





Striving for Sustainable Development in the Modern Era: Traditional Natural Resource Management Practices and Challenges among the People of Limi Valley, Nepal

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Abstract. Traditionally, indigenous communities have played a pivotal role as defenders of forests, both flora and fauna. Living in the midst of nature, they view forests and the spaces in and around it as sacred. Taking the example of the Limi Valley nestled in the Humla district of the Karnali Province in Nepal, this paper examines the various ways in which practices of conservation and management of natural resources and biodiversity has been seamlessly interwoven into the lives of these populations since generations through traditional social institutions. For the indigenous people of the Limi Valley, traditional practices of natural resource conservation are a part of their culture, tradition and ecology. But with the rapid expansion of state led development of infrastructure, communication and transport in recent years, and outmigration of youth, the life of the community has undergone drastic transformation and the traditional institutions and practices have taken a hit. By drawing from qualitative research from the field consisting of in-depth interviews and group discussions, this paper also focuses on the changes taking place amongst the people inhabiting the Limi Valley as a result of policy interventions, the challenges that are being faced by the community and their efforts to manage and protect their natural resources through traditional practices in the face of modernity.

Keywords: Limi Valley, indigenous community, tradition, conservation practices, sustainable development

1 Introduction

Nepal is considered as a biodiverse-rich country, even though being small in terms of territory. The country encompasses complex topography and variation in flora, fauna and habitat. Since many generations, various local communities and indigenous groups in Nepal have been practicing traditional local governance systems and decision making. Despite significant changes in recent years, there are a number of cases which have successfully been continuing the traditional practices of conservation and management of biodiversity and natural resources despite expansion of modern legislations and policies. Since the time spanning hundreds of years, the various socio-cultural and ethno-racial groups residing in the different parts of the country have developed their own unique local community-based knowledge and practices which have been informally transmitted through the process of socialization, helping them adapt to the physical environment, and enriching the social milieu as well. A number of studies have documented this aspect of the Nepali society, of the ways in which communities have used their traditional, indigenous knowledge in order to manage and use natural resources in an environmentally sustainable way (The World Bank 1998; Karki and Adhikari 2015, Chaudhary et al. 2017).

However, there have been changes in these traditional community-based practices in recent times because of different reasons, but one of the significant features of these practices has been its resilience and it has managed to adapt, survive and be transmitted in the face of social as well as environmental changes (Karki and Adhikari 2015, Chaudhary et al. 2017). While traditional institutions and practices in natural resource conservation and management have been gradually withering away due to state led legal and developmental interventions, some of these traditional institutions and practices are still observed in the high, mountainous regions of Nepal which are relatively remote and isolated from state led development activities until recently. In such mountainous regions the major source of livelihood for the people is farming and allied activities, especially raising livestock. Because of the extreme climatic conditions which is extremely cold and dry, the productivity of the land is low. Thus, people living in these regions are mostly dependent on natural resources for their sustenance and livelihood and as a result have developed an intimate and symbiotic relationship with the forest and pastureland from which guarantees them security and from which they also derive a sense of identity and a thread of continuity from the past (Uprety 2008, Sherpa et al. 2009, Ning et al. 2013, Khatri 2020).

2 Research Methods and Data Sources

This study has used secondary data from the available literature for observation and examination of the topic, especially studies related to traditional practices of natural resource management. Constitutional and legal frameworks as well as policy documents have been used for analysis. Additionally, key informant interviews were conducted with different stakeholders such as the people of the Limi Valley, youth

and local leaders. A week-long field visit was carried out in September 2021 in Limi Valley where in person interviews and field observation was carried out. Additionally, a number of interviews were conducted via online mode and telephonic conversations. In order to have a better understanding and grasp of the historical and the transformations taking place in the Limi Valley, both ecological and socio-cultural, a group discussion was conducted which included men, women, local leaders and elderly citizens of the Limi Valley.

