

# PASTORALISM IN SHIMSHAL: ADAPTING OLD PRACTICES TO MEET NEW CHALLENGES

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## Abstract

Shimshal is one of the valleys in Karakoram most favourably endowed with pasture resources. The pastures are a major asset of the community and a stable feature of agricultural practice. However, in recent years pastures have become increasingly difficult to access and the pastoral workforce has been declining, threatening the sustainability of combined mountain agriculture and the livelihood of local farmers/herders. There are many factors behind this change. Due to increased outmigration and the lack of interest in pastoralism among the youth, it is hard to find skilled persons who can endure the harsh conditions of life in the pastures, and pasture management responsibilities have shifted from male to female household members. At the same time, however, farmers/herders of Shimshal are trying hard to resist encroachment on their ancestral lands and fend off territorial claims from neighbouring communities and external interference that could lead to their dispossession. This article examines the role of pastoralism in ensuring the social and economic well-being of the Shimshal community. It also looks at how community members have adapted their pastoral practices in the face of rapid social, economic and environmental changes.

**KEYWORDS:** gendered division of labour, Hunza, Karakoram, pasture disputes, shrinking pastoralism

## Introduction

For pastoral communities, resilience means the capacity to respond to challenges such as territorial dispossession, external developmental interference, socio-economic change, and labour shortages. This could be done in a number of ways: adapting mobility patterns and herd size and composition based on the available workforce; restructuring local governance; and increasing community participation in herd management practices (Dong, Liu and Wen 2016; Kreutzmann 2004; Nori and Scoones 2019, 2023; Robinson, Jamsranjav and Gillin 2017; Singh and Kerven 2023). This raises the question as to what role traditional institutions play in maintaining a practice that has long faced

external threats and been exposed to internal challenges. Community institutions that regulate resource management are often perceived as stable and stagnant entities that carry on inherited practices. Such a limited perspective obscures and undermines the dynamic way in which behavioural patterns adapt to changing societal, political and economic conditions. Mountain communities are often compelled to change their way of living, sometimes at short notice, and inherited livelihood practices have to be adapted and modified. To understand these processes, it might be helpful to look beyond the notion of indigenous knowledge and familiar activities as the mainstay and central aspects of regulation.

### *Transforming combined mountain agriculture*

Two salient components of resource management can help us analyse social and economic changes in the high mountain regions of Asia. They are water and pasture management, the two pillars of combined mountain agriculture (Ehlers and Kreutzmann 2000; Kreutzmann 2000, 2009, 2023a). Both require communal efforts and embody rules and regulations that provide insights into community structures. They form the backbone of ‘traditional’ mountain economies that have undergone significant transformations in recent decades. Both strategies are easily distinguishable from ‘modern’ interventions. Therefore, they are sometimes misconstrued as indigenous knowledge systems and archaic practices, which overlooks their capacity to cope with external interventions and internal transformations.

### *Disputed commons*

The backbone of these management systems has been structural elements that seem to persist over long periods of time with moderate modifications and adaptations. Often the spatial share in a watershed or a communal pasture ground does not change much over time. Irrigated lands often constitute the nucleus of village oases engaged in combined mountain agriculture; at the same time, vast barren lands, variable rangelands and scattered pastures expand to the peripheries, contacting property spheres claimed by governments and neighbouring villages. Their borders might be disputed by encroachers and other claimants. The probable outcome might be that user groups (a cluster of settlements, villages and/or lineages) and their respective entitlements (in terms of land property, water rights and pasture accessibility) might be altered and modified. Powerful actors confront local communities that act in solidarity to defend common interests. This could affect communal assets, decreasing benefits from natural resources and shrinking the community’s wealth structure.

Pasturelands have become the last remaining asset of pastoral communities

in recent years. Often these spaces and their borders are disputed, either when space is required for communal projects such as biosphere reserves and national parks or when neighbouring communities claim traditional rights over barren lands and pastures. The latter often happens when these lands start being used for other profitable ventures such as mining and trophy hunting. Suggesting the need for a ‘new narrative’ about pasture conflicts, Scoones and Nori write: ‘Conflicts are the result of long-term neglect of pastoral areas by the state, the fragmentation of local authority, increasing social stratification, and resource grabbing, exacerbated by the instrumentalisation of grievances and the availability of small arms’ (Scoones and Nori 2023: 131). These issues hit local communities hard and pose additional challenges for conflict resolution and reconciliation.

