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Eroding Pillars: The Status of Local Institutions in Resource Management in Leh

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Eroding Pillars: The Status of Local Institutions in Resource Management in Leh

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The region of Leh in Ladakh, part of the Indian Trans-Himalaya, is marked by one of the harshest environments for agriculture and human habitation. Biophysical limitations—such as extreme temperatures, low precipitation, thin soils, and sparse vegetation—lead to strong seasonality in natural resource availability and severely restrict productivity. Only a narrow range of floral and faunal species—adapted to cold-arid conditions—can persist in such environments (Hartmann 1999; Fox et al. 1994). These ecosystems remain ecologically sensitive, and even minor disruptions—whether climatic or socio-economic—can have long-lasting consequences.

Despite these constraints, communities in Ladakh have sustained their livelihoods for generations through adaptive strategies grounded in deep ecological knowledge specific to mountain environments. Traditional agro-pastoral systems, shaped by an intimate understanding of the region's terrain and climate, have enabled long-term survival within this fragile ecosystem. Acknowledging the importance of these systems in ensuring food and livelihood security under extreme ecological constraints, the Food and Agriculture Organization (FAO) has recognised Ladakh's traditional farming practices as potential "Globally Important Agricultural Heritage Systems (GIAHS)" (FAO 2008). However, this delicate balance is increasingly being challenged. Over the past few decades, rapid socio-economic and spatial transformations—driven by tourism, military presence and infrastructural expansion—have led to shifts in land use, livelihood patterns, and food systems (Dame 2018; Dame et al. 2019; Müller et al. 2020). Erratic weather conditions, driven by changing climate, are also posing growing risks to ecological stability. These converging pressures are placing significant strain on the traditional systems and local institutions that have historically governed sustainable resource management in the region.

Local Institutions in Resource Governance

Ladakhi communities historically developed a network of interlinked institutions—social, cultural and religious—that shaped local governance and resource management. At the village level, roles such as the *Goba*, *Chhurpon*, *Lorapa* and *Lurhupa* played essential roles in coordinating agricultural and pastoral practices. These institutions ensured equitable distribution of resources and enforced seasonal responsibilities via social norms. Though differing in scope, they operated under a collective ethic of responsibility, embedded in communal norms and aligned with ecological cycles.

The *Goba*, or village head, traditionally held the highest authority in local governance, managing community affairs, resolving disputes, and overseeing collective welfare. This position was not hereditary; instead, the village community selected the *Goba* based on experience, leadership qualities, and commitment to public service. The *Goba* played a central role in ensuring fair access to resources and coordinating agricultural and pastoral activities at the community level. The position also involved liaising with neighbouring villages, monastic institutions, and government bodies on matters of resource management, development planning, and administrative coordination. Importantly, the *Goba* also served as an umbrella authority, under whose supervision other traditional institutions – such as the *Chhurpon, Lorapa* and *Lurhupa* – operated. This structure helped maintain coherence and coordination among various roles within the village.

Over time, however, the structure and role of the *Goba* have undergone significant changes. A major factor is the declining interest among villagers, meagre income, reduced social standing and the availability of alternative livelihood opportunities. Additionally, the introduction of formal governance systems, such as the Panchayati Raj, have shifted many responsibilities to officially-recognised bodies. This overlap, along with confusion over institutional boundaries, has further challenged the *Goba*'s relevance and reduced its effectiveness in village affairs. As a result, the process of selection has shifted from a consensus-based approach to a rotational system, weakening the continuity and perceived legitimacy of the role. These changes have gradually diminished the *Goba*'s functional authority and symbolic status, impacting not only the role itself but also the traditional institutions that once operated under its guidance. Despite these transformations, the *Goba* system still exists in every village, though with more limited influence and increasingly parallel to formal governance structures.

Water management in Ladakh was traditionally overseen by the *Chhurpon* (which translates to 'water lord'), a designated community member responsible for the equitable distribution of glacial meltwater used for irrigation. In Ladakh's cold-arid environment, where agriculture is entirely dependent on controlled cryosphere-fed irrigation, the role of the *Chhurpon* was vital. The water distribution system followed a rotational schedule, ensuring that each household received a fixed time slot to divert water to their fields. This not only maintained fairness but also optimized the limited water supply.

The *Lorapa*, meanwhile, was responsible for monitoring free-grazing livestock to protect cultivated fields from damage. Traditionally, throughout the agricultural season, the *Lorapa* played a crucial role in preventing animals from straying into sown fields. If livestock were found grazing in prohibited areas, they were taken to the *Lora* – an enclosed holding space – where they were kept until the owner paid a penalty, as per community rules. This system not only discouraged negligence but also reinforced collective accountability in managing village resources. In recent years, however, urbanisation and livelihood diversification have led to changes in livestock composition, herd sizes, and land-use patterns. Improved fencing around agricultural fields has reduced direct dependence on human monitoring, while individuals appointed as *Lorapas* may now be engaged in other forms of employment, limiting their ability to carry out duties consistently. As a result, both the significance of the task and the status of the post have seen a gradual decline.

