

# Transformation over time in Kochila/Saptariya Tharu Architecture: A case of Baswalpur, Saptari, Nepal

Niru Chaudhary <sup>a</sup>, Sudha Shrestha <sup>b</sup>

<sup>a, b</sup> Department of Architecture, Pulchowk Campus, IOE, Tribhuvan University, Nepal

✉ <sup>a</sup> cniru80@gmail.com, <sup>b</sup> sudha.shrestha@ioe.edu.np

## Abstract

Tharus are one of Nepal's major ethnic groups, and Tharu architecture is an excellent example of ethnic architecture with an ecologically responsive design. However, as a result of urbanization, many Tharu settlements are shifting to fit modern demands, and traditional houses have been modified, with contemporary appliances, new spaces, and domestic life added that bear little resemblance to the original. This study presents an exploration of the transformation of the built form in traditional settlements of Kochila Tharu community. A survey of traditional settlements of the southeastern part of Nepal i.e., Baswalpur village of Saptari district is undertaken in order to extract an urban pattern or a rationale from what may appear as capricious disorder. The objectives of this research are to investigate the paradoxical phenomenon of the house transformation in this village; to determine the extent of the impact of the transformation; to identify the factors that contributed to it. To investigate the effects of changing physical configuration on the values and meanings of traditional homes, field observations were made at a few houses chosen using the purposive sampling technique, and interviews were conducted. With the identification of these factors, it is anticipated that this study will serve as a reference on house transformation and offer a reasonable perspective for community and government to take development measures on the transformation of traditional homes in Baswalpur village.

## Keywords

Urbanization, Modernization, Housing Transformation, Traditional Kochila Tharu settlement, Urban influence

## 1. Introduction

### 1.1 Research Background

The worldwide expression of changes due to sustainability, globalization and technology in architecture has led the transformation process. Architecture has close association with change and transformation and concepts such as globalization, sustainability, ecological approaches and technology diversify the change-transformation circle [1]. To develop every settlement, a number of ecological, socioeconomic, and cultural regulators are at action that are produced from two different backgrounds [2]. Some of them are created using natural background knowledge, such as the location of water, the location of agricultural land, the location of barren land, the topographic features, the orientation of the sun, the climate, and the availability of construction materials. Others arise from socioeconomic factors, such as a safe and secure location, technology, common

religious and philosophical ideas, individual preferences, and financial stability. These controllers act as a settlement's background forces and aid in the settlement's gradual transformation [2].

In addition, the requirements and economic growth of these settlements influence the development of communities that determine the pattern of settlement change. Some of trends underlying transformation be seen as logical responses to changes in culture and society. For example, certain changes in the traditional settlement have been necessary to alleviate the housing shortage. Likewise, other changes reflect desire to live a more comfortable lifestyle [3]. Likewise, in most developing countries, contemporary buildings are unlikely to meet local conditions because transferred technology and imported designs fail to meet physical and psychological needs. Furthermore, blindly copying new concepts without any alteration has negative consequences for the old social, environmental, and cultural values of the area

[4]. What's more unexpected is that, despite significant use of new building materials, processes, and equipment, new projects have failed to respond appropriately in climatological or environmental terms [3].

Traditional Tharu architecture, like most other similar examples around the world, evolved in response to the needs of its users and the region's living environment. Geographic, climatic, sociological, and historical elements all have an impact on a region's architectural style. Many developing countries have seen a major change in architectural design systems that were previously used, with no way of adapting to the new style. As a result, local architectural forms, which have been reacting to people's physical and cultural requirements for thousands of years, appear to be overlooked. The majority of old residences are being turned into contemporary amenities from a similar archetype. Even though many characteristics of traditional homes were finest in their context, it is challenging to integrate modern living habits into a traditional setting. In addition, the new generation is drawn to the quick accessibility of all of the modern hi-tech age's conveniences.

### 1.1.1 Research questions

The objective is to explore how housing is changing, how space is used, and the spatial characteristics of interior and outdoor space in traditional rural villages. The research questions are listed below:

- What are the aspects of the area in which the Kochila/Saptariya tharu architecture has been changed?
- How does the socio-economic factor affect the spatial configuration of the Tharu house form?