Pastoral resilience, local governance and institutional configurations have been challenged from two directions. First, there are internal forces that put pressure on pastoral practices and their adaptive capacities. Second, there are external forces that result in legal disputes over property rights, unconsolidated spatial boundaries and encroachment into inherited lands. These forces also include attempts to dispossess pastoralists through government interference and claims for unsecured rights to pasture property. Both of these internal and external factors threaten the survival of pastoral practices and may have contributed to the shrinking of pastoral spaces in High Asia (Kreutzmann 2013, 2016, 2022, 2023b). The perceived antagonisms between ‘tradition’ and ‘modernity’ must stand the test of their role in developmental agendas and community and household debates. Critical challenges of adaptation to market conditions, balanced cost efficiency and selective livelihood options need to be positioned along the tradition-modernity spectrum.

### *Cost-efficient ‘traditional’ systems*

In previous times, the management costs of irrigation and animal husbandry were low and mainly took the form of household labour or community obligations. Generations-old irrigation channels were managed in an extremely cost-efficient manner as the community used village resources to nominally remunerate the service providers in kind (Agarwal and Narain 1997; Aubriot 2022; Dörre 2023; Dörre and Goibnazarov 2018). Recent expansions of irrigation networks were state-financed or donor-initiated ventures. Their management cost is significantly higher and requires monetary remuneration for water guards and workers. Most of these funds are generated outside the village economy and depend on remittances from migrants.

A similar challenge lies ahead for pastoral practices in general and specifically for the adaptive capacities of village communities in the Karakoram

Mountain region and the Hunza Valley (Kreutzmann 2004, 2012, 2015). The Pamir region south of the Central–South Asian watershed was selected for a number of reasons. The region has witnessed significant infrastructural, political and socio-economic changes since the last century, thus putting the adaptive strategies of communities to the test.

### Shimshal pastoral practices: adaptive capacities on the decline?

The case study sheds light on some of the challenges and opportunities faced by mountain communities exposed to strong winds of change. Empirical evidence was repeatedly collected in the Shimshal Valley between 1985 and 2023. Observations gathered from nearly four decades offer insights into a transformation process brought about by various factors – infrastructure developments such as the Shimshal road; educational attainment that led to a shortage of agricultural labour; outmigration; and disputes about territorial boundaries (Benz 2014, 2016; Butz 1996; Butz and Cook 2011; Cook and Butz 2011, 2021; Ehlers and Kreutzmann 2000; Luxom et al. 2022; Ptáčková 2020). The opening of the Shimshal road in 2003 connected the village of Shimshal with the Karakoram Highway and allowed regular vehicular traffic for the first time. This two-decade-old innovation provided an accelerating factor for all the processes of change in Shimshal.

Focusing on the Shimshal community, which has the most extensive but difficult to access pastures, this study shows how social and economic changes have forced pastoralists to invent new methods for managing their flocks of yaks (*zugh*), sheep and goats (*kla*) throughout the year. As the workforce has shrunk, there are not enough people who can spend long periods of time in remote pasture settlements and carry out tasks related to shepherding and milk processing. This threatens the sustainability of pastoralism within the community commons. The difference between irrigation and pastoralism is that water management is centred in the village while pastoral duties often have to be done far away in remote pastures and for longer periods of time. It is relatively easy to find labourers for irrigation, but pastoral management requires special skills, physical endurance and long absences from home. The discussion will focus on the transformation of Shimshal's pastoral practices over the last century and possible methods and solutions for adaptation in the future.

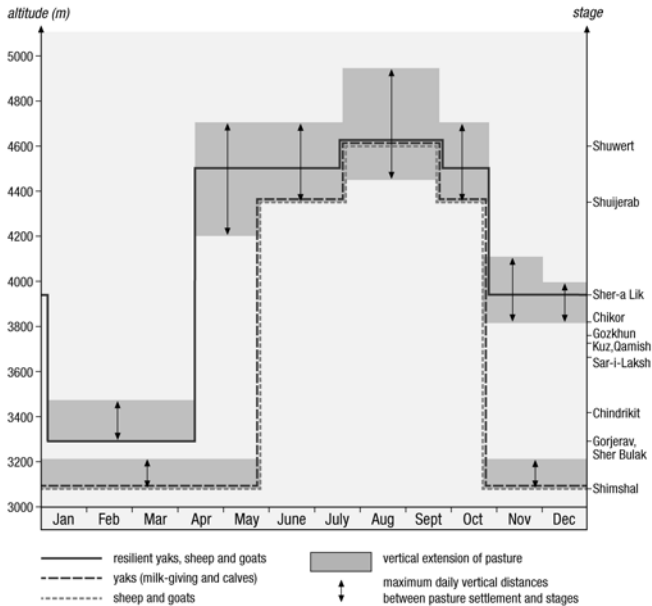
#### *Inherited pastures and indigenous management practices*