3 Limi Valley: Situating History and the Context of the Place

Limi Valley is a trans-Himalayan area situated in the northernmost part of the Humla district within the Karnali Province. Limi Valley functioned as a separate Village Development Committee (VDC), representing the smallest governing unit under the earlier centralized system of governance, before the formation of 753 local government units in the current federal structure. Limi VDC was integrated into Namkha Rural Municipality (RM) alongside three other VDCs -Hepka, Muchu and Khagalgaun- following the local body restructuring in the present federal set up. Notably, Namkha RM now stands as the largest local unit in Nepal in terms of geographical area, with Limi Valley encompassing nearly half (1201 square km) of its total land area.

Limi Valley's altitude ranges from 3000 to 6000 meters. Consisting of three settlements: Halji (3740 metres), Zhang (3930 metres), and Til (4100 metres), with Halji being the largest settlement areas-wise. Sparsely populated with approximately 150 households spread across the three settlements, with Halji having 96 households, Zhang having 33 and Til 25. Located in the heart of Halji settlement is the ward office that administers the Limi Valley. Lying in the transboundary region, Limi Valley's residents have to pass through the Nyalu Pass, which is situated at a staggering 4940 metres above sea level, in order to reach Yalbang or Simikot for accessing various municipal as well as government services. Cut off for six months annually, from November to April, due to heavy snowfall, residents of Limi Valley face challenges in accessing municipal and district services in Yalbang and Simikot and remain disconnected from the rest of Nepal as well. To the north, the Valley borders Purang County of Tibet, China which is easier to access across the border and remains open throughout the year (Goldstein 1974, 1975).

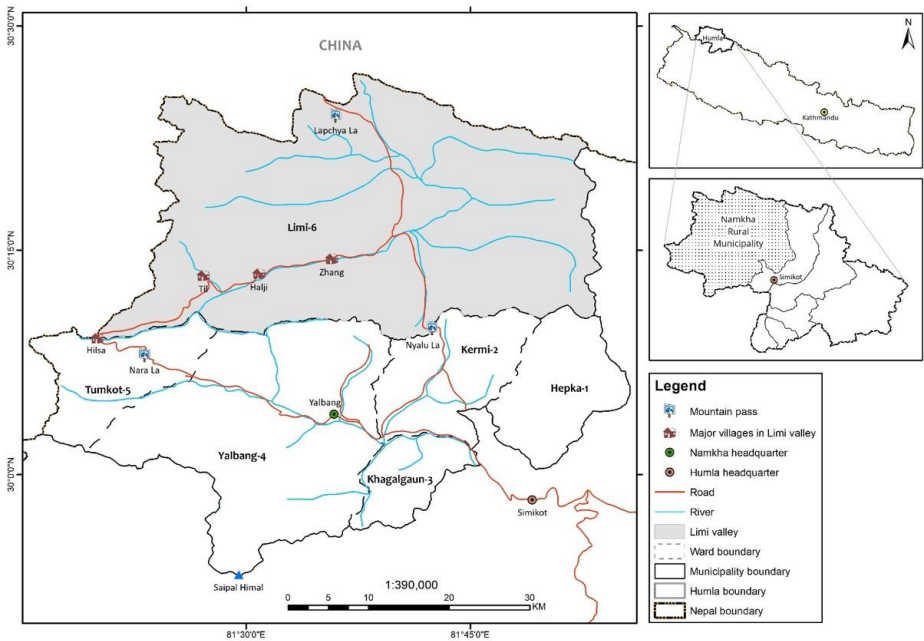


Fig. 1. Map of Limi Valley and Namkha Rural Municipality, Humla

The Valley is an extension of the western Tibetan plateau which comes within the political territory of Nepal. It holds sacred places for Hindus and Buddhists as Mount Kailash and the Mansarovar Lake are at a close proximity of the Limi Valley. Both Mount Kailash as well as Mansarovar Lake are visible from Lapcha Pass which is a border point located in Nepal. The Valley hosts ancient monasteries integral to social and religious life, dating back to the 11th century. Apart from this, there are two more monasteries, one each located in the settlements of Zhang and Til (Hovden 2013, 2016). These monasteries and the institutions associated with them depend on villagers for support and, in return, play crucial roles in local organization and ritual functions, including protection from natural disasters and other adversities (Hovden 2013).

