



## RURAL LANDSCAPES IN NEPAL

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2. The walled city of Lo-Manthang amid its alpine semi-arid surrounding | K. Weise
- 3.View of Newar settlement of Bungamati with the agricultural landscape | K. Weise
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## Introduction

Every year on April 18th the International Day for Monuments and Sites is celebrated. This was initiated by the International Council on Monuments and Sites (ICOMOS) in 1982 and approved by the UNESCO General Conference the following year. In Nepal April 18th has been adopted as the *Bishwa Sampada Diwas* or World Heritage Day.

The theme of the International Day for Monuments and Sites 2019 provided an opportunity to “raise awareness about the relevance of rural landscapes, the challenges that encompass their conservation, the benefits that these efforts provide, and how rural landscapes are intrinsically related with sustainable development”. ICOMOS Nepal joined many ICOMOS national committees throughout the world in organizing an event to celebrate the day and initiate discussions on Rural Landscapes. This took place on April 18th in partnership with the Department of Archaeology, Government of Nepal as well as the Department of Architecture, Institute of Engineering, Tribhuvan University. Present were members representing the organizers as well as UN Habitat, UNESCO, ICIMOD, SONA, numerous prominent planners and architect as well as students.

At the entrance of the venue were exhibition posters with individual case studies of rural landscapes from various parts of the country. The event began with presentations of the eleven case studies providing information on the specific sites while indicating their significance as well as the challenges of conserving them. These short presentations provided a wonderful overview of the diversity of landscapes found in Nepal from the high trans-Himalayan regions, the mountainous areas, the foothills down to the flat plains of the Terai. The examples showed how these landscapes had different attributes that gave them their significance.

Janakpur, known from the Ramayana as the birthplace and home of Sita, the consort of Lord Rama, is surrounded by 72 ancient ponds that create a sacred landscape which is threatened by neglect and development.

Two wonderful landscapes created by ancient fortifications were presented, HariharpurGadhi in Sindhuli and MakwanpurGadhi which link back to historic battles. These sites are not well kept however they are also potentially threatened by inappropriate beautification plans.

Four Newari settlements were presented from inside the Kathmandu Valley which included Sunaguthi, Thecho, Khokana and Bungamati. Each of these settlements are facing threats to specific attributes such as the settlement structure, the monuments, the hydrology system or the surrounding landscape. Particularly road widening, inappropriate reconstruction after the earthquake damage as well as government priority projects such as the Fast Track to Nijgadh, the Outer Ring Road, the Bagmati Corridor as well as high tension cables are destroying the landscape within the Kathmandu Valley. As we move further west the well preserved settlement of Bandipur is also facing issues with inappropriate development in the surrounding landscape.

The archaeological landscape of Kapilavastu with hundreds of subsurface archaeological sites mostly still hidden beneath the ground are threatened by inappropriate development. Kapilavastu is particularly significant for Buddhists throughout the world as the natal landscape of Gautama Buddha.

**By: Kai Weise and Anie Joshi**

The landscape around Lo Manthang in Upper Mustang is defined not only by the impressive dry arid slopes but also by the many ruins of earlier settlements and forts. The recently built road as well as buildings using modern materials has begun to change this landscape. A similar threat is looming for Dolpo however in certain areas such as Phoksundo Lake and Ringmo village the local community has begun actively responding to development pressures and challenging government projects of building roads and luxury hotels.

After a keynote presentation and discussions it was decided that this discussion must continue in a targeted manner with key stakeholders and authorities. Change is inevitable and many landscapes will be covered with settlements, infrastructure and changing commercial functions. This publication will provide a glimpse of some examples of the wonderful diverse landscapes of the country which must be protected.

**Wooden bridges still maintained for the passage of the yaks despite of the new suspension bridge built in the mountain areas of Nepal**

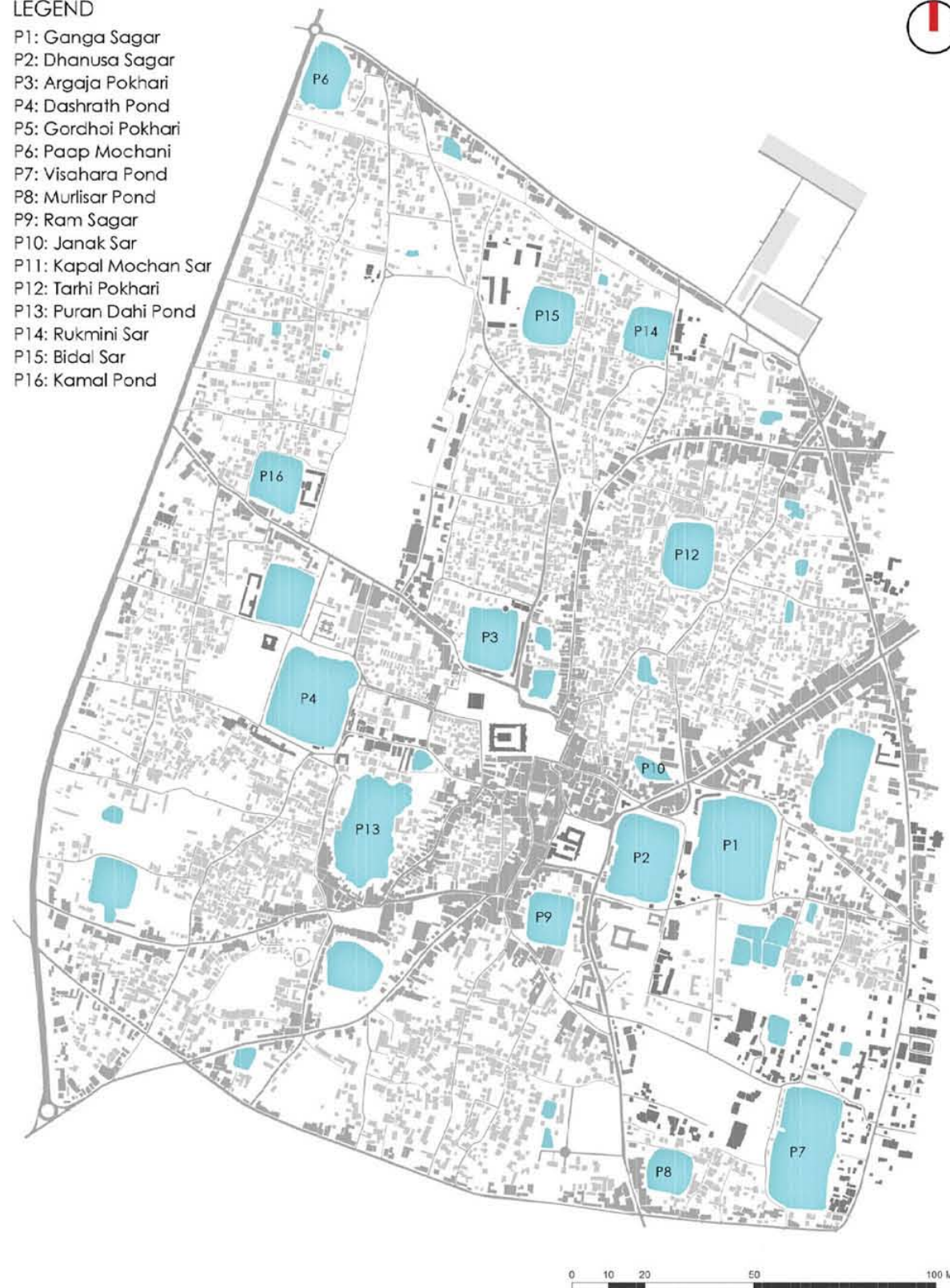
Photo: A. Joshi





## LEGEND

P1: Ganga Sagar  
P2: Dhanusa Sagar  
P3: Argaja Pokhari  
P4: Dashrath Pond  
P5: Gordhoi Pokhari  
P6: Paap Mochani  
P7: Visahara Pond  
P8: Murlisar Pond  
P9: Ram Sagar  
P10: Janak Sar  
P11: Kapal Mochan Sar  
P12: Tarhi Pokhari  
P13: Pura Dahi Pond  
P14: Rukmini Sar  
P15: Bidai Sar  
P16: Kamal Pond



**Map of Ponds in the City of Janakpur**

Source: Animesh Shrestha

## Ponds of Janakpur

By: Animesh Shrestha | AAJU Design

**Janakpur**, also known as Mithila Nagari, lies in Dhanusha district in the Terai region of Nepal. It is 390 Km and around 10-hours' drive from Kathmandu, the capital city. Janakpur is exceptionally developing as a commercial and industrial town and is also widely visited by many pilgrims for its great historic and religious importance.

Named after the legendary King Janak, Janakpur is a great pilgrimage site for Hindus. The city is popularly known as **Janakpurdham**, which is composed of three words, 'Janak', 'Pur' and 'Dham', which mean 'father', 'village' and 'renowned place for pilgrimage' respectively. The city is birthplace of Sita, Lord Rama's wife as mentioned in the Ramayana (Hindu epic). Therefore, is considered very important place for Hindus.

**Janaki Mandir** (Temple) is the major skyline of Janakpur which carries legacy of the legendary King Janak and his daughter Sita.

Even if this city is primarily famous for Janaki temple and the ancient Mithila art, the city is also renowned as an ancient town of ponds throughout the country.

In Janakpur, several gods and goddesses find symbolic representations through rivers, ponds and trees. This type of representation is a common characteristic of the traditional settlement showing connection between nature, culture and society. The city is said to have **72 ancient and sacred ponds** of historical and mythological significance. Among which, Ganga Sagar and Dhanusha Sagar are two sacred ponds situated at the center near the Ram Mandir, one of the oldest temples of Janakpur. During Chhath, on the important festival of Nepal, these ponds become extremely important because several religious ceremonies are conducted here. Besides religious associations, people come around the pond to escape from the heat of Terai sun and enjoy cool breeze.