Local historiography and oral traditions suggest that Shimshal was initially settled seventeen generations before the present by an ancestor named Mamusing,



that are grown close to seasonal pasture settlements. About 300 hectares of irrigated cropland (barley, wheat, potatoes and fodder crops) are cultivated by 266 households; agricultural landholdings are larger than in other Hunza villages (Ali and Butz 2003; Butz 1996; Fontanari 2022; Hussain 2016). The compact oases form a stark contrast to extensive, scattered, variable and dispersed pastures in side valleys (*jerav*). This second and dominant pillar is characterised by pasture utilisation in the Shimshal Pamir, Zardgarben, Ghujerav, Lupghar, Malangutti, Momhel and Yazghil valleys, which connect with the centre of crop farming in the village over comparatively long distances, involving walking for one to three days (Butz 1996; see Figure 1). No pasture can be reached by vehicular traffic. Besides yaks (*Bos grunniens*), human portage is the main means of transport. During the last generation, a number of donkeys (*Equus asinus*) were bought from neighbouring communities for carrying loads between camps and settlements (Khan and Rahman 2009; Wajid et al. 2023). Cattle are late additions to the flock and mainly stall-fed with residues and alfalfa (*Medicago sativa*) from nearby fields and kept in the village for daily milk supply for household consumption. Pastoral resources range in an area extending up to around the 5,000 metre contour line, offering ample grazing land for sheep (*Ovis*), goats (*Capra*), yaks and donkeys. The Shimshal administrative district covers an area of about 2,700 square kilometres, a quarter of the former principality of Hunza, and is larger than the Khunjerab National Park, which is about 2,300 square kilometres (Butz 1996). Half of the area of the Karakoram Mountains is by and large suitable for animal grazing (Khan 2003). Shimshal has the largest pasturelands of any single community here; its importance is reflected in its major provision of livestock revenue to the ruling family of Hunza for many generations (Kreutzmann 2015, 2020).

Seasonal high-altitude pastures are approached from mid-May, when flocks leave the household pens in Shimshal village and are brought individually or in groups to Lupghar in the lower Shimshal Valley, to Ghujerav and Yazghil or to the most important pasture area of the Shimshal Pamir. Shimshal Pamir was reached in former times via the Zardgarben and Shatchmerk passes (see Figure 1). Since 1996 the approach route has followed the Pamir-e Tang, a new access route built by communal efforts (*nomos*). In most cases, lower mid-level pastures are visited first before the summer season is spent at the highest elevations (see Figure 2). Non-lactating yaks and robust sheep and goats are kept outside the village for most of the year.



**Figure 2.**

Seasonal migration of different flocks from Shimshal village towards seasonal settlements at higher altitudes.

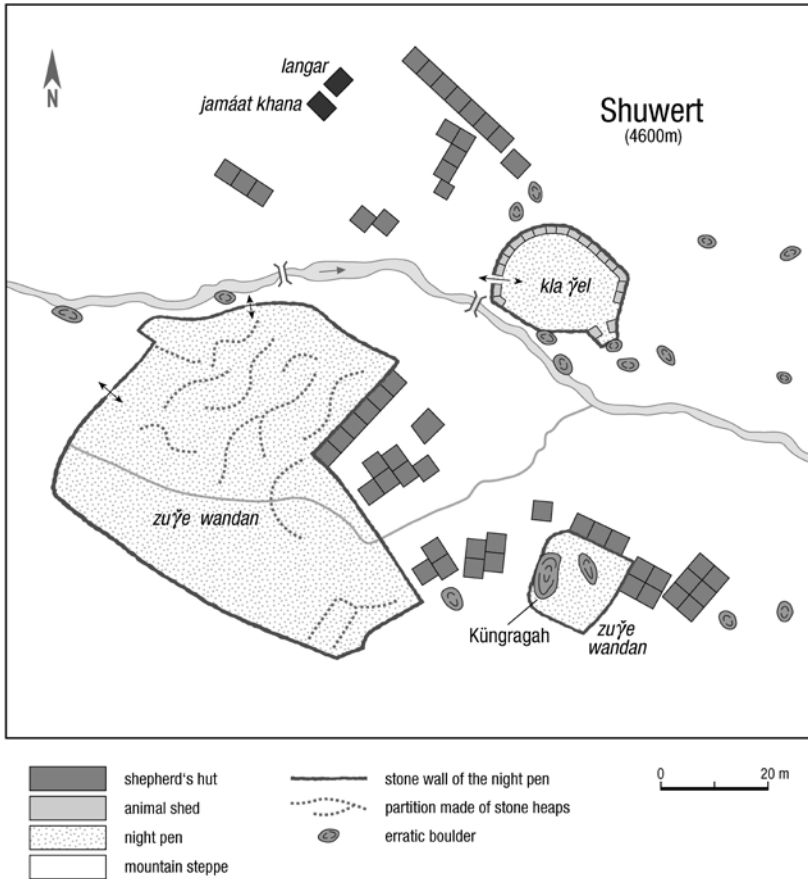
Source: Author, after Kreutzmann (2015: 188).