Limi Valley had very minimum to almost no access to modern medical care, facilities and medicines until 1980s (Goldstein 1974). Adding to the woes of people is the poor physical infrastructure like lack of road connectivity, unreliable telephone services and health care facilities, among other things. Access to modern healthcare still remains challenging, with limited infrastructure and reliance on traditional Tibetan medicine as the available local health services are neither fully functional and fraught with problems such as being short-staffed, unavailability of life saving medicines, etc.

The development and expansion of physical infrastructure such as construction of modern buildings and roads have received huge boost in the recent years. But this emphasis on infrastructure development has altered traditional life and led to a reduction in livestock numbers with restriction in the access to pastureland across the Tibetan plateau. In recent years, the sight of livestock being carried from one place to another in caravans, people walking on the roads has now given way to occasional jeeps and tractors, especially in Hilsa, Yari, Tumkot, Yalbang, which were non-existent a few decades ago (Bhotiya 2018).

With subsistence farming limited by the adverse climate, Limi residents engage in diverse economic activities such as handicrafts, entrepreneurship, and trade across regions. Crops are grown only once a year because of the extremely cold climate. Since the meagre agricultural yield is unsustainable for the population, other economic activities are also undertaken. This problem is not unique to the Limi Valley but can be observed in other mountainous regions especially those located in the higher altitudes. The agricultural output is barely adequate for a little over half of the population for the entire year. Thus, in order to sustain themselves, the people have to undertake mostly trade and trade-related activities, embarking on arduous journeys across Tibet and neighbouring areas of Nepal (Saxer 2013, Goldstein 1974, 1975, Hovden 2016, Hovden and Havnevik 2022).

4 Formal and Informal Natural Resource Management Practices

In the present time, Limi community appear to be at a junction which is trying to adapt to national and provincial legislations along with their traditional knowledge. As of 2018, the forest areas adjoining both Halji and Zhang have been registered as community forests. Surrounding forest cover registered as community forests, coexist with traditional customary laws, demonstrating the strength of traditional practices. The local customary system of planning, managing and conserving natural resources in Limi Valley today is done in a way which encompasses both the traditional way as well as the local governance system. The local laws have evolved through time and been adapted by the people as a means of sustainability and continue to persist even today. Thus both set of laws, customary as well as national, operate in tandem and the people have adapted to a dual administrative set-up (Hovden and Havnevik 2021). The twin aims of community forestry were conservation and rural income generation (Saxer 2013). As the three settlements, Halji, Zhang and Til have their own forest areas, this registration of land as community forests have not had any significant impact, especially in terms of curtailment of traditional rights till now.

The smaller forest area near the settlements is overseen by each village's respective general assembly, while the management of the larger pastureland does not fall within the purview of the community forest. Instead, it is regulated by the joint village assembly and the collective leadership of all three villages. Decisions concerning regulations for pastureland shared by the three villages are made during

village assembly meetings, a tradition which has been upheld for many centuries. Livestock movement, grass and fodder collection, typically occur on a designated day which is decided by the village assembly meeting, with a focus on ensuring equal, or at least equitable access to these resources for every household.

The Limi community has established comprehensive guidelines and regulations for the management and utilization of natural resources. They have designated specific timeframes for grazing livestock in distinct blocks of pastureland on a rotational basis. This customary rule primarily ensures sustainability, prevents overexploitation of the pastureland giving it time to regenerate. The schedule for accessing the forest, collecting dry firewood, and grass is determined through the village assemblies conducted twice a year, where each household head participates.



Fig. 2 Village Assembly Meeting, (Picture by Astrid Hovden)

Each village settlement has its own pastureland, and there are also shared pasturelands situated farther from the villages. The opening and grazing times for these common pasturelands are systematically determined through local consensus during village assembly meetings. Livestock are moved to different designated blocks in a rotational manner, and everyone is required to adhere to these regulations. Violations incur varying penalties; cutting green trees, animal trespassing, and not adhering to scheduled grazing times result in smaller fines in cash or cereals, while hunting or killing wild animals is penalized with heavier cash penalties (Basnet and Chaudhary 2017).