**Ganga Sagar, Janakpur**

Photo: Bijay Chaurasia, Wikimedia Commons, 2016





#### **Chaos and pollution in front of Argaja Pokhari**

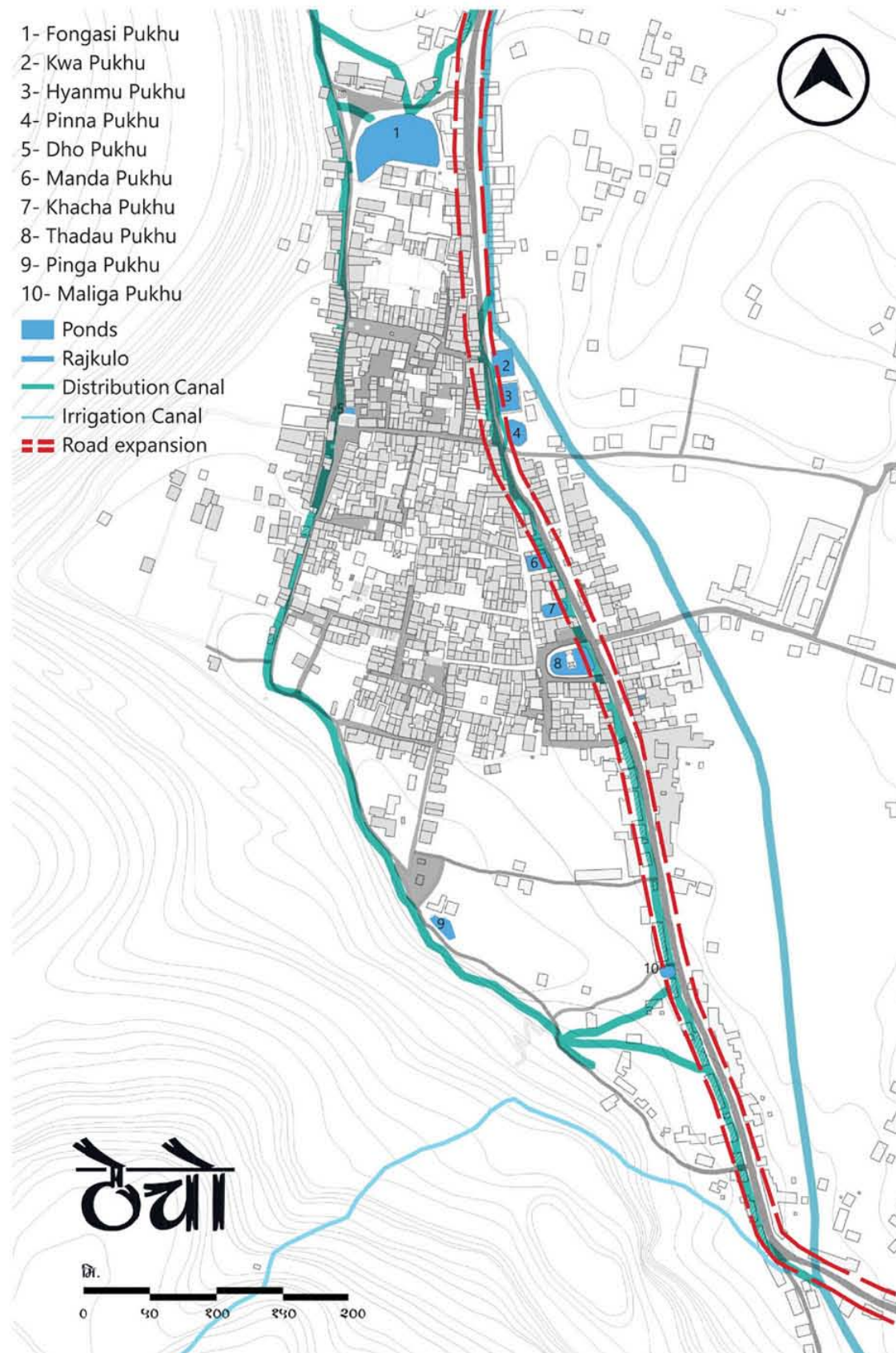
Photo: Satish Shrestha

**The Briha Vishnu Purana** (pp.29-33) records 72 sacred ponds called sars and kunds. The sacred kunds(wells), such as Agni kund, Vidya Kund, Gyan Kund ,etc. are believed to be associated with lord Rama, Sita, Janak as well as with various other gods, therefore pilgrims take bath in those tanks and kunds in order to get rid of their sins and to obtain religious virtues. Besides these, there are three sacred rivers, namely, Dugdhvati, Yamuni and Gerukha, which flow within the radius of one mile to Five miles of Janakapur.

#### **Threats and Challenges**

Conserving and preserving the historic and religious ponds lying throughout Janakpur has been a serious challenge. Many Historic and religious ponds here are on the brink of disappearing due to human encroachment upon such ponds. Most of the ponds in Janakpur have fallen to pollution due to human activities. Therefore, this is high time, these valuable ponds to be preserved and protected.





**Map of Ponds at Thecho**  
Source: Shristina Shrestha, Lumanti

## Thecho and its hydrological layer

By: Shristina Shrestha | ICOMOS Nepal | LUMANTI

Settlements are formed by overlapping different layers negotiating in such a manner that every representative layer adds new identity to it. Talking about the flourished settlements of Kathmandu valley apart from its glorified cultural and architectural layer, the concept of hydrological layer always adds the unique mark to its glorious history. Water being the most essential need for drinking and household activities and then for agriculture to produce more staples, transportation of Water and its network to the settlement has always been the first priority in infrastructure development. A well-organized society can only function these tasks which helps to create economy and prosperity. Thus, the concept of collection of water and creating different network has always been part of culture in every human civilization.

In Kathmandu valley, a special meaning for association with hydrological layer is provided by **Rajkulo**, the ingenious water supply system design of the valley meaning royal canal. It constructs a linkage from various source to

the city center and networking with various city ponds and stone spouts. Besides carrying water to the ponds, the Rajkulo was also designed to distribute water for irrigation. It was planned in such a way that besides carrying water from one place to another, it also recharged the ground water table.

Like every major city in Kathmandu valley, **Thecho** also has a Rajkulo connected to its 10 ponds that fed them all season taking advantage of natural terrain. Located on Lele road between two ancient settlement Sunakothi at north and Chapagaun at south in Lalitpur district, the place consists of two chief deities namely **Bramhayani and Balkumari** dividing the settlement into two parts chwe lachhi and Kwe Lachhi. Its main jatra is Bramhayani and Balkumari Jatra associated with its chief deities which starts by cleaning ritual in the pond behind Bramhayani named Dho pukhu. Thus, it exhibits an active existence of pond is vital part of its cultural layer which has been practiced from 16th century to the date.



**Dho pukhu : The main Jatra of Thecho** associated with its chief deities starts by a cleaning ritual in this pond, Thecho  
Photo: Shristina Shrestha





Before



After

**Use of dozer in the Pinna pond for making modern buildings for the old age, Thecho**

Photo: Kantipur, 2075 BS



**Khacha Pukhu; Once considered as the purest source of water in the settlement, Thecho**

Photo: Shristina Shrestha

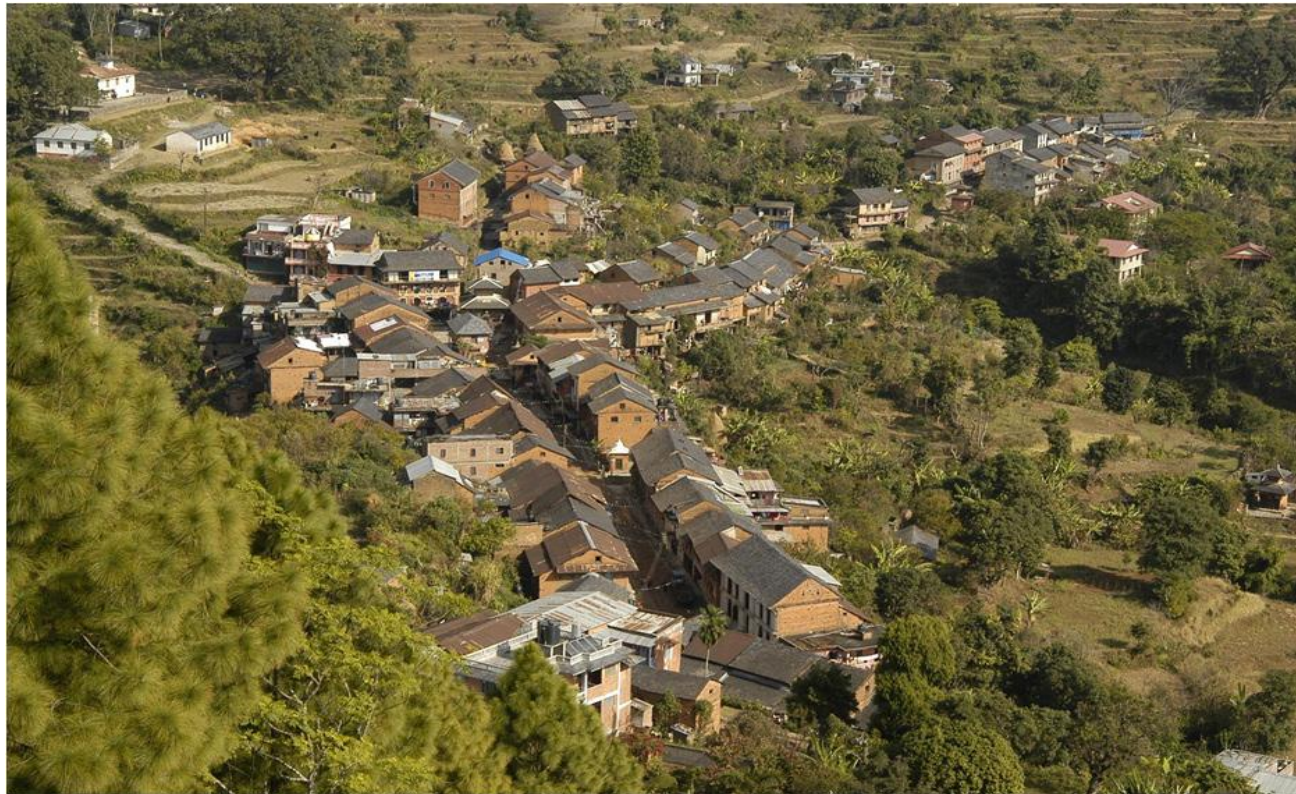
Currently, in the valley, lesser is known about rajkulo's present location and connectivity. But in case of Thecho, the Rajkulo network can still be found profoundly. Also special Guthi associated just to clean Rajkulo from source Tika Bhairav to Thecho every year just before the Jatra. This shows the socio-cultural association with hydrological layer and its significances. Thus, the availability of different sources of water bodies is one of the distinct physio-cultural factor which governs the morphogenesis of the settlement.

