# Effect of Contemporary Urbanization on Historic Town Tokha

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**Abstract**
Traditional towns are developed for people in their natural mode of movement with an interplay of mass and void. Mass represents the built structures like Buildings, Temples, Falcha, Sattal, etc whereas the space represents streets(Tole), Nani, Chowks, Courtyard, Keba(private garden), religious and cultural nodes. Town relatively large and permanent settlement having linkage with agriculture and history of its development shows the history of mankind. Towns have been in a continuous transitional state since their evolution and its natural process. Urbanization is a frequent and unavoidable phenomenon around the world, with development and expansion helping many individuals and companies but also posing the risk of destroying historical places of cultural significance. The consequences of urbanization on the built environment in the ancient town of Tokha are investigated in this article. Historic cities are frequently targeted for fast urbanization, which is frequently accompanied by changes to the built environment in historic areas. The study's main goal was to figure out how urbanization affected Tokha, a traditional town. To examine urbanization data from the ancient town of Tokha, this study uses both qualitative and quantitative methodologies under the constructivist/ interpretivist paradigm. Our findings indicated distinct physical, economical, and socio-cultural urbanization causes that resulted in observable and substantial changes in Tokha, a medieval town. These elements play an important role in implementing the Local Development Plan (LDP) for Tokha's sustainable urban expansion and cultural preservation.

**Keywords**
Historic Town, Urbanization, Built Environment, Tokha

## 1. Introduction

Cities are a component of a broader society, and their spatial shape is inextricably linked to the society's economic, social, cultural, political, and environmental structures. The history of the development of cities in the history of humankind.The advent of modernism and large-scale rebuilding in the twentieth century prompted many towns to embrace change by rejecting old design, building techniques, and materials in favor of more contemporary ones[1].Commercial enterprises coming towards the settlement centre lobbied for new architectural interventions, assuming that older structures would be sacrificed[2].The replacement of ancient buildings with new ones obliterated the city's social and cultural core, as well as people's sense of place and identity[3].

Urbanization is rising at an unprecedented pace in developing nations such as Nepal. Many heritage towns with distinct aesthetic, architectural, cultural, and historical values are under threat from urbanization. With a 1.35 percent annual growth rate, the total population of the country is 26,494,504. The valley's population is 1,208,238 people or 4.56 percent of the entire population of the country. In Nepal, the number of metropolitan cities with a million or more inhabitants has risen from one in 2001 to six in 2015[4], with ancient towns, in particular, suffering fast urbanization without concern for changes in their architectural heritage. The process of urbanization within the valley is characterized by an increase in population, shift of economic activities from agriculture to others, rural-urban migration, and Sprawl and haphazard development within the valley. These trends ultimately lead to the transformation of the physical, social and cultural setting of the cities as well as smaller settlements causing haphazard growth.

## 1.1 Research Objectives:

To analyze the morphological, socio-economic, and cultural changes in the traditional town tokha.

To identify the cause and effect of urbanization in tokha.

## 2. Literature review

### 2.1 Urbanization

Urbanization, the transformation of rural populations to urban populations, manifest in the increase of urban populations, the expansion of urban built-up areas, and the creation of urban landscapes and environments and their associated social and lifestyle changes. The process of urbanization can be determined by the change of economic activities from agricultural to non-agricultural, rural to urban migration, change in settlement pattern, change in behavior and values of people and even change in a physical environment with increasing modern amenities and facilities. The pace of urbanization emerges both positive and negative effects. The negative effects such as urban agglomeration(urban sprawl), rapid depletion of natural resources, encroaching of river plains, dreadful pollution of rivers, rapids and uncontrolled depletion of agricultural land into built-up areas, and many more. The urban population in Nepal increased from 17.1 percent in 2011 to 41.7 percent in 2015.

