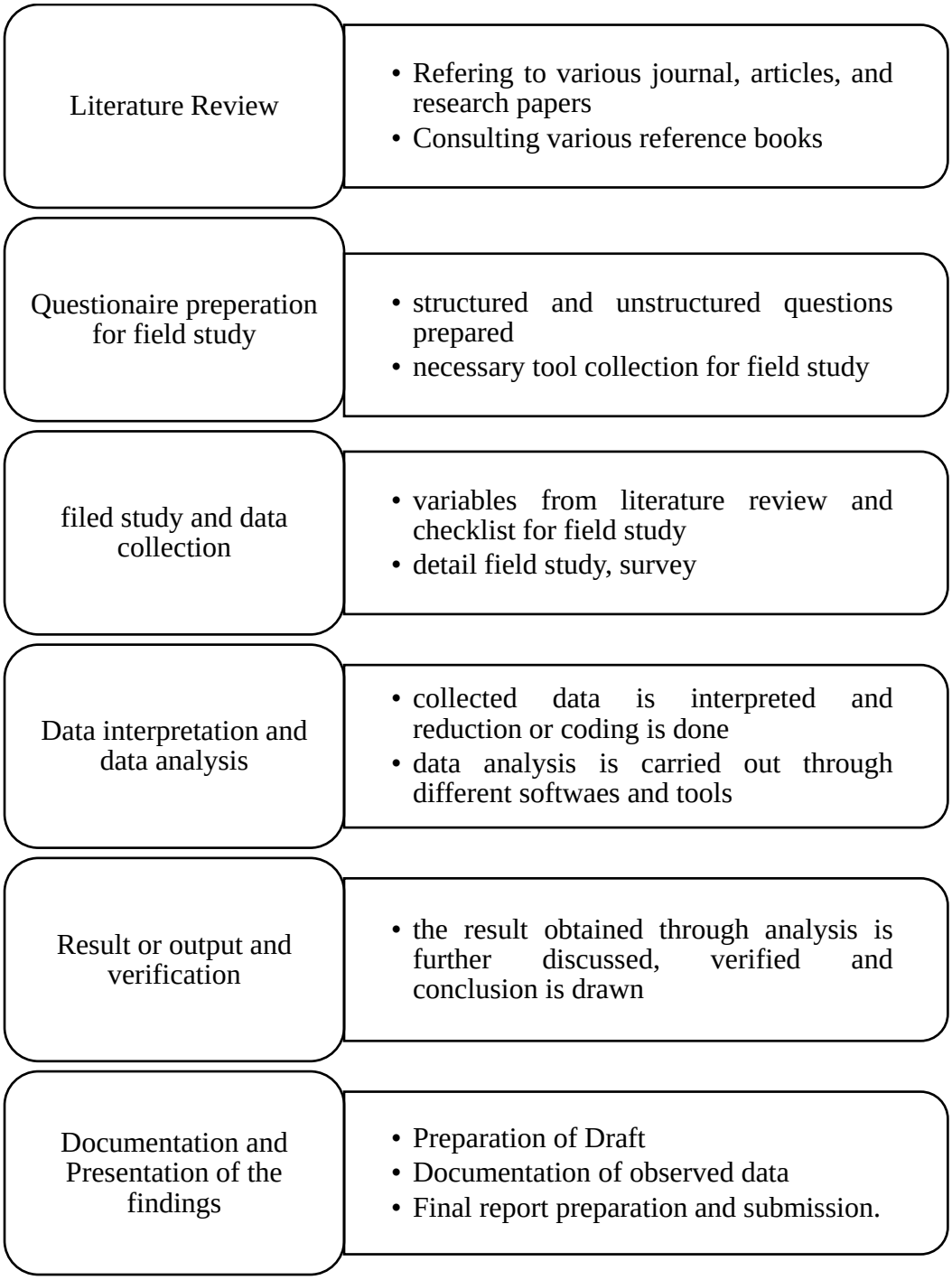
For data collection in field, direct observation is done. Questionnaire survey and interactive interviews is carried out. For interactive interviews, unstructured questions were prepared. Interview was also taken in small groups and questions were reconstructed to suit groups, which is useful for exploring a topic broadly. These interviews were recorded as audio, video clips, written notes, sketches or photography.

After data collection, data reduction or coding is necessary. Large data is reduced in volume into manageable chunks. Chunks of similar themes, notes in margin, highlighted and graphic linkage for better understanding and making and following a scheme of codes that could be

framed from out of research objectives and questions. Qualitative data is displayed in a form of charts, graphics or tables, maps and diagrams and directed by the analytical process.

Maps, geography, climatic information, existing (architectural and structural) data about homes and traditional villages gleaned from firsthand observation, and resource people are the elements needed in this research. Data were gathered by observation, measurement, recording, re-drawing, and interviews with residents of the area. Try to understand the perspective of the local people regarding the settlement and dwellings. The tools needed in this study are stationary, digital camera, audio, video, computer, drawing and questionnaire.

Table 1 Flow diagram of methodology



1.7 Research Methods

The research method is the strategy used to implement the plan that answers research questions (University Libraries, 2018). This research will provide the insights of magar settlements. Since the qualitative research strategy uses a questionnaire survey, an unstructured questionnaire survey will be used to understand the people's opinion, use of

spaces, relationship between festival and different aspect of people's life and architecture of that place and the direct observation and interpretation of data will be done.

1.7.1 Sample Framing and Sampling

A sample is a selection made from a population for research purposes that includes a relatively small number of individuals. Participants or respondents are the names given to the sample's constituents. A sample is a fixed group within a statistical population whose features are studied to get more insight into the group as a whole. The object or source from which a sample is taken is known as the sampling frame. Sampling refers to the method used to draw a sample from a population.

1.7.2 Questionnaire Construction

A questionnaire was designed to obtain the answers to the questions mentioned in the scopes and limitations of the research. First of all, a literature review was done to find out the variables for the questionnaire which comprises research questions. Secondly, demographic data and public opinion and land use data were constructed.

The demographics question includes respondents' age, gender, location, ethnicity, religion, employment, family type, household size, and household income. Building specifications questions include land area, building type, and orientation of building, natural ventilation, and its size. The unstructured open ended questions including use of different spaces in settlement, people's perception, relation between festival activities and their building etc are prepared for field operationalization. The pre-testing is carried out before the field investigation. These structured and unstructured questionnaires are transferred in the KOBO toolbox to operationalize in the field and later deployed and collected through a free open-source tool for collecting data from mobile devices is called KOBO collect.

1.7.3 Data Collection

The data wass collected for concluding the study. The primary sources of data are the official sources and the field, both of which provided the information in its unprocessed form. Information gathered and processed by the researcher directly, such as through observations,

surveys, interviews, and focus groups, is referred to as primary data sources. The information's were gathered from the below-listed sources:

- Household member in the community
- Direct Observation
- Literature Review

1.7.4 Field Operationalization

Structured and unstructured open ended questions were prepared for field operationalization. Pre-testing was carried out before the field investigation. KOBO tool box was used to collect unstructured questionnaire and later wass deployed and collected through KOBO collect which is a free open-source tool for mobile data collection based on the selection of building as per requirement. For unstructured questionnaire, interviews were conducted individually also in group. Video recording, tape recording, writing are done later on N-Vivo were used to analyze the unstructured text, audio, video and image data from the interview.

1.7.5 Data Analysis

All the raw data are collected in the KOBO TOOLBOX software instantly after the questionnaire survey was conducted. Further, the statistical analysis was done using the SPSS statistical tool such that direct graphical comparisons can be made with the obtained results. For unstructured questionnaire, interviews are conducted individually also in group. Video recording, tape recording, writing are done later on N-Vivo is used to analyze the unstructured text, audio, video and image data from the interview.
The analysis of the obtained data was done based on the ground of the research questionnaire. The relationship between various variables was analyzed to withdraw the conclusion from the questionnaire survey. Below is the list of variables that are inter-related to obtain the answer to the research question.

1.8 Scope and Limitations

The present study covers the area called Thabang which is located in mid-western development region, Lumbini province. It may not be applicable to all magar villages in Nepal due to its geographical condition and the unique characteristics features of western

Magar community, which is sometimes, may be same as of others. The study is fully dependent on field visit, interviews, data collection, and interaction with local people of the study area. The research will be limited to the detail study of 30 houses for structured questionnaire and 5 respondents for unstructured open ended interviews during the limited time frame of 4 months. Due to limited time frame except festivals others factors cannot be studied in detail. Further research can be conducted for detail study of other factors.

1.9 Expected Outputs

The study seeks to understand the role of festivals in magar settlement. This study will clarify how this festival connects house, whole settlements, and different spaces. Magar settlement is a bounded ecological system where missing a single element will break this chain. How it was working in the past, how it is transforming in contemporary situations and what is the desired changes are few queries which are answered through this study. In general, the study of housing is a multidisciplinary area of study that draws from a variety of fields, including urban studies, architecture, planning, history, sociology, economics, and other fundamental and complementary human sciences. As it addresses themes pertaining to architecture sociology and socio-cultural trends influencing its spatial form, this work is unique to its disciplinary environment.

This study has proposed to look on the traditional architecture of magar settlement of Thabang Village, discover it from social, cultural, ecological aspects to find out the important design strategies which can be useful for the contemporary architecture. This study intends to know the role of festival in vernacular magar settlements as an ecological system along with its cultural, social and economic relation. This study gives the insights from relationship of ecological system, vernacular architecture, and people. How these variables are interconnected will be discovered.

CHAPTER 2. LITERATURE REVIEW

According to (Statista, 2021) data around 79% of the populations were residing in rural area in 2021. This data shows that maximum number of people still lives in rural area. Urbanization is happening in core city areas in rapid way, creating many opportunities as well as problems for human lives and settlements. Problems like degraded environmental quality, overcrowding, housing quality, slum, limited sanitation, and limited access to water, unemployment, waste disposal and urban crime cause very low quality poor conditions. In Nepal, about 430,000 families live in substandard housing, according to government statistics. In Nepal, there is a significant imbalance between the supply and demand for excellent, reasonably priced housing. To bridge Nepal's housing gap, an approximate 70,000 new dwellings would need to be constructed each year (Devkota, 2018). To address the above problems, development of rural settlement, ecological and regional design can be the solution of this problem.

After rapid industrialization and development of transportation, in the name of functionalism the housing and buildings lost their cultural and symbolic dimensions. Houses and architecture needs to be localized and informed by their place. Just the impacts of geographical or climatic factors are not enough. As with traditional vernacular design, It should also incorporate social and cultural elements that promote vibrant housing cultures, places, and ways of being in the world as evidence for the value of habitat. Looking at the traditional buildings and architecture without professional designer or architects, it reflect the truthiness of material and immaterial values which are so harmoniously blending in their landscapes as a geographical and cultural location that serves as a reflection of human history and experience. Traditional architecture blends into locations, geography, natural resources, and the surrounding environment. It is non-arrogant, linked, and calm. Architecture that takes into account the variety of economies and cultures and that represents the building and knowledge cultures passed down from one generation to the next.

2.1 Ecology

Ecology is the study of how living things interact with their surroundings. Williams (2007) explains that Environmental quality can be improved through ecological design of architecture, community design and regional quality. The ecological design makes the positive impact on planet. Environmentally conscious architecture includes elements that

relate to people, the environment, and structures all at once. Utilizing human experience as a process, cooperating with the natural environment, or developing housing as a necessity of human life in symbiotic relationship with the environment are all examples of holistic development.

A component of ecology is the ecosystem. Ecosystems are generated when a community of organisms interacts with its environment, whereas ecology is the study of ecosystems. This is the major distinction between ecology and ecosystems. An ecosystem, often known as the biosphere, is the entire surface of the Earth. Natural resources including land, water, and air are found on the Earth's surface, where living organisms can be found. The constructed environment must be incorporated into the ecosystem without affecting the ecosystem's overall balance. The ecosystem is made up of all the organisms and nonliving elements that can be found in a specific location.

The ecological limits on the resident populations are defined by ecosystem. These limitations are interpreted in relation to the production and transformation of energy, the production and consumption of food and water, the creation and recycling of water, and the varied usage of renewable and non-renewable resources across time. Information, knowledge, and values that are utilized implicitly or explicitly to innovate and use resources, make tools, harness energy, and develop skills serve as a mediator between the relationship between the resources that are available and human societies.

Vernacular buildings reflects the conscious or unconscious know how of local craftsmen and the inhabitants. Understanding options, traditions, conflicts, discussions, and compromises is crucial. Local knowledge is important, but advancement of the community, settlements, and structures must also take into account a number of characteristics of modern culture, particularly ecological and social elements. This is based on initiatives to protect the environment and promote a sustainable environment (Sigit Wijaksono, 2017).

2.2 Settlement Pattern of Village

In simple definition, group of buildings and their distribution pattern makes a settlement. Buildings do not exist in isolation. It is a part of both the social and physical environment, and it alters both

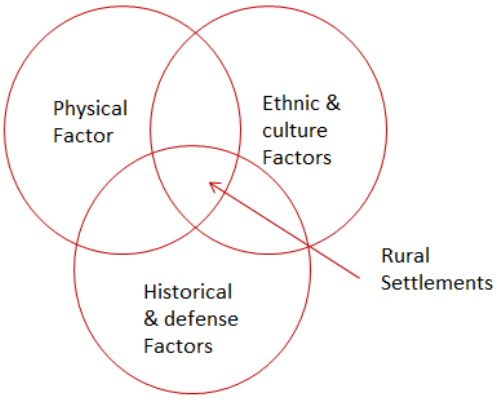


Figure2.1. factors affecting rural settlements

of them. Architecture interacts with the environment, previously constructed structures, society, and its cultural, religious, technical, and other surroundings. In architecture, art and aesthetics, shape and functionality, materials and technology, and so many other requirements combine.

The distribution of structures and homes in rural and urban settlement is referred to as the settlement pattern. Geographers, historians, and anthropologists are interested in settlement patterns because they can shed light on how a community has changed over time. A population's distribution over a specific area is referred to as the settlement pattern. The size, shape, and density of a settlement's people define its pattern. Any given area's settlement pattern is the result of a variety of variables. Settlement patterns are mostly influenced by topography and climate. The primary determinant of the rural settlement patterns in a peasant society is the agricultural system practiced. Settlements can develop in a variety of ways. Compact settlement, scattered settlement, ordered settlement, linear settlement, and nodal settlement are the five primary forms of settlement. Rural areas frequently have dispersed settlement patterns. This pattern appears when there is no center cluster of residences or businesses and homes are spread out over a wide area. The most direct and deep connection between rural communities and land exists. The majority of residents in the hamlet work in primary industries including agriculture, fishing, logging, mining, animal husbandry, etc. The settlement size is relatively small.

The layout, construction and use of buildings are developed from the interaction between wide ranges of factors. The layout, construction and use of buildings and settlements are connected to lifestyle and values concerning the social organization of household and communities. Vernacular building and settlements are not just static forms but are constantly evolving according to the changes in the communities that shaped their forms. Magar settlements are mostly found in the top of the hill or mountains. Magar Houses are built according to the style of the geographical features and resources found (Bista, 1967). Factors influencing the type of rural settlements are physical, ethnic or cultural and historical or defense.

Physical factor: It covers things like drainage, water availability, climate, height, and terrain type. These factors affect the kind of home and its dimensions.

The settlement of Thabang is between hill and river with gentle slope. Because of the terrain's contours, rainwater can easily drain into rivers without any prior spatial drainage design. Ecologically, the orientation of the building is placed in the path of the sun and wind. The orientation of the building and settlement is toward the southern slope of the mountain. The

majority of the house aligned itself parallel to the orientation pattern. The structures are spaced apart by 1.5 to 3 meters. The majority of homes are not built with the spacing between buildings in consideration. The condition of limited land in urban area can be found in this village as well.

Ethnic and cultural factors: Caste, community, ethnicity, religion, and social institutions are some of its components. At Nepal, it is typical for the primary caste to live in the village's center, with the lesser castes that provide services clustered around it. As a result, a settlement becomes socially segregated and split up into various units.

The difference in the habitation environment is however distinct by location in Thabang village. For instance, the core area of the village with more gentle terrain is primarily settled by Magar community. Bika community resides in the upper part with more terrain pitch. Likewise Nepali the community of tailor profession, reside at the east and west fringe of the village.

Historical and defense factors: It has security features that serve as a deterrent to theft and robbery. Security concerns supported the development of centralized settlements since throughout history; the majority of regions have been attacked by outsiders or engaged in internal conflict. Villages were constructed on defense hills and islands during periods of political unrest, war, and enmity between adjacent populations. In India, the majority of the forts are situated on hills or higher land.

In some places, on the low plains just below the top of the hill, there is the beauty of the Magar villages like in Thabang village. In earlier societies, when one settlement was at war with another settlement or one of the head of a village is at war with other head of the village, the hilltop settlement is view as the best to protect from attacks. Therefore, the main reason for the dense population of Magar on the mountain tops is security (Magar S. R., 2020). There are five areas in which the distribution of settlement morphology should be studied:

- Characteristics of each house
- Location of these houses within a village or community unit
- Relationships between homes and other structures, such as temples, venues for sporting events, etc.
- A floor plan of the entire village or community
- The geographical proximity of a village or community

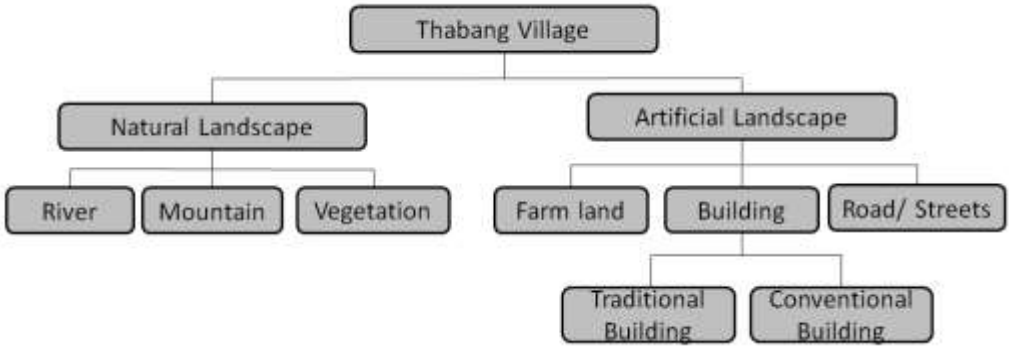


Figure 2 Thabang Village and its components

Village Site Selection Criteria

The foundation of human existence is the village. Traditional villages include both minority settlements with historic structures and unusual customs as well as ancient villages and cities with reasonably complete ancient homes, traditional customs, and lifestyles. Village site selection and village spatial shape are long-term developments. The best way to preserve our connection to nature is to honor it and include it into our long-standing historical practices in order to uphold the sustainable ecological principles that our ancestors spread.

As per Hai-fan Wang (2019) the "stereoscopic distribution theory" and the "stratospheric habit theory" are two hypotheses about village site preference. The association between the strength of ethnic groups and land form is strengthened by the "stereoscopic distribution theory," which integrates the tools of production with living space. This theory holds that while the land form defines the shape of the settlement, ethnic strength determines the stereoscopic form of the occupied land from low to high altitude. This theory is based on the survival status of ethnic groups in anthropology. According to the "stratospheric habituation theory," a population's suitability for stratospheric migration determines its destination, and its habituation dictates the form of its settlement. According to the "stratospheric habituation theory," a population's adaption to the stratosphere dictates the location of its migration, and its habit determines the settlement shape. The two theories view the development of villages from several angles, including conflict and ethnic customs, whereas the magar people choose to live in a community surrounded by other people and their surroundings. The stratosphere habit theory applies to Thabang village, where the shape of the settlement is determined by the landform and agricultural output.

2.2.1 Culture

There is no simple or commonly accepted definition of culture in general. Culture is the way people live as individuals and as a group while interacting with the environment, society, and economics. Culture builds values that drive collection action which is a character most lacking in economic and environmental domain. Culture is as transmitter of life and ways of life which transmit life across generations or time. Culture is a collection of historical intellectual (non-material) and physical (material) accretions that have the power to influence and control society's nature and behavior. Culture is something which is accrued, gathered and remembered from past. As the definition provided by World Bank - Culture can be defined as "the whole complex of distinctive spiritual, material, intellectual and emotional features that characterize a society or social group."

Tangible Culture: Tangible cultural manifestations are things that people create, keep safe, and pass down through the generations. It consists of artistic creations, architectural icons like monuments and buildings, and other tangible examples of human brilliance that have been assigned cultural significance in a civilization. It includes the human rights, value systems, traditions, and beliefs in addition to the arts and literature.

It is obvious that culture has the potential to change societies in the interconnected world of today. Our daily lives are enriched in countless ways by its many manifestations, which range from traditional customs to modern art forms to our beloved historical landmarks and museums. Heritage serves as a source of identity and cohesiveness for communities that have been destroyed by economic change and unstable economic conditions. Heritage and creativity both form the foundation for successful, innovative, and creative knowledge civilizations.

Architecture is a lithic history which means chronological orders of events and trends written on stones. When we look at the building, we read the stories about geography, climate, society, culture, religion and technology etc. Considering historical architecture as a lithic record of social developments, technological advancements, religious movements, and occasions that are significant in human history. Building reflects the story of that time, several going back and forth can relate in the building. Cultural achievement can be measured from subtracting the previous buildings from present buildings.

Magar of Thabang village has vividly tangible culture like monument Jaljala temple, sattal, Than, wood carving, stone inscriptions, housing pattern of Magar village with its art and

architecture, inscriptions, agriculture typical tools, costume, jewelry of different ornaments and cuisine.

Intangible Culture: Non-material accretions (intangible culture) can be seen as knowledge systems that is passed on from generation to generation, practice and application of such knowledge gives life to the material expressions and instill life in these living cultures have worldviews constructed through these activities. They also provide identity and distinction to the home society. Artistic expression, such as oral history, language, literature, performing arts, visual arts, and crafts, is also a part of cultural practices (e.g. traditional healing methods, traditional natural resource management, celebrations, and patterns of social interaction that contribute to group and individual welfare and identity). Magar intangible culture includes language, religions, traditions, rituals and rites of community, festival, cultural music and dance, greetings and hospitality of magar people.

People from various locations, races, and cultures react to their varying environments in different ways, creating a distinctive habitat and way of life. The house is influenced by cultural spiritual, material and social aspects which affect form. The expression of shared societal objectives and moral principles can be seen in the house, village, and town. Different types of houses create various kinds of villages and cities according to culture. The layout of a person's home is determined by the way they live. Since it determines the people's way of life, religion and culture have always played a significant role in the development of the environment for habitation. The most important aspects which affect built form are some basic needs, family, and position of women and social intercourse.

2.2.2 Society

People don't typically live alone or apart from one another. Instead, people prefer to live in neighborhoods with neighbors who share their race, country, religion, or other cultural traits. An organization and way of life are shared by members of a human community. A nation or a country is held together by a group of families, clans, toles, castes, and ethnicities.

Depending on who is doing the categorization, there are a wide variety of ways to distinguish between human societies. Anthropologists, for instance, frequently utilize the group's means of subsistence to describe them. Anthropologists categorize a tribe as a hunter-gatherer society if its people eat through hunting animals and gathering vegetation. A society is said to as pastoralist if its residents frequently rear animals for their meat, blood, or milk.

Agriculturalist societies are those that cultivate crops for harvest, and these societies can eventually develop into industrialized agriculturist societies with the usage and application of technologies based on fossil fuels.

Since all facet of a person's social behavior, including domestic, economic, political, legal, moral, and religious behavior, is influenced by the culture of his or her group, it is difficult to understand human society without understanding human culture. Man's social behavior differs qualitatively from that of animals. Culture is the characteristic that separates all human groups from animal groups. Without culture, it is impossible to comprehend the nature of human civilization and the evolution of human social life. Culture is the distinctive feature that separates human groupings.

A culture creates institutions, values, and tools. Culture is made up of socially learned and socially transmitted behavioral patterns. Common values and symbol systems serve as the foundation of social organization, and the social environment mediates cultural artifacts. Social conditions presuppose the existence of cultural objects, we could say the distinction between the two is academic classification and in life, the social merges into the cultural so the social bubble is inside the cultural bubble of elements and expressions of culture.

House or the shelter is the basic need of human to survive from the harsh climate and weather and safety from wild animals. So house is the man’s negotiation with nature and development of the first social unit of family/social life within dwelling of the human. Later on Temple which is man’s recognition of spiritual nature is a dwelling of the immortal. Man’s faith on supernatural power and spiritual development. Dimensions and perfection as beauty are the major factors to build temples which means perfect for the perfect. The evolution of house and temple are result of man’s basic need of shelter and spirituality. Eventually man started to live in group called society or community, which fulfilled its social needs or demands.

Throughout history, the requirement for settlements to fit in with societal mores and way of life has shaped them. The combined parts of residential structures represent the dominant way of life, which is based on social and cultural traits of the society. Like in joint family in Nepal after son’s marriage or increased family members, the dwelling should be able to meet the quickly expanding family's changing needs. As per the economic condition of household, the house would expand or sub-divided to create new living spaces. In this situation, house would grow and adapt to the new situations like living organisms. Most homes can be used for a variety of purposes, not just living. In a few instances, homes are used as offices. In the economic affairs of the household, women have a significant role. They made handicrafts like rugs and textiles in addition to cooking, washing clothing and dishes, and caring for kids. For

these numerous activities, house areas were modified. So the traditional houses are multi-functional units designed for residential, economic and service functions.

Maslow's demand hierarchy theory states that human needs can be broken down into five categories, from the least to the most important: physical needs, security needs, social needs, respect needs, and self-realization needs. In addition, one can construct four circles to represent the relationship between village people and culture. The first circle alludes to man, the most intelligent being in all of nature, who has the ability to modify and alter the natural world. It serves as the foundation of the entire cultural system and is also its most active component.

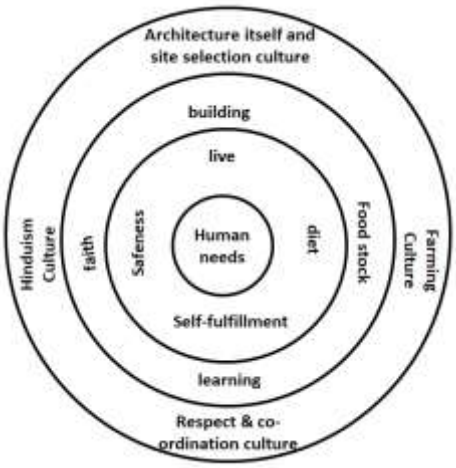


Figure 3 the relationship between man and culture

Source: (Dan Dai, 2019)

The second circle is concerned with the desire to satisfy people's own material and spiritual requirements, including those related to housing, food, safety, and self-realization. The forms are discussed in the third circle. That is, building site selection and architecture itself culture, farming culture, Hindu culture, mutual respect &co-ordination and so on (Dan Dai, 2019).