### Limiting factors

Taking the Shimshal Pamir as an example, the two main pasture settlements – Shuijerab and Shuwert – appear unchanged. Up to fifty huts (*khun*) are in a relatively good state and can be occupied if needed (Cockerill 1895; Shipton, Spender and Auden 1938). The number and presence of houses disguises the fact that significant changes in occupancy have occurred over time. In 1935, out of 54 Shimshal households, 42 shepherds and shepherdesses (*khunedor*) were sent to the Pamir pastures and twelve to Ghujerav (Qudratullah Beg 1935; Schomberg 1936; Shipton, Spender and Auden 1938). By 1985, out of a total of 123 households, eighty went to the Shimshal Pamir and six persons were responsible for herding flocks in Ghujerav. The number had already declined,

but less significantly than in the neighbouring villages of Gojal and Central Hunza (Ehlers and Kreutzmann 2000; Kreutzmann 2004). Shimshal has remained the most important area for livestock keeping in the Hunza Valley, where the decline of animal husbandry as a major source of income had not begun yet; the share of herders was significantly higher than in other villages and in tune with household growth. It was speculated that its remoteness from the Karakoram Highway, its peculiar position as a non-road-linked village in the Hunza Valley, its rootedness in traditional practices, and the community's appreciation and exploitation of valuable natural resources might be responsible for the persistence of pastoral practices (Ali and Butz 2003; Hussain 2016; Wiedner 2019; see also Scott 2009).

Nevertheless, in Shimshal, decline can be observed in terms of workforce availability. While the number of households more than quadrupled over the last century, the number of available shepherdesses who can afford to and are willing to spend five months each year in the summer pastures has decreased significantly, from more than forty persons in 1935 and in the late 1980s to twenty in 2013 and fifteen in 2017; only two shepherdesses were present during the entire season in 2023 (Butz 1996; Kreutzmann 2015, 2020; Wiedner 2019). A shrinking number of huts are occupied in the highest pasture settlement of Shuwert (see Figure 3), where in the late 1980s about 6,800 sheep and goats, 460 yaks and 300 cattle were counted (Butz 1996; Khan and Rahman 2009; Wiedner 2019). A quarter century later, 207 out of 217 Shimshali households possessed 1,524 yaks and more than 4,000 sheep and goats. These two extremes replicate the fluctuation range that depends on numerous factors. In 2023, it was stated that the number of yaks had decreased in Shimshal Pamir by one-third due to significant sales to bazaars and butchers, while sheep and goats were so numerous that the night pens could hardly provide sufficient shelter to all of them (see Figure 3). In Ghujerav, only 25 to 30 yaks and about 1,000 sheep and goats have been herded since mid-May and returned to the village in mid-September. Local experts assume that the carrying capacity of the pasture is almost double, but only two shepherds at a time take care of the animals sent by all the households. In Lupghar, the same number of animals and shepherds spend the summer in two camps high in the valley following a similar pattern of shifts. Workforce availability and fodder capacity are the two main constraining factors. The carrying capacity for summers is quite high in all pasture areas, but certain pastures need to be reserved for winter forage. The real challenge is how to feed the animals during the cold season.



**Figure 3.**

Map of Shuwert village.

Source: Author, after Kreutzmann (2015: 482).

Note: The importance of yak keeping is obvious in Shuwert, lying at 4,600 metres and the highest-lying summer pasture settlement of Shimshal. About fifty huts provide shelter for the shepherdesses. The night pens are framed by stone walls that are vulnerable to predators as no other protection is given.