But desolately, the cleaning process by Guthi has been stopped since last 5 years due to direct connection of sewage line to the Rajkulo. So they are filling the pond by buying water tanker before every Jatra. Presently, among 10 ponds Maliga: Pukhu has already been encroached to build women safety building upon it. Since last March 2019, Municipality itself have encroached Pinna Pukhu to build

the old age home on it. The number of ponds has been reducing to accommodate the contemporary needs. Also there is high threat of collapse to the 6 ponds adjoining to the main road, its distribution canal network and Rajkulo which lies on the main Satdobata-Lele road due to road expansion. Thus, one of the surviving hydrological layer of Thecho is in brink of disappearing due to unplanned contemporary development and lack of research.

Today, the Rajkulo is not just a solution to the water scarcity problem of the valley but also continues as a glorious part of our culture and heritage. But the major challenge is how these traditional layer will find relevance in the contemporary need. With the understanding the place through its hydrological layer and its ability to negotiate with the contemporary need, a question can be raised "How valid is it to build over its layer?"





**View of the rural landscape of Bandipur—The Bazaar and the surroundings**

Photo: Jharna Joshi

## BANDIPUR—Historic bazaar and the surroundings

By: Jharna Joshi | ICOMOS Nepal

**Bandipur** is situated to the south of the Prithvi Highway that connects Kathmandu to Pokhara. The main Bandipur Bazaar is 8 km uphill from Dumre on the Prithvi Highway and is completely restricted to vehicular access. The Bazaar is elongated east-west with the two ends rising up to form hillocks on each end, providing excellent vantage points overlooking the bazaar and the surrounding landscapes. The northern and southern parts of the ridge slope gently with cultivated terraces, especially on the southern slopes, where there is good sunlight and water sources. The view from Bandipur is unique; the length of the Himalayan range visible extends from the Dhaulagiri range in the west to Gaurishanker to the east. The settlement and the surrounding agricultural terraces along with the cultural diversity are key components of the Bandipur landscape.

The extant settlement pattern of Bandipur evolved from the scattered clusters of dwellings of the early Magar settlers and presently demonstrates the distinct characteristics of a Newar settlement with some local variations. The Bazaar efficiently utilises the level ground of the ridge with the row houses built at the edge of the slope

with three to four storeyed on the main street but extending below a level or two following the slope of the ridge. The houses extend beyond the Bazaar branching out along the ridge and following the natural curves without excavating or levelling the land. The Bazaar is the widest and relatively aligned, whereas the branches are narrower and gently rise or slope. This creates interesting spaces at the nodes, where temples or patiare placed and are extensively used for religious, cultural and social events as well as play areas for the children.

A typical house in Bandipur has a shop on the ground floor with sleeping rooms in the upper floors and the kitchen in the attic. The ground floor facing the bazaar can be fully opened with shuttered doors, creating a true bazaar like atmosphere, as displayed goods can be seen from the streets. The shop fronts on the south facing façade of the street have a covered passageway with a continuous balcony extending the length of the bazaar. This covered passageway lines only the northern side of the bazaar (south facing) to catch the sun in the winter and provide shade in summer.



**The skyline of Bandipur within the Preserved cultural sub-zone**

Photo: Jharna Joshi





**Top: Bandipur Bazaar area with local shops alinged along the main road**  
**Bottom: The essence of the urbanscape is preserved through the restored traditional houses**  
 Photo: Jharna Joshi



### Threats and challenges:

The core area of Bandipur and the surrounding 500 metres was declared SamrachitUpachetra or Preserved Cultural Subzone in 2016 by the Bandipur Municipal Board. The aim of the designation is to preserve the traditional buildings of Bandipur. The potential of the bazaar with its unique architecture and settlement pattern as a tourist destination and subsequent economic benefits were the motivations for the designation. The declaration is accompanied by basic guidelines and regulations on restoration and reconstruction of buildings within the protected zone. The requirements are basic and specify height restrictions, roof and architectural style including types of windows and door. It also requires a demolition permit to be approved from the local authority and restrictions on any "modern or western" styles. The conservation policies address the built heritage but there are no provisions to conserve other aspects of the landscape, such as the natural environment or the intangible heritage. The limitation of the designated preserved zone with basic conservation policies that only consider one aspect (the Bazaar) of the overall landscape is accelerating development in the periphery

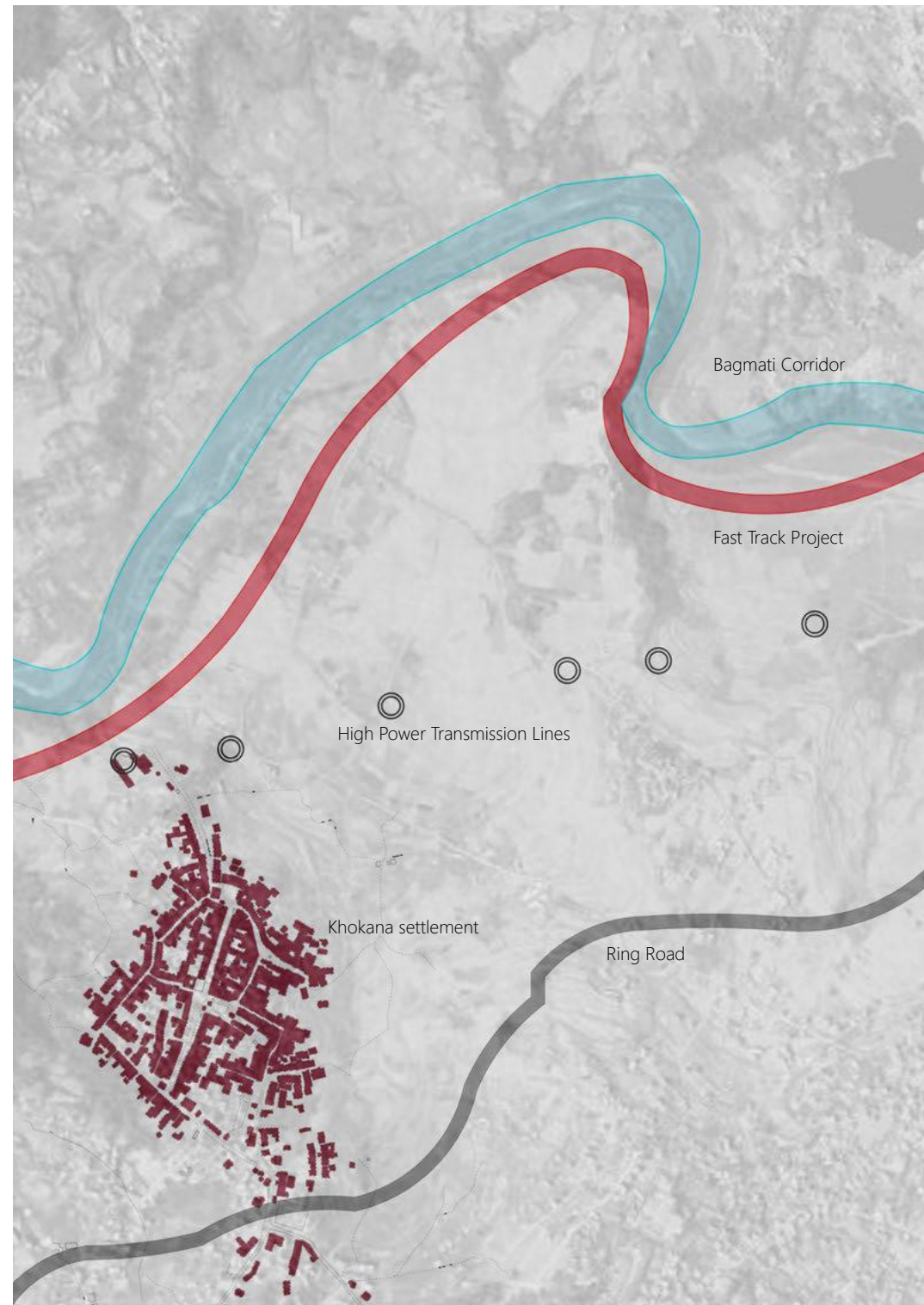


**Covered passageway in the Bazaar**  
 Photo: Jharna Joshi

**New houses and road built in the periphery**  
 Photo: Jharna Joshi







**Map of Khokana settlement amidst proposals for development projects such as the Bagmati Corridor, Ring Road, Fast Track Project, transmission lines and upcoming satellite city**

Source: Record Nepal | Annotation: I. Karmakar

## KHOKANA : Agricultural Landscapes

By: Ipshita Karmakar and Anie Joshi | HCAE and ICOMOS Nepal

Over the years, a changing landscape has been emerging due to several reasons, changing climates, unmanaged urbanisation, displacement, migration, or political conflict. The result of this is that rural landscapes all over the world have been in constant flux. They are changing and adapting to the proposal for development infrastructure, overtaking their fields, their community spaces and in some cases their homes. One such example is the suburban town of Khokana in Lalitpur.

Khokana is a traditional settlement where a majority of the population is engaged in agriculture. Most of the residents of this town are Newars, who are considered the first settlers of Kathmandu Valley. In 2007, Khokana was listed in the tentative list for UNESCO World Heritage site in Nepal.