Fig. 3. Farmland, Halji, Limi Valley (Picture by Ishwari Bhattarai)

In the Valley, economic activities such as farming, irrigation and its maintenance, harvesting are closely embedded within the cultural practices and natural cycle. In all the three settlements, residents exercise controlled access to the resources in their respective village forests. The village assembly determines the timing for collecting firewood and other forest products while strictly prohibiting the cutting of green trees and saplings. Violation of this rule results in penalties, either in the form of cash or grains. A robust religious institutional organization serves as a deterrent against harming animals and damaging plants and trees. The illegal hunting of wild animals and the use of firearms incur the highest fine, reaching up to a cash penalty of NRS 50,000.

5 Emerging Issues in Nature, Culture and Local Administrative Aspects of Limi Valley

Amidst the various issues concerning their traditional and customary ways of life which includes the management and conservation of natural resources, the people of Limi Valley seem to be at crossroads, facing new challenges. A significant challenge is human-wildlife conflict, with crop losses reported due to wildlife. Ghimire (2018) in his study noted that around 23 per cent of the households in the Valley had reported some crop loss because of wildlife. Despite penalties, illegal wildlife hunting and trade remains yet another concern. Some studies as well as accounts of the Limi

Valley pointed that few outsiders from neighbouring settlements visiting the Valley might be involved in illegal wildlife hunting and trade (Saxer 2013, Ghimire 2018). In 2013 four snow leopards had been killed for illegal trading (Ghimire 2018). These activities have necessitated the role of local religious leaders of the monasteries in discouraging such activities with illegal hunting attracting hefty fines, this issue remains significant.

A Nepali scientist, who conducted research in the Limi Valley and the surrounding Humla region, highlighted the enduring presence of cross-border illegal wildlife trade in the area (Ghimire 2018). Traders from India and China illicitly engage with locals, fostering close and secretive relationships while providing substantial financial incentives. This collaboration often leads locals to collude with these illegal wildlife traders. Notably, local religious leaders and the monastery play a crucial role in discouraging acts of killing and hunting wildlife. The administration of oaths and the imposition of high penalties appear to have significantly deterred widespread hunting of wild animals.



Fig. 4. Rinchenling Monastery at Halji, Limi Valley (Picture by Ishwari Bhattarai)

Along with the aforementioned issues, coping with and surviving the frequent natural disasters is also something that people of the Limi Valley have to deal with every passing year. These recurrent natural disasters, including floods triggered by glacial lake outbursts, pose threats to the Valley's social, cultural, and ecological fabric. In the year 2011 a disastrous flood swept away houses in the Halji settlement and nearly devastated the 11th century Rinchenling Monastery. Even

though the Limi residents were able to save their lives from this tragedy, almost 25 acres of farmland was swept away (Hovden 2011). These natural and human induced annual floods pose a grave menace to the socio-cultural as well as geographical environment of the Limi Valley.

6 Migration as an Upcoming Concern

Please The phenomenon of young people leaving their villages in the hills and mountains of Nepal for employment opportunities is quite common, and Limi is no exception to this trend. Historically, Limi Valley resisted outward migration, implementing strict regulations and fines for individuals and families choosing to relocate permanently. The village authority retained control over the properties of those who migrated permanently. Non-compliance with traditional rules resulted in exclusion from village events, the selection of authorities, and participation in religious worship at the monastery. lies who migrated away permanently. The property of those individuals and families who migrated permanently is kept under the control of the village authority. Those who do not adhered to the village rules are not allowed to participate in village functions, selection of authorities, or perform religious worship in the monastery. The strict monastic recruitment rules also appear to be one of the main reasons for villagers to migrate elsewhere. Additionally, the obligation for the eldest son to return to the village and assume the role of the head of the household upon his father's retirement at the age of 65 years has often resulted in the disruption of young men's education. A student who was studying in Kathmandu said:

Few years ago [in 2018] I visited my village [Til]. To my surprise, I found very few young people of my age there. Nearly all the youths had migrated to Kathmandu or India for higher education or employment, turning my village into what seemed like an "old age home." The absence of my peers made me feel isolated, and with fewer family members many homes have experienced a decline in the size and number of livestock. Numerous cattle sheds stood empty, as many of the young and economically active individuals engaged in work across the border in China, for better or worse.