## Pastoral practices and gendered responsibilities

Shimshal Pamir offers the most valuable resource and the most complex system of pasturing. The shift from sheep and goats to yaks around the end of the twentieth century was significant. At present, the pendulum has swung in the other direction. These processes need to be understood better. According to Cook and Butz, ‘Because yaks are worth more for the market value of their meat than for the subsistence value of their hair and milk (and sheep and goats have almost no market value outside the village), pastoral decisions are being driven primarily by concerns about yak welfare’ (Cook and Butz 2021: 1418). The heavy yak supplies cash to households, while the comparatively lighter sheep and goat are reserved for domestic consumption. Various factors play a role when it comes to adaptation in pastoral practices. First of all, workforce availability and professional herding abilities are crucial for maintaining or adapting a system that requires herders to stay away from their home and daily routine for long periods of time. Members of households were assigned pastoral duties when the herd size required their attention and when processing milk would supply the household with substantial amounts of butter and dehydrated buttermilk (*qurut*) for winter stocks. Other household members would stay back in the village for pending agricultural tasks and winter fodder production. When most households sent herders to the high pastures (*pamer* in the Wakhi language), the shifting of herds (*kuch*) was a communal affair and a special event in the agricultural calendar of the village.

Early reports do not provide specific information on the gendered division of labour in the high pastures. Most sources describe interactions with male shepherds (Qudratullah Beg 1935; Schomberg 1936; Shipton, Spender and Auden 1938; Visser 1926; Younghusband 1896). In a more differentiated observation, Visser met ‘about thirty persons, men, women, children’ in Ghujerav in 1925 (Visser 1926: 461). Similarly, his wife reported meeting ‘four or five women’ living in two huts in Ghujerav (Visser-Hooft 1926: 91). Even in a 2001 interview conducted by Hajat Shah with the experienced yak keeper Laili Shah, only the male realm of shepherding is addressed (Bennett 2004: 24–28; Shah and Shah 2003). There should be a distinction between shepherding in summers and winters, close to the homesteads and far away in remote camps, and between related duties such as transferring livestock from one stage to the next (see Figure 2). Shah’s interview addressed only the winter season in locations far away from Shimshal village. The winter duty has long been a male domain, as is the organisation of camp shifts (*kuch*). The latter have always been a cooperative effort in which every person available was needed and participated. In contrast, it is hard to believe that there was a time when only men were responsible for shepherding all year round,

especially for the processing of milk. Most people recall that pasture management was shared between men and women at almost all times (Bennett 2004). The only exception might have been when there was an external threat, such as raiding and plundering as well as the presence of the military. When China controlled the Shimshal Pass and winter pastures, and when Pakistan established a military post at Kuz (see Figure 1), women were encouraged not to stay on their own in Shuwert. Although evidence is limited, it could be surmised that women were less visible back when the high pasture summer settlements such as Shuijerab and Shuwert were fully occupied. House plans show a resemblance with family-based economies in which male and female members cooperate (Kreutzmann 2015). Many of our interlocutors mentioned that they spent school holidays with their grandmothers in the Shimshal Pamir. What needs further explanation is how women came to be primarily responsible for managing summer pastures. It has been suggested that women spend a full five months in Shuijerab and Shuwert on their own, and are occasionally supported by men and children who bring necessary food supplies and return with butter and dehydrated buttermilk. Only during the shifting of herds do groups of helpers and herdsmen join the women on duty. Gender aspects of the division of labour need to be discussed as women shoulder a large share of the burden of agricultural work and animal husbandry and play the role of stewards of the high pastures.

Herdling duties were carried out entirely by men until the second half of the twentieth century. Gradually, herding became a shared duty in which shepherdesses took care of flocks during the summer months in the highest elevations. In the above-mentioned interviews, labour shortages and educational progress were cited as indicators for changes in and the absence of the previously available workforce. The transition from agricultural mobility within the village towards educational and labour migration to other areas of Pakistan and beyond has put pressure on the gendered division of labour. The opportunities for military service opened up immediately after Pakistan gained independence. Male outmigration started in the 1950s and educational migration increased in the 1970s. Female outmigration started about fifteen to twenty years later. The outmigration of the male workforce and children has increased women's responsibilities in the agricultural realm. In the past, elderly men, retired soldiers and labourers were available in the village to assist women with animal husbandry tasks far from the village during summers. The situation became more challenging when joint families split up and some household members moved outside the valley to Aliabad, Gilgit or other parts of Pakistan. Nevertheless, it has been observed that men interfere in decision-making, dominate choices and claim higher professionalism (Azhar-Hewitt 1999; Cook and Butz 2021; Felmy 1993). In an earlier study, Butz (1996) recorded in the late 1980s that

Shimshal Pamir was valued by shepherdesses as a ‘haven of relative female autonomy’ (Butz 1996: 42). As trekking and mountaineering expeditions increasingly visit pasture settlements, the sense of remoteness and tranquillity is diminishing. This has led to a rise in male presence and interference, which has been further amplified by returning migrants.