This traditional settlement has a number of features that makes it deserving of this honour. Primarily, the hillside landscapes that it occupies has made it conducive to practice a variety of agricultural and irrigation methods. The high plateau that the settlement occupies has led to cultivating the land around in terraced fields. The irrigation system is an offshoot from the Rajkulo, an ancient water canal system that supplied water within the Kathmandu Valley through a canal system. The irrigation system in Khokana consists of ingeniously designed canal systems that supply water to each field negotiating terrains and the landscape elevations. This system helped cultivate abundant paddy fields and mustard fields, though in recent years, cultivation has decreased. Khokana was a pioneer in mustard oil production where the crop that was cultivated was processed in the same village.



**Top: Aerial view of Khokana in the 1970s**  
Photo: Schrider





**Top: The agricultural landscapes of Khokana village**

Photo: K.Weise



**Left: The settlement of Khokana has suffered extreme damage post the earthquake of 2015, with RCC buildings dotting the traditional Newar architectural landscape**

**Right: The Deu Pokhari at Khokana. Several places of worship and cultural practice will be affected by rampant development of infrastructure around this area**

Photo: I. Karmakar



**Top: Protests conducted by the residents of Khokana against impending development projects**

Photo: Record Nepal

Hence, this mustard oil producing heritage has been instrumental in its recognition as a potential site for UNESCO enlisting. The traditional wooden oil presses are unique to Khokana, and several of these were run in the recent past. Only four of them have survived so far. The settlement has produced unique tasting mustard oil since several decades, and is known for its industrial heritage of oil mills. However recently, there has been a decrease in the farming of mustard in the area. Nowadays, the mustard seed is brought in from as far as Terai in Nepal and even India. The mechanisation of the process of making mustard oil has also led to the decline of the practice. That has led to several of these historic mills shutting shop.

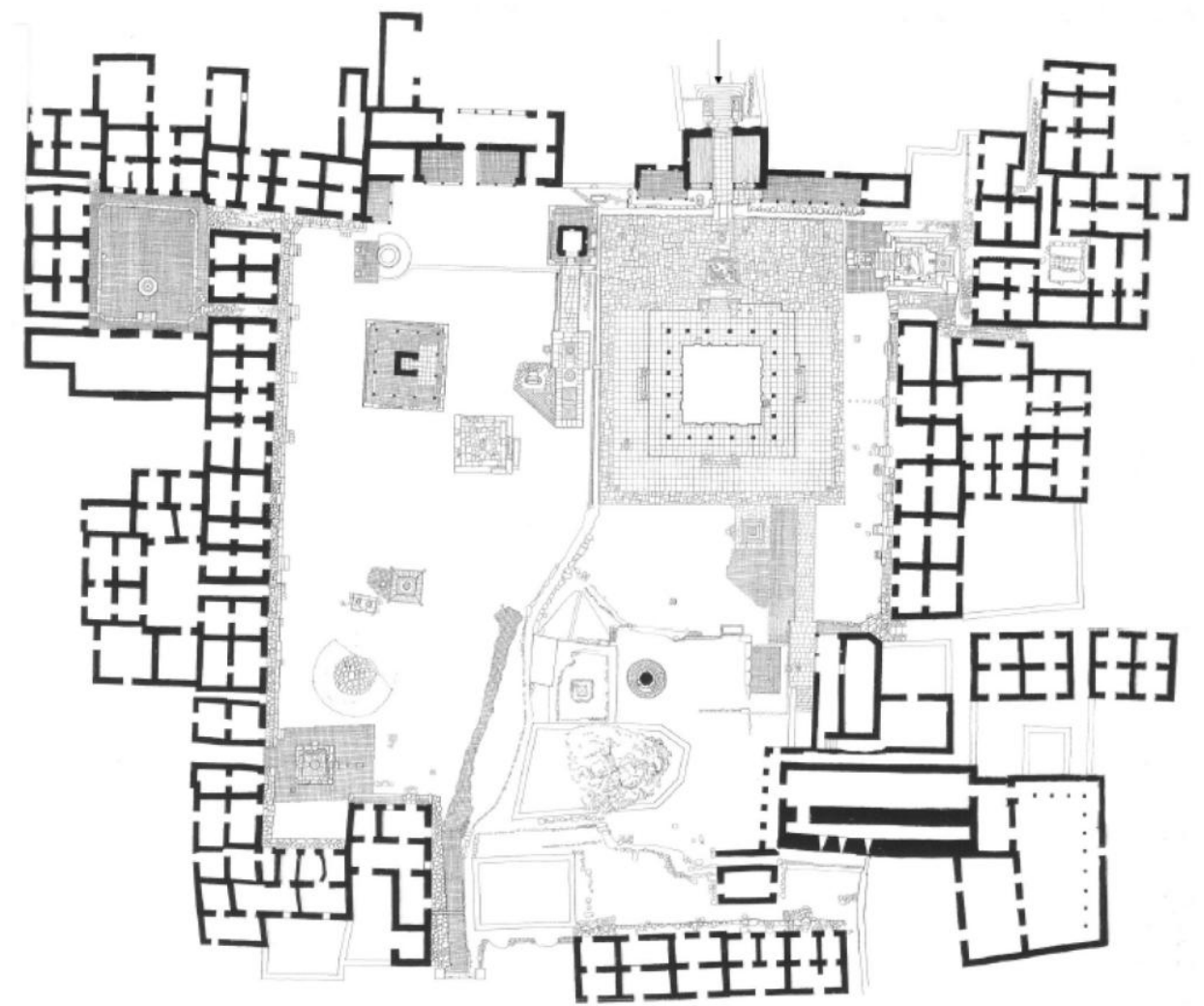
But a far greater threat is planned urbanisation. This settlement has become a hotbed of development projects. It currently faces the combined threat of 5 so far; the Kathmandu Terai fast track highway project, an outer ring road cutting through the settlement, a high power transmission line, and a vehicular corridor to be built along the river banks of the Bagmati river. There is also talk of an upcoming satellite city to be planned next to the area. It is not the first time that the residents of this

area have been asked to give up their land for development projects. Several tracts of land acquired by the Army today lie unoccupied, and have been given away to private developers.

In the wake of this, it becomes obvious that this heritage settlement will not remain the way it is. The satellite city will bring in gentrification, and the ring road will not only cut through community spaces, but also the few open spaces within the settlement. The highway will cut through the fields, permanently changing the landscape, and putting the livelihoods of several people in jeopardy. The agriculture dependent community will be forced to adapt when the fertile lands are built over. To say that these projects have been sanctioned without the consent of villagers is a given, and several protestors have appealed to the higher powers in Kathmandu.

In the wake of such developments it becomes essential to safeguard such settlements and their agricultural landscapes. It is important to understand the ecological and sociological systems within a place to holistically intervene within it.





**Plan of Machhindrath Square**  
 Source: Danish Architecture students c.1968

# BUNGAMATI

By: Padma Sundar Joshi | UN Habitat

**The Newar settlements** scattered within the Kathmandu Valley are testimony of agrarian society with the compact city planning in the higherland and the terraced agriculture lowlands. Each of these settlements have deeply rooted socio-cultural and religious values which gives a unique identity to these settlements.

The Newar settlement of **Bungamati** lies to the South West of Patan, positioned high above the Bagmati river as it exits Kathmandu Valley. The presence of the Lichhavi inscription at the entry of the town indicates its earlier origin. However, the existing structure of the city is a later period development with the presence of the Rato Machhindranath Temple square at the heart of the city. The deity Machhindranath is an important figure to Hindu and Buddhist religious practices in the Kathmandu Valley and the chariot festival of the Rato Machhindranath commence from Bungamati in every 12 years.

The town is composed predominantly of the farmer community however, the traditional craftsmanship of the carpentry has been adopted by many of the families in Bungamati. The settlement's historic housing and several temples were badly damaged during the 2015 earthquake.

**Threat and challenges**  
 The foremost threat faced is the deterioration and permanent loss of architectural and urban heritage as well as the community's intangible heritage. In the reconstruction of Bungamati's historic housing and temple structures, a great challenge is faced to carefully and swiftly rebuild these damaged structures while also promoting ecologically sustainable methods of construction, sanitation and waste management. Continuing unbridled development of the Kathmandu Valley poses further threats to the individuality of the settlement and its terraced agricultural landscape.