Like as seen in Thabang village, the site is selected as per to fulfill the basic requirements like food security, safety, close to nature for self-fulfillment and social needs. Houses are built according to the style of the geographical features and resources found. Later on social values, norms are developed and transferred into architectural values and artifacts.

The model can be used to explain how sociocultural influences and housing form are related. where a culture's values for architecture, social norms, and social values were used to choose or create architectural artifacts. Through a methodical investigation of specific questions posed in a tangible-intangible orientation, such as "What architectural artifacts are in use?" the features shown in the model can be studied. What architectural principles influenced the selection of the artifacts? What social and behavioral expectations, guidelines, and prohibitions have an impact on these architectural values? What social ideals influenced and gave rise to social norms about specific behaviors, decisions, and activities? According to the study, “social participation in the design of residential architecture has a positive impact both on the architecture and on relations between people who are involved in the creation of such architecture” (Kosk, 2016)

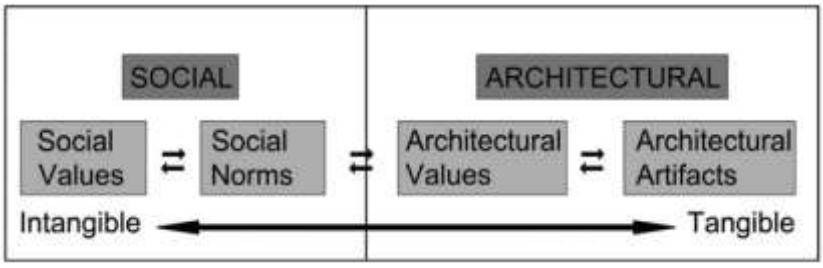


Figure4. Model of the relationship between social values and architecture

Source: (Erdoğan, 2018)

The study of a traditional magar house is used to illustrate the model, with the emphasis on how social values such as religious convictions, the relationship between male and female figures, family structure, the social standing of the family, neighborhood ties, and social values in magar tradition interact and coexist to create form in the settlement. A four-part model that illustrates the connection between architecture and social elements and the interaction between the house shape and socio-cultural aspects has been used to describe this relationship. This model can be used as a methodological tool for exploring and understanding the relationship between a particular culture and its architecture and also to learn about the value and meaning of specific architectural artifacts (Guillaud, 2020).

Social Values: The extended family pattern, the status of the family in society, relationships between men and women, neighborhood relations, daily routines of the family, traditions, beliefs and their rituals among the society, their hospitality, the beliefs and practices, need to be studied in the working standards of this model (Erdoğan, 2018). Magar people have deep culture spirit of living together. Magar settlements or community is dense and crowded. In early stage Magar people used to hunt the animals and search the food like yam etc such practices are still yet as for entertainment.

Social Norms: Studying the fundamental social norms and laws that emerged from social ideals is necessary. Women are required to do household tasks while men play a more active part in society. The presence of extended family fosters harmony inside the home. Helping one another has become crucial as neighborhood ties have grown so close. One of the social rules is to treat the guest sincerely and with respect as well. It's crucial for neighbors to offer assistance to one another, and traditionally, women shared household chores with their female neighbors. Another value is hospitality, which calls for treating others with respect and honor. Religious celebrations, weddings, and funerals all take place in homes.

Architectural Values: Certain types of behavior were required by these social norms, which in turn gave rise to specific architectural values. The house is multifunctional and built

adaptably to the extended family, representing the family's standing in social life. Depending on the requirements of the extended family, different rooms are used. Rooms serve a variety of purposes. It is possible to use multipurpose rooms and areas on a daily basis. The relationship between a house and a street can be planned as a hierarchy of public, semi-public, and private places. The home and its spaces are used for a variety of social and religious rituals.

Architectural Artifacts: This expression is used to emphasize that the historic structure can be thought of as a result of human action. This assumes greater significance for a historical structure that was constructed using artisanal techniques and stratified over time. The typology of houses, wooden decoration, private-semipublic-public spaces, daily life in these spaces, the use of spaces while gathering, large openings and decoration are some of the artifacts that needs to be studied.

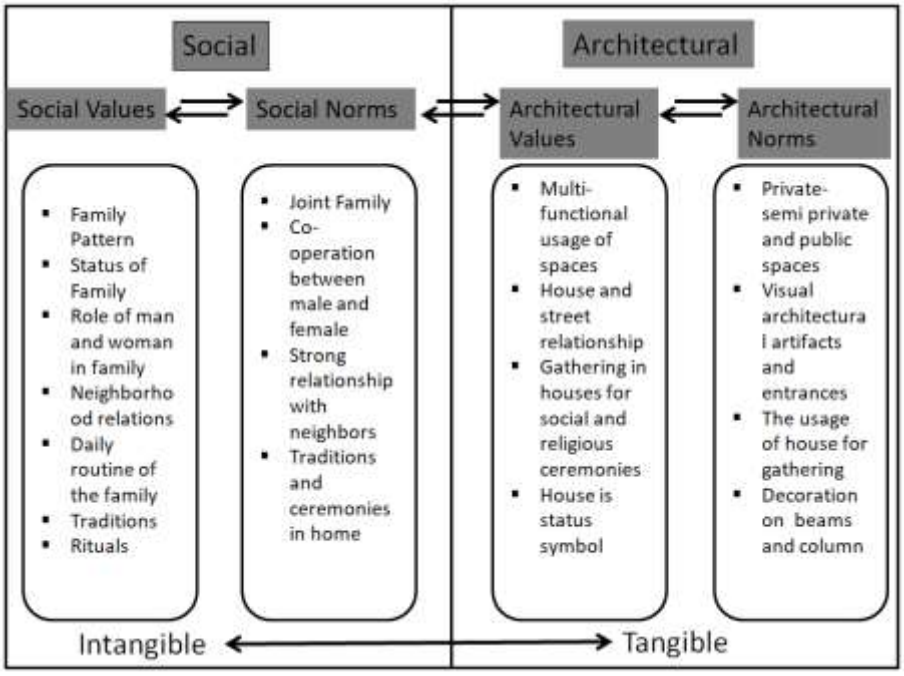


Figure 5 Relationship between social values and architectural artifacts of Thabang Village

2.3 Socio-culture Dimension

Sociocultural is something that involves the social and cultural aspects which means common tradition, habits, patterns and beliefs present in a particular group or community. Culture is the way of living as individual and ways of living together in co-existence with nature, society and economy. Urban society has urban culture where as rural society has rural culture. It should be understood that modern urban culture distances away from nature and

prioritizes economic life. Rural cultures are closer to nature and interact with it prioritizing social life. Culture continues and transformed according to time. It was happening in past, continuing in future similarly in present as well.

The foundation of social structure is a set of shared values and symbolism. Societies are not static and as they change over time, due to the changing demography, coming in contact with others, in migration and out migration compositing, their cultural values and social practices change. These changes of values are get pronounced in traditional societies with traditions, beliefs and intangible valued developed out of earlier contexts. Socio-cultural sustainability strives to preserve the cultural environment, transfer construction cultures, foster social cohesion, foster innovation, and acknowledge intangible values. Using materials sourced from local knowledge, designing building construction based on the expression of a local skill, adapting based on the characteristics of old buildings, and maintaining the scale and typology of the original building are just a few examples of how developing residential developers demonstrate this dimension.

Vernacular architecture reflects both tangible and intangible values that demonstrate how adaptable humans are to their environments and how much they cherish nature, regardless of the particulars of their surroundings. Traditional societies with traditions, beliefs, and intangible values that have emerged from prior contexts are more prominent in these shifts in values. In order to conserve the cultural environment, transfer construction cultures, foster innovation, acknowledge intangible values, and promote social cohesion, socio-culture sustainability is a key component. Indicators of this dimension include employing locally available materials, creating building construction based on the expression of a local expertise, and modifying based on the peculiarities of older buildings.

The building language that represents the immaterial values of those who built and lived in the area reflects the social and cultural aspects of vernacular architecture as well. The various expressions of sacredness (religious or agnostic, myths and legends), statements of symbolism and identity connected with the construction systems, and apotropaic protection devices are examples of how this collective memory manifests place attachment. Awnings, galleries, courtyards, and gardens are examples of intimate areas with these qualities expressed that are enjoyable to live in (Guillaud, 2020). The vernacular human settlements, hamlets, and villages reflect the desire and ability of the inhabitants to exchange and live together as well as to uphold the conditions of social cohesion in order to live as peacefully as possible despite conflicts of interest. This goes beyond the simple architecture of the buildings.

Indigenous people, their culture, their community, and their unique character came before the village's growth. Since local knowledge is essential to regional advancement, it is difficult for a community to eradicate local culture as a cultural concept. In residential complexes, where residential growth is one of the fastest-growing sectors, the socio-cultural ecology idea is concentrated. This idea aims to establish a new paradigm in which three factors must be taken into account when building a settlement.

1. The settlement can depict and communicate the original culture. This dimension can be seen in a number of ways, including the use of locally sourced materials by residential developers, the expression of a local skill in the design and construction of buildings, adaptation based on the characteristics of older structures, and preservation of the scale and typology of the original structure.
2. The social and economic activities of the neighborhood are frequently linked to create the village. This dimension is defined by indicators for maintaining the current geographical mix for habitation; this is so that as the population increases, so will the impact on social activities and local economic development.
3. The village must be constructed while maintaining the buildings' historical significance. There are two markers for this dimension:
    - How to utilize existing structures rather than constructing on new ground
    - How to respect the local setting.

The number of homes, home status, building type, and forms of inhabitant institutions are the factors that affect the socio-cultural ecology of the residential complex.

Settlements that reflects and express indegenous cultures	• using materials sourced from local wisdom • building constructs based on the expression of a local skill • Adaptive features based on old buildings characteristics • retaining native building scale and typology
The form built by linking social and economic activities of Society	• maintaining spatial combinations for live, trade and social activity • emphasizing publix spaces
Maintaining building with existing heritaze values	• respect local context • utilizing existing buildings instead of buildings in new land

Socio-cultural ecology of the settlement complex

Connection between place, public space and socio-cultural activities in Magar Community

The Thabang village is situated in a foot of the hill, surrounded by agricultural land and rivers from three directions. Thabang is a place which is similar to dense urban area, the compact settlement and spaces makes it that way. The interacting public spaces for people are market, square, streets, aangan, agriculture land where agriculture activities, gathering and festival activities take place. These activities differentiate the private space of house, into semi private spaces like Mahira and aangan, into public spaces like square and streets. Streets works as a linkage between private and public spaces, pedestrian movements is highly influenced by building details; the streets are not monotonously designed. The sun and shadow effect can be felt. Spaces in this settlement can be seen as street space, nodal space and spaces formed between house and streets called aangan. The aangan are used for agriculture product, ladies making threads for hand-woven cloths. Aangan is also used for social gathering during festivals and social functions. Nodal spaces are informal and element of surprise while moving. Street itself used spaces for daily activities by farmer, used by human for lifecycle rituals and movement during festivals. The relationship of socio-cultural aspect with built space in magar architecture. The types of spaces are shown below:

Table 2 the types of spaces in magar architecture

Types of Spaces	Functions
Streets	• Space for public interaction
Aangan	• Festivals and social functions • Utility area: sun drying grains, cloths
Mahira	• House hold goods; dhiki, jaato • Semi-public space for guests and social interactions
Store /Kitchen/ Bed Room	• Storage space for firewood, agriculture product • Private spaces for daily life activities and needs
Agricultural Land	• Major source of economy • Design of house is based on agriculture
Artistic Decoration on Beam, Column, Window and doors	• Traditional mythological stories are displayed through carvings • Animal, plant, bird, man and woman are carved

2.4 Problems

With the change and development in technology and inventions in different fields, its direct or indirect impacts can be seen in most of the sectors whether it is agriculture sector, education sector, health sector or housing sector. With the ease of transportation and availability of material, some sort of urban and industrial transformation can be seen in rural areas. Rural areas are undergoing a complex process of rural transformation. The repercussions of this process go beyond the economic and even beyond the agricultural sector's development, with some having detrimental effects in many rural communities. But these rural transformation processes can be directed in a way that prevents undesirable impacts and results that are advantageous for rural communities and settlements. The rural transformation needs to be ecologically more sustainable and socially inclusive (platform, 2016). The rural transformation trends and driving forces are

- population growth
- climate change and resource degradation
- globalization
- urbanization
- rural-urban linkage
- migration and mobility
- agricultural modernization

Changes in demographic composition, socio-economic attributes and residential distribution can be seen in rural settlements. Demographic changes are a direct response to organizational, technological, and environmental changes. Globalization, economic restructuring, innovations in farming, closeness due to communication and transportation improvements all have implications of demography of rural settlements. Migration into and out of rural areas is strongly related to employment opportunities. Agriculture is still the dominant profession of villagers. The changes in rural population have been coming from the shift in economy. Economy is shifted from agriculture resource to services, as family farms are replacing by corporate farm. Other reason is technological development and communication. Young people are leaving rural areas after school graduation for new opportunities and old people are migrating in rural areas.

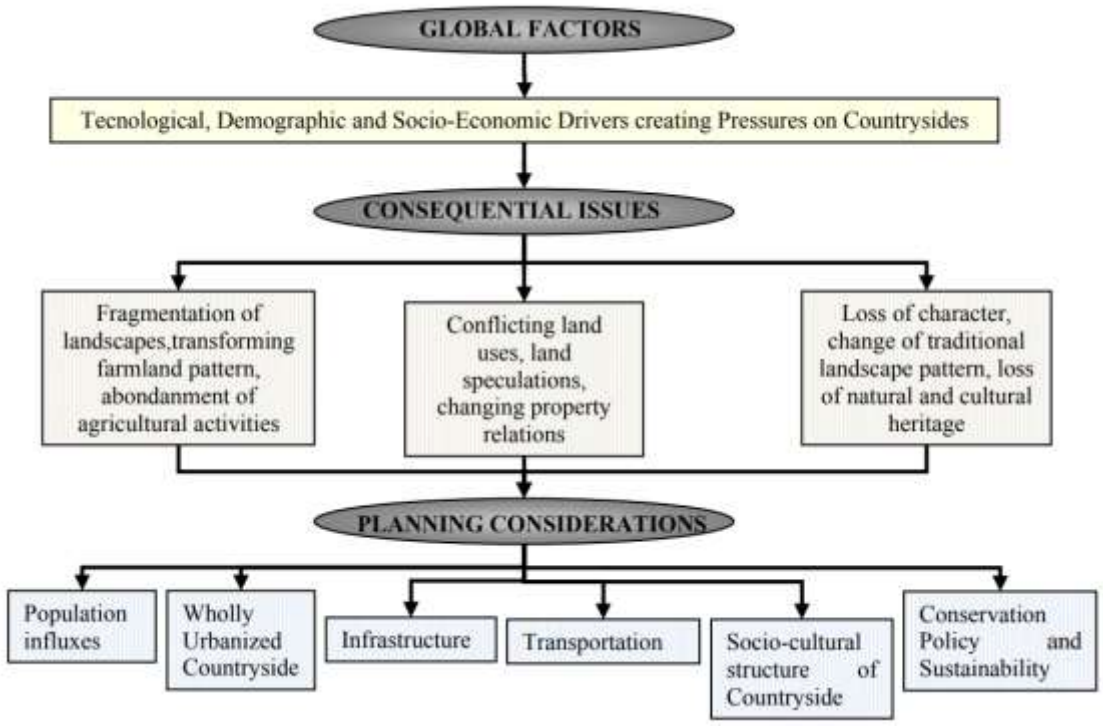


Figure 4 the conceptual diagram of the causes and consequences of transforming countryside

Source: (KOCA, 2012)

2.4.1 Globalization

Another significant force behind structural change is economic globalization, which also serves as an essential precondition for the processes of rural transformation. The interconnection of rural economies in developing nations with global markets can result in the cross-border interchange of goods, services, capital, and technology, but it can also lead to dependence on the prices of commodities on the global market and price vulnerabilty. Economic globalization has a significant impact on the processes of rural change in a variety of ways, including the transfer of technology, the introduction of new goods and services, and land speculation. This may also create a wide range of economic opportunities, depending on how competitive rural areas**.**

2.4.2 Population growth

The population change occurring in many emerging nations is one of the major worldwide issues driving rural transformation processes. The number of young people who need to be incorporated into the employment market significantly rises as a result of the continued population growth. Increased demand on natural resources like land and water, as well as on

essential services and infrastructure, is brought on by population increase. It would be incorrect to assume that population growth does not put significant pressure on the resources of rural spaces, even while these pressures are also factors in increased mobility and movement within rural areas as well as from rural to urban areas. As a result, compared to urban areas, the share of population increase in rural areas is decreasing globally.

2.4.3 Climate Change and Resource Degradation

The effects of global warming and climate change, such as increased temperature variability, extreme weather events, and enhanced rainfall variability, add to the stress on natural resources. Even though the effects of these developments vary greatly between locations, there is general agreement that already fragile regions like the Sahel zone will find it more challenging to guarantee food security for its rural population. An additional force behind changes in the agricultural industry and the greater rural area, which frequently take the shape of migratory flows, is the unpredictability of weather patterns as well as the mounting demand on and deterioration of natural resources. Furthermore, the effects of climate change not only make farming less appealing but can potentially harm the livelihoods of vulnerable populations due to the lack of social support services in remote and rural areas.

2.4.4 Urbanization and Rural-Urban Linkages

The process of urbanization and migration from rural to urban areas is one of the main drivers of rural transformation that best illustrates the connection between rural and urban places. Economic development and growth are often focused in urban areas and do not reach the most vulnerable populations. Cities have greater and more varied access to essential services and employment prospects than rural areas, or at least it seems that way. This has a powerful draw on the rural population, especially young people. In addition to these physical disparities, there are significant economic connections between rural and urban areas, particularly when it comes to food systems.

2.4.5 Migration and Mobility

Both a driver and one of the main outcomes of rural transformation may be attributed to the growing ability of the rural people to move or even migrate between rural areas as well as

from rural to urban areas. As a result, it is closely related to population expansion, climate change, and the strain that these factors place on natural resources and essential services. Another crucial aspect that encourages mobility and might lead to migration is employment possibilities, or rather the lack thereof. Of course, each nation and location has unique push and pulls factors. International migration can be strongly influenced by factors like shifting norms and values and global information access, however many movement patterns are seasonal and lead to multi-local livelihoods in which families get their income from multiple different geographic sources. The fact that young boys are frequently the ones moving, nevertheless, is one pattern that is readily visible. This has significant effects on rural areas where households may be led more often by women and where the relevance of gendered access to resources and services increases.

2.4.6 Agricultural Modernization

Whether agricultural modernization counts as a trend or driver is up for debate, but there is no denying that it alters rural communities' appearance and is directly related to the need for inclusive growth. Modernizing agriculture and boosting productivity are essential to altering the agricultural industry and hastening the structural change of rural areas. However, even if increasing agricultural productivity has the potential to be a significant policy priority with the ability to drive and expedite rural transformation processes, it is also a driver in many developing nations, particularly in Sub-Saharan Africa. Achieving food security for both rural and urban areas requires increased agricultural productivity, but it can also result in a significant release of labor that must be absorbed by the nonfarm economy, placing pressure on the labor market and having an immediate impact on urbanization, mobility, and migration.

2.5 Changes or transformation of rural Society

Transformation of rural society is not in the desired direction. Agriculture is the center element of the village, which is haphazardly transforming into plots where RCC structures going to stand. Locals are now depending on imports for food security eventually destroying the farmland pattern and economic viability of farming.

2.5.1 Physical changes:

2.5.1.1 Transformation of agriculture land pattern

Agriculture land is the central element of any community that needs to be maintained by community to balance the socio-economic structure of that community. These lands have both economic and environmental values and quality. If the farmer gives up on his property or sells it to an urban developer, this could have an impact on the entire neighborhood and the settlement's future.

Farmland patterns and rural natural landscapes with their amenities have changed over the past few decades as a result of shifting socioeconomic situations, an increase in residential, commercial, or leisure activities, and urban agglomerations brought about by transportation system developments. We cannot neglect the profits from local farming activities for the regional market economy when discussing economic outcomes. The primary suppliers of fresh food for the nearby communities and marketplaces are local farmers. However, urbanization and land sales with an urban focus are degrading high-quality farmlands, encouraging land allocations with subdivisions, slowing farming operations, and ultimately destroying the pattern of farmland and the financial feasibility of farming.

2.5.2 Loss of particular settlement character

As is evident in rural areas, the loss of beautiful landscape aspects, the removal of social and cultural values of the community, and the loss of a specific settlement character result from the transformation of farmland into fragmented pieces of land and the emergence of conflicting land uses. Due to the ease of movement, urbanites are now able to access all rural areas, where they are affecting the traditional values and way of life of the local distinct villages. The natural trails of rural landscapes started to become crowded as a result of accessibility and mobility. The area passing through the highways began to lose their quality of landscape character and nature.

2.5.2.1 Modernization

In addition to altering the physical terrain, modernization also affects the way that people live their traditional lifestyles and routines. Unlike the ancient towns, the new homes lack

personality. People mistake these changes for the local character of the traditional landscapes because the pace of change causes them to lose sight of the original identity.

The way that various social groups view a settlement depends on its character. The way people perceive a landscape gives it a specific identity. People's behaviors, daily activities, social interactions, and practices identify cooperative or antagonistic land uses, and their perspectives on the surrounding environment determine the nature of the settlements. Understanding the thoughts and behaviors of the original occupants on the settlement develops important in terms of good planning and sustainability because the concept of countryside identity has such historical, cultural, and geomorphologic characteristics. Antrop (2000) criticizes the new landowners' lack of knowledge of how the features of the environment have altered and how the settlement pattern has developed. As a result, raising public awareness of the settlement's historical origins is crucial to improving perceptions of the land's importance.

2.5.2.2 Visual Quality

Locals frequently consider visual quality to be a crucial determinant of how the new urban elements blend into the surrounding environment. According to the study's findings, farming has been regarded as the most important component of rural character, and residing in or adjacent to a natural setting has been regarded as the most important component of rural lifestyle. Locals were surveyed about how they felt new home construction will fit in with the neighborhood's existing character. These factors lead us to the conclusion that the settlement's character is composed of a few natural and cultural components that have been endorsed by the neighborhood.

2.5.2.3 Construction technique

After late 20th century, the importance of new building materials and technology led to the introduction of new building typologies in urban areas as well as in places with good access to the road system. Vernacular buildings are replacing the modern design with form, material and technology. Slope roof, thick wall, load bearing system, roof projection are replacing by flat roof, thin wall, RCC frame structure and roof without projections. Natural materials like slate roof, wooden roof, natural stones, and mud mortar are replacing by CGI roof, burnt brick, and cement mortar. This is causing the problem like reduced thermal comfort and

dependence upon artificial energy resulting in environment pollution. The widely used RCC frame is now noticeable throughout Thabang village's landscape, representing residents' ambitions for modernization and their firm trust in cement's strength and durability.

2.5.2.4 Loss of memory, knowledge and skills

The workforce has followed the demand and adjusted, giving up the traditional artisan skills and expertise that had previously been passed down from one generation to another, even though reinforced concrete production requires specialized engineering knowledge and construction abilities. The professional education of architects and engineers, which is wholly centered on modern construction, reflects these changes (Adhikary, 2016). They have also contributed to the low status of traditional artisans in society and the devaluation of their skills, even if their knowledge is still pertinent to anti-seismic design and appropriate design for climate and place. Therefore, important safety features of conventional building design and construction may be forgotten or neglected if knowledge is not passed down the generations. Confidence in the durability of cement mortar led to the removal of through and corner stones, two crucial elements of bonding, and the construction of thinner walls (making houses cooler to dwell in). Additionally, it has increased the danger of constructing on shaky ground (eg. building on the filled outer edges of mountain terraces rather than on the solid ground back against the hillside) (Forbes, 2015).

2.5.3 Socio-Economic Changes

2.5.3.1 Economic Changes

Economy is contained within the environment or ecosystem. Ecological concerns and economic concerns are at conflict. Ecology investigates the coexistence of man and nature. Economy equals ecological discord. Raw materials are converted into finished products both directly and indirectly through the usage of nature. Environmental pollution occurs throughout this production due to emissions and trash. In the same way that the environment can be considered a component of the economy, the two are interconnected.

Most of the impoverished middle-income groups live in rural areas, which have far lower incomes than metropolitan areas. The farmer makes very little money. The primary cause of

the economy's weakness is its whole reliance on agriculture; small-scale enterprises are still in their existence.

By integrating the social and economic activities of the settlement's residents, Thabang's settlement was formed. This dimension is defined by indicators for how to preserve the current spatial mix for habitation, commerce, and social interaction while prioritizing public space. People were involved in agriculture as primary occupation whereas trade, mining, craftsmanship, private and government jobs are some of the secondary occupations. The major occupation of the magar local people is agriculture, animal husbandry and foreign military employment like Indian and British army. From the history, they were engaged in military within the country or outside the country like India and Britain. Magar constitute the largest number of Gurkha soldiers outside the Nepal. During World War I and II magar showed their bravery. Magar have indigenous knowledge of medicinal plants and herbs. The major crops are millet, maize and potato. Beside the agriculture some of the people are enrolled in tourism facilities like hotel, restaurants, private job and business. Magar consist skills as craftsman and black smiths among the Nepalese and the primitive mining is largely in their hands.

The major occupation is agriculture. Even though agriculture is the major occupation but people are struggling for basic needs. Agriculture is not further developed as the income generation source. This is the reason, People are now attracting in business, foreign employment for economic opportunity. Few young people are establishing their own agriculture farm, nursery, business opportunity. There is urgent need to promote local agricultural product, investment in agriculture. So far the buildings are constructed with locally available reusable material and manpower which extend building lifetime and save resources and economy.

