

Political Ecology of Human-Environment Change in Gojal, Gilgit-Baltistan, Pakistan

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Abstract In the past half-century, the Gojali people of northern Pakistan have experienced dramatic human-ecological change, the dynamics of which have been shaped by key aspects of the region's environmental governance context, including Gojal's geographical peripherality and constitutional liminality, the emerging influence of global conservation and international Ismailism as non-state transnational governance actors, the construction of the Karakoram Highway and subsequent development of a regional road network and the 2010 Attabad landslide disaster and associated influx of food relief. These contextual features have complemented and sometimes contradicted each other to influence Gojal's political ecology in three ways: they have (1) diminished Gojalis' inclination and capacity to maintain and productively use agricultural and pastoral environments, (2) limited locals' access to their ecological resource base and undermined the legitimacy of local resource control and (3) created new Gojali identities that are both less materially rooted in the local environment and more capable of acting politically in support of local resource control.

Keywords Political ecology • Resource governance • Human-environment change • Gojal • Gilgit-Baltistan • Pakistan

Introduction

The Pamirian portion of northern Pakistan is roughly contiguous with Gilgit-Baltistan's Gojal subdistrict (Fig. 1).

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Fig. 1 Gojal sub-district, Gilgit-Baltistan, Pakistan

Gojal's 23,000 inhabitants are overwhelmingly Wakhi-speaking members of the Shia Ismaili sect who share religious, linguistic and cultural ties with Pamirian peoples in adjacent countries, as well as a common human ecological history of farming in river valleys and herding on extensive alpine pastures. Their relationship with the geo-ecological environment is changing drastically. Farming and herding—for subsistence and the market—are diminishing as sources of household reproduction and individual identity. Large swathes of mountain territory have been reserved as conservation zones, and much of the remainder achieves its greatest economic value as a tourist attraction. Subsistence-oriented institutions and governance practices that coordinate how environmental resources are accessed and used are disintegrating, replaced by less locally autonomous ones more attuned to the exigencies of market orientation. Economic activity is increasingly concentrated in the main valley, close to the Karakoram Highway (KKH), an arterial motorway that draws

people's movements, activities and preoccupations down country, away from the mountain environment that sustained their forebears. As a result of these changes, the majority of Gojalis are losing practical—and in some cases legal—access to their ecological resource base as skills are lost, farming infrastructure disintegrates, traditional environmental knowledge is forgotten, ecological commons are enclosed, resources are privatised and ecological governance is bureaucratised and delocalised.

This subtle, incremental and seemingly noncoercive process of ecological alienation is easily understood as an innocuous by-product of integration into a national polity, market-oriented modernisation, economic rationalisation and responsible conservation, aspects of which most Gojalis enthusiastically support. But it should not for that reason be considered inevitable, apolitical or without contestation. Changes to human-environment relations are always shaped by the rules, conventions, decision-making processes and self-governing subjectivities involved in the use and control of the environment and natural resources and are often reflective of alterations to those aspects of 'environmental governance' (Robbins 2012). Our purpose in this chapter is to trace the overlapping influence of five key features of Gojal's environmental governance context on the characteristics, timing, geographical distribution and social consequences of human-ecological change in order to outline the contours of a *political ecology* of environmental transformation in the region.