### *Pasture governance today: duty in shifts*

One of the latest developments is the introduction of livestock taxes and a shift system (*sur*) that broke down shepherding periods to a number of days or weeks per eligible person. The need to adapt the pasturing system again arose after both girls and boys started pursuing educational opportunities, resulting in the non-availability of permanent herding personnel. A village that wants to establish a fair system for allocating common tasks in communal pastures needs a set of rules and regulations. Villagers discussed the option of hiring permanent shepherds from the community or introducing a rotational shift system in which every household participates. The first option was dismissed as some herd owners feared that their animals would not be treated properly if the herder came from another lineage. In recent years, the set of rules has been expanded and refined. The Falahi Committee, a village-based welfare committee, keeps the livestock record of each household. Certain measures were introduced to address the fact that the number of women willing to spend five months in the high pastures would steadily decrease. The Falahi Committee provides a good example of community-based adaptation. Nearly every year, the rules have been modified according to changing circumstances in the village. In the beginning, livestock contributions were levied to generate monetary funds for hiring emergency personnel during the summer pasture period when free roaming animals went astray and entered pasture grounds reserved for winters. These men supported the women in Shuvert and received a salary fixed by the committee. Similarly, as a rule, winter shepherds came from each household on a rotational basis. Nowadays, funds are needed to identify and hire nine winter shepherds (*samistone shpun*) who spend seven months (mid-September to mid-May) away from the village in remote winter pastures. They keep all animals that are strong enough to survive outside the village. If a household has no member to send on duty, a replacement has to be found and remunerated. In 2022, the cost of hiring a replacement winter shepherd had risen to 250,000 rupees (equivalent to US\$1,000) plus one eight-year-old yak of equal value. The money would buy all the eighty to one hundred bags of cement bags required to build a house.

According to the records of the Falahi Committee, only two women spent prolonged periods as summer shepherds (*tabistone shpun*) in Shimshal Pamir



**Figure 4.**

Comparison of the annual migration cycle of Shimshal pastoralists for 2013 and 2023, illustrating female and male realms of responsibility. Created by the author.

with more than 1,000 yaks and nearly 2,000 sheep and goats. They were supported by three other women and five men. All of them worked in rotating shifts for *sur* duty. The Falahi Committee calculated the length of stay required according to the household's livestock, equivalent in terms of yaks (ranging from 1 to 26 per household), sheep and goats (ranging from 7 to 58). Based on this they prepared a duty calendar of *sur* shifts (see Figure 4). In 2023, they decided that the pasturing season would require regular male support through *sur* duty and additional helpers when herds were moved (*kuch*) to bring the animals from Shimshal to Shuijerab on 16 May and on their return scheduled for 10 October. The yak owners were divided into eighteen groups of five to seven members based on the number of yaks in their households; similarly, 22 groups of sheep and goat owners were formed. The largest ones with about twenty yaks or forty sheep and goats had sixteen days of shepherding duty, while the ones with only five yaks were supposed to serve for five days only, equivalent to ten sheep and goats. Thirty-five households with a combined total of fifty yaks opted for the opportunity to pay 1,500 rupees per yak to the committee as compensation for not participating in herding. Practically, ten to fifteen persons were present in Shuwert at the same time; around eighty persons were involved in sheep and goat herding and one hundred in yak-keeping during the whole period. Every second household sent members on duty. Several people mentioned that they had been four to five times to the Shimshal Pamir this year, including the recently completed *kuch*. In 2023, the change from permanent female attendance in the summer pastures to the *sur* system involved about 130 persons in the Shimshal Pamir, 25 in Ghujerav and 20 in Lughar during the season. This change has posed a challenge for local pasture management in coordinating appropriate timings and implementing flexible control measures. Ideally, by the time the shifts of one team come to an end, the next group have arrived and to take over. All observers know that this system of alternate shifts is only partly feasible and does not work properly (Wiedner 2019). In many cases, those present have to try to cover up failures and absences. If somebody cannot meet their obligation, they need to hire a replacement (one of their relatives or neighbours) for about 1,500 rupees per day.