2.5.4 House form, building services and settlement pattern

In 2008 a model village development program was launched by central government. Thabang was selected as one of ten such villages selected in the country. Different from the ‘adarsha gaon panchayat’ label to Thabang in 1970, this project brought a number of transformations in the settlement and the dwelling functions. Particularly notable is the widening and pavement by flagstones of the lane, which included both the east west and the north south lanes. This partially narrowed down the existing house lots, but more importantly it brought certain changes in neighborhood activity spaces. The project also included the plan to shift

the pig raring space (malkhad), to the village periphery, which are now located at the lower levels of the ravine. At present, cattle are not kept in the home but in the sheds in the fields. The project at the same time assisted to build toilet in each dwelling unit. The changes can be seen in the cluster plans surveyed. (Model village development project, 2008)

Because of the model village development project, the widening of the street has narrowed the private front yard of the house. In not a few instances, with the house adjoining the street, angan no more exists. Thus, in such cases, the earlier yard space with the approaching path in it is lost. This change has transformed the settlement to one with a feature of compact urban settlement. The leveled street pavements of flagstones, which are generally kept clean, provide space for neighbors and villagers to gather for different purposes. This is a new space that didn't exist in the past. One can see children playing and residents coming out and sitting in stools or blankets laid in these lanes. The angan is now the street. With neighboring houses adjoining or close by, the street is freely accessible unlike the angan of the past. This scene reminds one the atmosphere of a traditional town. The cluster plan illustrates the changed environment of the house and the lane after the project.

2.5.5 Desired direction of changes

2.5.5.1 Ecologically responsive architecture

Any type of design that integrates with biological processes to reduce its negative effects on the environment is known as ecological design. It is time to acknowledge that the current models of agriculture, architecture, engineering, and technology are flawed if we are to create a sustainable world that meets the requirements of all living things.

According to data, buildings are responsible for 40% of the world's greenhouse gas emissions, 40% of the world's solid waste generation, 12% of the world's water usage, up to five times as many pollutants as in outside air in buildings, and a third of the world's resources are used in buildings. To solve these problems different building rating system like LEED, GRIHA, BBREEAM, CASBEE are developed in different part of the world. It is essential to incorporate a thorough understanding of ecology into the design of goods, structures, and landscapes. The ecological design approach is guided by five principles (Sim van de Ryn, 2007).

1. Understanding the natural environment

The biosphere is the term used to describe the entire earth's surface as an ecosystem. The biosphere is the area of land, water, and other natural resources where there are living beings. Our built environment, an area that must be integrated into the ecosystems without adversely affecting the ecosystem's balance, is included in the biosphere, which is made up of smaller units called ecosystems. This includes all the organisms and the non-living environment found in a specific location.

The first step to establishing a nature integrative design is understanding the natural environment. It involves comprehending how the ecosystem functions, as well as how those functions relate to the designs of buildings. It is important to constantly apply these analytical methods to determine and specify the functions of building designs and their related effects on the nearby and faraway environment. These processes, such as environmental protection, environmental impact assessment, integrated assessment, etc., which are typically carried out for individual projects like dams, roads, factories, or airports, should be expanded to include damage assessment, ecological replacement systems, or ecological integration solutions for smaller project designs like commercial and residential buildings (Anselm, 2006).

2. Solution Grow from Place

Ecological design takes place in the context of particular locations. The place, the soil, the plants, the animals, the climate, the topography, the river flows, and the people give it coherence. In terms of managing trash and energy, it looks for regionally specific solutions. Minimizing the contribution of cement manufacturing to global warming through carbon dioxide emissions. The region's acid rain may be a result of the power needed to heat the residence. Soil erosion on the property due to altered terrain and drainage may have an effect on the nearby watershed. The house might alter the habitat of existing wildlife. Emissions from different glues, resins, and coatings used during construction may endanger the health of residents inside the home. This is the sad reality of the wider ecological costs of a single building.

The house can be situated to use the least amount of cement possible, or alternatively, less harmful cement can be used, to resolve these undesirable problems. By carefully orienting the building and using the right building materials, passive solar heating can be used to address the building's heating problems. The effects can lead to innovative ecological design.

3. Ecological Accounting informs design

Jed Emerson's research indicates that sustainability generates mixed benefit (economy, social, environmental). Just as financial returns are meticulously examined, it is possible to carefully document social and environmental returns and deliver them to investors seeking such returns. As a result, market rate and socially or environmentally conscious capital are combined to close the sustainability gap by substituting supported blended financial, social, and environmental returns for unsupported levels of financial returns. Enterprises can access lower cost, more flexible sources of finance by optimizing and enhancing social returns like the creation of living wage jobs and environmental returns like less greenhouse emissions.

4. Design with nature

Designing with nature and developing solutions locally are directly tied to bridging the scale continuity between the designed and living worlds. Because many current modern constructions disregard "design with nature," they cannot be created to be truly sustainable in today's modern, industrial, and military empire. Although such systems can be made more resource and energy efficient, they will never be sustainable without a dramatic overhaul. Our lives would be less dispersed and more trusting if we were able to build locally rooted, self-organizing, compact communities that brought work, shopping, and recreation closer to where we lived. This would save time and energy on commuting, reduce CO2 emissions and our dependence on oil, and free up time for family and community activities. This is an illustration of what scale-linking of designed and natural systems can accomplish in terms of developing locations that actually function as communities.

5. Everyone is a designer

During design process, every voice should be heard. Honor the special knowledge each person brings. The design has been embedded in culture, acquired through everyday involvement in family and communal life. Local expertise and resources provided communities with all they needed to plan, construct, and manage their spaces. Design is too crucial to be left to designers alone; it should address the difficulties presented by actual locations and include ecology and community among its considerations. Design is not a neutral, modeled by powerful political and economic forces.

6. Make nature visible

The environment like wind, wild rivers, weather is the most powerful teachers. With the living practice in a designed environment, people don't know where the drinking water is coming from, where the tons of wastage are going on. Due to the daily experience of design environment, we learn detachment from nature and surrounding. Making nature visible enables us to interact with larger spheres of life and educates us on the environmental effects of our actions. An illustration of this is the typical drainage system, which allows water to quickly disappear while collecting up various contaminants. The water is concealed, and so are the system's effects, which lead to the contaminating of rivers or wetlands downstream and a reduction in ground water recharge. By allowing water to run on the surface into drainage ponds, drainage systems can be made visible and environmentally useful. It can safeguard wetlands and streambeds that naturally capture storm water.

This suggests a new kind of aesthetics for the built environment which shows the relationship between culture, nature and design. Ecological design makes us again close to the wind, rain, sources of food and the life cycle of our materials. The structure would need to help people understand how the weather, the seasons, the sun, and the shadows vary and flow, turning their awareness of the natural cycles that sustain all life. A wall should be a living skin that adjusts to changes in temperature and light, not a static, two-dimensional architectural piece. Building with energy efficiency also entails building with consideration for the environment. A better building for humans is the end consequence.

The desire to interact with a wide range of animals is inbuilt in humans. The term "biophilia" serves as a reminder that we were created to coexist with and adapt to nature. The biophilia theory strongly argues that a significant portion of humans' quest for a meaningful life is directly influenced by their relationship to nature. This need is met by ecological design, which makes natural processes visible and active at scales ranging from the household to the neighborhood to the entire city (Garden, 2018).

2.5.5.2 Continuity of vernacular reflection in new design of house and public spaces

Through the use of passive solar design, conventional methods, and regional materials, vernacular architecture can reduce waste and energy consumption. This is possible as part of an ongoing development process in which solutions are customized for particular situations in accordance with region and climate. (Jorge Fernandes, 2015). The goal of present-day and future architecture and construction should be to achieve a hybrid system that uses both

conventional and intelligent materials and enables for the investigation of novel aesthetic and functional ideas.

Any location's vernacular architecture is greatly impacted by its geographic setting. Hanoks, a new type of architecture that is qualitatively distinct from modernist homes because it represents the altered lifestyle demands of the twenty-first century, are an example from South Korea. But neither has it ever been a part of pre-industrial jargon. Vernacular reinterpretation and modification to make a building type fit for modern living is referred to as new vernacular. The new vernacular in South Korea demonstrates how the vernacular has changed to accommodate the modern world's growing complexity (Yun, 2014).

The transformation of Mahira into large span multi-story building is one of the major shifts in Thabang. Mahira is replaced by addition of room space which shows their changing needs of more space. Transformation of streets the pathways into public spaces, where people walk, sit and talk these days like they used to do in aangan. Transformation of building layout, plan shows the new functional spaces. Transformation of streets and new roads shows the changing social system and economic need of the settlements.

The idea of the vernacular should not be ignored just because it has a broad range of applications. Instead, its significance should be expanded to incorporate recently developed post-industrial vernacular structures. Hanoks provide evidence that the idea is becoming more significant, particularly in nations that are transitioning from the industrial to the post-industrial era. In order to market particular locations as having cultural history and so increase tourism, many other emerging nations, notably China, have started giving historical architectural styles within urban landscapes preference. The barrier between ordinary and spectacular blurs as new interpretations and construction techniques are applied in instances where vernacular architecture is recreated and replicated. However, individuals who are studying architecture need not expedite the blurring of the lines between vernacular and non-vernacular architecture by giving up on their efforts. Instead, it is our responsibility to constantly investigate architecture's ambiguous gray area and to reveal the elusive clues to an abstract idea.

2.5.5.3 Rural Place making

A collaborative process called place making enhances the bond between people and the shared spaces. When choosing a location, it's crucial to consider who will live there, including children, seniors, individuals with disabilities, as well as their ages and gender. A

shared vision for that location is then developed using this information. Emotional connection to nature or wild places comes before knowledge. revealing the truth in order to keep rural residents involved in changing and managing the terrain. A community's streets, sidewalks, parks, buildings, and other public spaces can all be improved through place creation. This includes both private and public locations. The objectives of placemaking are to promote more interactions between people and more socially, physically, and economically successful communities. (Anderson, 2019).

Figure 5 Place making: A tool for rural & urban communities

Source: (Anderson, 2019)

2.5.6 Festival

As per the definition in Wikipedia (2022), festival is an event ordinarily celebrated by a community and centering on some characteristics aspect of that community and its religion and culture. Festival constitutes the high culture – low culture interrelationship and religion. The origin of festival is agriculture because food is a vital source that many festivals are associated with harvest time. Thanking god for good harvest and religious ceremonies happen for festival events as seen in Magar's Bhumeya puja or festival. Community festivals offer chances for social interaction, entertainment, and the creation of social networks, all of which improve community cohesiveness and help to create social capital within a community.

This intangible belief plays a significant role in the definition of place and cultural identity. Festivals, festivals rituals and the associated spaces are the vital aspects of community and their culture. These festival activities preserve the community pride, learning new things, strengthen relationships. While celebrating different rituals in different locations, it brings vitality in community. Spaces are maintained properly and community development occurs. It attracts visitors which stimulate growth of tourism and other businesses in community. Carries the massage of the past generations to the present and future and preserve the culture.

First, the god of nature worship. Because they are challenging to recover from, natural calamities have retained the original mindset of nature worship. For instance, clouds or thunder cause precipitation in nature, and humans have no control over how much precipitation occurs. Floods are particularly difficult to forecast or alter when there is an abundance of precipitation. The veneration of the god of nature is thus born. The awareness of ancestor worship is the second. According to the idea of "animism," after death, man becomes god. In the afterlife, ancestors would grant blessings to their descendants, and their inns are filled with mysticism. They feared that someone would deliberately destroy them, causing the good fortune to vanish and maybe affecting their offspring. The latter, like the cemetery, displays a fundamental understanding of ancestor worship. The Magars practice "animism." They hold that nature is the foundation of human existence and the source of our sustenance. The idea of peaceful cohabitation between man and nature as well as the sustainable ecological concept of treating natural resources with "reasonable access and suitable use" are both embodied in the simple, unsophisticated thinking of the Magar people. If the natural world is significantly harmed, the extinction of certain natural creatures would certainly result in human survival falling into a certain predicament, so the idea of moderation and peaceful cohabitation should be implemented.

The uniqueness of Thabang village is a result of the coming together of the building materials, climate and vegetation, conditioning environment of monsoon. The agricultural civilization supported by the climate of the settlement. They worship and celebrate different aspects of nature which relates to life like deurali puja, sinia puja, bhumiya puja, than (agricultural household tools) and ancestors. Festivals can be seen as timed and related to the seasonality and nature. After harvesting the crops of winter, they worship nature for suitable weather and rain for new seasonal crops. The seasonal calendar shows the equal participation of man and woman in agriculture. Nokobange dance is the major part of the festival. Every dance step replicates the daily life of the people and nature. Like milking the cow, plantation

in field, blooming of flowers, skinning the vegetables, growth of plant, door locks of house and so on.

During the Bhumeya puja, the place or major markers of these festivals are the river, the temples of Jalajala, offering site, than. Streets or pathways linking to associated place: The certain routes are assigned for performing rituals and connecting the markers. Some mythological stories and myths are behind certain festival and its rituals. They celebrate this festival with the hope of saving land from flood, landslide, and storm, rain any other natural disaster. To make nature happy, they celebrate this festival every year. The associated individuals, families, clans and caste groups: During this festival not only magar, people from other ethnic groups like Nepali, damai equally participate. They have important role to perform during this festival. The elders of the community attempted to pass on this knowledge through rituals.

Figure 6 Thabang Village Site plan

Source: (Model village development project, 2008)

CHAPTER 3. RESEARCH METHODOLOGY

The research uses the cluster sampling approach, which divides the study's whole population into groups termed clusters that are externally homogeneous yet internally heterogeneous. A miniature version of the total population can be found in each cluster. A researcher must select the best technique to sample the items from each selected group after determining the clusters (CFI). Particularly for samples that are widely dispersed geographically and would be challenging to properly sample otherwise, cluster sampling is time and money efficient. Cluster sampling uses randomness, thus if the population is clustered correctly, the sample will accurately represent the features of the wider population, giving the study great external validity.

According to the central line theorem (CLT), regardless of the population distribution, the distribution of sample means approaches a normal distribution as the sample size increases. Typically, sample sizes of 30 or more are seen to be adequate for the CLT to hold (Ganti, 2022). So, for unstructured interviews, 30 respondents were selected as per cluster sampling. For in-depth interview individual interview were carried out. 5 no of people were selected for individual interview. The sample size for quantitative analysis if it will require is calculated by following formulae. For structured questionnaire survey, purposive sampling can be done where sample of 117 residents units after the calculation of total population of 274 residences, can be carried out.

$$n = \frac{Nz^2P(1-P)}{(N-1)*e^2 + z^2*P(1-P)}$$

Maximum margin of error (€) = 5%

Confidence level = 95%

A questionnaire was designed to obtain the answers to the questions mentioned in the scopes and limitations of the research. First of all, a literature review was done to find out the variables for the questionnaire which comprises research questions. Secondly, demographic data and public opinion and land use data were constructed. The information's were gathered from the below-listed sources:

- Household member in the community
- Direct Observation
- Literature Review

The relationship between various variables was analyzed to withdraw the conclusion from the questionnaire survey. Below is the list of variables that are inter-related to obtain the answer to the research question.

Table 3 showing the relationship between variables

S.N.	Questions variable	Relationship analyzation
1	Age of the Buildings	Existence and serving period
2	Ethnicity	Mixed settlement or not
3	Religion	To understand the religious and its influence
4	Occupation	Type of activity done for living
5	Origin	Originality of belongingness
6	Family	Family structure and building form, layout
7	Privacy	Layout of spaces inside buildings and settlement
8	Nos. of building floors	Building typology and use
9	Size & House condition	Strength and function of the house, wealth
10	Functional used and unused spaces of house	Preference of used spaces of buildings
11	Climate	temperature, humidity, wind, rain and radiation and light, lifestyle & building technology, agriculture
12	Building material & technology	Changed or not
13	Architectural style	Traditional , modern or hybrid
14	Current lifestyle	Satisfaction and changing needs of the occupants
15	Role of female in house and community	Limited to household or in other activities
16	Migration	Better economic opportunity and lifestyle
17	Land	Available for further construction or not
18	Food production	Enough or not
19	Family type	Space requirements and changing needs
20	Society	Relationship with neighbor and shared spaces
21	Economy	Family status and building form, material & layout
22	Festival	Relationship with built & un-built spaces

S.N.	Questions variable	Relationship analyzation
23	Rituals	Ritualization of spaces

Social, Economic and Demographic character of respondents

The total no of household are 417 in Thabang ward no 1. Among them 274 homes belongs to Thabang village and the household no from dalit community is 76. So the 27.7% household belong to the people from dalit community including Bika, Sunar, Nepali and 63.3% belongs to the magar people includes Budha Magar, Pun Magar, Jhakri Magar, Gharti Magar and Roka Magar. The total population is 1912 where the 46.7% males are lower in numbers.

The larger groups of people involved in the responses were the age group of 25-80. The respondents who were involved in the survey had different occupational background. 33.33% people are involved in agriculture, 26.67% people are involved in foreign employment, 20% in business and 13.33% in private or government job.

For data collection 30 households were purposively selected for unstructured interviews and five key informants for structured interview. The respondents were chosen from eastern, southern and north fringe of the community. 16 no of female and 14 no of male were interviewed as per the population ratio (53.3% female and 46.7% male). 22 no of respondents belong to magar and 8 no of respondents belong to dalit (73.3% magar and 27.7% dalit). Cluster sampling was done where the whole population was divided into three groups. Each cluster was a mini representation of the population.

Figure 7 three clusters for the study, Thabang Settlement

Source: Model village development Program (2008)

CHAPTER 4. MAGAR ETHNOGRAPHY

4.1 Magar an ethnic group

4.1.1 Origin of Magar

Unlike some other groups in Nepal, the Magar don't have a well-known story of their origin (Shepherd, 1982). Numerous myths and tales, many of which are related to mountains, hills, and rivers, are associated with the origins of various ethnic groups in Nepal. In Nepalese traditions, myths and legends expressed in their prosaic forms are associated with folktales, while those that are sung in poetry forms are referred to as folk epics and ballads. There are several myths and stories about the Magar that connect to various regions of Nepal. The same tales may occasionally only be expressed in one form, while in other instances they may be expressed in a combination of forms. In Nepal, the Magar language is typically used to name places, rivers, villages, deurali, forests, and highways or tracks. The Gandaki region is where most of these names are found. The Magar tribes are as a result are the indigenous people (Bhumiputra) of Nepal (Magar L. , 1995).

Scholars argue that because these cast live in central region of Nepal they were called Magar. Thus, they think that the word "middle" is where the word "Magar" comes from. Magar formerly worked in Parbat and the Twenty-two copper mine in the Baglung region. Khanal, the term for those employed inside the mine, and "Magara," the term for those employed outside the mine. Later, this word Magara changed to Magar, giving rise to the word Magar.

It has been discovered that Magar people are addressed in different ways throughout Nepal and other nations. Instead of calling themselves Magar, people in Nepal's eastern regions like Panchtar and Illam named themselves mahar. Magar named them "chyang" in Sikkim. In his writings, the first British missionary Sir Kirkpatrick refers to the Magar as a "mugger." People from the Magar ethnic group in western Nepal's Rukum, Rolpa, and Pyuthan called one another "paray." In the past, it was discovered that the Magar were also referred to as "prajajhat." Magar individuals were chosen for Kaji positions in administration due to their loyalty and impressive physical attributes. (Acharya, 2022).

After the study of magar clan by Adhikari (2021) it is concluded that the "Real Magar" or original magar were probably the most powerful, influential, prestigious, successful, and dominating tribe among the three or more set of tribes who lived closely in the western hills of Nepal in historic times, influencing the rest of the neighboring tribes to take the "Magar"

title. The particular trait of western Magars adding suffix bang to name place, major cluster can be seen in Pyuthan, Rukum, Rolpa, Baglung and Myagdi district of Nepal and minor cluster can be seen in Dhading, Chitwan, Gorkha and Makwanpur district. Magars were scattered around eastern Nepal due to migration as it is known that Magars were assigned in different parts of the country after the annexation of the kingdom of Nepal by Prithvi Narayan Shah where Magars played a major role in Gorkhali warfare.

The Magar people are reliant on farming and raising livestock. They also work in the police and military, among other professions. Magar people are migrating from their villages to the city in pursuit of secure employment and a better quality of life. They work as porters and guides in the tourism industry in addition to carpenters, house workers, and caterers. In the current environment, many Magar from villages also travel abroad in search of employment possibilities and well-paying jobs. Magars' way of life has altered as a result of development, migration, and globalization. They acquired the ability to adjust to new situations. The new political changes in Nepal gave marginalized groups of the population the opportunity to demand equal rights.

4.1.2 Distribution of Magar

Despite the fact that after the 18th century CE most of their dominions ceased to exist as a result of the unification of the country by an influential King of Nepal, also known as the founder of Nepal, the Magar, currently the third largest ethnolinguistic group in Nepal, was historically one of the most dominant indigenous groups in the country with their designated regions of control like Barha Magarat (Twelve Magar States) and Athara Magarat (Eighteen Magar States). The Magar people have fought in wars against Kashmir, Gorkhali kings, Khas rulers of western Nepal, Gorkhali kings, for the country's unification, in world wars, and most recently, an armed revolution led by the Nepal Maoist community party.

Figure 8 Area of Magar

Source: Adhikari (2021)

In terms of language use, magar communities can be split into three categories. The magar from the western Kali Gandaki River is known as athara magaranta, the magar from

the eastern Kali Gandaki River as Bahiya Magarnt, and the magar from the Dolpali magar as Kaike Magaranta.

Magar Identity

With their designated areas of control like Barha Magarat (Twelve Magar States) and Athara Magarat (Eighteen Magar States), the Magar, currently the third-largest ethnolinguistic groups in Nepal have historically been among the most dominant indigenous groups there. However, after the 18th century CE, most of their dominions ceased to exist as a result of the unification of the country by a powerful King of Nepal, also known as the founder of Nepal. The Magar people have fought in wars against Gorkhali kings, Khas kings in western Nepal, Kashmir, and Gorkha kings, helped bring their country together, participated in world wars, and most recently, they have supported an armed uprising under the direction of the Nepal Maoist community party.

In the eyes of the other communities in the country, the Magar identity in the country is shaped by the position of the Magars before and during the Shah Dynasty. In 1816, the Treaty of Sugouly established Gurkha recruiting history and attracted India-British colony due to their participation as warriors for the Shah Rulers and their exemplary bravery and integrity. Gurkha regiment developed into an institution, which helped in recruitment.

The Magars, the largest ethnic group in the nation, use cultural norms to create their own unique identity. The Magars are divided into two groups—the Barha and Athara Magarath area—and three different linguistic groups—the Dhut, Kham, and Kaike groups—due to the geographic diversity of their settlements. There are Magars living in Nepal and other nations as well. The Nepal Magar Association has created chapters in 67 districts to serve as an umbrella organization. District Magars are represented by these district chapters in the central Magar association. Thus, NMA is the representative of all Magars (Magar S. T., 2014).

4.2 Rolpa District

The Nepali province of Lumbini contains the highland district of Rolpa. It encompasses 1879 km2. It turned become a "Maoist Stronghold" for the Nepali Communist Party. The Madi khola drains Rolpa southward from a group of 3000–4000 meter hills located 50 km south of the Dhaulagiri Himalaya.

Figure 9 Rolpa District

Source: District Coordination Committee

Rolpa was historically cut off from the outside world by this mountain range, which prompted travelers between India and Tibet to take a detour and take easier routes to the east or west while east-west travelers discovered easier routes through the Dhorpatan valley to the north, the Dang valley to the south, or along the Mahabharat range. Ten local level organizations make up the Rolpa district, nine of which are rural municipalities and one is a municipality. Liwang is the districts headquarter of Rolpa district. Rolpa is the epicenter of decade long maoist insurgency. Currently, it is regarded as the best place to go to experience nature's tranquility, native Nepalese culture and lifestyle, and regional delicacies.

With 43.2% of the district's population, the Magar constitute the largest ethnic group. With 33.8% of the population, Chhetri is the second largest. Following that are Kami with 12.2% of the population, Damai with 3.6%, Sanyasi with 2.3%, and Bahun with 1.1%.

Thabang Village

Western Nepal's Rolpa district contains the settlement of Thabang, which is surrounded by a huge panorama of valleys, gorges, river basins, and forested mountains. The municipality of Thabang is located in Lumbini Province's Rolpa District. It lies on the lap of historical hill, Jaljala (3639m) which the government of Nepal recognized as the tourism destination for its natural beauty and political significance. It is 35km away from district headquarter Libang.

It is naturally beautiful and culturally rich. The Maoist insurgency is centered in the old Magar village of Thabang in the Rolpa region. Maoist commanders and fighters were housed

in a clustered village of about 3000 homes. During the uprising, 21 traditionally built wooden homes were burned, and 33 villagers perished. However, Thabang is now a quiet community with certain tourism potential. The town has rustic artifacts such cottages with wooden plank roofs, the traditional spinning wheel and loom, the dhiki, the janto, and the makaiko thankro (a traditional means of storing ears of grain) (Dangi, 2020).

4.2.1 People of Thabang

The people of Thabang are the origin of Thabang itself whose ancestors are supposed to be come from the part of china. The major group of people of Thabang is kham magar, bika and Nepali whose traditional occupation is blacksmith and tailoring respectively. There are houses of Gurung and Thakuri as well. The magar community of Thabang is made up of five clans- Budha, Roka, Pun, Gharti and Jhyakri. As per oral tradition, Budha and Roka come from the member of same ancestry and are the initial settlers of village, while Jhyakri is the descendent from the member of Roka clan. The localities of each clan is not as distinct as it is used to be in the past, yet there are names of the localities such as Budha-dera, Roka-dera, Gharti-dera, Kami-dera etc, suggesting the primary location of respective clans. (Model village development project, 2008)

Figure 10 Thabang Village Source: (Google earth, 2022)

Most of the people are Hindu and some are Christian as well. Most kham magar are rich and involved in trade or tourism-related businesses. Dalits struggle financially and either work in agriculture or for magar, daily wages, mining, etc.

History of Thabang

Poudel (2012) explains that in the 1640s, Southerly Thakuri monarchs conquered the valley, ruled over the Magar, and imposed an annual tax. They transported Dalits from the Terai belt in the south to perform artisanal activities like blacksmithing and forced the Magar to labor in iron mines and in the harvesting of minor forest produce (particularly spices) from the area's thick woods. The Magars are known as a militant, independent, and insubordinate community

that is resistive to authority. Such descriptions have crept into Magar common knowledge and folklore. However, its origins may be traced back to the early eighteenth century, when the Magar erupted in open rebellion against the Thakuri rulers' attempts to form military battalions in Magar in order to increase their hold over Thabang settlement. The rebellion continued for a while. In addition to rejecting Thakuri tax requests, Magar peasants also forbade their rulers from erecting garrisons or palaces within Magar communities. The Thakuri kings were compelled to abandon their intentions and exempt the Magar from paying taxes as a result of the uprising's ferocity. The influence of the Thakuri leaders was weakened during the ensuing decades by mutually destructive conflicts over trade and territory, which allowed Prithvi Narayan Shah of the family of Gorkha to rise to prominence as a new regional force by the middle of the eighteenth century.