### 2.2 Planning and Design of Traditional Town

Traditional towns are the product of spontaneous expansion over many centuries, with a focus on the placement of Gods and ceremonial events through circulation. Traditional town 'zoning by jaat' supported the profession's survival, limited intra-town migration (the idea of the workplace at home), and permitted the establishment of localized "homogeneous communities." Religious Rituals were therefore used to mediate town planning bylaws. Individual aspects were given a balanced and full cosmic picture, resulting in the inclusion of cult images in each Tole, which is mostly survived by the common and powerful ones today, such as Nriteswora, Ganesh, or the Chaitya. Areas are designed on a pedestrian size and include excellent community spaces that belong to communities rather than individuals. Along with the consistency in building height and texture, the narrowing and broadening of

the roadway break up the monotony and adds individuality to the area. Nodal spaces, roadways, and open courtyards were the three different forms of public places. Traditional building design and form focused on creating space on the exterior rather than on the inner. Outside the building, there are dalan, fales or falechas, Patis and Sattals, Chowks and Chukas, and so on[5].

## 3. Methodology

The transformation ongoing in the traditional town due to pressure developed in the peripheral area eroding the traditional morphology and spatial system as well as limiting social interaction within the community. Discussing about the transformation of Tokha seems to be a positivist paradigm with quantitative methodology whereas the study of traditional Town Tokha seems to be studied under interpretivist or constructivist paradigm with a qualitative methodology. As a result, both quantitative and qualitative methods were used in the investigation. To assess the traditional type of settlement, a questionnaire survey was conducted at the site, coupled with direct field observation and interviews with local residents. For the qualitative method, historical photographs and maps were studied and compared with an existing situation to understand the change over time. Literature of the place was also studied to understand the socio-cultural aspects of a place.

## 4. Site Area

The study area Tokha is located in the northern part of Kathmandu and about 4KM north of the Ring road. Tokha is presently located in Tokha Municipality, wards 2 and 3, and spread across 7.2 Km Square. Tokha derives its name from two Newari words (Tukhya), "Tu," meaning sugarcane (referring to the production of chaku—a quintessential in Newari sweets such as yomari—made from raw sugarcane juice), and "khya," meaning field. The village of Tokha once had an abundance of sugarcane, and with most of the raw materials for this delicacy available, it became renowned for its chaku, as well[6]. The history of Tokha dates back to the Licchavi period and even beyond that. According to history, Tokha was said to be ruled by King Dharmadutta at around 2960 Sambat. King Dharmadutta was said to be very religious, courageous, and believed in fair justice. The

**Figure 1:** Mu Dhoka now and then



**Figure 2:** Written Inscription of Tokha

then area of the Tokha was said to be very large and the settlement extended to Sankhu and was termed as "Tinsaya Tokha Satsaya Phera" which explained the extent of its boundary. The inscription found in the Tapa Lachhi(upper square) in the Chandeswori VDC of Tokha dates back to Licchavi Sambat 519 is during the reign of Shivadev II and Amsuverma indicates the historical glory of the area. It is very difficult to find the exact date of establishment of the settlement according to the inscription of Tapa Lachhi the settlement can be termed as 1423 years old. The terminologies like Tilmak meaning irrigation canal and Gulma meaning, a strongly fortified area mentioned on the inscription explain that Tokha was in itself a strong independent settlement with agricultural primacy[7]. During the Lichchhavi era, Tokha hosted the country's first central jail, which housed the country's most notorious offenders. Tokha is mentioned in the Malla period chronicles as the location where King Bhupalendra Malla, grandson of Pratap Malla, imprisoned his mother Queen Riddhi Laxmi of Parthi Bendri for poisoning his father King Prithidev Malla. Tokha is claimed to have served as a fort against invasions by neighboring monarchs in
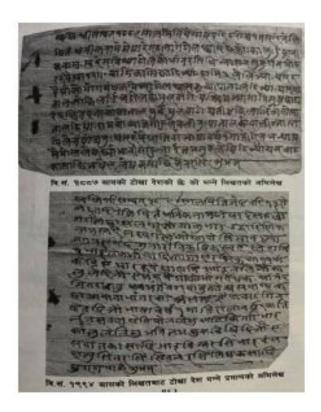
medieval times, such as King Jaya Dev's attack on the fort to plunder its riches. This is reflected in the village's geographical layout, particularly in the historic habitat on Tokha's northern side, where the Taleju Temple sits. The Tokha court, which is now a part of the Taleju Temple, was a significant player in many of the historical wars that took place here. Tokha has witnessed numerous political disputes—from political coups to serving as a refugee sanctuary for those exiled—play out throughout history as a sought-after fort[8]. Tokha has also had a significant role in the history of commerce between Kathmandu and Tibet. The town was designed with a distinct clear set of needs, objectives, and a real understanding of urban spaces. The settlement was planned with proper streets creating visually and socially effective squares focusing attention towards a temple and putting a monument in just the right place breaking the monotony in the built environment. The planning of traditional towns was not only incorporated aesthetic but also social, cultural, functional, and even economic aspects effectively. The ecological and cultural conservation were given utmost consideration as there were resources allocated in terms of gold, silver, land, or kind so that the culture, tradition, and monuments could survive for more years to come. The rules and regulations were
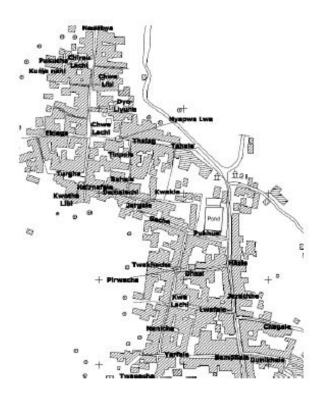
**Figure 3:** Tole in Tokha