The *sur* system is a compromise oscillating between professionalism and labour availability. The quality of managing the herds and the processing of milk is already hampered and severely affected. The *sur* system is rather costly as shepherds have to leave their businesses or duty stations for a period of up to ten days. In case a ten-day shift is assigned, they have to carry food rations for two weeks as it takes two days to reach most pasture settlements. Even if they have to spend 15,000 rupees on a replacement shepherd, the investment is considered worth it as they can graze ten to fifteen sheep and goats in the high pastures and might produce sufficient fodder in the village for the remainder of the year.

## Legal disputes about contested property rights

Land is the most valuable asset in Shimshal, but recent developments have led to its potential loss, and territorial dispossession is perceived as the major threat to community survival. For village communities, the adherence to inherited lands and spaces is of utmost importance. For some outsiders it might seem paradoxical that Shimshali families who preside over their extensive village lands feel threatened by encroachment and dispossession. The Shimshal Nature Trust was founded as a community body in response to a conflict during the establishment of the Khunjerab National Park in the mid-1970s and the Central Karakoram National Park in 1993 (Butz 1996; Hussain 2016; Knudsen 1999; Kreutzmann 2004, 2020; Schaller 1980; Wajid et al. 2023). The villagers claimed that this was an attempt to expropriate their inherited lands and valuable pastures. Park authorities and consultants alleged that humans were harming the environment by using natural resources. This proved to be a completely false argument, as the Shimshal community had demonstrated for many generations that sustainable pasture use is feasible and can make a lasting contribution to biodiversity protection. One of the few studies that examined vegetation cover and fodder consumption in Shimshal Pamir concluded that pasture use was well within the limits of the vegetation's carrying capacity (Wiedner 2019).

After longstanding confrontations and disputes, a management plan was drawn up twenty years after the establishment of Khunjerab National Park. Agreements were subsequently signed by all communities who accepted compensatory measures, with the exception of Shimshal community, who claimed that the loss of their cultural identity and natural assets was not compensable (Ali and Butz 2003; Butz 1996). They claimed that their cultural identity as farmers who practice combined mountain agriculture was under threat. The conflict was not resolved, but Shimshal Nature Trust agreed to share the common burden of nature protection with the national park management in 2001. Five years later, community-controlled hunting areas were introduced in the Northern Areas, present-day Gilgit-Baltistan, as the introduction of trophy hunting had become one of the compromises through which village communities received a share from high shooting fees and facilitating hunting parties. However, the lucrative proceeds have been the cause of new land disputes between neighbouring villages. Although pastoralism is integral to Shimshal's identity and self-esteem, it seems that different negotiation partners – government institutions, village communities and stakeholders – did not have a common understanding of ground realities, which made it difficult to come up with a mutually acceptable decision about the future use and sharing of resources.

Earlier, land disputes revolved around usage rights to remote pastures or land parcels that appreciated in value along new roads. Now the Shimshali community has been challenged by the Abgerchi villages of Upper Gojal in relation to the Ghujerav Valley. The Ghujerav Valley has been regularly accessed by pastoralists from Shimshal who utilised its pastures to graze up to thirty yaks and 2,000 sheep and goats in the summer. They take turns to carry out shepherding duties (*sur*); the length of stay is calculated according to the number of animals in a household's possession. In 2023, about thirty people were on duty; they used to walk for two days from Shimshal village across Boesam Pass to reach the fertile grazing grounds and their huts below Mandiqshlaq (see Figure 1). Access to Ghujerav Valley from where it meets the Khunjerab River near the Karakoram Highway is rather difficult, although it has been improved to ease the journey of hunting parties on their way into the valley. The dispute between Abgerchi and Shimshali has been aggravated in recent years and become an expensive and seemingly never-ending court case that is still pending. Ghujerav provides an illustrative example of how land disputes come up when the appreciation and value of formerly neglected or less important areas increases and becomes a feasible source of income. The establishment of national parks and trophy-hunting areas is an existing issue. Mining for gemstones, gold and mineral resources could potentially cause disputes among a different set of players and stakeholders in the future.

Studies of earlier disputes that have been described in detail elsewhere (Kreutzmann 1995, 2004, 2015, 2020) reveal that all the village communities involved have spent more time and monetary resources on employing legal advisers and pursuing court cases than they could ever generate from pastoralist practices on the disputed lands. Such legal disputes amply demonstrate the importance of space as the last resource that needs to be safeguarded and utilised for coming generations. Pastoralism might be declining as an economic resource for farmer-herders, but this is not correlated with the steady appreciation of the monetary value of their home territory. Land and pastures function as a security measure, especially in the face of rising social, economic and environmental challenges both nationally and globally.