By the 1760 s, Shah had been able to unite several hill-states into the political entity we now know as Nepal and stave off military attacks by the East India Company. Shah's control meant the return of taxes and slave labor for the people of Thabang. However, the Rana dynasty of Kathmandu replaced Shah authority less than a century later. Members of the royal family were given tax-free parcels of land under the birta patronage system that the Rana administration instituted. The Ranas also carried out a national land survey between 1920 and 1940 with the goal of defining birtas' private property rights.

Communities that engaged in common ownership in Magar, along with the Rana policy of designating village chiefs as tax collectors (mukhiyas), led to the emergence of new types of division. Mukhiyas and their kin, who were permitted to keep a portion of the tax revenue, became dedicated to the Rana emperors. These newly formed elites received preferential treatment during the land survey and were frequently given bigger portions of historically shared property as private holdings. Large landowners and small landowners made up the final ownership structure. The bulwark of Rana feudalism was the mukhiya, a tax collector who also served as the community's law enforcer. Because of historically unusual tax demands and because peasants resented the mukhiya's autocratic control, there was ongoing discontent in Thabang with the Rana regime. As a result, it is important to research "their active or passive affiliation to the dominant political formations, their attempts to influence the programs of these formations in order to press claims of their own, and the consequences of these attempts in determining processes of decomposition, renovation, or neo-formation," according to Gramsci. In other places, Gramsci makes the observation that the collective experience of the masses as members of the underclass is reflected in their "intuitions of existence and the world," no matter how shattered or even incoherent. As a result, the

peasants of Thabang established a political history of dissidence and opposition to governmental authority, which anticipated the uprisings of the twentieth century that culminated in the Maoist revolution and, prior to it, the emergence of "new common sense" among the Thabang masses.

In 1996, an armed uprising gave birth to the Maoist revolution in Nepal. During that tragic time, more than 14000 people died and at least 200000 were displaced. Within Nepalese circles, Thabang is regarded as the gravitational and educational center of the movement.

Table 4 the history and behavior of people of Thabang

Timeline	Law enforced	Behavior of Thabang Magar
1640 Thakuri Kings	Introduced annual tax Forced them to work in mines	Magar farmers rejected Thakuri's demands for taxes. The Thakuri kings were compelled to change their minds and exempt the Magar from paying taxes.
1760 Shah Kings	the restoration of taxes and slave labor	The Rana dynasty replaced Shah rule.
Rana Regime	A system of patronage called birta Village tax collector mukhiya were introduced	Due to historically excessive tax demands, there was ongoing unrest in Thabang against the Rana regime.
1996	Maoist revolution began as armed rebellion	Movement's gravitational and educational centersHuge political change in the whole country

4.3 Bhumeya Puja Festival

Festivals cannot exist without public rituals. Individuals' lives are marked by rituals from birth to death. Every culture has a unique collection of rituals that represent particular facets of existence and human endeavor and serve to define the community, its place in the universe, and its interaction with the natural world. Bhumeya puja is a public ceremony in which participants come from a specific social or religious community. It serves as markers of historical or mythological events and commemorates the legends and a hero intrinsic to the identity of a particular community It indicates the beginning and end of seasons as well as significant solar, lunar, and agrarian cycle stages. Festival celebrations include specific

ceremonies, the utilization of unique dance styles, and the ceremonial preparation of specific foods.

Magar's history starts after they settled on the terraced hillside and engaged in agriculture. They began to worship nature because of the frequent landslides that occur during the rainy season and the consequent increase in the seasonal harvests. Mother Nature is worshipped at Bhume puja. The Magar people practice natural religion and worship the gods (Bhume Puja: Magar Culture, Traditions and Festivals).

Bhumeya puja (Namkah) is made up of two words from kham language nam and kaha where nam means land and kaha means hope. They celebrate this festival with the hope of saving land from flood, landslide, and storm, rain any other natural disaster. Magar people remember the early evolution of human, living in groups; hunting wild animals, cutting trees and cultivating as a result environmental balance get disturbed. In rainy season people have to face unprecedented loss of life and property, they believe it happens due to some unseen power. Various rituals, traditions and dances are performed. The relation between people and nature can be seen through a festival of magar which is known as Bhumeya parba or Namkah. Namkaha is associated with the early evolution of human civilization of people.

Human starts to extract from nature but in returns fails to return back to the mother earth. Magar worship mother earth in order to please her. Magar has no tradition of idol worship like any other ethnic groups. Magar are the worshipper of nature. For them to love nature is important from the religious point of view. Magar community’s unity as well as civilization and development expressed in various rituals and dance forms.

The uniqueness of Thabang village is a result of the coming together of the building materials, climate and vegetation, conditioning environment of monsoon. The agricultural civilization supported by the climate of the settlement. They worship and celebrate different aspects of nature which relates to life like deurali puja, sinia puja, bhumiya puja, than (agricultural household tools) and ancestors. Festivals can be seen as timed and related to the seasonality and nature. After harvesting the crops of winter, they worship nature for suitable weather and rain for new seasonal crops. The seasonal calendar shows the equal participation of man and woman in agriculture. Nokobange dance is the major part of the festival. Every dance step replicates the daily life of the people and nature. Like milking the cow, plantation in field, blooming of flowers, skinning the vegetables, growth of plant, door locks of house and so on.

The place: From the jestha1 according to Nepali calendar this festival starts, from this day beating of drums prohibited, this will bring floods, natural disaster. Committee of muthangi is

formed, Leaders of the dance known as (Nokobange) group of dancers. After jestha 15 drumming starts, this is performed by people from damai community. Multhangi the youth dance performer both boys and girls starts to practice from this day. The dance practice is practiced in nearbye open space inside the community. In the last day of jestha young people (multhangi) went to Jaljala Mountain to collect the flowers. During their way they worship trees and plants and offer liquor. Before evening every temple of Jalajala needs to be worshipped. Memory marks, stones or temples associated with the passage of festival: during the bhumeya puja, if sudden rain starts than jhankri perform some rituals and worship stones in nearby river to stop the rain. The major markers of these festivals are the river, the temples of Jalajala, offering site, than.

Streets pathways linking associated place: The ritual processions of multhangi dancers while returning from Jalajala. While returning they follow the certain route. Next day, they spend that night in Jaruwapani in temporary shelter, where nokobange dance performance is performed. The next stop is Gobang khola, near the village. From this place namkaha starts, where running partners are selected in Dhupibang. After the running completion in Dhundhkhola, they finally enter into the village. Firstly they visited to the village leader house (mukhiya), after than in priest (jhankri) house, thereafter while performing their dance in streets of village they move to the Namchun site (offerin site), for the offering of goats.

Stories: - Namkah is made up of two words from kham language nam and kaha where nam means land and kaha means hope. They celebrate this festival with the hope of saving land from flood, landslide, and storm, rain any other natural disaster. Magar people remember the early evolution of human, living in groups; hunting wild animals, cutting trees and cultivating as a result environmental balance get disturbed. Since the beginning of time, when Gods and other deities had not yet been created and when natural disasters occurred, our forefathers have been puzzled as to why tragedy claimed the lives of so many people. In response, they sacrificed animals as an act of worship to the earth in an effort to win her favor and win her forgiveness. In order to prevent floods, excessive rain, and landslides during the rainy season, the festival of Bhume is performed to satisfy the natural deities of land, water, and rain. To make nature happy, they celebrate this festival every year.

The associated individuals, families, clans and caste groups: During this festival not only magar, people from other ethnic groups like Nepali, damai equally participate. They have important role to perform during this festival. Damai are the instrument players, these instruments are the major parts of this festival. During this festival Katuwal from kami community plays an important role in this festival. Their role is to find the goat for the

offering and to spread news in village regarding the festival. In the past, rituals were cult behaviors oriented around nature, community well-being, illness prevention, and the defense of livestock and crops. Through rituals, the community's elders tried to transmit this knowledge.

The Bhume naach is the festival's major attraction. Only during this event is the unique dance, known as jhimkari or balkushyne in the native Magar language. A typical dance is performed by the participants, which consists of two rows of men and women dancing in a circle while wearing traditional attire. Men perform balpujachala together with the 22 various dances that make up paicharu or paisaru. These detailed dance styles demonstrate how each element of nature and each animal's movement coexisted in harmony.

Looking at their festival, major locations are hill top, stream or river the water source, streets of village, frontal space of house. All the resources are natural. Their dance form shows the how important is nature to them. Inclusion of every caste shows their relationship and unity. Their mythological stories remind them the importance of nature. During this festival there are different locations inside and outside the villages. These locations are very important to perform cultural activities. The streets around the villages are used for performing dance and other ritual activities. The unique usage of new crops in the festival's food rituals is proof that it is a festival of farmers and peasants. It is enthusiastically observed in the community and serves as a reminder of their rural origins. Rituals are distinguished by repetitious and highly symbolic elements, such as Nokabange dance styles. The ceremonies of the Magar community are unique. These entail particular performances given by a person or a group of individuals. The location of the performance can be one's home or a public area like a river bank, well, hill, field, or water tank. It generates opportunities and clarifies the roles of various groups that inhabit various hierarchies.

This intangible belief plays a significant role in the definition of place and cultural identity. Festivals, festivals rituals and the associated spaces are the vital aspects of community and their culture. These festival activities preserve the community pride, learning new things, strengthen relationships. While celebrating different rituals in different locations, it brings vitality in community. Spaces are maintained properly and community development occurs. It attracts visitors which stimulate growth of tourism and other businesses in community. Carries the massage of the past generations to the present and future and preserve the culture.

4.4 Religion and Culture

Man and animal both needs shelter, a place to live, the only difference is man has a spiritual aspect which make him different from animal. In Thabang, The local religious system includes animists and shamanism; their dhami is a type of faith healer or shaman, and their jhakri is another type of faith healer or shaman who serves as the traditional spiritual and social leader of the magars. The Magar have a Guru baa who conducts religious activities, plans celebrations for social and agricultural purposes, reforms traditions and customs, strengthens the social and production system, manages resources, resolves cases and disputes, and systemsatizes leisure and social-cohesion activities.

Magar are believed to be nature worshipper and their kul and ancestors. They belief that nature command all life, they believe in naturalism or shamanism and animism who perform Baraju puja, kul puja, jhakri puja, naag puja, ban puja, vayu puja, bhume puja, simya puja etc. The Magar worship nature, ancestors, and supernatural beings. In a similar way, they worship hunting deities both inside and outside of their own families, such as their grandparents and grandmothers. They have unique religious rituals of their own. They have their own ideas about what happens after death and bury their deceased. According to their belief system, they are animists or worshipers of nature. They practice shamanism, and Rama is their Jhakri (shaman) who performs both healing and social rituals. Their Dhami (faith healer) mainly performs faith healing.

There are different religious place in Thabang rural municipality. During baisakh, jestha, shrawn purnima special worship program takes place. Braha temple in Jaljala valley, 500m apart in southern direction Bhama Pukh cave are the major religious place in this village. There is a belief that after worshipping in these places people with no children can have children.

One of the major festival of this place is Bhume puja, Where worshipping mother earth for the safety from natural hazard and calamities. It is celebrated in month of Asar for a week where a cultural dance known as bhume nach is performed by communities. Nacharu nach is another type of dance form which is performed in different occasion like festivals, child birth, someone who came after long time from employment and so on.

4.5 Primitive Belief/ Hinduism:

First, the god of nature worship. Because they are challenging to recover from, natural calamities have retained the original mindset of nature worship. For instance, clouds or thunder cause rainfall and humans have no control over how much rainfall occurs. Floods are particularly difficult to forecast or alter when there is an abundance of rainfall. The devotion of the god of nature is thus formed. The worship of the cloud god, the thunder god, and the water god is increasingly common among people. The awareness of ancestor worship is the second. The idea of "animism" holds that after death, man becomes god. In the afterlife, ancestors would grant blessings to their descendants, and their inns are filled with mysticism. They feared that someone would intentionally destroy them, causing the good fortune to vanish and maybe affecting their offspring. The latter, like the cemetery, displays a fundamental understanding of ancestor worship. The Magars practice "animism." They hold that nature is the foundation of human existence and the source of our sustenance. The idea of peaceful cohabitation between man and nature as well as the sustainable ecological concept of treating natural resources with "reasonable access and suitable use" are both embodied in the simple, primitive thinking of the Magar people. If the natural world is significantly harmed, the extinction of certain natural creatures would certainly result in human survival falling into a certain predicament, so the idea of moderation and peaceful coexistence should be implemented.

4.5.1 Lifecycle and rituals

Although the Brahmin-chhetri, Rai-limbu, Gurung, and Magar lifecycle ritual actions and behaviors differ, their common goal—the satisfaction of the supreme power and gods of the ancestors—is fairly similar. Although magar from different parts of Nepal may share a similar appearance, their rituals vary due to differences in their geology, inherited cultural practices from their ancestors, and contact with other ethnic groups. A person comes into being as a member of a group and community at birth, which is a fact of the beginning of life. It must go through several rites after birth as part of the socialization process for its future. One of the main activities of the magar society is worshiping the natural environment, gods, and their ancestors. The newly born child should pass chhaithi, nawaran, paasani, marriage and many other ceremonies as well as rites and rituals.

Magar people and their life cycle indicate to their inner core values, life style and livelihood. After the birth of the child different ceremonies takes place like nwaran, paasni and so on. After reaching at age of adulthood marriage and family starts, they engage in economic activities to fulfill their individual and family needs and responsibilities. During their whole life they enjoy their life in a community by celebrating festivals and different aspects of nature, enjoying food and drinking, singing and dancing. Magar people celebrate festival in a group with full enjoyment. After getting old, death is the important part of their culture. They belief in animism and ancestors, their blessings are important for them. They worship the soul of their dead or ancestors for the good fortune and blessings in family. They belief in rebirth and continuity of lifecycle occur.

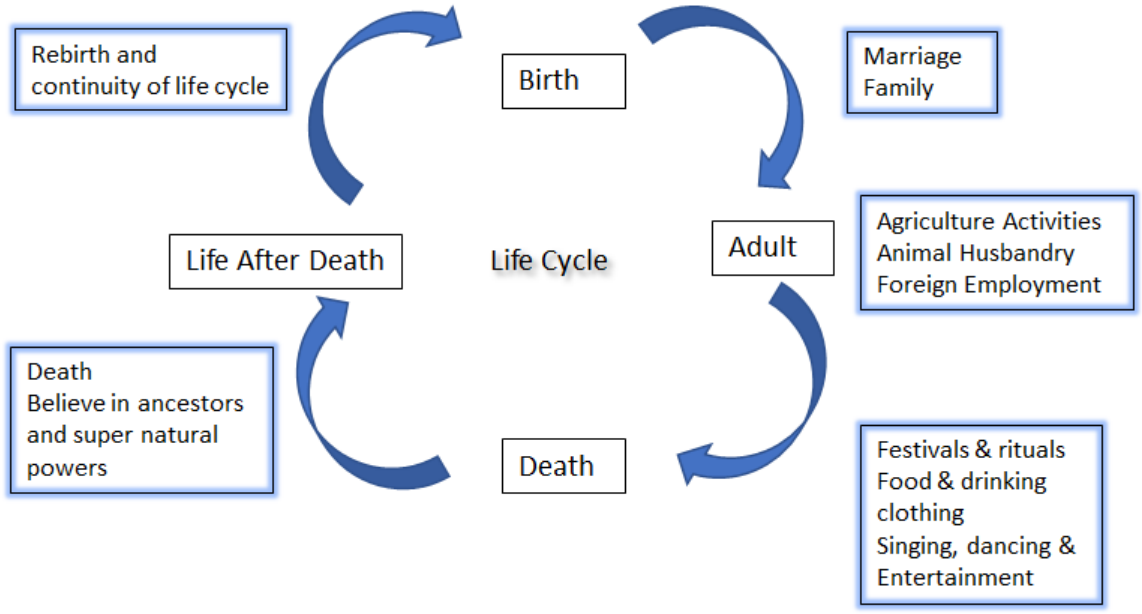


Figure 11 Lifecycle of magar people

CHAPTER 5. STUDY AREA

5.1 Study Area

Figure 12 study area

5.1.1 Geographical Location

Western Nepal's Rolpa district contains the settlement of Thabang, which is surrounded by a huge panorama of valleys, gorges, river basins, and forested mountains. The municipality of Thabang is located in Lumbini Province's Rolpa District. It lies on the lap of historical hill, Jaljala (3639m) which the government of Nepal recognized as the tourism destination for its natural beauty and political significance. It is 35km away from district headquarter Libang.

Thabang rural municipality was established in 10 March 2017AD. The total area of this rural municipality is 191.07sq.km. The population density of this area is 56.94 individuals per sq.km. The dominant languages are Nepali, Khamkura, Newari and English. A decade long people's war, the war waged by the communist party of Nepal Maoist, introduced it internationally as the epicenter of Nepalese revolution. Though mainly populated by magar, one of the indigenous people of Nepal, now it is mixed settlement of magar, dalit and others.

5.1.1.1 Climate

The outstanding features of the landscape are its mountain and setting of village itself. Temperate climate dominate this rural municipality due to location in the mid-hill area with a suitable elevation of 1800m from sea level. The climate of Thabang is warm in summer season and rather cold in winters with occasional snowfalls. The climate of this region is influenced by monsoon. It has warmed temperate at lower elevations and alpine at higher elevations. The mean annual precipitation recorded was 1569.7mm (range: 1161.2mm in 2014 to 2497.1 mm in 2000). The precipitation (1240.8 mm in average) occurs during the monsoon period (June to September). The mean annual maximum temperature varies from 19.4 to 35.1 degree Celsius and minimum temperature varies from 5.3 to 22.9 degree Celsius.

5.1.1.2 Magar of Thabang

Communities dominated by Magar and Dalit people can be found in towns and cities ringed by 4,500 meter or higher mountains. The Magars, a group that includes the illustrious Gorkha warriors, identify themselves as hunters and gatherers who came to the fertile river valley of Thabang several hundred years ago from mountainous regions to the north. The Magar, who lived in 18 hamlets or principalities, had a dispersed style of leadership wherein residents of each hamlet gathered once a week and occasionally even more frequently to decide internal issues. A leader (mukhiya) ruled over each hamlet and dealt with other Magar communities on a rotational basis.

5.1.1.3 Population

As per municipality (2021) the total no of household are 417 in Thabang ward no 1. Among them 274 homes belongs to Thabang village. The household no from dalit community is 76. So the 27.7% household belong to the people from dalit community including Bika, Sunar, and Nepali. 63.3% belongs to the magar people includes Budha Magar, Pun Magar, Jhakri Magar, Gharti Magar and Roka Magar. The total population is 1912 where the 46.7% males are lower in numbers.

5.1.1.4 Occupation

The major occupation of Thabang people is agriculture, foreign employment, business and tourism activities. Most of the families are occupationally depends on agricultural activities. After agriculture, foreign employment is another source of income. Very less people are involved in job like government and private offices, post box offices, schools etc.

5.1.1.5 Family

Most of the families are living together. Most of the families are joint families. It is found that the no of nuclear family is increasing. Migration is one of the reason, where new generation migrate towards towns or foreign countries, only parents are forced to live alone despite the joint family culture of the society.

5.1.1.6 Lifestyle

The lifestyle is quite simple. The village as a whole is small and everyone knows each other. Together, they enjoy holidays. Everything in the village is connected, and you can get around it all on foot. While men are at work, women manage the majority of the household chores. The younger generation clothes more contemporary, such as in slacks, t-shirts, and jackets, as opposed to the older generation, which wears traditional clothing. Although Dalit people tend to have lower levels of education, the majority of young people attend school or college in the nearby city.

5.1.2 Site

The region of the Thabang is the mountain region with a temperate climate. It is covered with a dense forest and contour land. The village is located in a terrain of relatively gentle slope but which falls steeply towards three sides. At east and west are ravines of Dontho khola and Rhi khola. While at south is Thabang stream flowing from east to west. With the annual erosion of the river banks, the village has lost some of their farm land by the river banks and cemetery sites. Thabang River is now a wide expanse filled with river boulders. The boulders

Figure 13 Site

supply the village stones for building works. In the uphill, a few hours by foot, are forests of pine and cedar. Roofing slates are transported from farther away, half a day on foot. The area around them has been converted into stepped terraces for growing maize, vegetables, fruits, local cereals. This village also exhibit exemplary architecture corresponding to their culture and livelihood and which has helped them the adverse weather in this hill.

Site has a great importance for vernacular buildings and builders. There is a high influence of site on house form. The houses of Thabang village are oriented to the east and south direction. The location for cremation site, historical sites, and sacred water sources are important general aspect of the influence of site on house placement in a spiritual sense. Despite of hilly contour land, the form of the buildings are unchanged.

The compact village of Thabang is due to the lack of arable land and habit of living in crowd of magar people. In the past, magar used to be hunters and live in a group. That is the reason magar settlements are compact and they live in a group.

5.1.2.1 The site and its choice

Magar culture retains the typical original cultural characteristics, which permeates into culture, art, daily life, and other aspects. In order to preserve the harmonious relationship between man and nature, the village's site was chosen with the consideration of ecology. It is less active in altering the topography and destroying the natural ecology, and it displays the religious thought of the original religious belief, reverence and worship of nature, and cohabitation of people and gods.

The Magar people have always treated nature with respect. The earth is regarded as the mother by the Magar people, who believe that nature is the source of all that we need for survival. The homes of the Magar are adapted to their surroundings. The villages' design takes into account the geography and climate of the area, and the building materials are obtained from the area's natural resources. It is an organic component of nature that the structure is merged with the local natural landforms. The philosophical idea of "harmony between man and nature" is present in Magar Village. People should always follow the rules of nature when engaging in activities outdoors, and man and nature should coexist in harmony. Why are flowers, animals, stars and moons, wind and clouds, mountains and rivers used as metaphors in Magar songs? There would be no song without these metaphors. People dance in synchronization while recreating many aspects of nature at the Bhumeya festival,

such as a cow, tree, vegetable peeling, flower petal, etc. The ecological way of thinking is the coexistence of people and the natural world.

There are two ways that effect of the site on buildings. The first one is the physical nature of the site like its slope, type of soil or rock, water runoff, vegetation around, microclimate and so on. Other is symbolic, religious or cultural values. The close relation between house and landscape shows the harmony between man and nature. Magar people have a tradition of ban puja, bhume puja where the first bite of newly harvested food crop is offered to land. This shows the spiritual harmony between man and nature. Building respects the nature through the choice of siting, materials and forms. Thabang village is losing its identity in the name of economy.

5.2 Climate and need for shelter

Climate has a determining role in the creation of built forms. Shelter is a basic need of the human being. Human and his efforts to shelter himself against the extremes of weather and climate over the time produced different typologies of house form of dwellings like courtyard house in Marfa. The form of the building is related to economic activity rather than climate. In Thabang, the main effect of climatic influence is that the house door is faced away from the wind. Previously there were no provisions for cross ventilation, due to cold wind in winter. These days the wooden shingles and stone slate roof is being replaced by corrugated sheet which is much less practical in both heat and cold, yet it is widely adopted because it is new. It is also taken as a status symbol in the society.

Figure 14 corrugated sheets

Looking at the Thabang village, in the past, they had very limited natural resource to solve their problems by working with nature. In traditional building limited materials are used like, stone, mud, wood nothing more than that. With the development of transportation, there is easy access to modern material and technology.

In Thabang, the houses are placed in relation to wind, sun and shade as well as topography. Most of the houses aer identical in form and type although each house looks similar, there are individual variations. Looking at their traditional buildings, builder used to work in a limited economy, limited materials and limited

technology. In the limited technology and material their building shows high performance and limited waste. In 2nd and 3rd generation building we can see the Mahira in both ground and first floor. They work as intermediate between outdoor and indoor, shades the walls and windows and provide the possibility of continuing the ventilation of the house during violent rains. These buildings are just not individual solutions but group solutions which represent the culture and response to the characteristics of the region, its general climate, micro climate, typical materials and topography.

The compact settlements helps to reduce the surface area exposed to the sun and increase shading, preserve land, provide for defense needs. Wind break in the balconies of Thabang house, to stay safe during the rainy season and high wind. The corrugated sheets are used to cover the wooden railing of balcony. Very few and small openings can be seen in Thabang house. Verandah and overhangs are designed to allow the low winter sun and to avoid high summer sun.

5.3 Materials, construction and technology

From the very beginning wood and stones are used as the major building materials. Due to the limited technology in societies these materials were dominant. With the pace of time, man developed his dwelling from cave to hut and to the buildings of different forms which are derived from the available materials and techniques.

Most of the traditional houses in Thabang use the same basic technology fine cutting stones, mud and wood. Building form is just not limited to square, rectangular but L shape; U shape and T shape buildings can be seen. These days concrete are quite famous in the village. Few buildings can be seen where material and technology is changed but form of the building is not changed. It is quite similar to the past. Most of the materials can be reused again. Stone and wood are reused again. Beams are used in full length so that they can be reused again and again.

5.3.1 The process of construction

In the past people used to voluntarily work during the construction of house of any member of the community, where the host will provide food to the people who are working for them. One of the reasons of this kind of cooperation due to complex house and also the economic

matter, without the cooperation it was not possible to erect the building. The extended family members and neighbors are the primary work group. Where man, woman, children all help which shows the family unity in economic and social terms. But with the change of time, this practice does not exist anymore. But still “parimo tirney” is practiced which means it is compulsory to work for someone who worked for you, otherwise you need to pay money. This kind of cooperation is done for agricultural activities and also during construction of house.

In the past people had no option for choice of material and technology, they build their house with the material which are easily and locally available like stone, mud and wood. These days there are variety of choice of material and technology.

The buildings of Thabang village resist the lateral forces like wind, earthquake through rigid frame and bracing involves triangulation such as trusses, buttress, and shear walls.