**Reconstruction of Ta Falcha in Machhindrath Square**  
 Photo: UN-HABITAT

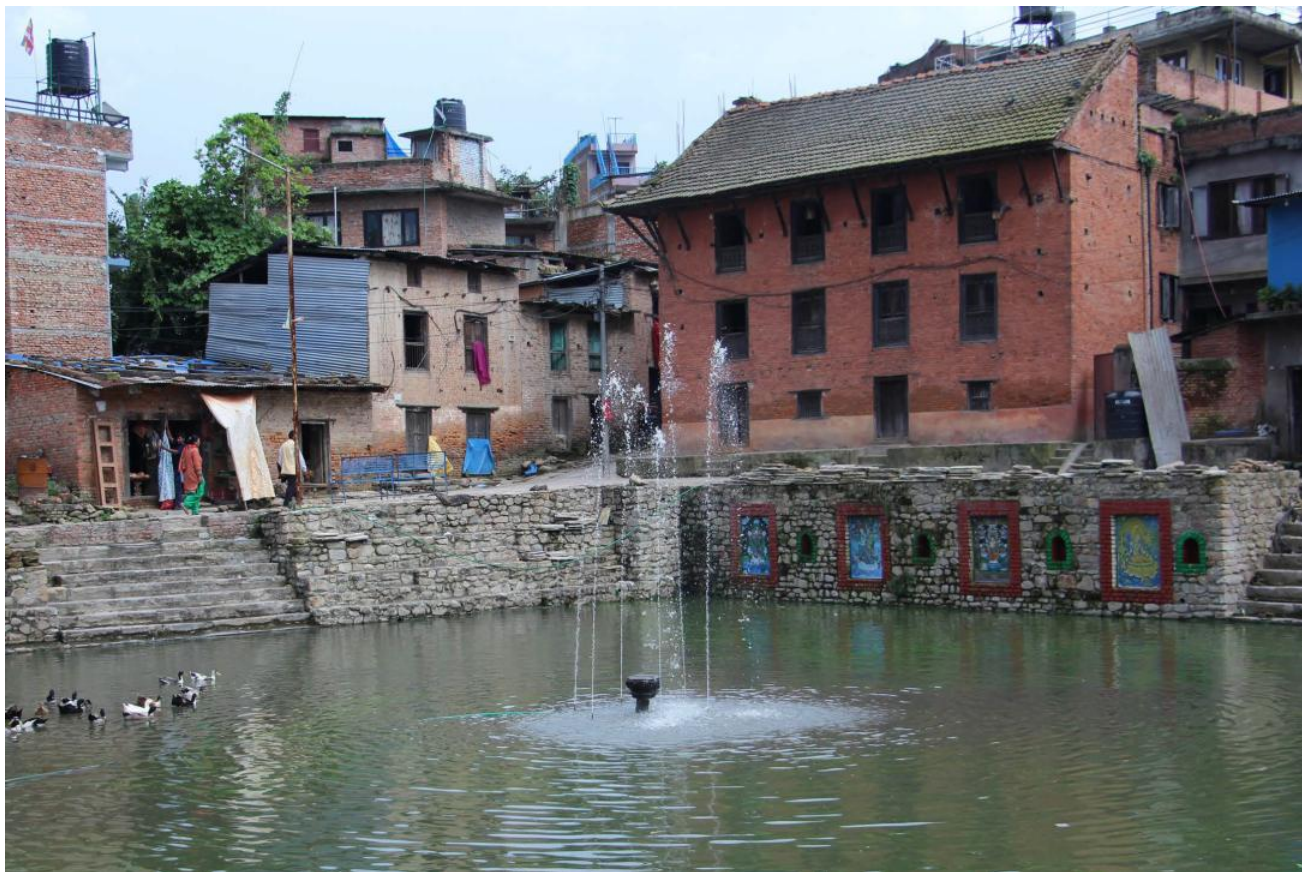




**Top: Local community collectively clearing De Pukhu pond during rehabilitation**

**Bottom: De Pukhu pond following rehabilitation**

Photo: UN-HABITAT







The whole stretch of historic Sunāguthi street endangered by the road widening

## Impact of proposed road widening, SUNAGUTHI

By: Padma Sundar Maharjan / Sabina Tandukar | ICOMOS Nepal

The historic suburban image of the traditional settlements with its natural landscape around is diminishing day by day. Of the many root causes, the blatant road widening projects are the most threatening ones in destroying the traditional settings. There are conflicting developmental rules like road widening and right of ways with the conservation laws in historic settlements. The road widening causes irreversible damage not only to the tangible heritages but also to the intangible heritages and socio-cultural values. Of many examples, Sunāguthi, a Licchavi era historical settlement is also in verge of destruction due to the proposed road widening through the main street that has several socio-cultural values.

**Sunāguthi** is a historic Nevāra settlement located 5km south of Lalitpur city. The settlement was known as Bhṛṅgārāgrāma in the name of Bhṛṅgāreśvara Mahādeva during Licchavi period. The stone inscriptions dated 641 AD of Bhīmārjunadeva and Viṣṇugupta at the temple complex proves the historicity of the settlement.

The settlement is built along the streets that circumambulate the central Mahādeva temple complex. The major daily activities and most of the socio-cultural functions are carried along these streets. The streets phalcās, ponds, temples and topographic points for special cultural performances. The settlement is surrounded by pristine agricultural fields and water logged natural landscapes.

Sunāguthi street and the structures are the major are lined up with unique type of caityas, tangible heritages that holds the immeasurable functions of the society. The daily and periodical religious-cultural activities are performed along these streets. They are the major lines of social network and urban public space. It also portrays the interrelationships among the neighboring settlements like Thecva and Khokanā. The annual religious dance performance at kvaylāchī during the Mohanī festival signifies the social relations with Thecva.



Aerial view of Sunaguthi and its vicinity

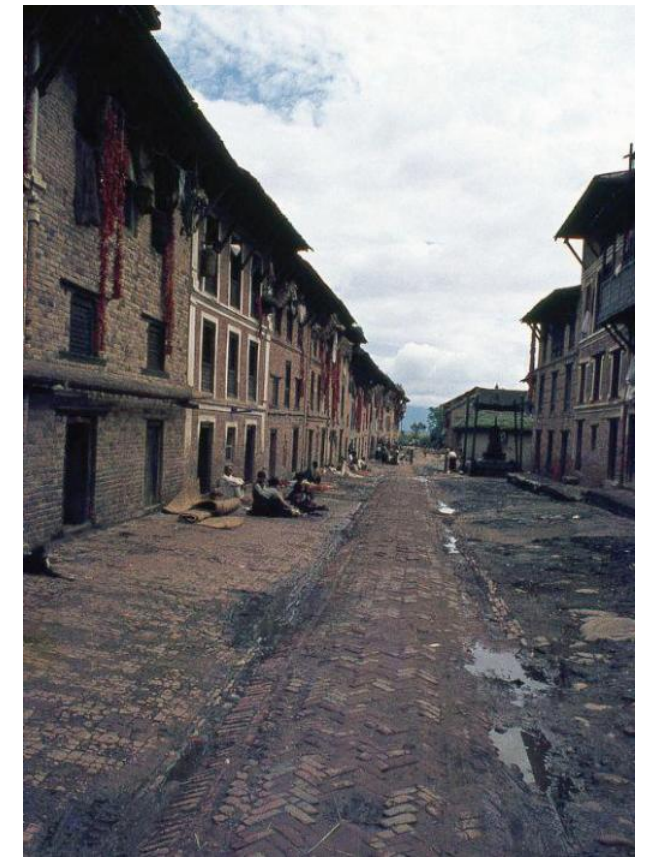
Photo: Doug and Nancy Hatch, 1966





**Śikharacuta Caitya at Hitiphusa**  
Photo: PS Maharjan, 2016

This settlement is in high risk of losing its heritage value due to haphazard urbanization and proposed groundless road widening project. The road widening will not only destroy the spatial configuration of the place but also badly affect the intangible heritages. The socio- cultural aspects and quality of life has been highly in danger. Many protests have been raised against the government baseless road widening proposal. A 235-year-old phalcā has recently been reconstructed after the 2015 earthquake at kvaylāchī with the help of national and international support. The project was partly funded by Mohr- Foundation, in cooperation with South Asia Institute, Heidelberg University. The project was envisaged as the resistance to the destruction of the heritage sites by the so called development projects. More conservation projects are to be done to safeguard the rural cultural landsapes.



**The street view of Sunaguthi with old brick paving on the street**



**Devagana from Khokanā**  
Photo: Basanta Maharjan 2013



**Bālakumārī Jātrā on caitra Purnimā**  
Photo: Yujen Maharjan 2018





**Drone shot of the Hariharpur Gadhi**

Photo: Kathmandu Living Labs (KLL)

## FORTS: Hariharpur Gadhi and Makwanpur Gadhi

By: Sadar Bhandari and Nishi Chaudhary | IOE, Pulchowk Campus  
 Pramit Manandhar and Astha Acharya | IOE, Pulchowk Campus

### Fortification:

Fortification was one of the means of defence and contributed largely in the military history of any place. However, with the invention of new military weapons the fort architecture slowly faded away and has been largely ignored by the architectural history. Despite of its ignorance, with its large scale architecture mostly in ruin today, it forms a remarkable entity of the landscape.

Nepal had smaller kingdoms before its unification in late 18th century. Hence, a large number of forts were constructed all over Nepal for the protection of these kingdoms. And the construction of forts continued till the 19th century for the protection from foreign invasion.



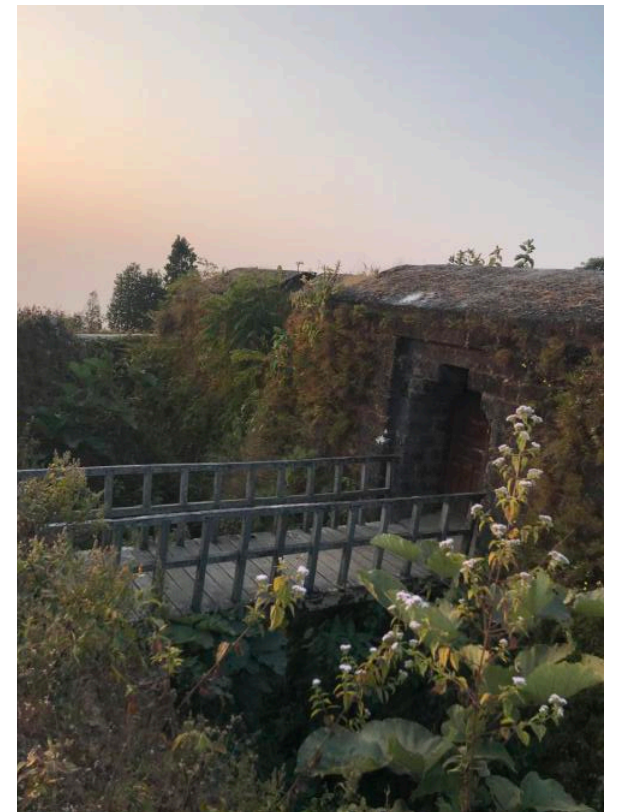
**Hariharpur Gadhi**

Photo:

### Hariharpur Gadhi:

Hariharpurgadhi is an octagram shaped military fort constructed by King Hariharsing Dev in 1269 AD. The only major military battle fought here was between Hariharsing dev and Mukunda Sen in 1331 AD. The fort had a Newar village established during its construction which has now converted to a Tamang majority village.