The *Lurhupa* was primarily responsible for the maintenance and protection of tree plantations, which could be either community-owned or managed by monastic institutions. Their duties included irrigating trees, repairing fences, and preventing free-grazing livestock from entering plantation areas. This role was significant not only for afforestation but also because these plantations served as important sources of fuelwood and timber – critical resources in Ladakh's cold and high-altitude environment. Traditionally, *Lurhupas* were compensated through a mix of in-kind benefits, such as access to land on lease from the monastery for farming, and collection rights for firewood and forage. In recent years, however, especially in monastic plantations, there has been a growing trend of recruiting non-locals to carry out these responsibilities, with such workers typically paid in cash (Ladon and Garkoti 2024). This shift, largely due to declining interest among locals – many of whom now pursue off-farm livelihoods – has weakened the traditional ties between villages and monastic institutions, which were once based on mutual dependence and shared resource management.

Religious institutions, such as the Hemis Monastery, played a complementary role by leasing land for subsistence agriculture in exchange for labour, thereby offering livelihood opportunities—such as the role of *Lurhupa*, already embedded in local governance structures to manage monastic plantations—alongside their religious and cultural functions. In parallel, social customs like primogeniture, polyandry, and celibacy in monastic life served as population-regulating mechanisms that reduced pressure on limited land resources and maintained household viability

Together, these practices constituted an adaptive and cohesive system of governance, supporting resource sustainability through the integration of ecological knowledge, institutional legitimacy and social cohesion. However, as new economic opportunities and formal governance frameworks gain prominence, these traditional systems, once essential for collective survival, are now facing significant challenges. This issue brief examines this transition, assessing the current status, key challenges, and future prospects of local resource management institutions in Ladakh amidst rapidly evolving socio-economic conditions.

Table 1: Traditional roles and shifts in key local institutions in Ladakh

Institution	Role	Shifts
Goba [village head]	Selected by consensus or rotational system; Summoned village gatherings, led consultations, maintained customary laws, resolved conflicts, and kept demographic and scheme records; Act as liaison with government; Oversee communal land, water access, and pastures.	Rotation-based selection increasingly common but authority has weakened; Panchayati Raj overlaps with *Goba* system; Participation is becoming symbolic in many cases, with declining public engagement and limited decision-making power.
Chhurpon [water manager]	Selection based on trust and irrigation knowledge. Manage cryosphere-fed irrigation, ensuring equitable distribution and timely access and avoid conflicts.	Land-use changes (e.g., farm abandonment, tourism development) and increased use of motorized pumps have reduced reliance on traditional irrigation system, weakening collective water management norms.
Lorapa [livestock monitor]	Selection by rotation or lottery; Number of *Lorapas* adjusted to village size; Monitors free-grazing livestock and enforce penalties on defaulters; Help enforce seasonal grazing regulations and reduce crop damage.	Declining participation; changes in herd composition and improved fencing have reduced functional relevance.

Lurhupa [plantation caretaker]	Household appointed by monastery or *Goba*; Protect plantations from browsing/theft, ensure irrigation and maintenance; In return, received subsistence farmland from monastery.	Decline in local participation, some roles now outsourced to paid labour.
Tsogs [groves/forest] (Angchok et al. 2016)	Initially open-access areas used for grazing and fuelwood. In the 1980s, the *Goba* began managing them as common property to prevent overuse; rules developed to control usage and maintain sustainability; stakeholders include *Goba*, agro-pastoralists, seabuckthorn harvesters, tourists, women's groups, and religious institutions.	Shifts in usage patterns: fuelwood demand has declined due to modern energy sources, while seabuckthorn harvesting, pasture use, and recreational tourism have increased.

Source: created by the author

Drivers for Change

The weakening of the institutions of the *Goba, Chhurpon, Lorapa* and *Lurhupa* reflects broader shifts in livelihoods, land use, and social structures (Table 1). External influences, such as government policies, market integration, and expanding tourism, have altered the relevance and functionality of these roles. The wider availability of subsidized food through ration stores, along with increased access to wage-based employment, has reduced economic dependence on traditional farming.

At the community level, population growth and a gradual transition toward non-agricultural livelihoods have further limited participation in these roles and weakened community engagement. The demanding nature of these positions, combined with limited financial incentives, particularly discourage younger generations from taking on these responsibilities.