5.3.2 Ecology

Environmental sustainability seeks to protect the environment, make the most of climate and natural resources, decrease waste and pollution, improve human health and welfare, and reduce the consequences of natural disasters that may be seen in the Thabang settlement. The local government is aware of reducing pollution and waste management. Separate sites are allocated for waste disposal which ensure safe environment. They are also conscious about natural hazards and essential measures to reduce these hazards with the help of their technical team. The traditional vernacular buildings of the Thabang include the ecological principles:

Integration with context: buildings of Thabang respect the nature and natural surroundings. Buildings have been built without struggling with nature according to special topography of area. Buildings are matching with each other with their scale, plan layout and façade to create a similar environment, responsive for life culture of occupants. Looking at the settlement pattern of buildings, the detached buildings respect for the rights of others to accommodate their natural surroundings, air, sun and view and do not look at each other.

Use of local materials and traditional construction techniques: After field observation it is found that, the traditional buildings of Thabang have been constructed by using local materials. All the sources are natural and nearby the villages. Stones and slates are easily available in nearby rivers and quarry which can be used by paying certain amount of tax to local government, same goes to wood which is available in nearby forests. Using local

materials provides to energy efficiency by optimizing construction efforts and to save resource economically.

Incorporating nature into space and spatial qualities: the traditional buildings are constructed by local people to benefit from natural and climatic factors. Buildings are oriented toward south and east direction for natural light, heat and air circulation. The villagers are getting benefitted from natural stone & wood which provide natural heating, cooling and ventilation within the building. Using ground floor and top floor for wood storage also creates buffer space and make upper floor warmer.

5.3.3 Society

Magars have a reputation as an independent and insubordinate community that is militant and resistant to rule. Such characterizations have seeped into Magar folk culture and common sense in Thabang as well. Their religious rules and ideals act as a guide for their behavior, which strengthens their group cohesion. They observe a variety of festivals, which are important to their way of life. Religion, cultural celebrations, and rituals support and promote group participation. The major festivals are Bhumeya puja, Baisakh Purni, Dhule, Harelo, Sawane Sankranti. They also celebrate Teej, Dashain, Tihar, panchami.

Magar are very social and loyal people. Their culture, tradition, religion bring them all together. It is found that magar people have very emotional relationship with plants due to their culture and social interaction. Wikipedia (2022) defines that the original religion or beliefs of magar people are Shamanism, Animism, and Ancestor worship. Animists and shamanism form part of the local belief system, their dhami (the faith healer or a kind of shaman) is called Dangar and their Jhankri (another kind of faith healer or shaman) was the traditional spiritual and social leader of the magars.

Magar are not idol worship, this is the reason no temple and shrine can be seen in the village. But their intangible belief can be felt from their cultural practice, where not only magar but other communities equally participate. Society is found to be very close to each other. Group decision is the final decision of the village. Looking at their way of living, no discrimination and respect can be seen. Looking at their building layout, it can be seen that the open spaces, streets are the interactive social spaces where most of the time is spent.

5.3.4 Culture

Rural culture is closer to the nature and interacts with the social life. The Magars are known as a militant, independent, and insubordinate community that is resistant to rule. Such descriptions have seeped into Magar common knowledge and culture.

Sapkota (2010) defines that the magar believe that god created human beings seen in their legends. Their behavior is guided by their religious norms and values which make them more cohesive group. They celebrate many festivals which are major aspects of their life. Religion, ethnic festivals and rituals help reinforce and increase group participation. The major festivals are Bhumeya Puja, Baisakh Purni,Dhule, Harelo, Sawane Sankranti. They also celebrate Teej, Dashain, Tihar, panchami.

5.3.4.1 Socio-cultural forces and form of the house and settlement

House is a manmade environment suitable for man for living more than just a shelter to live in. during the study it is found that major occupation of people of Thabang is agriculture, they have same form of economy and similar forms of rural houses and their spatial arrangements. Most of the houses demonstrate a general aspect of the economic need to store. Storage area is dominant space in every house. Like in traditional house the ground floor and attic floor is mostly used for the storage purpose. Wood and agriculture products are stored.

The influence of caste system can be seen in Thabang village. Caste distinction can be seen clearly in the settlement. The magar people live in a center and more stable plain land and other lower caste group live in the steeper and periphery of the village. There is no difference in magar and other caste traditional building. Traditional houses are almost similar. In some of the rich magar house we can see more decorative stuff like door, window, false windows, beam and column.

The concept of genre de vie have five aspects that affect built form. (Rapoport, 1969)

Some basic needs: Place of cooking and way of cooking has important role in magar house. The fireplace is kept at center, women cook by sitting on floors, where man eat first and woman and kids eat later. The sitting arrangement and use of space determine the house form and size.

Family: family structure and number of family member influence the house. In a joint family, it can be seen that kitchen are separately build. In a single family, kitchen is placed

inside the building. In a traditional house, with the no of family increase the house is also grows horizontally. The outside stair enables more than single occupancy in the same house without conflict. In joint family outer stair helps to differentiate individual spaces, where more than one family can use the space without any conflict.

Position of woman: the windows and doors are designed to prevent anyone from intruding into the intimacy of the house. The main entrance door is always hidden. Doors are also placed in a way to maintain the privacy. The bracket walls that that closes both ends of the front verandah. This wall partly hides the main entrance of the house when viewed from the front gives the degree of transition and privacy. It also helps to moderate the flow of cold wind in winter.

The need for privacy: privacy is also important for magar. Like in typical magar house, Mahira is used a living room where guests are welcomed and offered for drinking and eating. Unknown person are not directly invited inside the house. Bedrooms are private space where no one except the family members is allowed.

Social intercourse: socializing or meeting the people is very important in magar community. That is one of the reason they live in compact communities or settlements. People meet in the wide parts of the streets, women meet in the aangan, compound walls of the streets, fields. Magar people work in a group, during the agricultural work, they work in a group. Festivals are celebrated in group.

House is a part of settlement and cannot be looked in isolation. In magar settlement house is a small part of the settlement. Streets are the most used spaces in the community for different purpose as it depends on the age, gender and sex of the person. Streets are used by every age group and gender. Children play, elder people sit and talk, young people sit in a group. The movement from the house goes through the various transition to the street, and then to the other parts of the settlements.

5.3.5 Economy

Majority of Thabang population is engaged with agriculture, they have same form of economy and similar forms of rural houses and their spatial arrangements. Most of the houses

Figure 15 preparing grains after harvest in aangan

demonstrate a general aspect of the economic need to store. Storage area is dominant space in every house. Like in traditional second and third generation house the ground floor and attic floor is mostly used for the storage purpose. Wood and agriculture products are stored. Preparation area for collected harvest is very important like aangan. Every traditional house has aangan for their agriculture activities after harvest. People who are not engaged in agriculture, they use these spaces as their workshop area like carpenters and iron grill workers.

Typical Layout of Magar House

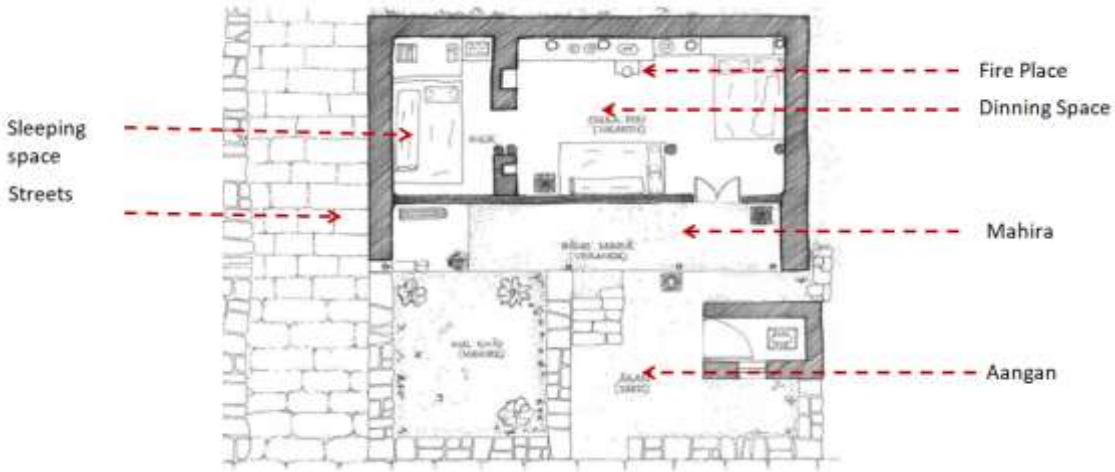


Figure 16 Typical House of Thabang

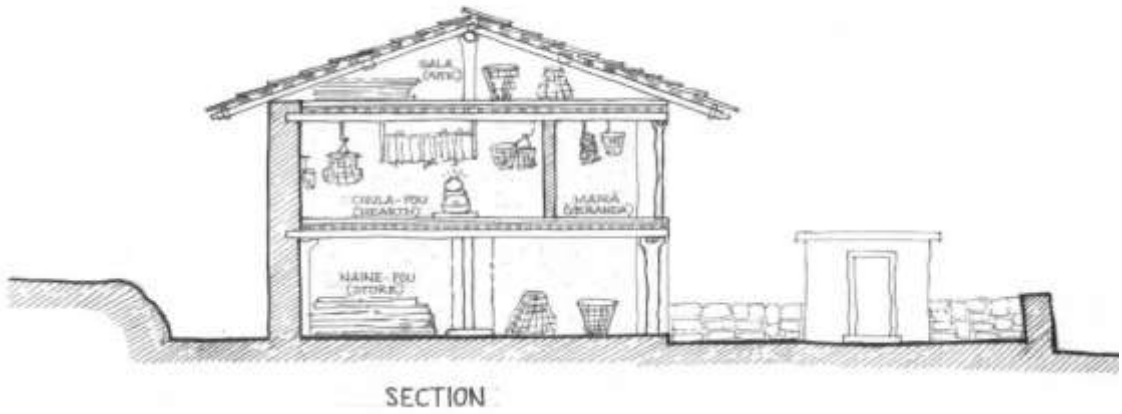


Figure 17 Section of the house

Kitchen: The most important space inside the magar house is the kitchen space. After crossing the front porch called mahira, the cooking place is accessible. The fireplace is placed in the center, everyone sit around the fire place and eat their food. Elderly and male eat first whereas children and woman eat later. The kitchen space is just not used for cooking but all the family gets together and discusses their family matter. Most of the important family

discussion takes place here. During festival, all the preparation like cooking and preparation are done here.

Mahira: Most of the outdoor works like preparing garlands, cutting vegetables, preparing leaf plates, preparing hand woven cloths is prepared in Mahira and aangan. In mahira dhiki, jaato are kept for grinding the wheat flour, corn flour or rice flour.

Aangan: Aangan are mostly used during the harvesting of crops. After collection of crops from fields, they are cleaned and managed in aangan. Different crops are dried and collected in aangan. Aangan is the semipublic space; it is a transition between house and street.

Streets: are the public spaces. Streets are used for movement and public activities. During festivals, streets are used as cultural routes. Before any festival, all the cultural routes are cleaned and prepared for festival activities. All the people of community get together for this purpose. During the festival, there is only one open space which is used for multiple activities is used for dance practice and final dance.

Agriculture land: is the first place where magar people worship and thank god for the harvesting and better crops in future. Later they thank ban deuta and jal deuta for the life. It is also the place for interaction and socialization, where people work for each other, gossip and eat their lunch together. Some people have their land far away from the village, they live in temporary shelter during the cultivation and harvesting time.

5.3.5.1 A look at present

Figure 18 Hybrid structure in Thabang

Thabang is changing. Multiple number of new rcc residences can be seen. New RCC buildings are similar to the buildings of city. These new buildings lacks the previous spaces like mahira and aangan. These building do no have any relation with its surrounding culture and topography. But number of hybrod buildings can be seen, where, essence of tradtional building can be felt. They are trying to create the previous spaces like in the past.these buildings are no more load wearing structure. Rcc column and beam can be seen but the appearnce and building material for wall, roof and the layout do not differentiate it from the past buildings.

Rapoport(1969) suggests that all housing needs to achieve four objectives in order to be successful:

- housing needs to be socially and culturally valid (traditional housing possibly works the best)
- it should be sufficiently economical to ensure that the greatest number can afford it (in primitive and vernacular context most, if not all, people have houses)
- it should ensure the maintenance of the health of the occupants (in relation to climate traditional housing succeeds, in relation to sanitation and parasites it usually fail)
- There should be minimum maintenance over the life of the building (here the evidence is equivocal).

In many communities, traditional housing may be able to fulfill these needs better than new housing, and attitudes about traditional housing may shift as a result. It is vital to understand that the utilitarian purposes of the home are secondary. The changing fashion in furniture and interior design is not due to changes in physical needs but rather changes in the image, the symbol and the fashion.

5.3.6 Building Typology and Layout

5.3.6.1 Namjing (first generation)

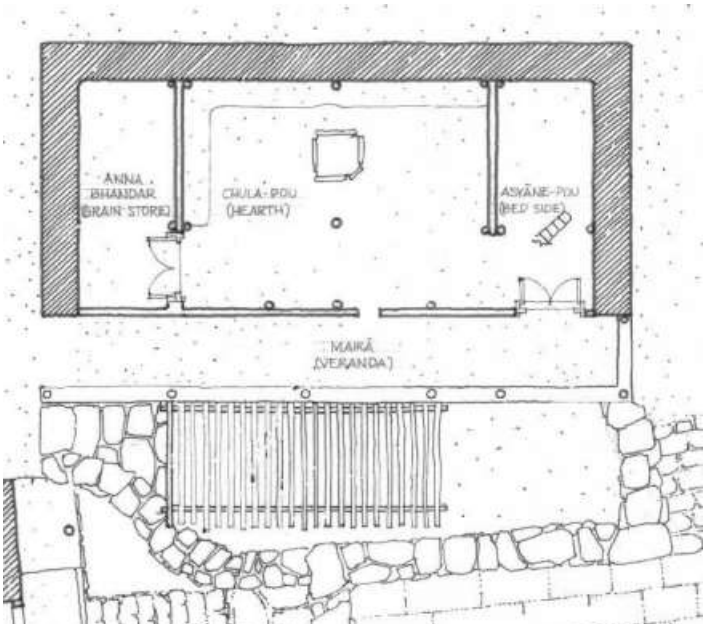


Figure 19 Namjing

This is single story building. In Thabang among 265 houses, there is only one house remaining of this type. It is supposed to be 175 years old which is used by almost six generations. This house does not have any windows or openings except a door. Small holes can be seen which is used for natural lighting. The plan of the house is a single hall; fire place is located in the center. Around the fireplace people sleep, sit which is used for multiple purposes. The roof is covered with wooden planks. Wood is one of the major materials used in this building which is used for openings, column, beam, wall, roofing material.

5.3.6.2 Second generation

Figure 20 second generation house

These are known to be second generation houses. T hese houses have windows and openings. These are more decorative and double story. Windows and beams are made up of wood which are highly decorative and beautiful. These building also do not have buigal the uppermost floor. The plan is somehow same as Namjing. The roof is covered with wooden planks. One of the features of this house is on the bracket walls that close both ends of the front verandah. This wall partly hides the main entry door of the house when viewed from the front degree of transition and privacy as well. Such houses installed false windows at the back side of the house and at the gable side also. The false windows are carved with various kinds of floral pattern while in other cases depict religious myths later on new houses opened their walls placing latticed window to give light to the interior towards east at the gable side

5.3.6.3 Third generation

These are known as third generation building. It is made up of wood, mud and stones. The building is three storied. Buigal can be seen in these types of buildings. These are larger than Namjing and second generation building. Ground floor is used for kitchen and storage purpose. First floor is used for sleeping and top floor is also used for storage. The roof is covered with slates which are found nearby the village. These types of houses can be seen in most of the part of the western Nepal.

An interesting change in the use of ground floor found in the first generation house shifting to the first floor in second generation house and then to the third attic floor in the third generation. This shifting process works in the same manner as one finds in Newar houses in Kathmandu. Part of the reason in this shift is that if the kitchen is at lower levels as usual, the smoke will affect the living functions in upper floors. At the same time it is also recognized that smoke repels the termites and gives more durability to the wooden members of the dwelling structure. In addition, in winter times, the house is better heated from the lower levels. Thus at present, there are both types of arrangements and in most of them, there are hearth both in the first and in the attic floor.

Third house type will invariably have multiple windows of larger size than those of the second type. And not a few have decorative panels—false, and with latticed opening. The

decorative motifs have diverse themes from floral patterns to images from Hindu religious myths. The window panels are either one or two with more height than width.

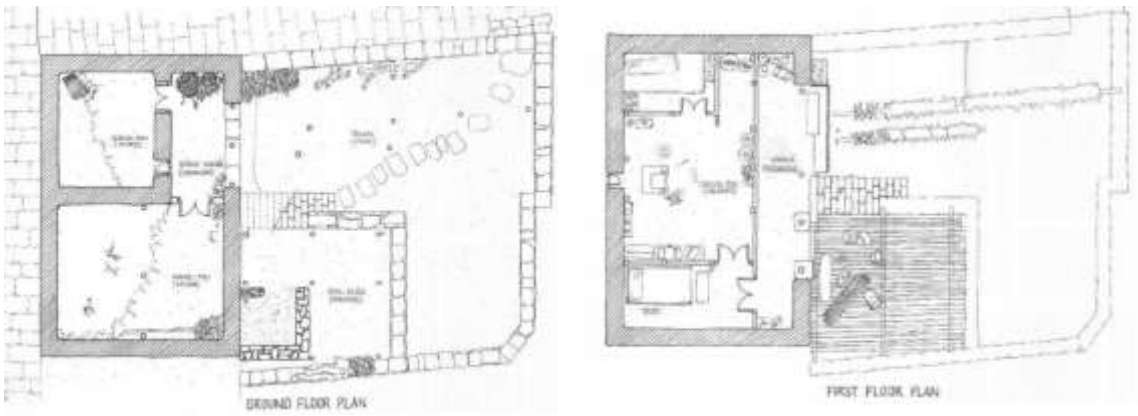


Figure 21 third generation house

5.3.6.4 Fourth generation

These are similar to third generation. These houses are made up of stone masonry. Stone is easily available nearby river. The workmanship and stone cutting skill can be seen in these types of buildings. It is three storied buildings with buigal. The roofing material is slate.

The wide front veranda which was both a functional and symbolic space of the earlier house form is now reduced to a passage with usual wooden balusters and horizontal rails. This veranda gives access to the separate rooms inside. With three floors, the floor area of the house becomes threefold compared to the first generation house. The depth of the house is found to be less by about 4 cubits, with veranda projecting out from the dwelling block. The house form is not simply of I shape like that of the earlier form, but also of L shape. Stairs are placed inside the house block giving the house a different façade appearance. A distinct character of such a house is in the masonry work. The stone blocks are cut in shape (called pharuwa) and laid in course with minimum mortar exposed, and is without mud or cement plaster. There are larger windows, of two to three panels, in the façade with protecting iron bars fixed in the window frame. In a number of instances, the central panel is openable shutter while the two sides are built in cabinet, thus giving a false impression of a large window. The shutter is of either 12 wooden panel or of glass.

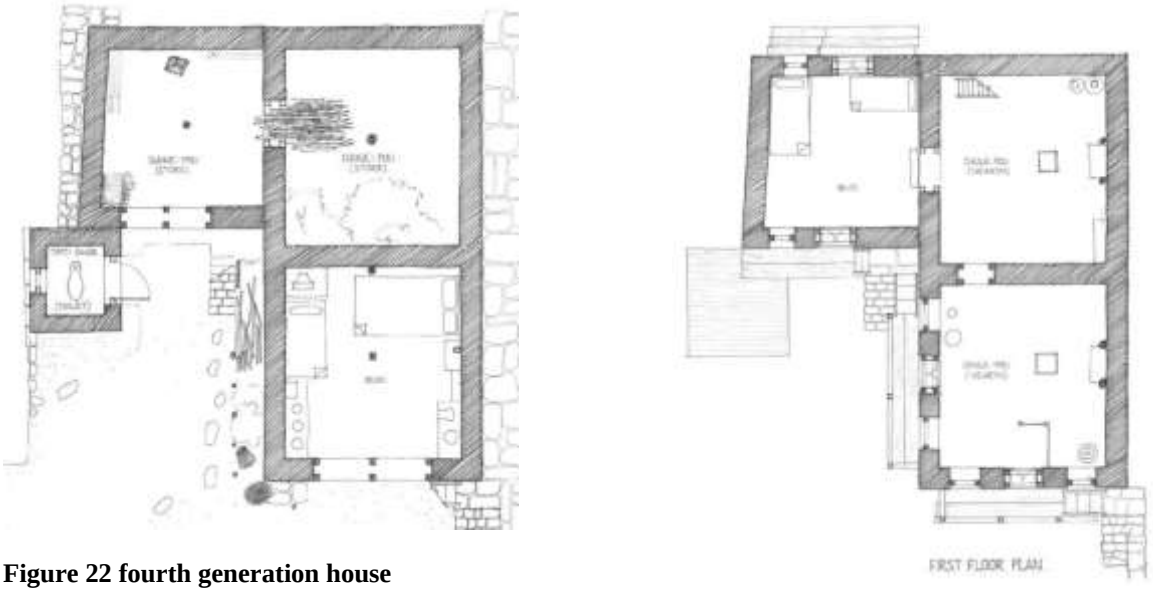


Figure 22 fourth generation house

5.3.6.5 RCC & CGI sheet used buildings (Fifth Generation House)

Initially most of the buildings of Thabang can be seen using wooden plank as roofing material. With the changing time and weather these wooden planks were replaced by CGI sheet. With the availability and initiation of municipality and rural municipality to replace thatch roofs people's housing program provide CGI sheets to under privileged people. These corrugated sheets are disturbing the visual balance of Thabang village.

With the ease of transportation and availability of new material RCC buildings are increasing in Thabang. These RCC building are unpleasant to the eyes. RCC buildings are threat to the identity of Thabang. Almost all the buildings are vernacular architecture. During reconstruction building façade has been continued as in the vernacular. Floor heights, structure and functional aspects are as per modern need. Very few no of buildings are contemporary architecture.

Table 5 showing the difference between different generation houses

S. No.	1st Generation house	2nd Generation house	3rd Generation house	4th Generation House	5th Generation house
1.	This house does not have any windows or openings except a door. Small holes	These houses have windows and openings. These are more decorative and	Buigal can be seen in these types of buildings	The wide front veranda which was both a functional and symbolic space of the earlier house	With the changing time and weather these wooden planks were

S. No.	1st Generation house	2nd Generation house	3rd Generation house	4th Generation House	5th Generation house
	can be seen which is used for natural lighting.	double story.		form is now reduced to a passage with usual wooden balusters and horizontal rails.	replaced by CGI sheet.
2.	The plan of the house is a single hall; fire place is located in the center. Around the fireplace people sleep, sit which is used for multiple purposes.	These building also do not have buigal the uppermost floor.	Ground floor is used for kitchen and storage purpose. First floor is used for sleeping and top floor is also used for storage.	The house form is not simply of I shape like that of the earlier form, but also of L shape.	With the ease of transportation and availability of new material RCC buildings are increasing in Thabang.
3.	The roof is covered with wooden planks.	One of the features of this house is on the bracket walls that close both ends of the front verandah.	Third house type will invariably have multiple windows of larger size than those of the second type.	Stairs are placed inside the house block giving the house a different façade appearance.	
4.				There are larger windows, of two to three panels, in the façade with protecting iron bars fixed in the window frame	

5.4 DATA COLLECTION AND ANALYSIS

5.5 Physical and Social Changes in House form and Settlement

From the study it is found that the changes or transformation of the village is not in the desired direction.

Physical changes:

Settlement pattern

The physical changes in settlement can be seen through the satellite images of the place. Agriculture land is converted into plots and transportation network has been developed through it. With the development of highway, no of new building is increasing by converting agriculture land into plot.

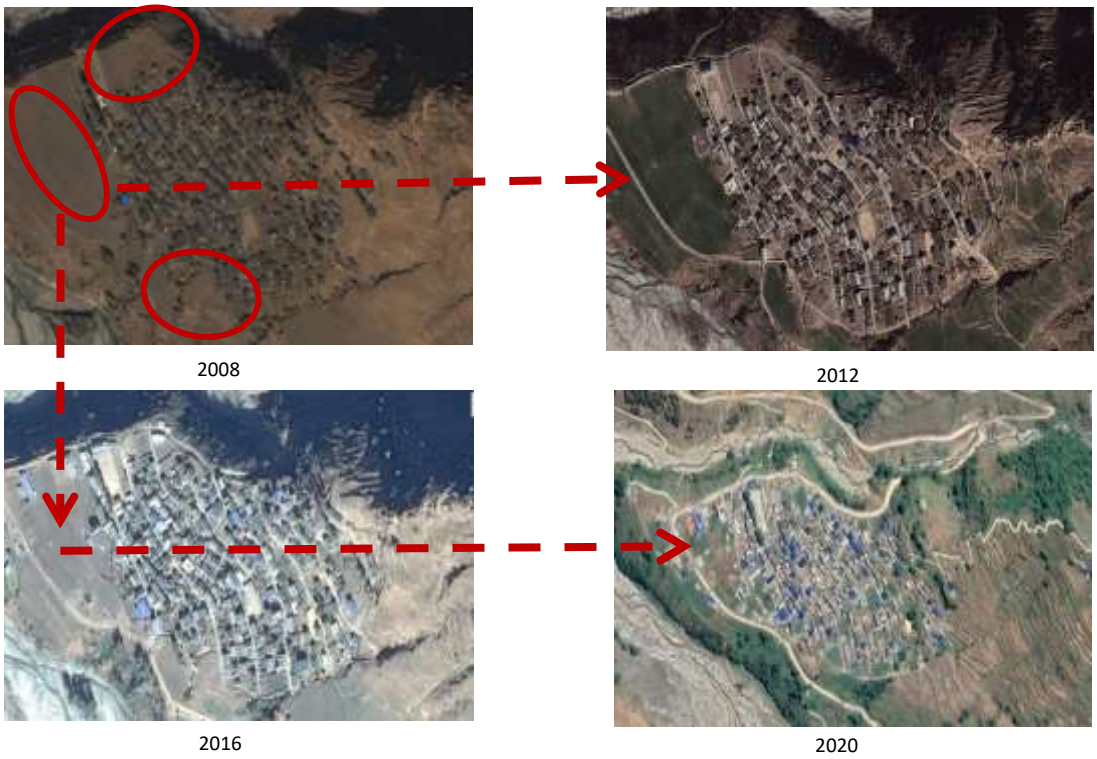
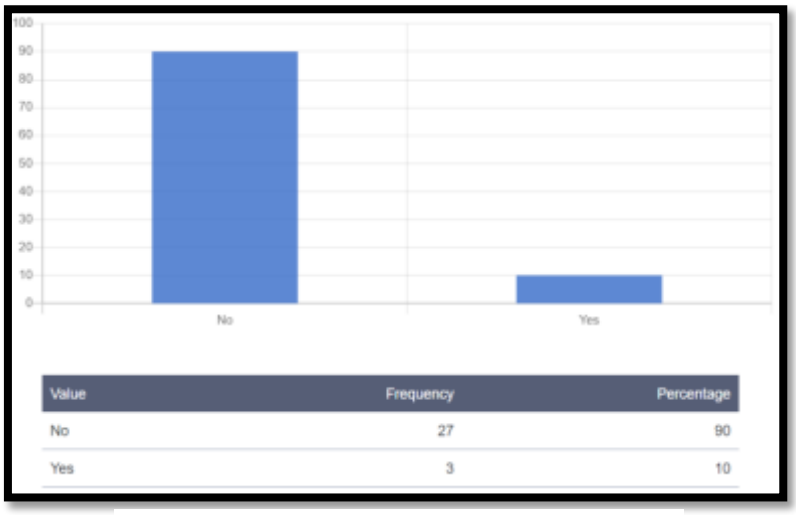


Figure 23 Satellite images showing the transformation of Thabang village, Rolpa

Source: Google earth pro 2008, Google earth pro 2012, Google earth pro 2016, Google earth pro 2020

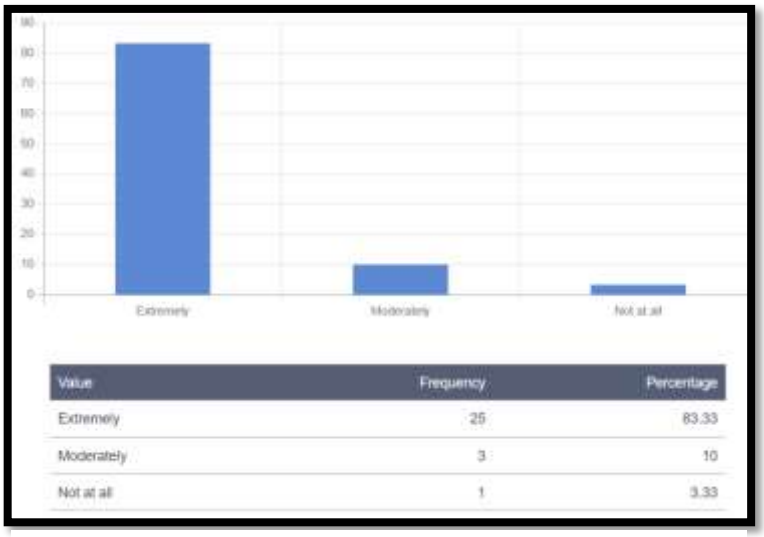
When asked about the availability of land for further building construction. 90 % people responded that there is no land for further building construction.