made based on religious context. In the present context, the traditional form is changing as the effect of contemporary urbanization resulting a loss of a traditional ambiance.

## 5. Data collection and Analysis

Two hundred Sixty respondents were surveyed through during the research with confidence level of 95 percent and marginal error of 5 percent among the total household of 804 in 1991. **Table 1**: Sample Distribution for Perception Survey

| Male | Female | Total |
| --- | --- | --- |
| 187 | 73 | 260 |

### 5.1 Transformation in Physical Form

Changes in the medieval town Tokha are marked by new development (In-fill development) in and outside the core area, vanishing and encroachment of public structures and some ponds, drying of wells, dilapidated condition of water spout, and so on. The interplay of mass and void in the core settlement is about to no more in existence as Keba (private garden) has converted into mass (built-up) thereby reducing the open area. The changes in structure (building) can be determined by the vertical division of houses. The house is divided vertically along the main central wall

between two brothers in which the odd number of the opening cut down brutally making the building look unpleasant both visually and functionally as shown in fig.4.



**Figure 4:** Vertical division of Building(Undulating skyline and cut down of Sanjhya)

Although, it spoiling the traditional ambiance, a social system of transferring parental assets equally to children and the transition from joint to the nuclear family system have encouraged vertical division of traditional building structures. And also, the addition of floors to accommodate growing family size brings a change in space usage. Baiga (topmost floor) used to be kitchen replaced by bedrooms and extension of floor replacing sloping tiled roofs with flat terrace built-in reinforced cement concrete which destroyed the uniform skyline of the building. Chidi (ground floor), the place used for store or animal sheds or working place are now allocated for parking space or shops.



**Figure 5:** Change in Building Materials

As shown in above fig.5, The transition from sun-dried to baked bricks, mud to cement mortar, brick exposed facades to cement plastered and whitewashed, and tiled roofs to reinforced cement concrete flat slabs was gradual. RCC structure for more room space, more

height and better light and ventilation somehow which cannot be obtained in traditional building and after the earthquake RCC structure seems to be a sustainable one. Although, it destroying the scale and continuity in traditional fabric. Most of the building types are of the modern building as shown in the data below and few neo-classical designs are in trend after the reconstruction of the building. Few of the building is of traditional one which is in old dilapidated form and people have shifted in outside the core area to their parental agricultural field developing new modern houses.

**Table 2: Building Type**

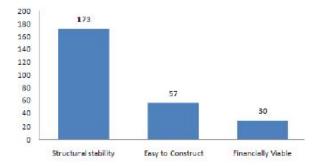| Description | Total No.of Respondents |
|---|---|
| Modern Bldg | 230 |
| Neo-classical Bldg | 15 |
| Traditional Bldg | 15 |
| Total | 260 |



**Figure 6:** Bar chart showing reasons for modern Building

Previously, the building use is used to be for residential purposes whereas the buildings along the spinal cord (main road) of settlement used to be residential with shops on the ground floor. But it changed with the change of time as shown in fig 7.
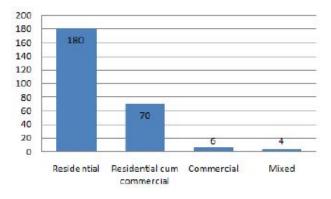


**Figure 7:** Bar chart showing Use of Building in Tokha

More than half of the sampled household is of

residential use as the sample collected randomly in every tole of the core area. And about one-third of the sampled household is of residential cum commercial as almost all the buildings along the main road and certain buildings in Pukhusi area, Chwe Lachhi(upper square) and Kwe Lachhi(lower square) are having shops on the ground floor changing the use of the building. Few of the building along the main road is of fully commercial activities and mixed-use as Sahakari office, shops, clinic, etc in one building.