## Conclusion: Future prospects for pastoralism in Shimshal

The shift from 'traditional' to 'modern' animal husbandry in Shimshal has brought about various changes. The gendered division of labour has increased the burden on and duties of women in livestock-keeping as summer pasturing was a role solely allocated to them. Men from the village would act as supporters and would help to make a safe transfer of herds between village pens and

high pasture camps at the beginning and end of the season. Duties traditionally carried out by men were thus allocated to women, reflecting a growing labour shortage. The introduction of the *sur* system allowed men to fulfil their pasturing duties during short periods that could be integrated into their overall work schedule. The *sur* system is costlier and less efficient as herders have to spend long periods of time commuting between the village and the pasture campsites. In addition, many herders who take on this duty are inexperienced. Many people fail to show up in time at the place where they are required (Wiedner 2019). Milk processing has already declined as women skilled in producing butter and dehydrated buttermilk (*qurut*) do not go to the pasture regularly. It is clear that pastoralism in Shimshal is getting costlier. Persons who cannot fulfil their herding duties try to find replacements in the village. Finding knowledgeable persons is increasingly difficult and the burden falls on members of the older generation in the village. In the absence of youths capable of carrying out herding duties, elderly people are compelled to take on the responsibility even though community custom would require that the elderly should be exempt out of respect for their age. The *sur* system seems unsustainable as most participants are not satisfied with the outcome in terms of quality and quantity. Reduced amounts of milk products, increased losses of herd animals to predators, difficulties in accessing fertile but remote pastures due to labour shortage, and increasing monetary contributions are the main drawbacks. It is important to note that the wealth that can be generated from livestock sales is still significant in relation to other Shimshal-based resources. Livestock sales contribute three-fifths of locally generated income; crop-farming, trophy hunting and tourism contributed only ten to fifteen per cent each in 2007 (Khan and Rahman 2009). Though the accuracy of these figures can be questioned, they show that Shimshal's economy is built on income resource diversification and contains some local resilience. Local production and income generation remains the basis of livelihood security, although remittances and other kinds of external income from salaries, mountaineering, services and business now play a major role. The latter sources are more vulnerable than sources that can be controlled and governed locally. Therefore, there are discussions about how to sustain the utilisation of pastures and generate significant wealth from them. One practical alternative would be to hire qualified shepherds from outside and pay them adequate wages. The option of hiring persons from outside the community has been ruled out so far as there is an unwritten rule that no wealth should leave the valley and go to outsiders.

A feasible alternative would be to remunerate local shepherds with the same salaries and incomes as drivers, shopkeepers and teachers. For that, the community would have to pay substantial livestock taxes to establish a fund within the Falahi Committee and augment it with Shimshal Nature Trust's

earnings from trophy hunting. These funds could be augmented with public or international donor contributions to payments for ecosystem services, as in neighbouring regions and other countries (see Asif et al. 2022; Kreutzmann 2024; Wangchuk, Wangdi and Dorji 2023). Shimshal's shepherds and shepherdesses have proved that they are keeping their pastoral environment fully intact, and that they can make use of ecological endowments and land in a sustainable manner.

Most Shimshali villagers want to pursue higher education and find a well-paid job outside the valley or become high-altitude porters for international mountaineering expeditions. Nevertheless, the community has a number of people who would gladly stay in the village if they could find a job where they are paid adequately and treated with dignity. Pastoralism could be one option as the demand for high-quality meat from yaks is high and growing in Pakistan. Considering the decent prices paid in bazaars and by butchers, it might be worth exploring this option. It would ensure the sustainable use of valuable community pastures, contribute to environmental conservation, protect the property rights of Shimshalis and promote pastoralism as a respectable profession. In any case, managing local economies and preserving natural resources will be costlier in the future. It seems worthwhile to consider long-term benefits and to adequately remunerate ecosystem services in terms of contemporary governance. Maintaining the status quo based on former rules and regulations would lead to irreparable loss as these have become unfeasible. The present and future challenge is to reinforce and strengthen pastoralism as a resilient pillar of combined mountain agriculture in the Karakoram. Adapting to changing socio-economic conditions would pave the path to a prosperous future for pastoralists in Shimshal. As people who have known and managed the landscape for generations, they have the ability to take on new challenges and a high degree of productive mobility. Their adaptive capacity, flexibility and mobility can help create a resilient society in their native remote mountain valleys.

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