Value	Frequency	Percentage
No	27	90
Yes	3	10

Figure 24 availability of land

To understand the people perception regarding the changing scenario Thabang, it is asked that what extent you think the physical environment is changed over time. 83% people agreed that the village is extremely transforming



Value	Frequency	Percentage
Extremely	25	83.33
Moderately	3	10
Not at all	1	3.33

Figure 25 Changing scenario of Thabang

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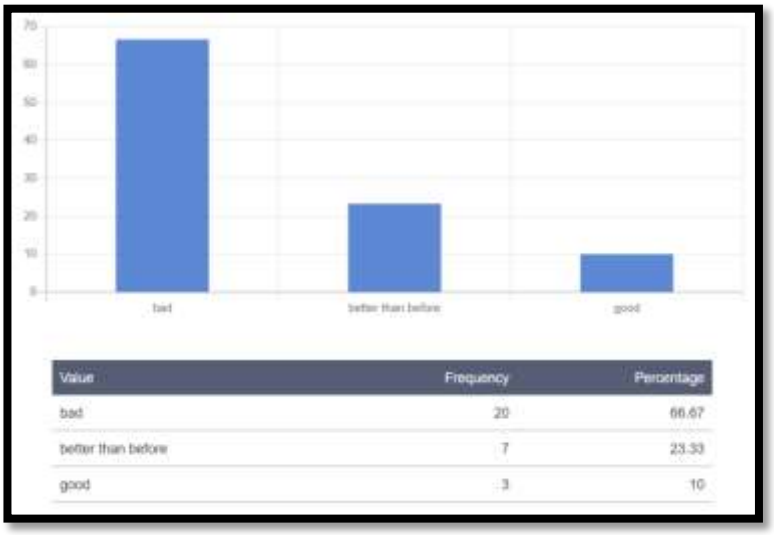
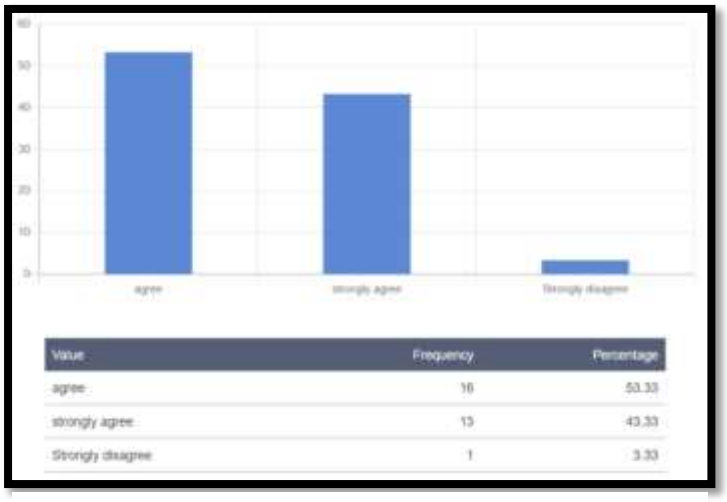
To understand the changing scenario of the village, it is asked, what is your opinion on the transformation of the village? 66.67% people are feeling bad where as 23.3% thinking it better than before.



Value	Frequency	Percentage
bad	20	66.67
better than before	7	23.33
good	3	10

Figure 26 pinion of people regarding the transformation of village

The reasons for transformation of village as per locals are construction of the new house form, re distribution of land among relatives, easy in available of modern materials, urban influence, change in function of traditional spaces and change in lifestyle as shown in following graphs.



Value	Frequency	Percentage
agree	16	53.33
strongly agree	13	43.33
Strongly disagree	1	3.33

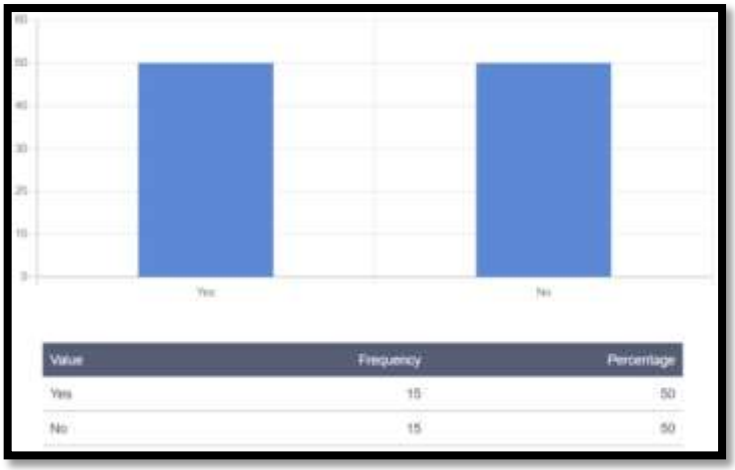
Figure 27 Construction of the new house form

To understand their preference of modern house, it is asked that do you think modern house is better than traditional house in terms of construction material, strength, thermal comfort and functional layout. More than 63% people agreed that modern house are better than traditional house in terms of better construction material, strong building material. They agreed that modern building layout is better and convenient than traditional one. In terms of thermal comfort they said that traditional buildings are better than modern building.

5.5.1.1 Construction technique

Are locally available renewable materials easily available?

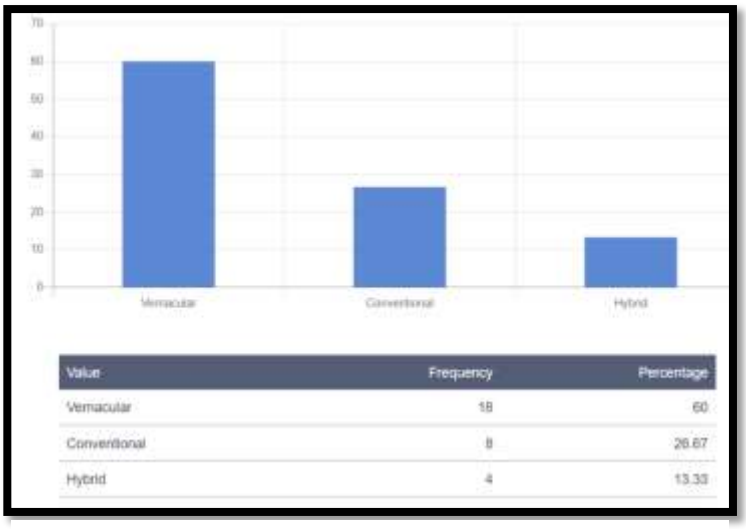
This answer is mixed answer. 50% think that local materials are easily available where as another 50% think it's not easy. For 50% non-renewable materials are easy and without any bothersome system.



Value	Frequency	Percentage
Yes	15	50
No	15	50

Figure 28 Availability of renewable materials

In the study area, 60% buildings are vernacular and other 40% is conventional and hybrid type.

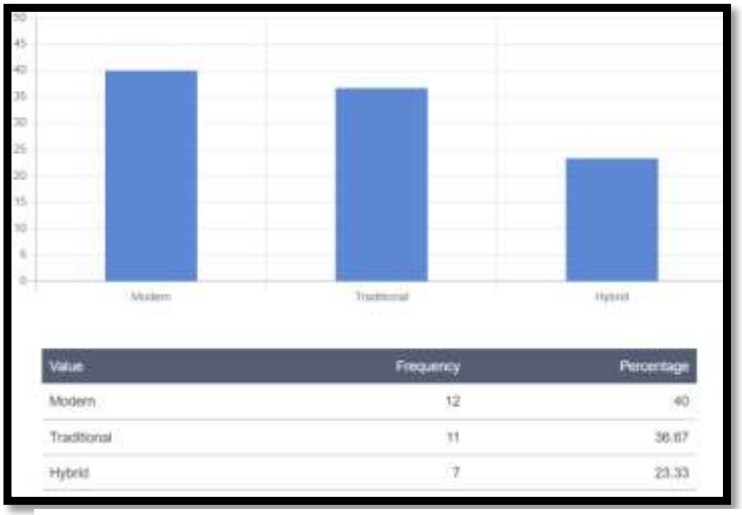


Value	Frequency	Percentage
Vernacular	18	60
Conventional	8	26.67
Hybrid	4	13.33

Figure 29 Typology of houses

If you want to reconstruct your house which material and technology will you use?

40% wants to build new RCC building. 37% want to build in traditional way where as 23% wants to build in hybrid style.

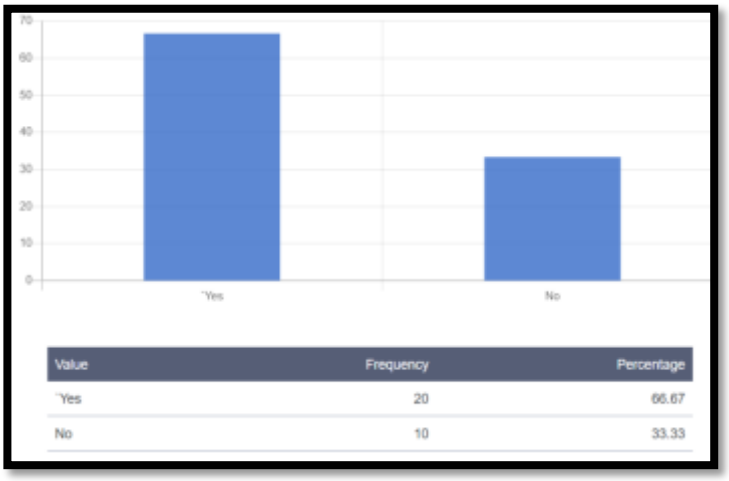


Value	Frequency	Percentage
Modern	12	40
Traditional	11	36.67
Hybrid	7	23.33

Figure 30 Perception of people toward reconstruction of houses

Is your house suitable for your current lifestyle?

67% people are satisfied with their current living way and house design or layout. 33% are not satisfied.



Value	Frequency	Percentage
Yes	20	66.67
No	10	33.33

Figure 31 Satisfaction regarding the traditional spaces

To understand the Construction technique in past and present, the question was asked what are the reasons for changing construction technology?

The interview suggests the factor that emphasized upon the changing construction technology through the key terms Globalization, transportation. One of the local answered that, "*This entire lantern house, you can see here. In the past people used to build houses of stone, mud and wood with the use of local manpower and available technology. These days due to tough and bothersome system with high tax, people find easy to get other material like brick, cement and rod, although all the material are locally available. Also the influence of city life and lifestyle, they are trying to imitate. It is a symbol of well to do family*."

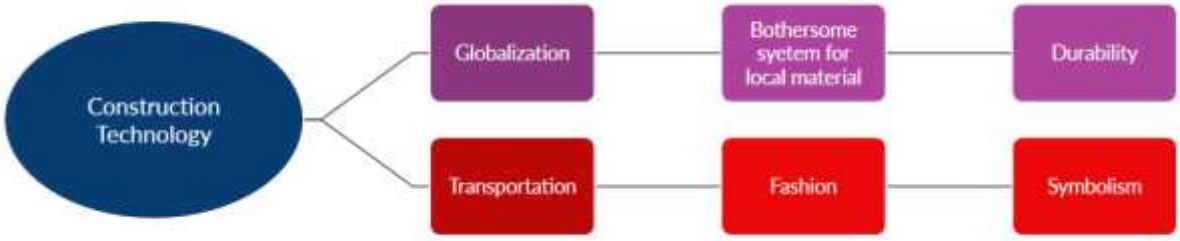


Figure 32 Mind map analysis of as per building construction as per interview

The interview the factor that emphasized upon the changing building materials through the key terms transportation and access, influence of city life, tough and bothersome local system and material replacing due to new technique.

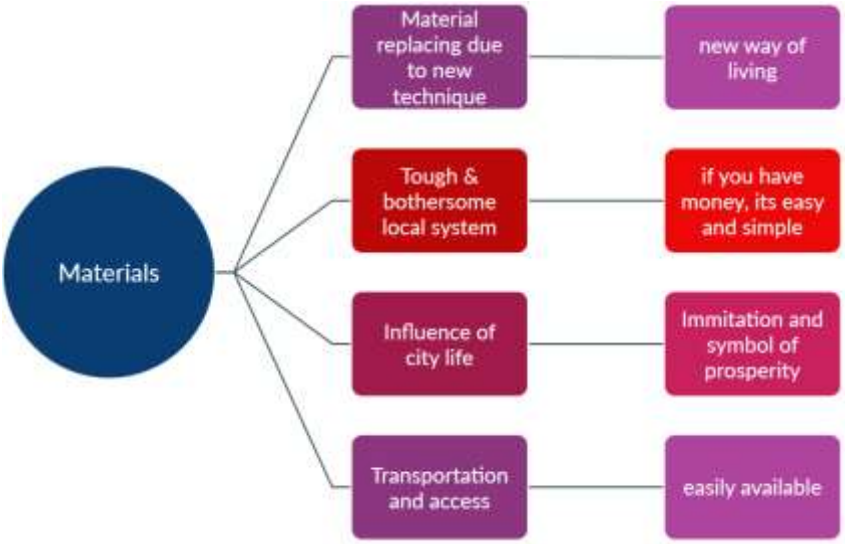


Figure 33 Mind map analysis of materials as per interview

5.5.1.2 House form

Looking at the family type, nuclear families are increasing. From the study it is found that most of the young children are migrating in new districts and foreign countries. They visit only during the festivals or any other occasion. Now the new generation also starts to live separately in a separate house due to which the houses form and layout is also changing.

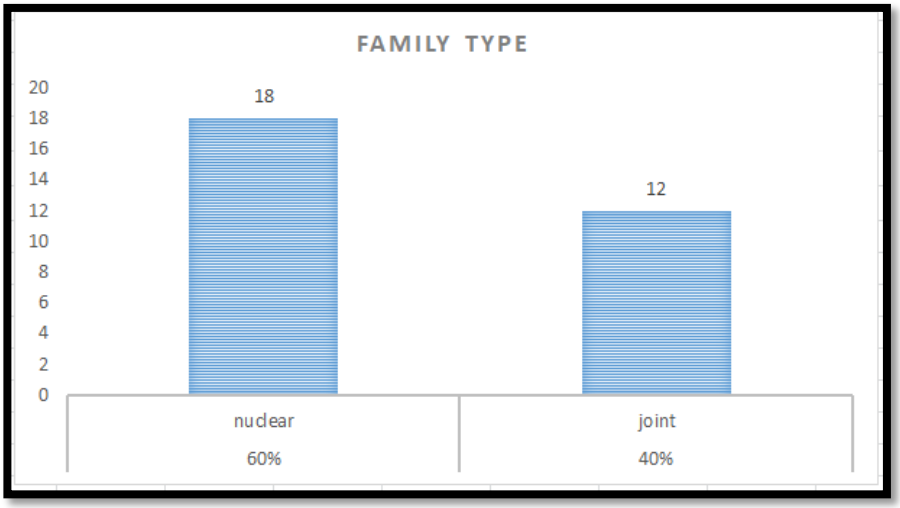
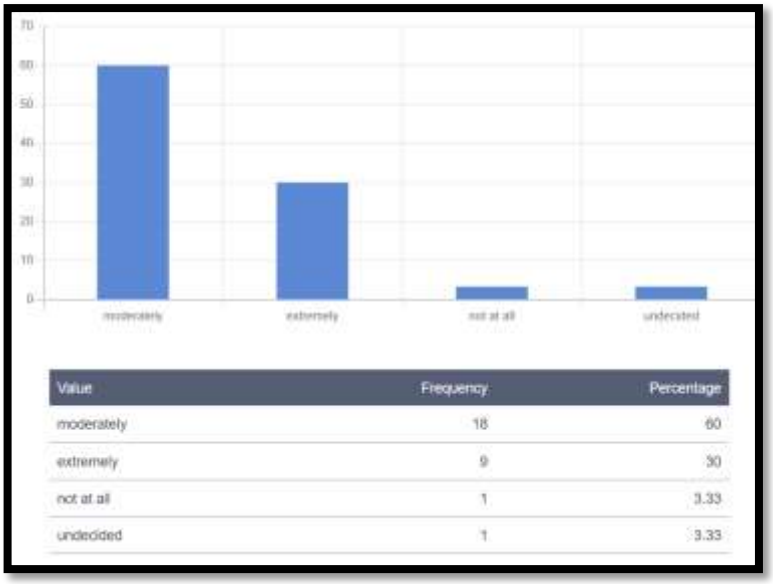


Figure 34 family type

Do you think city life is influencing the interior space configuration of traditional house?

Maximum no of people believe that the city life is influencing the villages that are connected with transportation.



Value	Frequency	Percentage
moderately	18	60
extremely	9	30
not at all	1	3.33
undecided	1	3.33

Figure 35 Perception of people

5.6 Building services

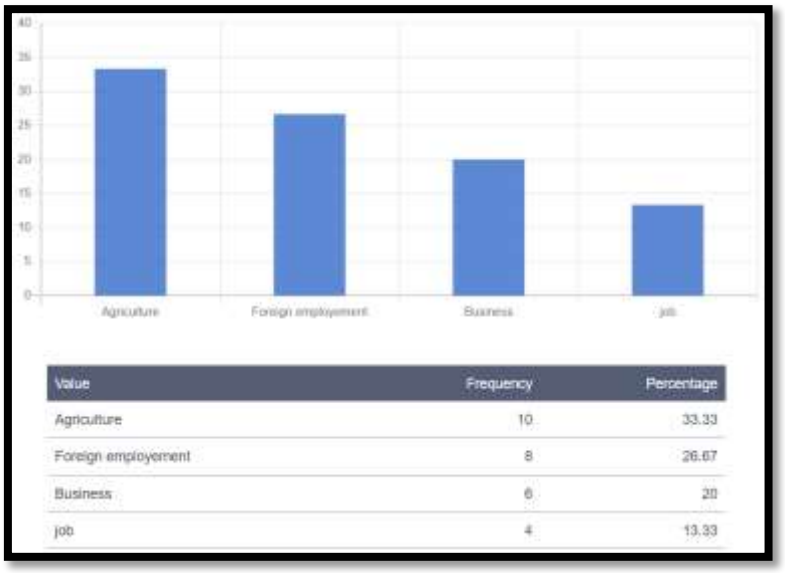
Building use and services are changing. These days solar electricity, direct water tap in individual house, toilets and septic tank, drainage system are some of the new changed building services. Animals like pigs are not allowed inside the settlements to make the city cleaner and visually pleasing.

Value	Frequency	Percentage
Residential	17	56.67
mied	13	43.33

Figure 36 changed building use

5.7 Socio-economic Changes:

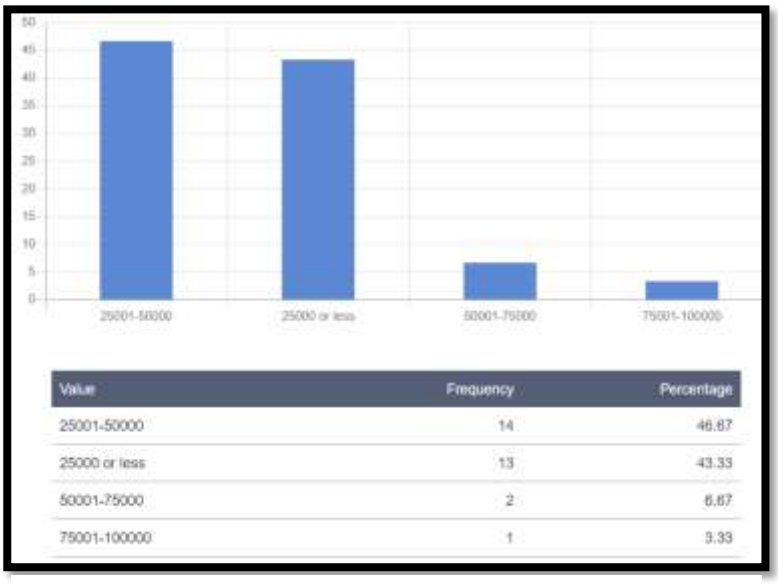
As per the data, maximum no of people are still engaged in agriculture as their primary occupation. Agriculture is since the major source of income. Not like in the past, people are just involved in agriculture. These days' people are attracting toward foreign employment, business and jobs. 33.33% people are involved in agriculture, 26.67% people are involved in foreign employment, 20% in business and 13.33% in private or government job.



Value	Frequency	Percentage
Agriculture	10	33.33
Foreign employement	8	26.67
Business	6	20
job	4	13.33

Figure 37 sources of income

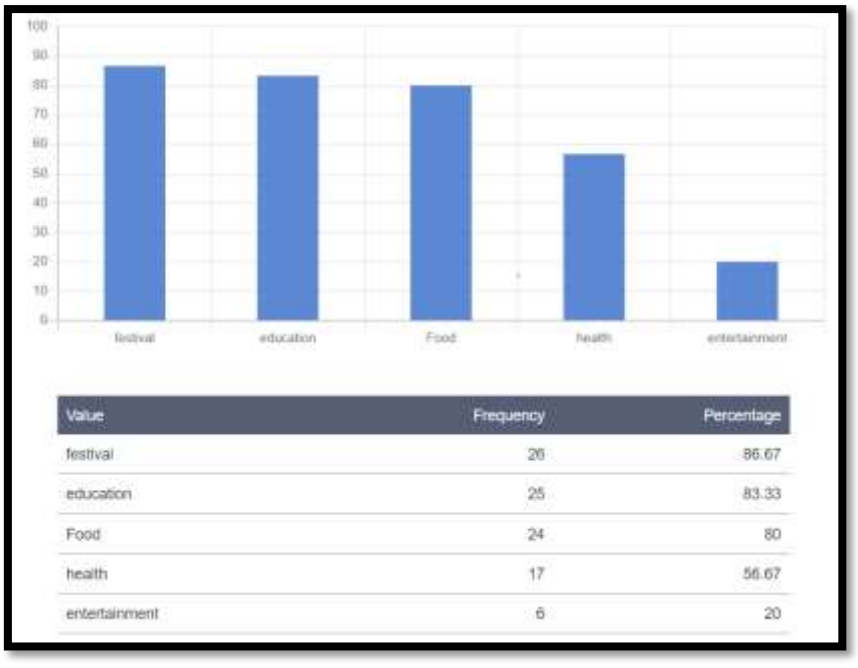
The monthly income also shows that people are having good amount. 47% people have monthly income between 25000-50000. 43% still having less than 25000 per month. Other 10 % is having very strong income generation.



Value	Frequency	Percentage
25001-50000	14	46.67
25000 or less	13	43.33
50001-75000	2	6.67
75001-100000	1	3.33

Figure 38 monthly Income of the families

In the past people used to spend money on cloths, food, and festival or entertainment activities. These days, spending money on education of their children and health is also added.



Value	Frequency	Percentage
festival	26	86.67
education	25	83.33
Food	24	80
health	17	56.67
entertainment	6	20

Figure 39 expenditure of income

The interview suggests the factor that emphasized upon the profession shifting through the use of key terms such as **tradtional agriculture system, lack of oppurtunities, lacking land for agriculture and inflation.** One of the local said that, "*Now a day with the export of new building material, new labors are also coming from outer districts. In my opinion, it is not good thing. First priority should be the people of Thabang. I am doing this wooden furniture works from the very early age. In the past, it was good source of income. But, it is quite hard to sustain here. My son is in abroad, because of lack of opportunities here".*

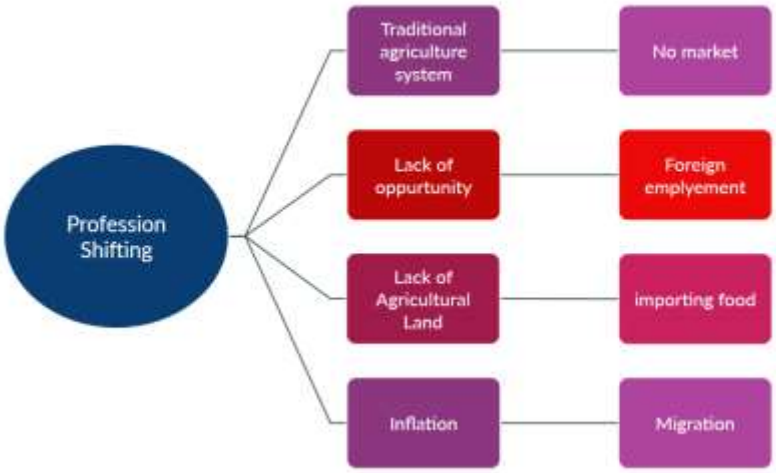


Figure 40 Mind map analysis of profession shifting as per interview

CHAPTER 6. DISCUSSION

Magar house is an individual unit of an ecosystem. Group of building makes it community. Connection between the homes, streets, agriculture land, forest, and resources make this system similar to an ecosystem. The values, customs, culture, laws and resources strengthen the relationship between them.