The material, geometry and construction of the fort is a unique entity in itself and has a rich architectural value. The village around the fort carries a historical connection to the fort but is also a canvas for slow social change from the original Newar community to the existing Tamang group. The added social and religious value to the rural landscape is through the preserved rural context, living culture of the Tamangs like local drinks preparation, agricultural practice, existence of historical temples of Newars and the new Gumba.



**Hariharpur Gadhi**

Photo:





**Top: Aerial view of Thulo Gadh of Makwanpur Gadh**  
Photo: Makwanpur Chamber of Commerce and Industry

**Down: Base map of Makwanpur Gadh**  
Source: Google earth | Annotation: Pramit Manandhar



**Left: View of the fort**  
**Right: Temple structure within the fort**  
Photo: Adarsha official



### Makwanpur Gadh:

Makwanpur Gadh was capital of the Kingdom of Makwanpur under the reign of Sen Dynasty. It was built by King Lohang Sen with the conceptualisation of two forts, Thulo Gadh and Sano Gadh. The Thulo gadh was the residence of the King and the courtiers and it also had a temple of Vanshigopal, and Siddheshwor. The presence of temple inside the fort is one of the peculiar feature of forts in Nepal. Residence for Military was placed in the Sano Gadh. Celebration of Victory Day on 10th Magh for victory over Bengali invaders is a major event celebrated here.

The geometry, material and construction method of the fort and the existence of the two forts nearby makes it unique.

### Threats and challenges:

Deterioration of building material is a big issue as structures are slowly degrading due to lack of security and maintenance. Growth of vegetation in the walls of fort makes its more vulnerable. There is no evidence of physical changes in structures and forms of roofs but the precarious structures needs immediate attention..

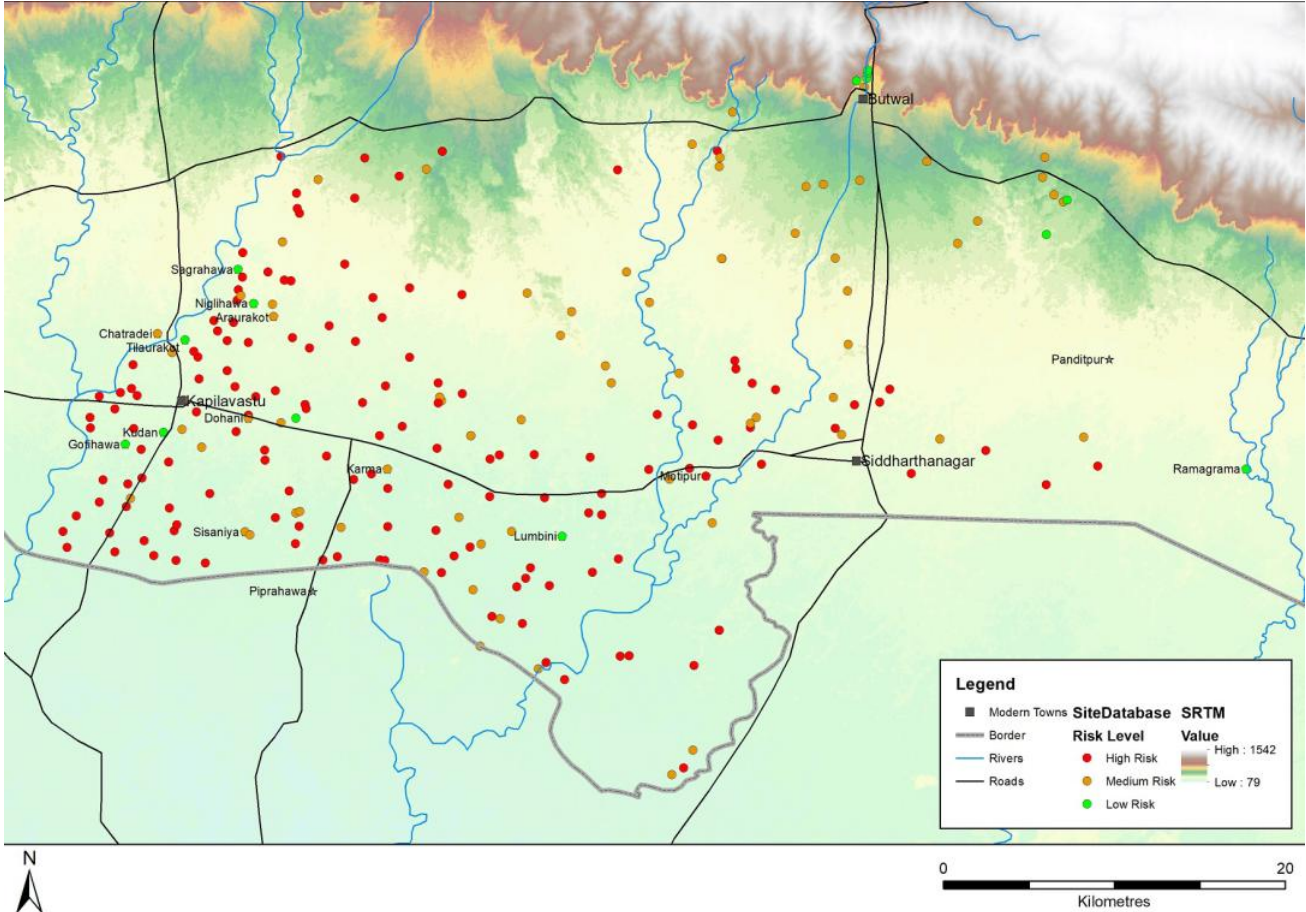
Located on the hilltop, these forts are vulnerable to landslides.

New settlement has grown near the fort with no historical link increasing possibility of commercialization neglecting its historical values.



**The central view of the Makwanpur Gadh**  
Photo: Prakash Adhikari





**Kapilavastu's archaeological landscape |**  
Source: UNESCO Chair, Durham University

**High Risk:** The site is already destroyed, or is in the process of being destroyed. There is no state ownership of land and no protection policies are in place

**Medium Risk:** The site is under threat from agriculture, construction and/or development. Some sites are government owned, but have no protection policies in place or the policies are not enforced

**Low Risk:** The site remains relatively safe from destruction. Land is government owned and there are policies in place to protect the site.

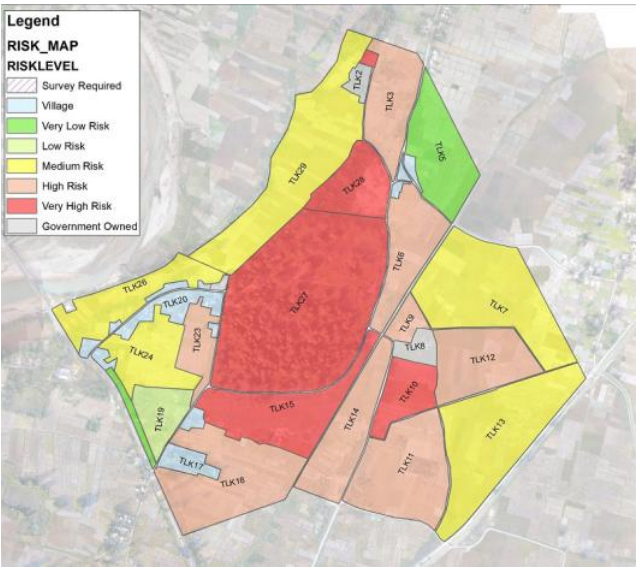
# KAPILAVASTU- A Hidden Archaeological Landscape

By: Kai Weise | ICOMOS Nepal

The archaeological site of **Tilaurakot** is the main candidate for the city of Kapilavastu, the ancient settlement where Gautam Siddhartha spent the first 35 years of his life before he renounced worldly luxuries in search of the truth to be enlightened as the Buddha. This site with archaeological remains dating back to, and before, the life of Gautama Buddha, is on Nepal's World Heritage Tentative List. The **archaeological landscape of Kapilavastu** is an area of Nepal's western Terai where hundreds of ancient mounds and larger historic sites are located. Although today's agrarian landscape is possibly very similar to what it would have been like over two and a half millennia ago, many of the ancient

fortifications, palatial structures, settlements, stupas and temples associated with this time-period have all been submerged under layers of alluvial soil brought by regular floods. Only through recent archaeological investigations (by Nepali experts in partnership with Durham University's UNESCO Chair) has it been possible to recognize and uncover the past grandeur of this area.

**Drone images and risk map around Tilaurakot**  
Source: UNESCO Chair, Durham University







**Top: Monastic complex below fields outside Eastern Gate**

Photo: UNESCO Chair, Durham University

**Down: Monks**

Photo: K. Weise



**The archaeological landscape of Kapilavastu** is still largely unexplored and unprotected, even though it is home to some of the most important sites of pilgrimage for Buddhists from all over the world. Due to being part of the Natal landscape of the Buddha, there is much interest in constructing monasteries and pilgrimage facilities for the increasing numbers of visitors to the region, with estimates of over two million annually by the year 2020, which will further increase with a new regional airport opening soon at nearby Bhairawa. Development also brings further challenges, including the expansion of settlement and agriculture, as well as associated industrial development, all posing severe risks to heritage. However, the majority of development projects are without consideration for heritage and subsurface archaeology, and little management planning has been carried out. The challenge is how to ensure that sustainable development in the region is based on safeguarding and promoting the rich and finite cultural heritage sites, including hidden remains below the surface.