This suggests that various transformations are occurring concurrently with the outmigration phenomena. Til, the smallest settlement in terms of population, exhibits the highest number of migrants, whereas Zhang, the second-largest settlement in Limi, follows closely. In contrast, Halji, the largest settlement, experiences the lowest outmigration due to its strict adherence to the traditional rules that discourages outmigration till now.

Due to limited opportunities in comparison to the aspirations of the young population, it is likely that this group may consider relocating from the village in the future. The young generation from Limi Valley, currently residing in Kathmandu, anticipates "some reforms" and "relaxation" in the stringent traditional rules enforced by the village authorities for those who have migrated, while the older generation continue to adhere "strictly" to traditional rules and show little openness to flexibility.

Even though they have migrated, these youths expressed a desire to maintain a connection with the village and wish to ‘contribute’ to the social development of Limi Valley. They appeared eager to explore opportunities for creating prospects for young and educated individuals, instigate changes in the current practices, entrepreneurship, tourism activities, development of local woollen clothes, and handicrafts so that educated youths could be enticed to return to the Valley.

On the contrary, traditional gender dynamics is perceived as not “gender-friendly” by young women in the Valley. A young woman, currently residing in Kathmandu expressed difficulty in adapting to the dominance of male members in almost all aspects of village social life which appeared to be discouraging women members to return to the Valley. She said:

In the village, women lack freedom. Household heads are predominantly men. And even in the few women-headed households who represent village assemblies, all public decisions are dominated by male members. We aspire some level of independence and freedom, but exercising any such freedom is challenging there.

These socio-economic and inter-generational shifts are likely to impact the traditional natural resources management systems and practices in the Valley. Concerning the decline in pastoral nomadic practices, a young man emphasized the positive impact of controlled and rotational grazing on regeneration of pastureland said:

Our life and livelihood are closely tied to farming, animal husbandry, and optimum utilization of natural resources for need rather than greed. The decline of pastoralism could also have a negative impact on our life and livelihood. Controlled and rotational grazing is also beneficial for the regeneration of pastureland. Over reliance on a single economic activity or the over exploitation of a particular resource may negatively affect our lives and the environment. We maintain a symbiotic relationship among nature, environment, and culture, with strict rules passed down through generations to conserve water, wildlife, forest produce, medicinal herbs, and to avoid overgrazing in the pastureland. This holistic perspective among local people emphasizes the importance of balance between nature and culture, fostering a consciousness that plays a pivotal role in sustainable development and coexistence.

7 Conclusion

For centuries, local communities have been played a central role in ensuring that the natural resources are managed in a sustainable way. Through evolving rules and regulations and a system of penalties they have safeguarded the ecology (Upriety 2008, Gilmour and Fisher 1991, Karki and Adhikari 2015, Basnet and Chaudhary 2017). Being institutionalized both through formal and informal channels, these knowledge systems are considered important for the welfare of the community as a whole and are transmitted from one generation to the other as a part of the culture. Even though these traditional knowledge systems have weakened or become extinct

because of the government's control, national level policies in forest and natural resource management and introduction of National Parks and Wildlife Reserves which largely restricted local communities traditional use and access to resources. Despite these changes, a few of them still survive. Even though grappling with issues such as migration and changing gender dynamics, the Limi Valley case highlights the resilience of local communities in preserving traditional knowledge systems. Recognition and involvement of external institutions without acknowledging these traditions risk irreversible losses, urging a balanced approach for sustainable development.

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