## 2. Literature review

### 2.1 Origin of Kochila/Saptariya Tharus in Nepal

Nepal is one of the multi-cultural countries with different indigenous groups living together in harmony. Tharus are believed to be one of the largest and oldest ethnic group seen in the southernmost part of Nepal and Nepal's southeast border India. "The Tharu, however, recognize many different subgroups distinguished by clan, region, cultural differences, and language" [5] and and endogamous sub-groups of

Tharus are Rana, Katharia, Dangaura, Kochila and Mech [6].

Study says, the Kosila Tharu of the eastern Terai were historically discovered under influence of the Brahminical and Vaisnava culture of the Mithila kingdom [5] and regarding the ethnonym of their language name, Krauskopff said that the ethnonym Koshila or Kochila could be related to the name of the river Koshi on the bank of which they used to live [7]. The eastern tharus, called Koshi or Koshila or Kochila tharus, are stattered in several districts from Morang to Rautahat, including Udayapur, Inner terai valley. The Koshila tharu, who seem to have mostly migrated westward are fewer and fewer in the districts of Siraha. They claim Saptari and Siraha districts as their main home but many also live in the Sunsari district on the other side of koshi river. Interestingly, there are also probably subgroups or endogamous units, such as the Lamputchwa tharu of Morang district who are considered different by the Koshila Tharus. The Kochila/Morangia tharu, located mostly in Morang and Sunsari, are distinguishable from other Tharu who name themselves Kochila in Siraha, Udayapur, and Saptari districts by attire, rituals, and language, according to Boehm. But commonly, Kochila tharu is also called as Saptariya tharu, as dominating Kochila tharu people reside in Saptari district [8].

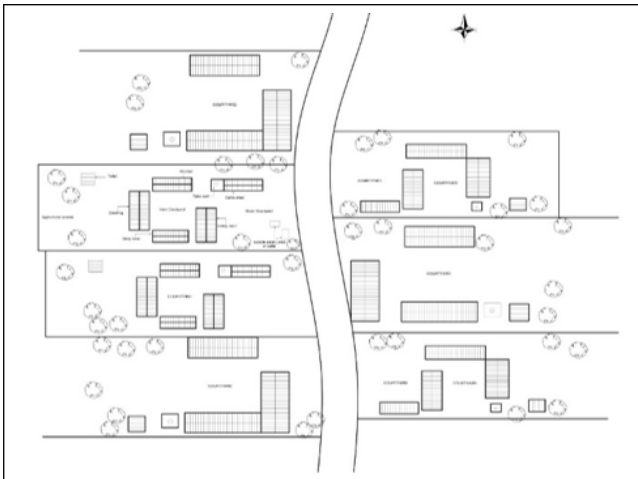


Figure 1: Distribution of Kochila Tharu in Nepal

### 2.2 Settlement planning and layout of Kochila Tharu house in Saptari

Kochila Tharu village of Saptari district are found to have linear settlement pattern. The majority of the Saptari district's villages have a main road that runs along a north-south axis and includes several branch village roads. The houses lie on the either side of the village lane, oriented north-east and running across the entire length of the settlement. The construction

pattern is identical i.e., long and single storied with an adjoining kitchen garden. But, now two storied houses are also constructed to meet the modern requirements. Normally, a village comprises just a single row of houses on either side of road, but some villages consist of several rows of houses too. The houses for living purposes are oriented towards the street and rest of the land behind the house is left for agricultural spaces as we can see on the picture below.



**Figure 2:** Layout of dwelling units in Saptariya Tharu village

### 2.3 Urbanization, Globalization and Modernization

The rate of urbanization has increased year after year in Nepal due to the fast expansion of the urban economy and social transformation. Cities and villages have expanded into the surrounding countryside, and new homes are being constructed among the fields, transforming farms and communities into new housing projects [9]. Likewise, rural regions have served as a buffer zone for urban sprawl, they also have the potential to become new urban development zones. In this regard, identifying the distinctive characteristics of the rural village based on location and historical process is critical in order to ensure the area's survival. Local cultural identity is becoming increasingly essential in this age of globalization. Similarly, many researchers contend that urbanization reflects changes throughout whole cultures and is a multifaceted representation of physical, geographical, institutional, economic, demographic, and social aspects [10]. Furthermore, the phenomena of urbanization are inextricably tied to modernity, industry, and the sociological process of rationalization, with urbanization causing massive

social, economic, and environmental changes.