Socio-cultural practices are the unique physical, intellectual, spiritual, emotional, and material characteristics that define a society or a social group. Cooking, working in the fields, travelling into the forest to gather firewood, and visiting with neighbors are some of the key daily routines in the magar community of Thabang. Their everyday activities are influencing the shape of their home and settlement. The community is situated between a forest, hills, and farmland. People can go every day or a majority of the time.

The interacting public spaces for people are market, square, streets, aangan, agriculture land where agriculture activities, gathering and festival activities take place. These activities differentiate the private space of house, into semi private spaces like Mahira and aangan, into public spaces like square and streets. Streets works as a linkage between private and public spaces, pedestrian movements is highly influenced by building details; the streets are not monotonously designed. Spaces in this settlement can be seen as street space, nodal space and spaces formed between house and streets called aangan. The aangan are used for agriculture product, ladies making threads for hand-woven cloths. It is also used for social gathering during festivals and social functions. Street itself used spaces for daily activities by farmer, used by human for lifecycle rituals and movement during festivals.

Festivals are the major part of Magar lifecycle. Bhumeya puja is the major festival of Thabang. They eagerly wait for this festival every year. Their mythological stories remind them the importance of nature. There is one story that *"Syopa (Nature) and Gorpa (Magar) are two brothers. The discussion of land happened between Syopa (Nature) and Gorpa (Magar). Remembering Syopa, Gorpa told that go in forest, you have no part of the land. From today, we became away forever, take only Dhaar(milk of cow to give in the Thaan, a sacred place for pooja), making kundal (stand of stone, putting its head dung to pour milk making whole from its upper part), Dhup (ghee of the cow putting in coal blessing the betterment of Pooja in the name of god). After the farewell of Syopa and Gorpa, in the remembrance of Syopa the custom has been started to celebrate the nature".* This story

shows that the relationship of nature and magar is of brotherhood. They produce variety of crops and use to rise in the name of the land god, the new item of every crop before they taste is offered to the land (Syorpa). The preparation for this festival starts from very early days.

Dalijiye Roka magar explains that "*Work of agriculture and homes are tried to finish at early as possible, so that they can enjoy this festival without any worries. For bhumeya puja, before few weeks nokobange dance group is formed. They practice starts at aangan of their house or in the open space at community. For some special food item, preparing rice flour, preparing leaf plate, hand woven cloths during the festivals are prepared in aangan and mahira. The entire cutting thing like khukuri, hasiya, kodali, bancharo are kept clean and prepared for the festival. All the streets, aangan, open spaces and homes are kept clean and tidy."*

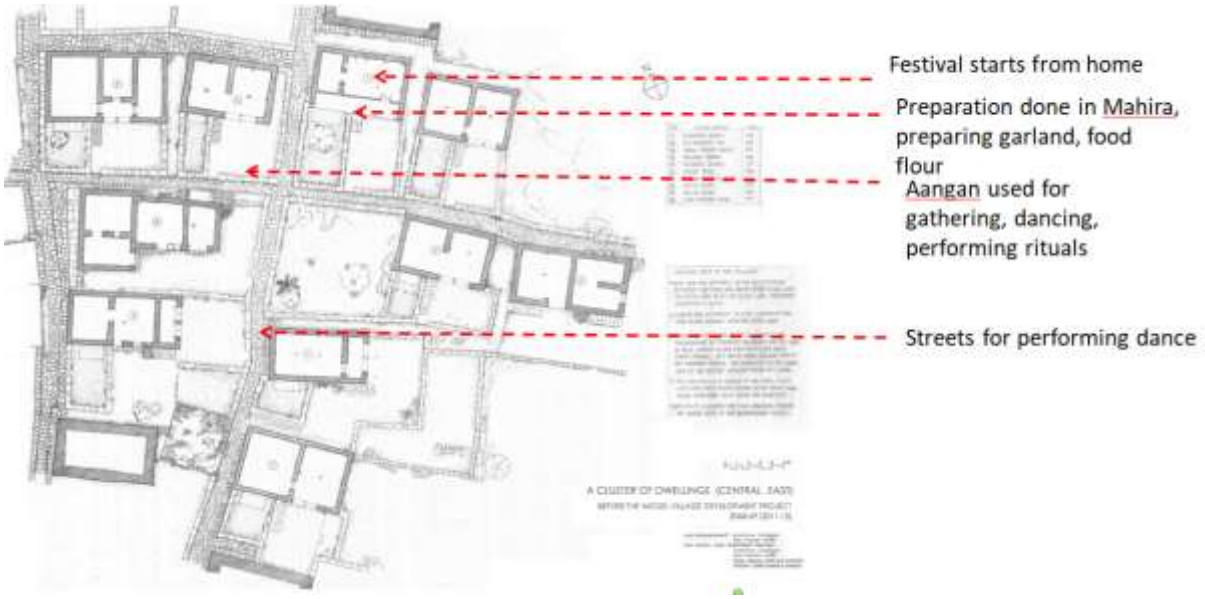


Figure 41 Cluster of Settlement, showing the relationship between house and settlement during festival

Bhadra Gharti Magar explains that *"before the day of Asar 1, dance group goes to Jaljala Mountain to bring seasonal flowers and leafs, on the way they worship trees, mountains, rivers. While returning they stay in different locations like Jorpani, Dhundhkhola,, Gobang, Dhankilathing. When they return to the village they go to the priest house and dance, than they go to the offering site called namchung. During their way to namchung, they go through the streets performing dance rituals and singing the nyaho songs. Every house hold joins them on the streets."*

The interview suggests the factor that emphasized upon the animist through the use of key terms such as **culture faith on nature** and **existence of past rituals.** One of the local respondent said that, **"***Bhumya puja is the major festival of magar in all over Nepal. It is very important for everyone to thank Mother Nature for everything she has offered. If it is not done in right time and in right manner it is believed that it will bring misfortune to the community, people, and land, animal."* From the study it is found that magar are animist like in the past. With the passing time certain rituals and practices are changing but their inner core values are not changed. Celebration of festival is as important as in the past.

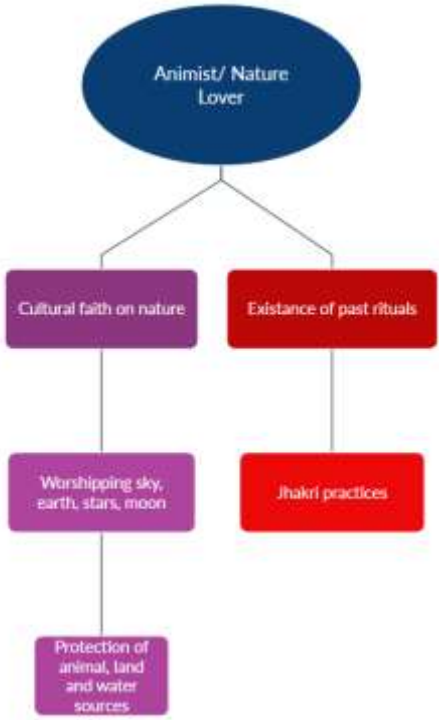


Figure 42 Mind map analysis of Animist as per interview

Looking at their festival, major locations are hill top, stream or river the water source, streets of village, frontal space of house. It is a festival of farmers and peasants and celebrated with enthusiasm in the settlement and is a reminder of their agrarian roots. Their inner core belief and animist behavior is responsible for festival celebration. The festival is somehow guiding them to plan their home and settlement. The festival starts from home to the settlement, for spiritualization they go to the mountain and forest. They come back to the village and to their home. Every year the ritualization of spaces and ecology happens in the society.

The relationship between Festivals and Agriculture life of the people

Bhumeya puja is the major festival of magar community which starts from Asar 1 for a week. There is a celebration of the storage of summer foods and they worship for the better crops for the monsoon. It is believed that the musical instruments begin to play, and then birds and insects come out to listen the music helps to keep the crops safe. Maghe Sankranti is also important annual festival, which is celebrated at the first day of magh, a time that marks the transition from winter to spring. According to the Magar terminology, Maghe Sakranti commemorates the end of udheli (literally 'down'), which is a period that lasts for six months starting from mid-July, and the initiation of ubheli ('up'), the period lasting for another six months starting from the mid-January. The down and up periods probably correspond to the

annual cycle of herding livestock up and down from high pastures, a historically important economic activity of the Magars. Dashain & Tihar are also celebrated as major festivals, where monsoon crops are harvested and summer crops are planted.

The agriculture related works are also defined for man and woman. Land preparation and plantation works are carried out by men. Weeding, harvesting and storage are carried out by mostly women. Man and woman manage their work in time so that they can enjoy festival without any worries. This shows that festival and agriculture activities are linked with each other eventually affecting the daily life and activities of the people. Their daily routine and way of living is the reason behind the layout and form of their building and settlement.

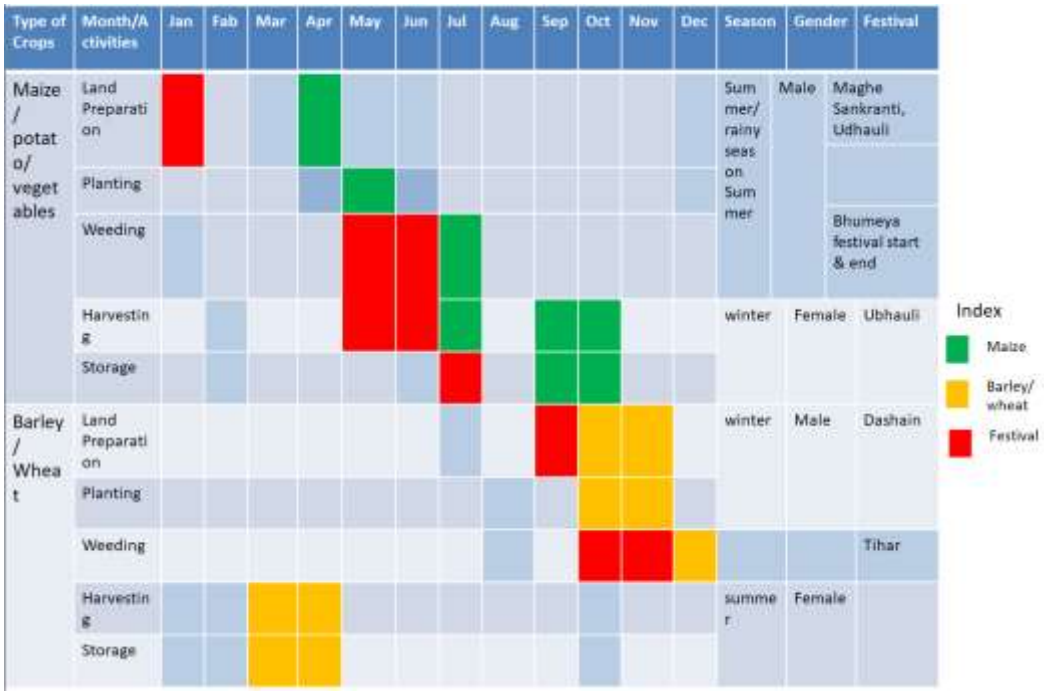


Figure 43 showing seasonal calendar along with the festivals

During the study it is found that major occupation of people of Thabang is agriculture, they have same form of economy and similar forms of rural houses and their spatial arrangements. Most of the houses demonstrate a general aspect of the economic need to store. Storage area is dominant space in every house. Like in traditional house the ground floor and attic floor is mostly used for the storage purpose. Wood and agriculture products are stored. The types of spaces and their functions in magar settlement and house are as shown in table:

Table 6 the types of spaces in magar architecture

Types of Spaces	Functions
Streets	• Space for public interaction
Aangan	• Festivals and social functions • Utility area: sun drying grains, cloths
Mahira	• House hold goods; dhiki, jaato • Semi-public space for guests and social interactions
Store /Kitchen/ Bed Room	• Storage space for firewood, agriculture product • Private spaces for daily life activities and needs
Agricultural Land	• Major source of economy • Design of house is based on agriculture
Artistic Decoration on Beam, Column, Window and doors	• Traditional mythological stories are displayed through carvings • Animal, plant, bird, man and woman are carved

From the field observation and interaction with people it is found that house is the first place where all the preparation for festival takes place. For any festival, house is prepared firstly. House is cleaned and purified before any ceremony. It is believed that some impurities and negative energy is cleaned before any ceremony. In a magar community, house is incomplete without aangan. Aangan is the most important open space in front of the dwelling where people gather, sing and dance, performed many rituals. In a large feast, aangan is used for dining and cooking purpose. Streets are important. They are just not for movement but they have great cultural and social values. People of Thabang use streets as per their wish like children play, elderly people get together, youth sit and chat. There are different routes for different ceremonies. From birth to death, there are specific streets for movement. Food, cooking and festival are interconnected. Like in Bhume puja, before worshipping and sacrificing he goat cooking anything inside the house is not allowed. Ground floor and attic space is mostly used for storage purpose. First floor is used for living space. With the change of time and layout of the building, the use of every floor is shifting above. In few house kitchen is allocated in above floor.

Festival is just not limited to the family and home. Magar people mostly celebrate in a group or community. Preparation for festival starts a month before the occasion in a community level. Every ethnic group is involved and equally participates in the festival. After home streets and nearby open space is used to gather and perform rituals. Worshipping and different rituals takes place in the agriculture land. Nearby forest and water resources are worshipped on the way to the mountain and temple. Festival connects the home with the nearby forest, water sources and mountains just not physically but the intense spiritual meaning and value is associated with it.

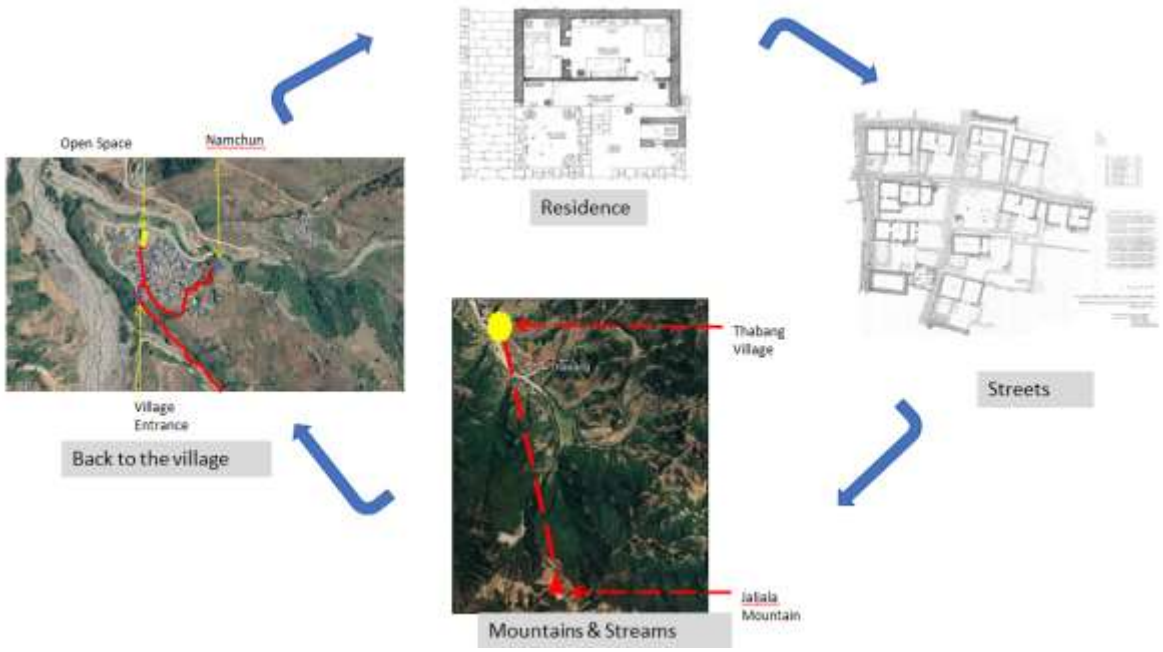


Figure 44 starting festival and ending festival in home

From the study it can be said that, magar house is an individual unit of an ecosystem. Group of building makes the community. Connection between the homes, streets, agriculture land, and water source make this system similar to an ecosystem. The values, customs, culture, laws and resources strengthen the relationship between them. The animist practice that still exist due to the belief in mythological stories, culture faith on nature and existence of past rituals. The celebration of bhumya puja every year is ritualization of ecology and spaces. They are not forgetting the ecology and its importance through their rituals and practices. The relationship between Festivals and Agriculture life of the people can be seen through the seasonal calendar. These show that festival and agriculture activities are linked with each other eventually affecting the daily life and form of the house and settlement.

CHAPTER 7. DESIGN SOLUTION AND SITE ANALYSIS

Desired direction of changes or design solution

From the study it is found that the transformation of Thabang village is not in desired direction. The desired directions for the transformation of village are discussed as below:

Ecologically responsive architecture

1. Understanding the natural environment

The transformation of Thabang village is definitely not in desired direction. New construction does not understand its natural environment. Haphazard construction of RCC structures does not obey its natural setting. Definitely these new building fulfills the changing needs of the occupants but in the cost of nature and its surrounding's visual quality. Visual quality is known as a key factor for the perceptions of local residents, they often look for whether the new urban elements fit in the natural setting or not. The settlement character is made up of a few natural and cultural elements that have been accepted by the neighborhood which needs to be preserve.

2. Solution Grow from Place

The house can be sited in a way that minimizes modern materials use or alternatives, less destructive material or local material can be used. The use of passive solar heating through careful orientation of the building and the proper choice of building materials can be done to solve the heating and lighting issues of the building. It seeks locally adapted solutions for energy and waste management.

3. Ecological Accounting informs design

Enterprises can access lower cost, more flexible sources of finance by optimizing and enhancing social returns like the creation of living wage jobs and environmental returns like less greenhouse emissions.

4. Design with nature

In order to save energy and time on transportation, reduce CO2 emissions and our dependence on oil, and free up time for family and community activities, it is necessary to develop locally rooted, self-organizing, compact communities that bring work, shopping, and recreation closer to our homes. By bringing family life, work life, and community life closer together geographically and putting people in more common and natural contact.

5. Everyone is a designer

During design process, every voice should be heard. Honor the special knowledge each person brings. The design has been embedded in culture, learned through daily participation in the life of the family and community. Local knowledge and materials gave communities everything necessary to design, build and maintain their places.

6. Make nature visible

The building should connect people with the change and flow of climate, season, sun and shadow, constantly turning our awareness of the natural cycles that support all life. A wall should be not a static, two dimensional architectural elements but a living skin that adapts to difference in temperature and light. Designing a building to save energy also means designing a building that is sensitive to nature. The human have an innate need for contact with a wide variety of species. Terms biophilia reminds us that we are designed to live and adapt within nature.

Place making as a tool for transformation

Most important thing while place making is we should know who is living there like old age people, children, especially able people, which age group, gender. This information is then

used to create a common vision for that place. Connection with nature or wild places are emotional not informational. Keeping rural people involved in transforming and managing the landscape by telling the truth. Place making can be used to improve all of the spaces that comprise the gatherings places with in a community like streets, sidewalks, parks, buildings and other public spaces.

Continuity of vernacular reflection in new design of house and public spaces

The goal of present-day and future architecture and construction should be to achieve a hybrid system that uses both conventional and intelligent materials and enables for the exploration of new aesthetic and functional ideas.

Modernist homes are qualitatively distinct from new architecture because it represents the transformed lifestyle requirements of the twenty-first century. But neither has it ever been a part of pre-industrial vernacular. The reinterpretation and remodeling vernacular in order to make the building type suitable for contemporary living which can also address as new vernacular.

The transformation of Mahira into large span multi-story building is one of the major shifts in Thabang. Mahira is replaced by addition of room space which shows their changing needs of more space. Transformation of streets the pathways into public spaces, where people walk, sit and talk these days like they used to do in aangan. Transformation of building layout, plan shows the new functional spaces. Transformation of streets and new roads shows the changing social system and economic need of the settlements.

Many developing countries, including China, have started privileging historical architectural styles within urban landscapes in order to promote certain areas as possessing cultural heritage and thereby boost tourism. As new interpretations and construction methods are introduced in cases where vernacular architecture is reconstructed and reproduced.

Continuity of historical events like festivals and their back stories or mythological stories in new design of buildings and communities will preserve the soul of the settlement. New design should incorporate all the historical events and its continuation in future.

Site Selection

The site selected for the design is eastern part of the village. This part consist maximum number of residences and home stays. The site is rectangular in shape. The major cultural

route during the festival goes through this site. Due to the changing land use and infrastructure this area is losing its original character.

Site Surrounding

To the north of the site, there is a playground, where children and youth play basketball. On the southern part the market area lies. In the eastern part, residences and agricultural land is located. In the western part home stay, new RCC buildings can be seen. School, health post, market, bus stop all are reachable 10-15 min distance.

Existing Use

In present situation, land is vacant and the owners are not living in this village anymore. The plot is converted into agriculture land. Neighbor is cultivating this land. In the past, there used to be traditional residence building on this plot. Due to the migration, owner dismantled the old residence because of very weak condition and sold the stone and reusable wood to the neighbors. Now days this particular area has mixed land use by including financial institutions like, shops, private offices, banks and homestay.

Context and magnitude of study

Every design project has positive as well as negative impact on surrounding environment, society, culture and economy. After analyzing the magnitude of problem, the intensity or scale of problem solutions needs to be found. Contextual interpretation of site is equally important. Before planning and designing any structure the surrounding context of the site should be known for the socially acceptable, long lasting and sustainable construction.

To identify the magnitude of problems and context study to specific to the site this study is very essential. In Policy context bylaws specific to the site needs to be studied. In Economic Context cost of the land, potential of the site including heritage buildings, economic solutions need to be found. For Social context interactive spaces around the site, public space, cultural spaces needs to be identified.

In Cultural context cultural activities, meaning of cultural activities, their routes and place needs to be studied. In Environmental context low carbon development, energy efficiency and sustainability needs to be studied. In Physical context, access to the site, waste management, drainage system, communication needs to be studied. In mobility, pedestrian movement vehicular movement around the site needs to be carefully observed. In architectural context fabric, tactility, scale, proportion, place context of the site should be carefully studied. To identify the magnitude of problems and context study to specific to the site this study is very essential.

Figure 45 surrounding of the site

In environmental context, the main focus is given on low carbon development, energy efficiency and sustainability. For low carbon development, the study is done on the methods of building materials, land-use, transportation and air pollution. For energy efficiency the study is focused on climate study, solar consumption, water consumption and land exploitation. For sustainability, building materials, traditional form and orientation, traditional designs are being studied.

In physical context, the focus is given on natural topography, geography, water resources & infrastructures, community water supply, rain water harvesting, drainage system, waste management, electricity supply and communication. Also the places around the site, pathways, views, vegetation and various activities around the site are also studied.

Physiography

- Topography: The site is flat with slightly contour land above.
- Climate: climate is average
- Soil: Alluvial soil
- Water supply: community water system
- Sewer: Sewerage can be only seen in market area
- Electricity: solar electricity in a whole settlement
- Street light: in few places

Site surrounding: surrounding the site most of the residences and home stays

Table 7 SWOT Analysis

Strength	Weakness	Opportunity	Threat
The site is calm and free from noise and crowd	High cost due to the varying topography and also transportation of material	Point of attraction	Risk of drainage problem due to the contour topography above
Good accessibility of streets and two wheeler vehicle	Lack of vacant spaces anymore for new construction.	Redevelop old buildings and under-utilized land to increase space and diverse use	
Good space for residence and homestay			

Concept & Form Development

The concept is inspired from the site and surrounding. It is developed from the two geometrical shapes of square and rectangular. Most of the traditional Thabang houses are made up of these two forms. It is tried to conserve and reflect the surrounding architecture while catering the modern demand as well.

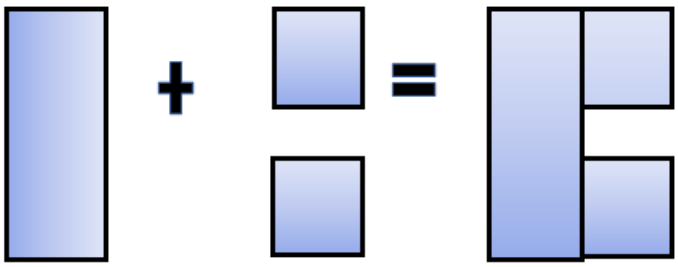


Figure 46 form development

It is tried to reflect some of the elements from the past like semi-private space like Mahra by creating space like that or giving the virtual view like that. Modern fascilities like toilets and bathrooms are tried to allocate inside the house. Aangan is tried to preserve as a way like in the past. The boundary wall is kept 2' high where people can sit and talk, tried to keep it as interactive space.

Figure 47 the mahira

Stone is used for wall wih the mixture of cement and sand. Wall bearing structure is design with 14" thick wall. Wood is used in railings of terrace, frame of door and window. Glass is used in windows for good lighting and ventilation to cater the traditinal problems of houses. It also creates tha transition between exterior and interior of the house.

Figure 48 the 3d visualization of conceptual residence

CHAPTER 8. CONCLUSION

Magar people and their life cycle indicate to their inner core values, life style and livelihood. The major occupation of people of Thabang is agriculture; they have same form of economy and similar forms of rural houses and their spatial arrangements. Festival and agricultural activities are interconnected. In the traditional building layout, the spaces are allocated as per the harvesting. The socio-cultural forces like the basic needs, family size and structure, position of woman, need for privacy and social intercourse are responsible for the form of the house and settlement of Thabang.