To mitigate these risks, archaeological evaluation and assessment is required to record known and newly discovered sites to identify areas that require protection and monitoring in the face of developmental threats. With technical assistance from Durham's UNESCO Chair, archaeologists and planners are utilising a swathe of traditional and cutting-edge techniques, such as UAV drone survey, geophysical survey, field-walking, excavation and community consultation, to identify the presence of archaeological remains, so that they can be preserved and protected. This has led to the application of Durham's Archaeological Risk Maps, which record the threat levels to the protection of sites across the landscape, as well as within archaeological sites. Using a traffic light system of red through to green, their maps provide recommendations for site managers, who may not have a heritage background, on how to guide developments. This invaluable contribution can enable sustainable interventions that protect the heritage of Kapilavastu and its landscape, whilst also provisioning visitor infrastructure and enabling positive social and economic



**Top Left: Entrance to the palatial complex within Kapilavastu**

Photo: UNESCO Chair, Durham University

**Top Right: The central complex wall exposed during archeological excavation**

Photo: A. Joshi

**Down: Drone images with risk maps**

Photo: UNESCO Chair, Durham University





**The walled city of Lo Manthang (viewed from the south side), with the ruins of Khachoe dzong and the village of Choser in the background.**  
Photo: Sirish Bhatt

## Cultural Landscape of Lo Manthang, Upper Mustang

By: Sirish Bhatt | ICOMOS Nepal

The walled city of **Lo Manthang**, the capital of the former Kingdom of Lo, was established in the 15<sup>th</sup> century. It is located on the ancient trade route between India and Tibet. The walled city with its compact settlement of earthen structure is situated on a plateau at 3810m above sea level and is surrounded by sprawling agricultural fields and barren hills dotted with ruins of ancient castles and monasteries.

According to the new political/administrative structure, Lo Manthang is part of Gandaki Province and is one of the five Rural Municipalities within the Mustang District. Among them, two are located in Lower Mustang and three in Upper Mustang. Lo Manthang Rural Municipality is subdivided into five wards and the entire city of Lo Manthang is included in ward number five.

The cultural landscape of Lo Manthang is an outstanding representation of the interaction of human and nature in a high altitude desert environment. Lo Manthang is the only surviving medieval fortified settlement in the

entire Tibetan region and is home to one of the last remnants of traditional Tibetan life.

### Expansion beyond the fortified wall

No significant changes have occurred in terms of the physical environment inside the wall since the late 18<sup>th</sup> century and have maintained the traditional characteristics. The expansion of the settlement beyond the wall is a recent phenomenon from around the late 60s when an army post, health post and a government school were built. In the last two decades, the development around the wall is happening at an alarming rate, especially on the east and west side. Since the late 20<sup>th</sup> century, due to increased demands for larger space and for tourism infrastructures, more and more houses started appearing. At present there are around 115 structures outside the town wall, among them 20 are built directly against the ancient wall and the rest on former agricultural land.

Lo Manthang was included on UNESCO Tentative list as "Medieval Earthen Walled City of Lo Manthang" in 2008.

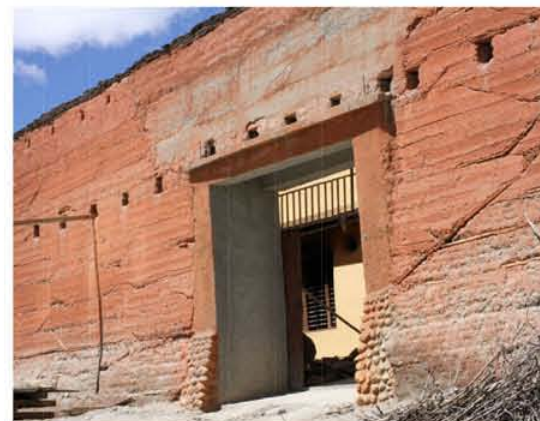
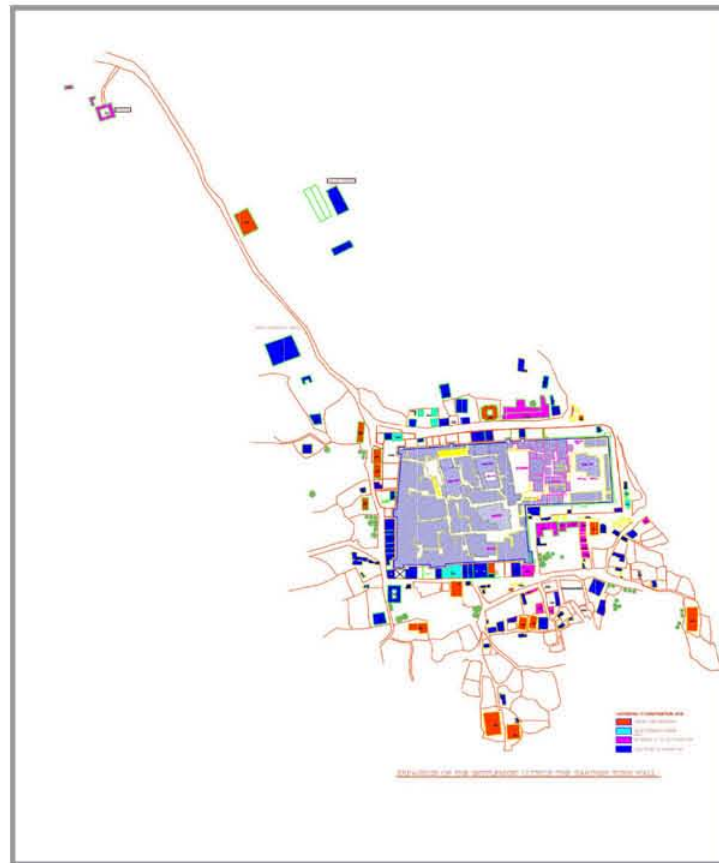


**Left: Map of Mustang District with its five rural municipalities. Lo Manthang Rural Municipality is located at uppermost part of the District. Right: Pema Dolma Bista, Vice Chairman of Lo Manthang Rural Municipality.**



Map source: [https://en.wikipedia.org/wiki/Lo\\_Manthang](https://en.wikipedia.org/wiki/Lo_Manthang) / Photo: Sirish Bhatt





**Left: Map of Lo Manthang showing the expansion of the city outside the earthen wall.**

**Right, Top: A concrete frame structure house being constructed outside the wall.**

**Right, bottom: The large opening made on the earthen wall to provide direct access to Choede Monastery.**

Photo: Sirish Bhatt

## Challenges

Change is taking place at a rapid rate in Lo Manthang having great impact on the landscape. The main factors causing the change are;

**Tourism:** with better connectivity, the mode of tourism is slowly shifting from trekking and camping to lodge/tea house type tourism. Also with improved tourism infrastructure, there has been a significant growth in domestic tourism in the recent years. This trend is likely to increase in the coming years, which means an increasing demand in tourism infrastructure.

**Road:** creating both positive and negative socio and economic impacts. The ongoing project of upgrading the existing Beni-Jomsom-Lo Manthang Kora-la road into a double-lane highway and an all-weather trade route is under Nepal Government Priority Investment Plan. In most cases, dusty wide roads are replacing the former trekking trails. As a result, restricted form of high value and low impact trekking tourism is gradually being taken over by low value high volume tourism. With the ease of transportation alien construction materials such as cement, iron rods and corrugated iron sheets are also being brought in.

**Political Change:** With the abolishment of the monarchy in Nepal in 2008 the Mustang Raja also lost his title, which has had impact on the traditional governance system. According to the newly implemented political structure, Lo Manthang is one of the three Rural Municipalities within Upper Mustang with its own elected Mayor, vice Mayor and members. With the emergence of this new local government new kind of leadership/authority has emerged. The new constitution also grants the local government autonomy of governance and management of local resources. Effective utilization of these opportunities can result in positive changes in terms of social and economic development and cultural preservation in Lo Manthang.

**Change** is part of any 'Living' culture. It is also one of the means of ensuring the continuity and sustainability of a place. The question is how can we accommodate change without destroying the intrinsic values of a place? Though Upper Mustang, especially Lo Manthang is going through rapid transformation, the region still possesses the exceptional natural and cultural attractions. It is important to ensure that any future development projects is thoughtfully planned in order to avoid destroying the fragile culture and ecology of the place.



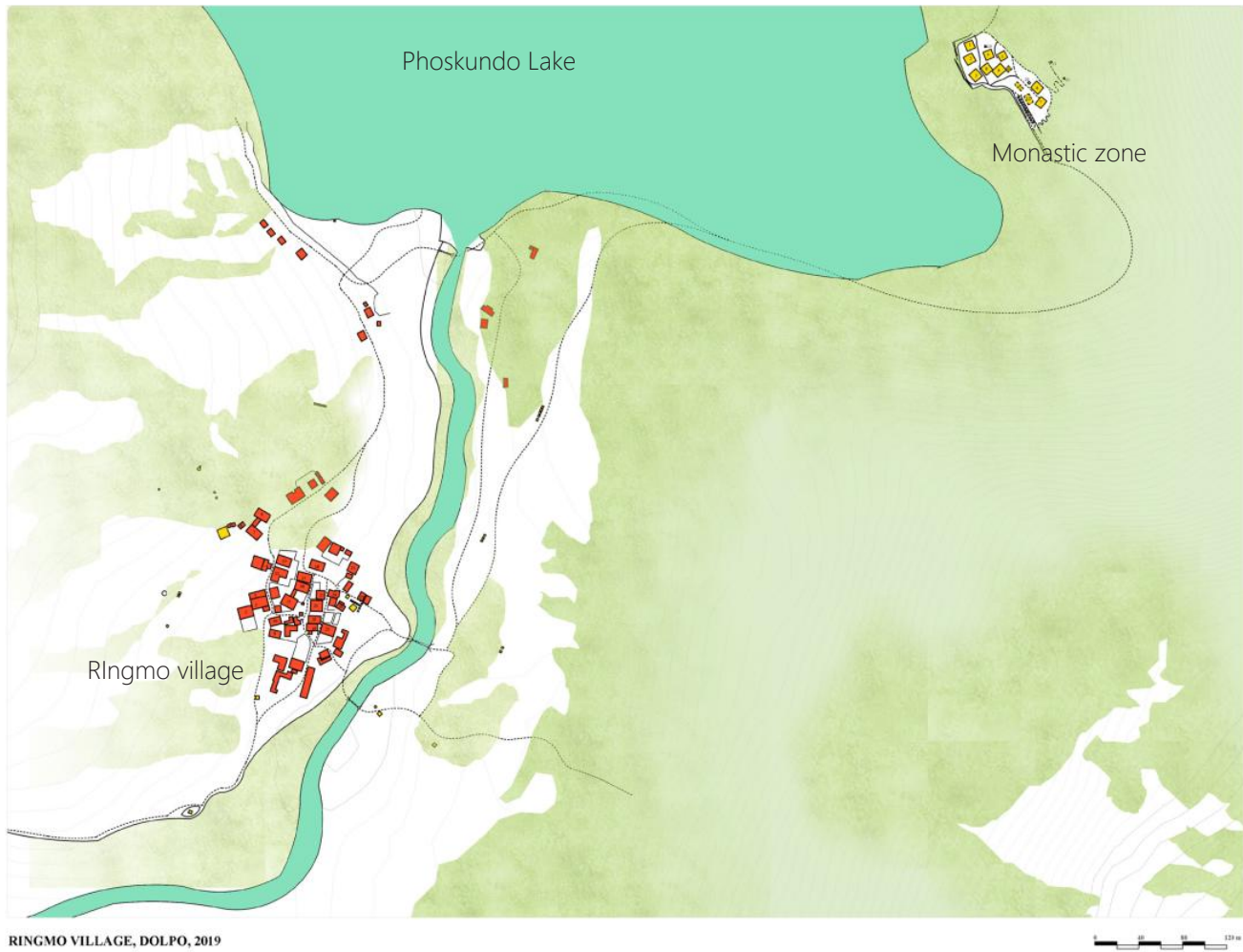
**The walled city of Lo Manthang (looking south) and its sprawling agricultural fields.** Photo: Luigi Fieni