### 2.4 Modernization and housing transformation

A modernization paradigm, one of the key currents in development theory within the social sciences, is used to align such transformation. Modernizing homes mostly involves switching from conventional to contemporary building materials and altering how space is used. Other causes identified for the modification of homes include the shift from a subsistence to a cash economy and the desire to lead a contemporary life. Due to the shift to a modern economy, urban inhabitants choose to live in "modern" homes that meet specific requirements, especially those who have acquired a certain degree of social prestige in terms of good education, prosperous businesses, and public employment [11].

The prevalent motivations of transformation of houses can be summarized as follows: socio-culturally determined aspirations; growth of family size; desire of generating income (subletting, kiosk, stable, local bar, handicraft etc.); response to harsh climatic conditions, desire to copy prevalent housing forms and aspiration to live in modern houses [12].

## 3. Research Methodology

This research is based on non-exact science since it studies human behavioral pattern, space and social relationship. This research takes qualitative as well as quantitative approach and utilizes a case study strategy within the transformative paradigm since knowledge is not neutral and it reflects the power and social relationships within society, and thus the purpose of knowledge construction is to aid people to improve society. The ontological claim is that modernization and urbanization has caused transformation of traditional architecture and settlement. Further, this research intends to produce knowledge by looking into the changes in the lifestyle and its relationship with the space configuration; the forces (Occupational shift, educational shift, changes in family structure, etc.) behind the transformation; relationship with their changed social life, cultural life with the spaces, both interior and exterior. Consequently, epistemological assumptions are established based on people's preferences for modern designs.

The transformation process is exploratory descriptive

explanation of the phenomena so the nature of the research topic, objectives, and research questions justifies the use of a case study strategy. The case study research technique is applicable in this study since housing change occurs in a ‘real world’ environment and is focused on present context so, the result may be varied according to time changed. And, a descriptive theory can be generalized through quantitative and qualitative analysis.

To investigate the ongoing transformation of Baswalpur village, 12 houses were selected using purposive sampling technique and socio-economic and demographic data was conducted for 132 respondents using structured questions.

#### 4. Study Area: Baswalpur Village

Baswalpur or Basbalpur is a developing market town in Sambhunath Municipality, ward no. 9 in Saptari district of Madhesh Province and in the Sagarmatha zone of south-eastern Nepal. It lies in the coordinates of 26.60°N latitude and 86.67°E longitude. The village is surrounded by agricultural land and other villages from all sides within approx. distance of 2-3km.

The study area for the research involved the observation of traditional as well as transformed residences of the Tharus group, as Tharus constitute the majority of the population in the village. In addition, since there are not enough traditional buildings in the tharu community area, Mushar basti was used to observe other traditional houses in Baswalpur village. Further, the observation is focused on the transformation and change taking place in Baswalpur village.

##### 4.1 Settlement pattern and house layout of Baswalpur

The settlement pattern is similar to that described in the preceding section of the literature review, but the internal layout of the typical Tharu home of Baswalpur differs from that of the mid-eastern and western Tharu houses in terms of space configuration and space name in local language.

###### 4.1.1 Allocation of spaces

- Public space: Outer Courtyard (Darbajja)
- Semi private-space: Cattle shed (Gahali), Entrance/guest hall (Basghara), Inner courtyard (Angnaa), Verandah (Osara)

- Private space: Dwelling space (Sutaiwala Kothli), deity room (Gosai ghar), kitchen (Bhatninha ghar)

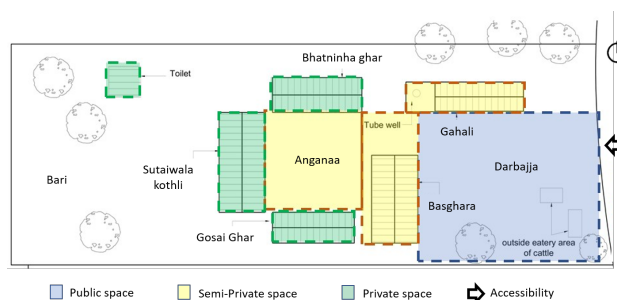


Figure 3: Zoning of Kochila Tharu house on the basis of privacy

#### 5. Site Observation and Data Analysis

The focus of the first study, which is based on field observations, is physical change. The second one was based on a questionnaire survey that sought to identify the socioeconomic context and perception survey. 132 respondents were surveyed through the research among the total household of 202 tharu houses. More male than female respondents were readily accessible for the study. The table below shows the sample distribution.