The main reasons for the changes are either due to changing lifestyle/ livelihood or simply because of insufficient rooms to accommodate the growing family needs and desire of them. During my interview with the local people, the young generation does not find their traditional house to be suitable for living as they prefer much time to spend in their own house rather than to be in community space. In an earlier time, people are more socialized and farming was the main occupation due to which they stay in their house only for short times, just to sleep and eat. They used to spend most of their time on a farm or at community open spaces like courtyard (falcha(pati), sattal, etc) for gossiping with neighbors or to watch various outdoor activities like Jatra to entertain themselves. As there is no modern technology for entertaining so focus on community life which results from no need of spacious rooms and about having sufficient light and ventilation thus developed houses in compact form. As a resulting increment in the height of the building as shown in fig 8.
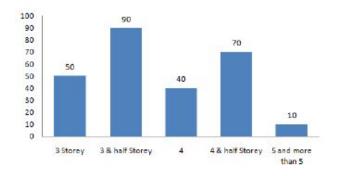


**Figure 8:** Bar chart showing Height of the Building

In the traditional settlement, the religious structure develop the bylaws for the surrounding building as buildings could not be built higher than a nearby temple. However, the trend seems to be changed as we can see the buildings higher than the surrounding temple due to the modernization the religious practice is diminishing or been ignored. The height difference
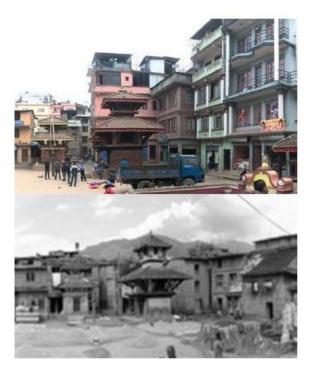
**Figure 9:** Temple and surrounding now and then in Chwe Lachhi

between that of old traditional building and new modern building in the core area is shown in the below table. **Table 3**: Height Difference from Old Building to New One

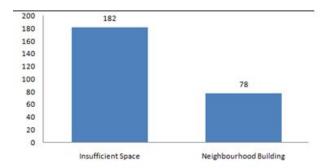| Description | Number | Percentage |
|-------------|--------|------------|
| Yes | 190 | 73 |
| No | 70 | 27 |



**Figure 10:** Bar Chart showing reasons of increase in height of the Building

The development of modern technology changing the lifestyle of the people which cannot be maintained in the traditional building so many people build a new house after property division in their parental agricultural field changing the land use and sprawl development in agricultural farmland. Densification inside the community is resulting in the loss of private



**Figure 11:** Changing built- form in Pukhusi area

open areas, which are necessary for quick rescue and escape in the case of an earthquake, as well as providing fresh air and sufficient light. The loss of the Keba (green vegetable garden) also means the loss of a source of income.

## 5.2 Transformation in socio-economic condition

Traditional settlement form based on Jaat (according to caste) structure as high caste people in the square area and low caste people in the periphery area. As in the context of tokha, social segregation cannot be seen, Kapali, Nakarmi and some Khadgi have houses around the Chwe Lachhi(Upper square) area. The main square area is surrounded by guthi houses. Kapali houses at the back of Narayan and Mahadev temple in Chwe Lachhi(Lower square) and Dangol at the northern part of the Chwe Lachhi (Lower square) area whereas Shrestha at the western part of Lachhi(square). As in the context of Kwe Lachhi(Lower square), the square is surrounded by high caste people i.e. Shrestha, and followed by Dangol at the periphery. The conventional occupational basis was created to satisfy the settlement's demand and supply, and everyone in the society could find a place to fit in. At present, few people following their traditional occupation whereas most of the people have changed their occupation. Farming, the main occupation which is shifted by business, service, and others.