**Shey-Phoksundo National Park**, the largest national park of Nepal with its total area of 3555 sq. km. was gazetted in 1984. The National Park along with its unique wilderness constitutes 3 buffer zones where human settlements with its unique culture are situated.

**Phoksundo lake**, famous for its turquoise colour, sits within an alpine semi-arid valley surrounded by steep slopes with patches of pine forest at an elevation of 3635m. The lake drains from the south where the village of Ringmo is situated. Further south, the river flows down a huge waterfall, a spectacular view after a 2 days trek from Sulighat the closest village connected by motor able road. The natural setting of the pristine blue water of Phoksundo Lake that spreads over 5 sq.km. is largely preserved and provides the backdrop for the walking trail to Upper Dolpo. It is a wetland with ecological importance which was enlisted as a Ramsar site in 2007.

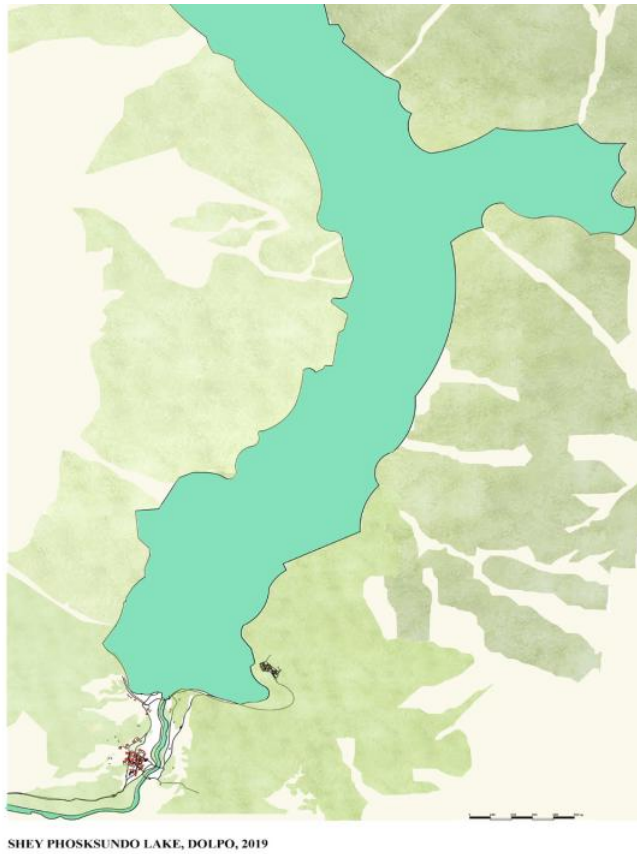
**The village of Ringmo** to the south of the Phoksundo Lake is rich in its culture and architecture. The practice of Bon religion prevailing in the region since the 13th century still continues in this village. To ensure the safeguarding of their own culture, religion and belief the sales of the land is limited within its community members. It has around 60 households built to the south of Phoksundo lake and a monastic complex on the cliff towards the south east facing the lake. The vernacular architecture blends well with the natural landscape and local lifestyle. Use of local materials like stone, clay and wood is seen in the construction with minimum fenestrations. The use of ground floor for cattle, first floor for living and the second floor for firewood and storage reflects the continued agriculture and livestock dependant life in this region. However, with the influx of the trekking tourists, tourism has become one of the major sources of income for the local community. With the harsh climate, most of the people move down to the winter camps or to the cities during winter (November-March) months.



**Map of Phoksundo lake with Ringmo village to the south and Monastic complex to the south east**  
Source: M. Kind, U. Furger and A. Joshi | Annotation: I. Karmakar

## DOLPO- Phoksundo lake and Ringmo village

By: Anie Joshi | ICOMOS Nepal



**Left: Map of Phoksundo Lake and the Ringmo village on the south**  
**Right: Phoksundo lake along the trail to Upper Dolpo**  
Photo: A. Joshi







**Top: The architecture and everyday life at Ringmo village**

**Down: View of the Ringmo village and the lake. The vernacular architecture blends well with the natural landscape and local lifestyle. However, with the recent arrival of modern building material, the aesthetic of the village is slowly threatening.**

Photo: A. Joshi



**Left: The southern side of the lake with boundary wall and tents.**

**Right: New construction nearby the lake**

Photo: A. Joshi

### Threats and challenges

The Phoksundo Lake in its natural setting attracts thousands of tourists every year to this region and has become a major source of income to the local community of Ringmo village. However, it has also brought along the threats to the Lake. The littering by the seasonal tourists camping nearby the lake has started polluting the water. With increasing number of hotels the sewerage disposal might be another major threat to the lake which will require immediate action plans. In addition, new hotels are being constructed nearby the lake which will need to be managed properly as the lands around the lake are private properties. To tackle these issues, the southern side of the lake has been fenced off for protection but no legal framework has been developed.



With the recent arrival of modern building material, the aesthetic of the village is slowly threatening. At local level, the new hotels being constructed should respect the traditional architecture style with integration of major services within and consider maximum protection of the lake in its natural setting. And the proposed national projects including a motorable road and luxury hotel should be assessed for its impact on the landscape and the economy of the local community. Quality tourism promotion will have less impact and major economic benefit to the locals. The community group discussion brought these important issues into attention and plans to work towards preparation of the Comprehensive Conservation and Development plan which brings hope for the safeguarding of this natural and cultural site.





## Discussions

Nepal is a country of diversity, both in respect to topography as well as communities. The landscape was created though the collision of the Indian and the Eurasian tectonic plates. The land was subducted, raised and folded creating the highest mountain in the world. When the air over the Tibetan plateau is heated in summer and rises, sucking in the moist air from the Bay of Bengal. These Monsoon winds bring moist air towards the mountains and as it rises there is heavy perception which has over millennia eroded away the landscape. People came to settle in this dramatic environment, having to deal with the forces of nature: earthquakes, landslides, floods and storms. They worked the land to carry out their meagre farming. Only in the valleys which regularly flooded with new silt or dried up lake beds are fertile ground. Here stepped terraces are created to grow paddy. These are the traditional landscapes of the pastoral and early farming communities.

These idyllic landscapes are still found, but they are fast being overrun by new developments. This includes the sprawling settlements and gigantic infrastructure projects that cut

though the landscapes, leaving deep scars. The romantic narrative of the traditional landscape might be far from reality, where development is seen as constructing buildings and infrastructure. People see development in leaving their fields and working in offices. The problem however doesn't necessarily only lie in this euphoria for material developments, but in the manner it is carried out. The problem lies in wrong or inappropriate planning and in many cases the total lack of planning. This is often closely linked to local governance, capacity of the system as well as financial policies. Funds are provided without adequate planning which often leads to projects that are high impact with little planning or even quality control.

There are certain needs that the communities have, and these cannot be disregarded. These needs change with time and exposure to different lifestyles. This isn't only linked to comforts and luxuries but also improved health and educational services. This often means improved transportation which till present in Nepal is restricted to motorized vehicles and the respective need for roads.

Traditional settlements are quickly changing. These could be living museums. However, the clearly defined boundaries often protected by a ring of deities are long shredded with sprawling expansions into the agricultural landscape. The traditional buildings are torn down and replaces with concrete blocks. This is fuelled by the construction market. Changes in societies have left people without community support in tasks such as building, which requires them to hire contractors. The traditional buildings could be kept and maintained as homestay, to impart information on traditional lifestyles to visitors while getting an income for the efforts.

A holistic approach is needed with multi-disciplinary expertise. There is need for land-use planning with clearly defined zoning plans. This would be linked to local governance. Enforcement can only take place using both carrot and the stick. This means there must be clearly defined regulations while also ensuring that the communities are ensured a livelihood,

whether through income sources and in certain cases through subsidies. This could be linked to heritage tourism or marketing of local products.

The link between regionalism and globalisation is a critical aspect which needs to be addressed in planning. There is a need for general awareness of tangible related intangible heritage. This would also need to be developed from the ground up, understanding of issues through education, the students that are the future. Issues such as the impact of climate change also needs to be taken into consideration. There is a need for further discussions as well as dissemination of this information, particularly to the planners and decision makers. The main stakeholders and authorities would need to understand characteristics, attributes, significance, threats and means of addressing conservation of Rural Landscapes.

**By: Kai Weise and Anie Joshi**

**The agriculture landscape along the settlement of Kagbeni with the backdrop of the arid mountain**

Photo: A. Joshi