Table 1: Sample distribution

Male	Female	Total
101	31	132

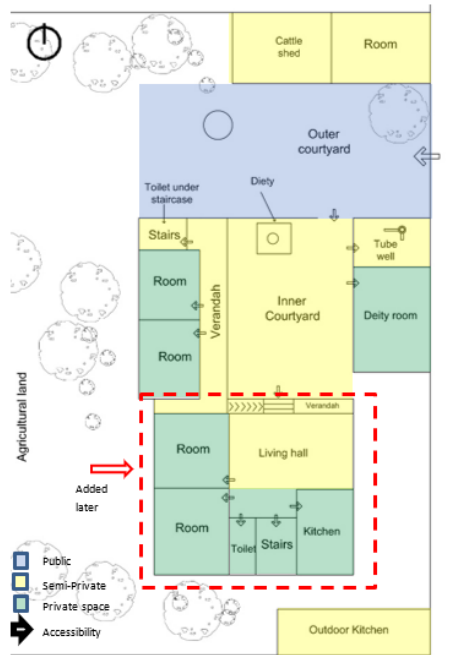
##### 5.1 Different type of housing transformation

###### 5.1.1 Horizontal extension

Horizontal extension projects range from expanding an existing room or rooms to building a fully new living unit to an existing one providing space to the extended family members.



Figure 4: Horizontal extended new house



**Figure 5:** Compact planning type of house was horizontally extended (Residence of Mrs. Ram Piyari Chaudhary)

### 5.1.2 Demolition of old homes and construction of brand-new ones

One way in which this transformation takes place is the construction of new walls of concrete blocks or bricks around an existing mud and poles structure. Occupiers move into the built-up part to allow demolition of the old structure. Respondent pointed out degraded and outdated traditional house for the replacement.



**Figure 6:** Replacement of mud house into RCC house; Residence of Mr. Ram Subaran Chaudhary after transformation

### 5.1.3 Replacement of mud and pole structures in phases

Another type of transformation is that of replacing one room after another, whereby a room built of mud and poles is demolished, the walls being replaced by concrete blocks. The reason for replacing the mud wall and timber post is that the process for maintaining and repairing is very hardworking and time consuming for the respondent.



**Figure 7:** Addition of pillar and concrete block in old mud structure; Residence of Mr. Raj Kumar Chaudhary

### 5.1.4 Constructing new concrete block structures next to outdated pole and mud structures

This type of transformation usually takes place in a larger plot, where it is possible to erect a new structure adjacent to the old one as shown in above figure, which is normally extended step by step until the whole house is completed. From the observed houses, maximum was following this type of transformation process. The degradation of traditional house and urge to extend sleeping spaces is the reason for this transformation as described by the respondent.



**Figure 8:** Contemporary two storey house was built beside traditional house; Residence of Mr. Ramakant Chaudhary

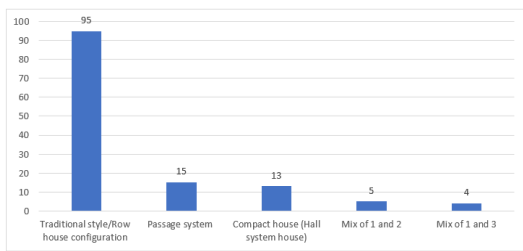
### 5.1.5 Interior modifications

Modifications are made gradually over time; the use of interior space involves occupants moving from one room to another. In certain cases, interior walls are removed in order to increase the size of rooms. The urge for opting modern house with modern amenities for the younger generation is the key reason for the modification as described by the respondent.

However, the observation from the survey revealed that maximum of the houses still follows the traditional row house configuration and few with passage system house and compact houses.



**Figure 9:** Interior modification according to city lifestyle, Residence of Mrs. Ram Piyari Chaudhary



**Figure 10:** Interior configuration of surveyed data

**5.1.6 Vertical extensions whereby rooms are added vertically to accommodate additional functions**

Vertical extension is another form of transformation started to be observed in the Baswalpur village where there is no space left for horizontal extensions. From survey, it is found that maximum respondents lived in one storey house.