Like as seen in Thabang village, the site is selected as per to fulfill the basic requirements like food security, safety, close to nature for self-fulfillment and social needs. Houses are built according to the style of the geographical features and resources found. Later on social values, norms are developed and transferred into architectural values and artifacts. Spiritualization or need of spirituality occurred. First, the god of nature worship. Natural disasters are difficult to overcome, so they have the original consciousness of nature worship. Second, the consciousness of ancestor worship. In the concept of “animism”, man is god after death. Ancestors would bless their descendants in another world, and their inns are endowed with spirituality. Their belief and ritual are giving the form and shape of the house. Extended outside spaces like Mahira, aangan, streets are the major spaces during these rituals and festivals. The idea of peaceful harmony between man and nature as well as the sustainable ecological concept of treating natural resources with "reasonable access and suitable use" are both embodied in the simple, primitive thinking of the Magar people.

The primary social norms and prescriptions that developed out of social values are transformed into magar people life and their daily activities. While men have a more active role in society, women have to perform household chores. The presence of extended family promotes harmony inside the home. The house type and settlement of the Magar society are shaped by social norms and relationships of values such as extended family pattern, the status of the family in society, relationships between men and women, neighborhood relations, daily family habits, traditions, beliefs and their rituals among the society, their hospitality, and their beliefs and practices. Helping one another has become essential as neighborhood relationships have grown so close. Religious celebrations, weddings, and funerals all take place in homes.

House form is changing new RCC construction is happening in village. In present day, new buildings are lacking the previous spaces like mahira, aangan, storage spaces, gathering

spaces during festivals and ceremonies. Due to which cultural routes are getting disturbed so as the living pattern and house form of the people. From the study it can be concluded that the changing fashion of buildings and its interior is just not because of changes in physical needs but the changes in the symbol and the fashion. The transformation of Thabang is not in right direction. Desired direction for transformation of the settlement needs to be in ecologically responsive architecture which is inspired from its traditional surrounding architecture. Keeping rural people involved in transforming and managing the landscape. A community's streets, sidewalks, parks, buildings, and other public spaces can all be improved through place making.

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ANNEX

Annex 1: Questionnaire

Name of the Respondent: **Gender M ☐ F ☐ O ☐**

A. DEMOGRAPHIC INFORMATION

1. **What is your ethnic group?**
   - O Brahmin
   - O Chhettri
   - O Magar
   - O Bika
   - O Damai
   - O Other

2. **What is your religion?**
   - O Hindu
   - O Christian
   - O Buddhist
   - O Muslim
   - O Other

3. **What is your origin?**
   - O Thabang
   - O Migration from other place

4. **What is your age?**
   - O 20-29
   - O 30-39

- O 40-49
- O 50-59
- O More than 60

5. **What is your gender?**
   - O Male
   - O Female
   - O other
6. **What is your household size?** In number
7. **What family type do you live in?**
   - O Nuclear
   - O Joint
8. **What is your occupation?**
   a. Business/trade
   b. Agriculture/Farming
   c. Private Job
   d. Government Job
   e. Teacher
   f. Others

If other, please specify

9. **What is the monthly income of your family?**
   a. 25,000 or less
   b. 25,001 – 50,000
   c. 50,001 – 75,000
   d. 75,001 – 100,000
   e. 100,001 or above
10. **What is the main source of income?**
    f. Agriculture
    g. Business

h. Job

i. Others

B. BUILDING INFORMATION

11. Building Typology:

O Vernacular

O Conventional

O Hybrid

12. How many stories is the house?

a. 1

b. 2

c. 3

d. 4

e. More than 4

13. What is the type of building use?

a. Residential

b. Commercial

c. Mixed

14. Which category of house do you live in?

d. 2nd generation

e. 3rd generation

f. 4th generation

g. 5th generation

15. What is the orientation of the building?

a. East

b. West

c. North

d. South

16. How you feel about the interior of your houses and spaces you use?

a. Not Satisfied at all
b. Slightly satisfied
c. Neutral
d. Satisfied
e. Very satisfied

17. Is your house suitable for your current lifestyle?

f. Yes
g. No

C. BUILDING & CONSTRUCTUON MATERIAL INFORMATION

18. Availability of land for further building construction?

a. Yes
b. No

19. Food production is enough?

c. Yes
d. No

20. Is rainfall happening as in the past?

e. Yes
f. No

21. Availability of water source?

g. Yes
h. No

22. Are locally available renewable materials easily available?

a. Yes
b. No

23. Use of renewable and non-renewable source of building material?

a. Renewable source
b. Non- renewable source

24. If non-renewable material, what is the reason for choosing non-renewable material?

25. Did you use local manpower and traditional technology while constructing your house?

a. Yes

b. No

26. If you want to reconstruct your house, which material you prefer?

a. Modern

b. Traditional

c. Hybrid

27. If you want to reconstruct your house, which technology you prefer?

d. Modern

e. Traditional

f. Hybrid

D. Activities inside the home

28. Do you have any common gathering space in your house?

a. Yes

b. No

29. Where do you spend your most of your time?

c. Bedroom

d. Mahira

e. Balcony

f. Kitchen

g. Aangan

h. Others.

i. If others, then specify

30. Is there a nearby outdoor public space (e.g. park, open space, playground) you visit frequently?

j. Yes

k. No

31. What is the walking distance of that place?

a. About 5 minutes walking distance

b. About 15 minutes' walk

c. About 30 minutes' walk
d. No open space nearby

E. Interacting with neighbors

32. How do you communicate with your neighbor?

a. Visiting each other at home
b. Angan
c. Streets
d. Mahira
e. Don't communicate with neighbors
f. Others

If others, then specify.

33. What spaces did you use to gather with your friends and neighbors?

a. Street
b. Market Place
c. Angan
d. Mahira
e. Others

If others, then specify.

F. Transformation of village

34. To what extent do you think the physical environment has changed over time?

O Not at all
O Moderately
O Extremely

35. Are these reasons for the transformation of the village?

	Strongly disagree	dis-agree	undecided	agree	strongly agree
• Construction of the new house form	O	O	O	O	O

• Re distribution of land among relatives	O	O	O	O	O
• Easy in available of modern materials	O	O	O	O	O
• Urban influence	O	O	O	O	O
• Change in function of traditional spaces	O	O	O	O	O
• Change in life style	O	O	O	O	O

36. Do you think city life is influencing the interior space configuration of traditional house?

O Not at all

O Moderately

O Extremely

O Undecided

37. Do you think modern house is better than traditional house?

	Strongly disagree	dis-agree	undecided	agree	strongly agree
Construction material	O	O	O	O	O
Strength	O	O	O	O	O
Thermal comfort	O	O	O	O	O
Functional layout	O	O	O	O	O

38. What is your opinion on the transformation of the village?

O Bad

O Better than before

O Good

O Very good

39. Which lifestyle you prefer the most?

- O Village lifestyle
- O City lifestyle
- O both

40. Do you think the new lifestyle has changed the function of spaces in your house?

- O Not at all
- O Moderately
- O Extremely
- O Undecided

41. Do you think modernization has contributed to the loss of village identity?

- O Never
- O May be
- O Yes

42. Do you wish to stay in village or city in future?

	Never	may be	yes
Village	O	O	O
City	O	O	O

43. Which type of house style do you prefer in future?

- O Modern
- O Traditional

44. Do you wish to preserve village identity?

- O Yes
- O May be
- O No
- O Undecided

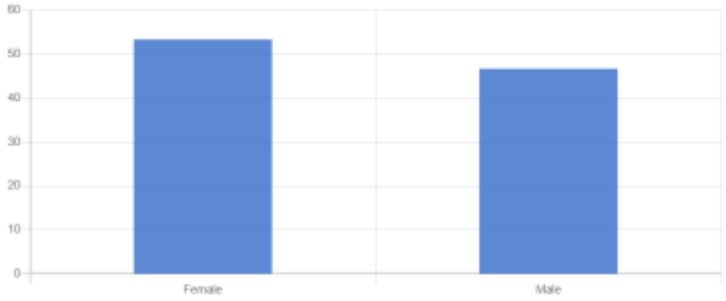
F. Recommendations

45. Do you have any recommendations for preserving the village identity to future design?

Unstructured questions for interview

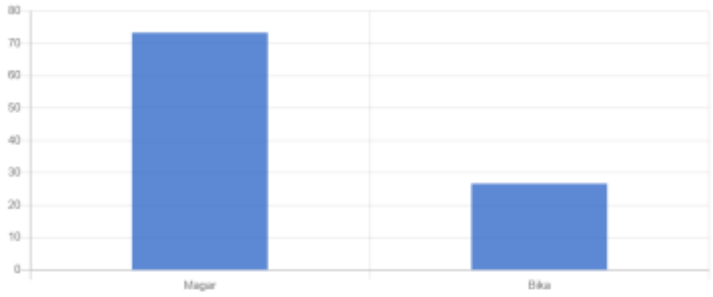
1. What makes magar community different from other communities?
2. Magar are known as nature lover or animist, do you agree? If yes, explain.
3. What are the animist practices that still exist in your community?
4. What are the daily rituals performed in house? Seasonal calendar
5. Magar community is known as a group or a closed community, especially Thabang is known for group decision and unity. How you explain this?
6. What is the importance of festivals in magar community?
7. What is the importance of Bhumya puja in your community?
8. How the celebration of Bhumya puja starts from individual house to the whole community?
9. How Bhumya puja take place from community to different locations like streets, agriculture land, rivers, and mountains, any story or belief behind it?
10. Is there any changes in festival activities now and then, if yes, what are the changes?
11. What are the reasons behind profession shifting from agriculture to other income generation profession like foreign employment, trade, job?
12. Construction technique in past and present, what are the reasons for changing construction technology?

Annex 2: Graphs



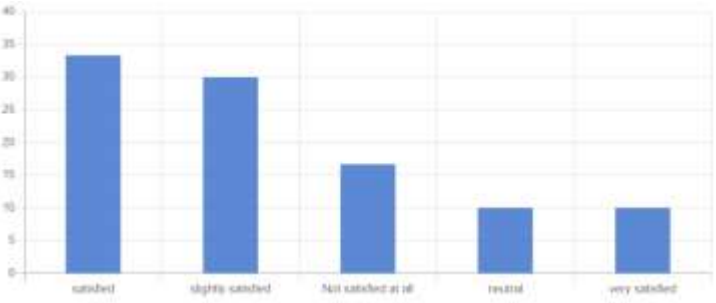
Value	Frequency	Percentage
Female	16	53.33
Male	14	46.67

Figure 49 Gender



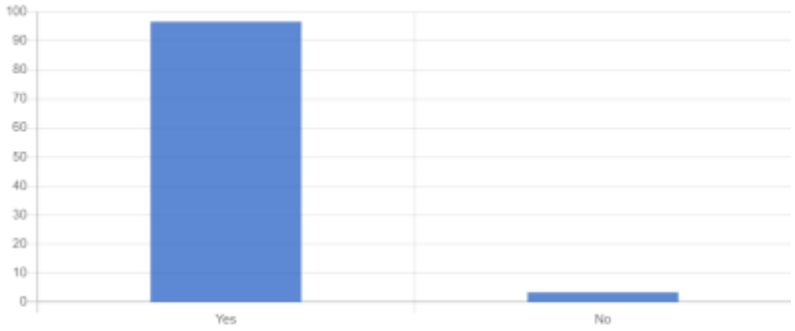
Value	Frequency	Percentage
Magar	22	73.33
Bika	8	26.67

Figure 50 Ethnicity



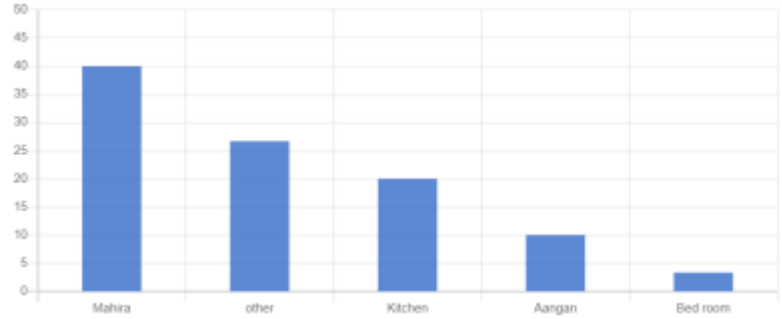
Value	Frequency	Percentage
satisfied	10	33.33
slightly satisfied	9	30
Not satisfied at all	5	16.67
neutral	3	10
very satisfied	3	10

Figure 51 satisfaction level of people with their interior spaces



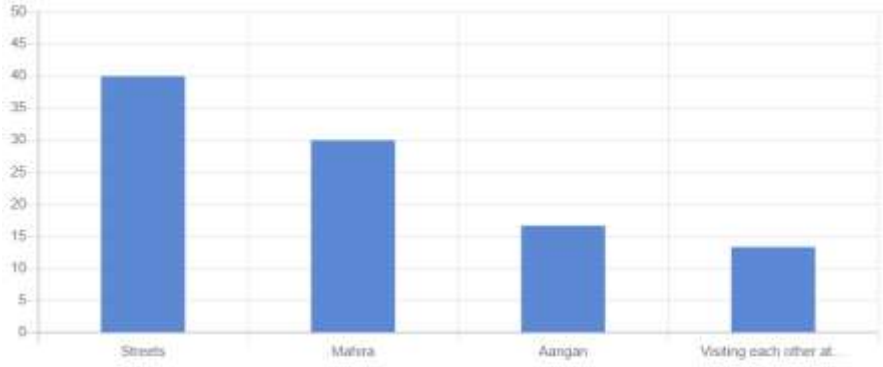
Value	Frequency	Percentage
Yes	29	96.67
No	1	3.33

Figure 52 availability of gathering spaces inside the house



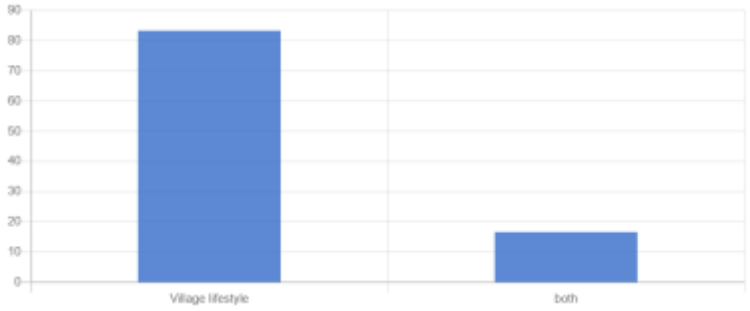
Value	Frequency	Percentage
Mahira	12	40
other	8	26.67
Kitchen	6	20
Aangan	3	10
Bed room	1	3.33

Figure 53 spending most of the time



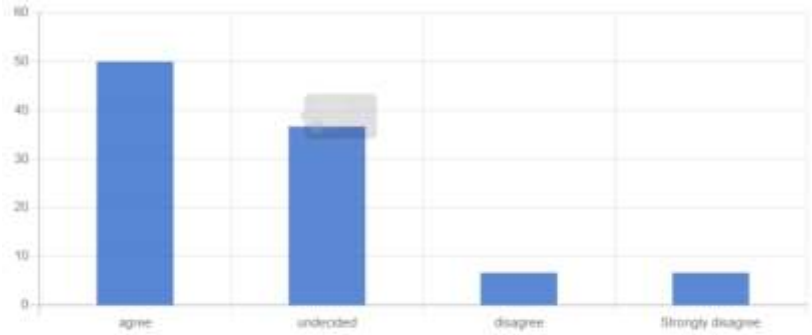
Value	Frequency	Percentage
Streets	12	40
Mahira	9	30
Aangan	5	16.67
Visiting each other at house	4	13.33

Figure 54 communication spaces with neighbors and friends



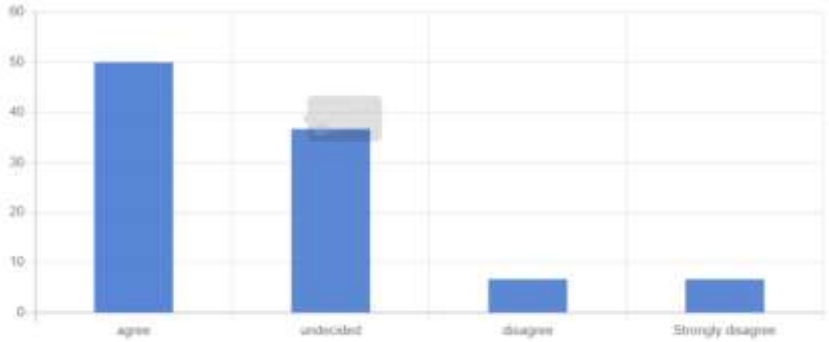
Value	Frequency	Percentage
Village lifestyle	25	83.33
both	5	16.67

Figure 55 preference of lifestyle



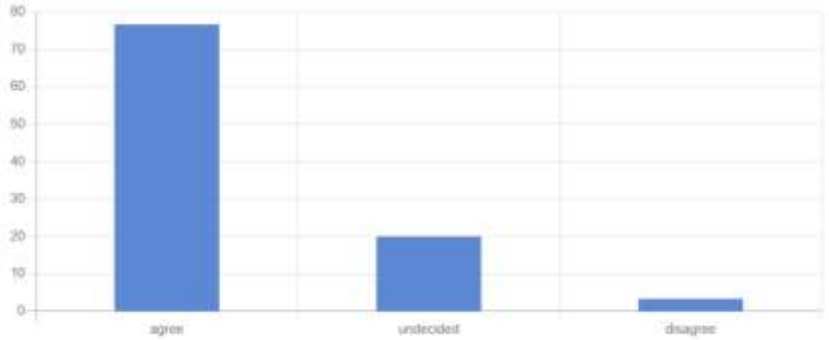
Value	Frequency	Percentage
agree	15	50
undecided	11	36.67
disagree	2	6.67
Strongly disagree	2	6.67

Figure 56 redistribution of land among relatives



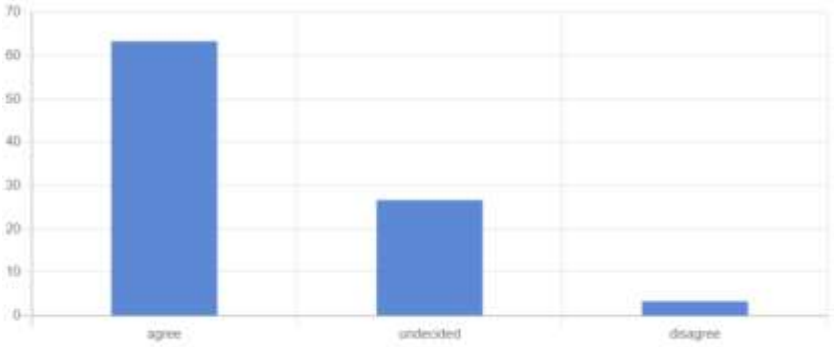
Value	Frequency	Percentage
agree	15	50
undecided	11	36.67
disagree	2	6.67
Strongly disagree	2	6.67

Figure 57 easy in available of modern material



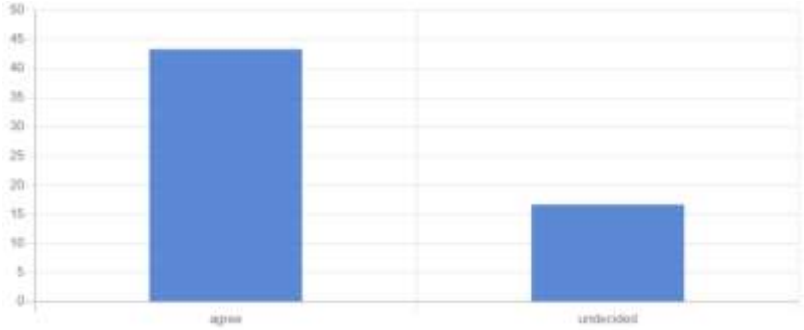
Value	Frequency	Percentage
agree	23	76.67
undecided	6	20
disagree	1	3.33

Figure 58 urban influence



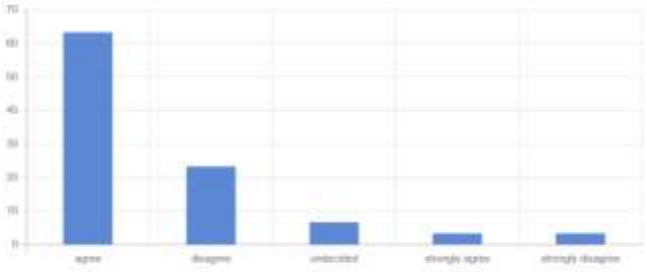
Value	Frequency	Percentage
agree	19	63.33
undecided	8	26.67
disagree	1	3.33

Figure 59 change in function of traditional spaces



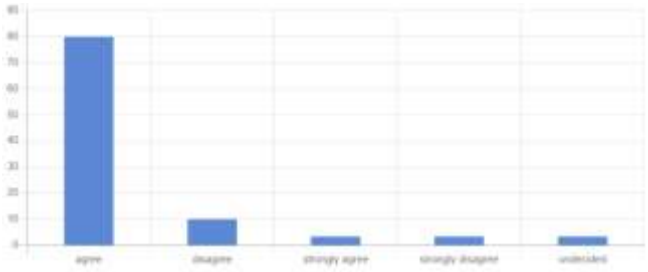
Value	Frequency	Percentage
agree	13	43.33
undecided	5	16.67

Figure 60 change in life style



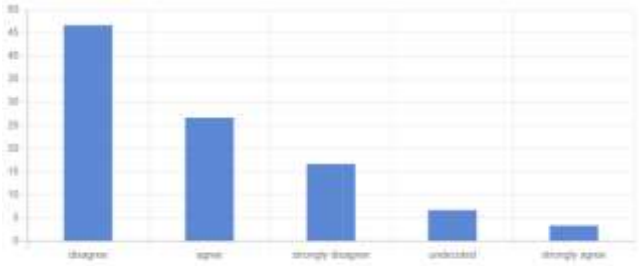
Value	Frequency	Percentage
agree	19	63.33
disagree	7	23.33
undecided	2	6.67
strongly agree	1	3.33
strongly disagree	1	3.33

Figure 61 construction material



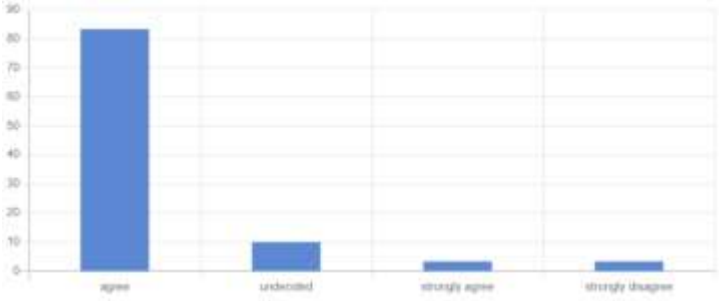
Value	Frequency	Percentage
agree	24	80
disagree	3	10
strongly agree	1	3.33
strongly disagree	1	3.33
undecided	1	3.33

Figure 62 strength of the material



Value	Frequency	Percentage
disagree	14	46.67
agree	8	26.67
strongly disagree	5	16.67
undecided	2	6.67
strongly agree	1	3.33

Figure 63 thermal comfort



Value	Frequency	Percentage
agree	25	83.33
undecided	3	10
strongly agree	1	3.33
strongly disagree	1	3.33

Figure 64 functional layout

Annex 3: Respondent Details

Table 8 Respondent Details

Nos.	Name	Gender	Age	Qualification	Occupation
1	Saraswoti Nepali	F	29	12	Private Job
2	Shamey Nepali	M	29	12	Teacher
3	Kamal Bahdur Rokamagar	M	49	5	Agriculture
4	Dalijiye Roka	M	45	8	Agriculture
5	Ramila Roka	F	47	-	trade
6	Sumitra Budhamagar	F	25	10	Trade
7	Baran Roka	M	39	8	Carpenter
8	Mangalchandra Roka	M	28	5	Agriculture
9	Sakuntala Roka	F	49	-	Agriculture
10	Aasha Roka	F	26	12	Agriculture
11	Dilrashi Magar	F	35	-	Agriculture
12	Dhani Magar	F	68	-	Agriculture
13	Bhadra Gharti Magar	M	49	3	Agriculture
14	Makh Bahadur Budhamagar	M	57	3	agriculture
15	Manpra Roka magar	F	34	-	Agriculture
16	Dor bahadur Sunar	M	28	-	Trade
17	Dilumari Rokamagar	F	69	-	Agriculture
18	DhanBhadur Roka	M	36	-	Trade
19	Aashish Jhakri	M	27	Bachelor	Job
20	Tej Dhan BK	M	37	12	Business
21	Santosh Roka Magar	M	31	10	Agriculture
22	Urmila Roka Magar	F	46	Literate	Agriculture
23	Anpim Budha Magar	M	51	8	Agriculture/ business
24	Kalpana Roka Magar	F	32	Literate	Foreign employment
25	Gagansari Nepali	F	76	Illiterate	Agriculture/ shop
26	Manju Nepali	F	25	Literate	Other
27	Bikram Roka Magar	M	36	12	Agriculture
28	Indira Budha Magar	F	43	Literate	Foreign employment
29	Dependra Roka Magar	M	33	8	Agriculture
30	Mina Nepali	F	29	Literate	Other

Annex 4: Acceptance letter

त्रिभुवन विश्वविद्यालय
Tribhuvan University
इन्जिनियरिङ अध्ययन संस्थान
Institute of Engineering
डीनको कार्यालय
OFFICE OF THE DEAN

GPO box- 1915, Pulchowk, Lalitpur
Tel: 977-5-521531, Fax: 977-5-525830
dean@ioe.edu.np, www.ioe.edu.np
गोश्वारा पो ब न- १९१५, पुल्चोक, ललितपुर
फोन- ५५२१५३१, फ्याक्स- ५५२५८३०

Date: September 14, 2022

To Whom It May Concern

This is to confirm that the paper titled "*Socio-cultural dimension of house form of magar community: a case of Thabang village, Rolpa*" submitted by **Manisha Yogi** with Conference ID **12041** has been accepted for presentation at the 12th IOE Graduate Conference being held in October 19 – 22, 2022 at Thapathali Campus, Kathmandu.

Khem Gyanwali, PhD
Convener,
12th IOE Graduate Conference

Annex 5: Plagiarism Report

076march008- Manisha Yogi.pdf

ORIGINALITY REPORT

10%
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Annex 6: Pictures

Figure 65 Hybrid house

Figure 67 Questionnaire Survey

Figure 66 Open Ground

Figure 69 Stone Inscriptions

Figure 68Thabang Village & Surrounding

Figure 70 Questionnaire Survey

Annex 7: Article