## 5.3 Transformation in cultural practices

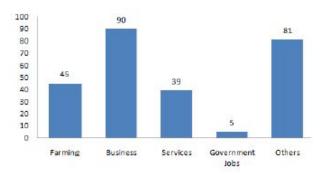Tokha, an ancient Newari town having its own culture, tradition, and rituals somehow different from that of
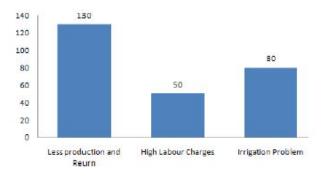
**Figure 12:** Bar chart showing Occupat



**Figure 13:** Bar chart showing reasons for leaving farming

Kathmandu. The community used to be quite tight-knit, with individuals working together on a variety of problems of common concern to the town (maintenance of common open spaces, falcha(Pati), waterspouts, well, etc, helping each other in the time of distress, sharing resources for the welfare of the community). People have become increasingly self-centered in recent years, and community life has lost some of its meaning. Furthermore, certain local cultural traditions (songs, dance, theatre, and musical instruments) have been changed by modernity (contemporary songs, pop concerts, and dances), while others have been forgotten. The concerned authority focusing on the revival of the local cultural practices and some younger generations are following traditional culture, customs and participating actively in festivals. Guthi, the social organization which performs actively for preserving culture and tradition and is self-dependent as they have their source of funds (land). The provision of guthi land transaction raised the endangered condition of culture as there is loss of income due to the sale of Guthi lands and members have to self-fund for performing the culture. Due to which the culture is transforming. Guthi Sansthan provides certain fund for Chandeswari Dyo(God) and Kwe Gane Dyo(God Ganesh).Rs.28000 for Chandeswari Dyo and Rs.

15000 for Kwe Gane Dyo which is not enough to function festivals or maintenance of the religious structure.

## 6. Discussions and Findings

Urbanization, developing new needs and desires which lead to new development in the core area and peripheral area causing the change in land use. Inadequacy of space in the Kul Ghar(house in core area) due to vertical division of house conversing the agricultural land into building parcels in piecemeal approach resulting haphazard and unorganized development. Vertical expansion of buildings along with projected floors, including variations in plinth height, floor height, and architecture style destroying the volumetric definition and creating a chaotic streetscape without any sense of place and identity. The increased height of the buildings made the streets and courtyards dark and damp by blocking the sunlight and air circulation and changed the community life. The sense of enclosure of the earlier times has been converted into a sense of suffocation. And the loss of Keba(private garden) resulted in a vulnerable condition during the disaster. The change in built form in the traditional settlement is due to a change in lifestyle as the traditional buildings are not able to cater to the modern needs and space to accommodate the extended family size.

In an agrarian society, people help each other whenever they need. Mostly the help is provided during the cultivation or harvesting in the field. With, decreasing landholding size of people, the people are getting less interested in agriculture. This has decreased the intimacy between the people and the mode of agricultural practice has changed from mutual help to hiring laborers for farming. As labor is getting expensive, agricultural practice can be unaffordable and uneconomical in near future. With the effect of urbanization, the lifestyle of the locals is changing. The mode of entertainment is changing from outdoor cultural activities to in-house activities like watching tv, movies, etc. So, in the present condition, more internal space inside the house is desirable. People are inclined towards nuclear family as it is seen that the extended joint family is gradually breaking into nuclear family. In that case, these people will be needing more land for housing units.

The loss of guthi revenue owing to the sale of guthi lands or the raikar parinat of guthi land into private

hands is causing issues for festivals and cultural traditions. The close-knit communal structure and identity that were maintained via these rituals and festivals are progressively dissolving as a result of this.

## 7. Conclusion

The research concludes that lifestyle changes have a huge impact on the built environment and its usages. Conversion of Keba (private garden) into the built-up area, increment in the height of buildings increasing the vulnerability during a disaster. The undulating skyline and vertical tall residences losing the character of traditional town and community life too. The modern amenities (Vehicles) changing the pedestrian movement into vehicular movement increasing traffic load in the settlement. The research also reveals that switching off from the framing profession due to less production and return leads to depletion of cultivable land in the periphery of the core area. Controlling mechanisms should be developed to prevent physical, socio-cultural, and cultural transformation and to retain its cultural identity.

## Acknowledgments

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