**Figure 11:** Vertical expansion of house due to limited plotland; Residence of Mukhilal Chaudhary

**5.1.7 Aspiration to live in a “modern” house**

The majority of the 104 respondents preferred modern house over tradition ones and prefer not to live in mud house. According to the respondents in this study,

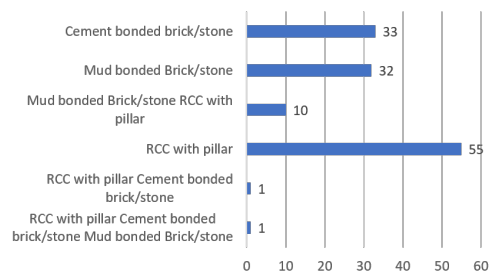
these houses are built of traditional materials and associated with poverty and hence low social status. Thus, most people want to change their houses to concrete block structures. Durability is a quality that, in the opinion of our survey respondents, defines a better dwelling. The belief that industrially manufactured construction materials are more durable than conventional building materials is widespread among villagers.



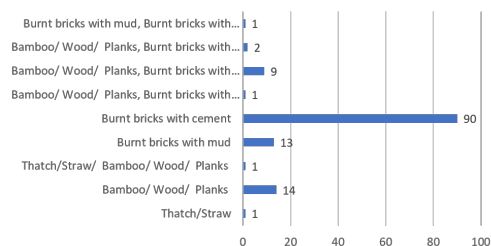
**Figure 12:** Compact style house of Hari Dev Chaudhary

**5.2 Other building information from survey**

From the survey, it is observed that maximum houses are used for residential purpose while only few is used as mixed used purpose. Maximum houses used RCC with pillar as foundation; burnt bricks with cement in outer wall; galvanized iron sheet and cement were both observed in equal manner where majority of houses has slope roof typology.



**Figure 13:** Materials used in Foundation



**Figure 14:** Materials used in Outer wall

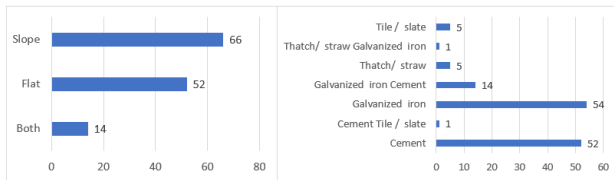


Figure 15: Roof type and roofing materials

### 5.3 Transformation in socio-economic condition

It is observed that maximum of the household includes agriculture and other secondary jobs as their main source of income. Majority of the respondent has pursued the education level up to class 10 while others has completed education level like class 5, undergraduate, graduate, etc.

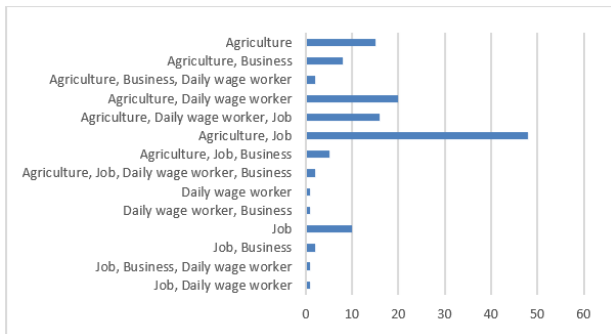


Figure 16: Main source of income

### 5.4 Underlying reason for transformation

According to the survey, the main reason for the village’s transformation is a shift in lifestyle and the easy availability of modern materials.

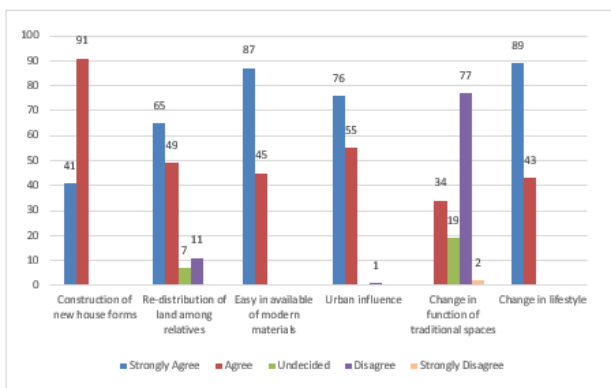


Figure 17: Underlying reasons for transformation

## 6. Findings and Discussion

The results of the above studies highlight the fact that social structure is one of the main factors in housing transformation that leads to the transformation of rural settlements as a whole. Discussions are made on the following points.

### 6.1 Physical transformation

#### 6.1.1 Construction of new house form

Most of the houses in the village have retained the courtyard planning. What have changed are the more private areas beyond these spaces. Reasons could be: need for more space due to larger families – additions and fragmentation; need for modern day requirements - internal bathrooms, kitchens; social habits of occupants in relation to space usage. Nowadays, people require all facilities of a homes in a single zone; separate house concepts are losing its form.