In many areas, the resources these institutions once governed, such as irrigation water, grazing lands, and fuelwood, are no longer central to everyday life as they once were. Changes in land-use, including farmland abandonment, altered cropping patterns, and increasing reliance on private water pumps, have reduced the need for coordinated management. The conversion of agricultural fields into tourism infrastructure, private business establishments, and sites for mass brick production has further compounded these shifts. These trends, while not uniform across the region, signal a shift away from collective norms toward more individualized resource use, and are exacerbated by erratic weather patterns and broader socio-economic changes.

Additionally, eligibility for many traditional leadership roles was historically tied to households that fulfilled communal obligations through contributions of resources or

labour. This system of selection, while fostering commitment and accountability, also resulted in underrepresentation of certain social groups, particularly those from traditionally non-landowning groups or the artisan communities. Women representatives were notably absent. Today, while examples of more inclusive representation exist in parts of Ladakh, such cases remain exceptions (Bajpai et al., 2020).

Way Forward

Despite the challenges, local institutions in Ladakh continue to hold significant value in managing common resources, with their deep-rooted knowledge and practices. Their potential for adaptive management remains critical in Ladakh's fragile ecological context. However, for these institutions to thrive amidst changing socio-economic conditions, they must be integrated more effectively into contemporary governance frameworks.

One potential model is the *Dzumsa* system in northern Sikkim, where traditional institutions have been successfully adapted to formal governance structures (Ingty et al. 2017). This integration has enhanced livelihood security and sustainable resource management, offering valuable lessons for Ladakh. Similarly, the resilience of some traditional systems, such as the *Amchi* system, which has been formally recognized under Sowa Rigpa, also known as the traditional Tibetan medical system (Ministry of Ayush 2019) for providing local health services, demonstrates how a combination of traditional knowledge and formal recognition can ensure the continuity and relevance of local institutions. Similarly, *tsogs*—community-formed groups aimed at resource management—have emerged as adaptive, grassroots responses to contemporary resource pressures, demonstrating the persistence of collective action in evolving contexts.

A notable example of the continued relevance and adaptability of traditional institutions is the recent strengthening of the *Goba* system. In April 2025, the community of Dezhi—a diverse settlement of migrants from across the region—appointed its first *Goba*, reflecting an age-old trust in the institution's ability to offer local representation, resolve conflicts, and strengthen community ties (*Indus Dispatch* 2025). Similarly, the first *Goba* meet in 2022, which brought together *Gobas* from various villages across the Leh district (Bajpai and Kothari 2023), illustrates a growing recognition of the need to reinforce traditional leadership roles amidst modern socio-economic and environmental challenges. Such stakeholder engagements are vital for strengthening local governance, encouraging shared learning, and building the adaptive capacity of institutions.

In the face of modern challenges, local institutions can adapt by embracing technological solutions that align with the community's needs and preserving their core functions. Furthermore, fostering stronger collaboration between informal and formal governance actors is crucial for the development of more sustainable and inclusive resource management models.

To enhance the effectiveness and longevity of local institutions, it is essential to address barriers to participation, particularly those based on gender and social inequalities. An inclusive approach can engage younger generations, ensure intergenerational knowledge transfer, and empower marginalized groups. This inclusivity will revitalize the traditional systems, making them more responsive to the current socio-economic and environmental context, and preserving Ladakh's unique cultural heritage and resources for future generations.

Recommendations

Future policy should prioritize:

- developing a hybrid model that blends traditional knowledge with modern governance systems to ensure adaptability and long-term sustainability.
- expanding the roles of local leaders, such as of the *goba*, through training and capacity-building programs to strengthen their relevance in contemporary governance.
- promoting youth involvement in traditional institutions through incentives, recognition, and opportunities for intergenerational knowledge exchange.
- encouraging formal institutions to adopt inclusive decision-making that engages women, youth, and marginalized groups, thereby strengthening equity and representation in resource governance.
- supporting community-led initiatives that reinforce traditional ecological knowledge and strengthen collective management practices.
- facilitating research into sustainable resource management models rooted in local traditions to safeguard biodiversity, cultural heritage, and food security in ecologically sensitive regions.

Conclusion

Local institutions in Ladakh have long been pivotal in maintaining social cohesion, ensuring resource distribution, and supporting community well-being. However, rapid socio-economic shifts, evolving governance structures, and growing environmental pressures have significantly weakened these institutions. For these traditional systems to remain effective, there is a pressing need to integrate them with modern governance frameworks through capacity building, legal recognition, and adaptive strategies. Strengthening community participation, ensuring inclusivity, and supporting these institutions are critical for preserving Ladakh's cultural heritage while enabling sustainable governance in the face of contemporary challenges.

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