#### 6.1.2 Re-distribution of land

Conversion of the family into single structure is another reason for land distribution including expansion of families from generation to generation, land distribution among relatives.

#### 6.1.3 Change in materials and construction techniques

People are becoming more interested in modern materials because they believe they are more durable and stronger. People are changing to contemporary building techniques in order to reduce the amount of hard labor and frequent maintenance necessary in traditional construction techniques, which also includes the ease of access to modern materials.

#### 6.1.4 Reflection of urban influence

Direct involvement with the city and city dependency are affecting the taste of the residents which often influence conventional beliefs. People find more convenient in compact planning houses.

### 6.2 Occupational transformation

Change in livelihood is observed which include transition of farming as main occupation to secondary occupation like business, job and insuring increase of wealth, economic assurance and technical excellence.

### 6.3 Environmental dimension

Most house retained courtyard planning which introduces cross ventilation into a building. Verandahs on either side of the main functional spaces that created a buffer zone preventing heat transmission. Other than that, modern materials like brick and cement traps more heat causing discomfort interior during summer.

### 6.4 Contradiction between modern and traditional building materials

Peoples' admiration towards modern materials is associated with durability and stronger. It is found that residents spend a lot of time in repairing or re-constructing houses built with traditional materials.

## 7. Conclusion

The tradition of housing construction in the village of Baswalpur is influenced by the modernization process in which the universal values of the living environment have replaced the lifestyles practiced locally. The previous social framework for the use of traditional home space has changed to personal preferences in managing the activities and functional needs of residents. Today, each home has its own way of respecting the original home and evolving its structure. As a result of individuals exploring new motives and possibilities, the living environment today is very different from the past. It is observed that, there has been significant changes in the construction materials and minimum changes in the form and layout of the houses in Baswalpur village. The internal layout of the houses can also be seen influenced by urban lifestyle as most of the young generations is found to be living in city areas for study or for job and hence the replications can be seen on the housing style. Therefore, as a result of observation, it can be said that socioeconomic factors of society have the greatest influence on the transformation of traditional houses in Baswalpur village.

This kind of settlement are not preservation oriented

rather they are continuity-oriented and they seek to create continuities of such expressions as traditions, beliefs and intangible values into the future through the acts of value to the present. So, allowing sufficient time (may be generations long) to change and letting the society make the change through its own mechanism would be in the best interest of cultural and social diversity of mankind.

## References

- [1] Serap Durmus. Change and transformation in architecture: On the concept of zeitgeist. *Global Built Environment Review*, 8(1), 2012.
- [2] M Rashid. The continuous process and purposes of the transformation of rural settlements in bangladesh. *International Journal of Architecture, Engineering and Construction*, 6(3):35–43, 2017.
- [3] Mohammed Abdullah Eben Saleh. Life and death of traditional settlements of southwest saudi arabia. *Journal of Architectural Education*, 51(3):177–191, 1998.
- [4] Gini Gopinath. Transformation of traditional to contemporary residential architecture of kerela-a critical analysis. 2014.
- [5] Stephanie R Eichertopf and Jessica R Mitchell. A sociolinguistic study of kochila tharu in southeast nepal, 2013.
- [6] Drone P Rajaure. Tharus of dang: The people and the social context. 1981.
- [7] Gisele Krauskopff. The anthropology of the tharus: an annotated bibliography. 1995.
- [8] Kelly Kilgo Boehm. *Language use and language maintenance among the Tharu of the Indo-Nepal Tarai*. The University of Texas at Arlington, 1997.
- [9] Feray Koca. Changing rural character related to urban growth in muğla, karabağlar. In *1st International CIP Endorsed METU Postgraduate Conference Proceedings*, pages 679–690.
- [10] Sunita Shrestha. Effect of contemporary urbanization on traditional town of tokha. 2021.
- [11] Huba Nguluma. *Housing themselves: Transformations, modernisation and spatial qualities in informal settlements in Dar es Salaam, Tanzania*. PhD thesis, Infrastruktur, 2003.
- [12] Demissachew Shiferaw. Self-initiated transformations of public-provided dwellings in addis ababa, ethiopia. *Cities*, 15(6):437–448, 1998.