Gojal's overarching condition of geographical peripherality, and constitutional and legal liminality, is the *first* feature of the region's environmental governance context to which we turn, as it provides an essential backdrop for understanding the others. Typical of mountain regions worldwide (Hewitt 1988), Gojal constitutes a socially, economically, politically and geo-ecologically peripheral part of the nation state to which it belongs. Associated with Gojal's *peripherality* in relation to metropolitan centres of economic and political power, its population also occupies a *liminal* position vis-à-vis the Pakistani nation: neither fully included nor excluded from national discourses and polities, strongly influenced by the geopolitical interests and interventions of bordering states and sharing certain cultural, religious and social affinities more strongly with Pamirian peoples across national borders than with majority populations in Pakistan. One consequence—and symptom—of the region's peripherality and liminality is that although Pakistan has invested heavily in controlling its Pamirian territory militarily, it has not devoted commensurate attention to the provision of economic opportunities, social welfare, infrastructure or good governance. In the past several decades, a variety of transnational non-state institutions have stepped in, simultaneously replacing (and sometimes reinforcing) distant and ineffective state-based governance institutions and strengthening affinities with Pamirian populations across borders. Two specific governance regimes have had an important influence on human-environment interactions in Gojal: the first is composed of those mechanisms associated with global conservation; the second consists of an interconnected web of local and transnational Ismaili *jamaati* and *imamati* institutions. These are the *second* and *third* aspects of Gojal's governance context we address. The former has limited locals' access to their traditional

resource base, generating a politics of resistance and introducing tourist trophy hunting as a key source of community income; the latter has provided social services neglected by the state, as well as material, organisational and ideological resources for coordinating human-ecological relations at the local scale. Both have contributed to the constitution of new environmental subjects and identities.

The *fourth* key feature of Gojal's environmental governance context is the development of a regional road network, beginning in the 1960s. Roads have facilitated the governance impacts of global conservation and Ismaili institutions; neither of these governance regimes could have had such reach absent the KKH and its tributary roads. In addition, the absence, construction and maintenance of roads are markers of Gojal's peripherality in relation to lowland Pakistan, as well as of the Pakistani (and Chinese) state's interests in managing the region's territorial peripherality and constitutional liminality. In these ways, roads are environmental governance 'actors', shaping possibilities and opportunities for Gojalis' use and understandings of their environment. It is therefore no surprise that when 25 km of the Gojali portion of the KKH was destroyed following a massive landslide in January 2010, the context within which Gojalis interact with their environment was significantly affected. For that reason, the Attabad landslide is the *fifth* feature of Gojal's environmental governance context we address here. Its implications for cash crop production, the immobility it imposed on Gojali people and institutions, the perceived inattention of the Pakistan state to Gojalis' plight and the massive influx of food relief from China have both reinforced locals' sense of peripherality and liminality and shaped environmental governance and practice in Gojali communities.

Legal and Constitutional Liminality

Prior to 1974, Gojal was an outlying territory of the fiefdom of Hunza, a semi-autonomous principality that fell under Pakistan's jurisdiction following the nation's independence and Kashmir's *de facto* division in 1947. During this period, Gojal was doubly *peripheral*. First, Hunza itself was remote from Pakistan's economic, administrative and social centres, and its inhabitants received few government services or other benefits of citizenship. Moreover, owing to the Kashmir dispute and Hunza's autonomy in most spheres of governance, its juridical status was ambiguous. Second, Gojal's Wakhi-speaking people were culturally, territorially and administratively marginal *within* mainly Burushaski-speaking Hunza, where Gojalis were denied the autonomous spheres of lineage-based governance enjoyed by the Burusho clans of central Hunza (Ali 1983) and Gojali territory was more directly controlled by Hunza rulers than was the Burusho heartland. This situation continued after 1974, when Pakistan's government dismantled the last of its principalities and, like the rest of Hunza, Gojal was incorporated into the Federally Administered Northern Areas, which was established in 1971. The Northern Areas was not granted the constitutional rights and powers held by Pakistan's provinces; neither were its

residents represented in the National Assembly. A federal appointee governed the new jurisdiction as head of a regional legislative assembly. The Northern Area's location in the disputed Kashmir Region, with international borders on three sides, meant that military and geostrategic interests were prominent in its governance, and Pakistan's armed forces enjoyed exceptional power.

In 2009 the *Gilgit-Baltistan (Empowerment and Self-Governance) Order* renamed the area Gilgit-Baltistan, extended residents' legal rights, strengthened the powers of the regional assembly (Hong 2013) and established a Legislative Council dominated by federal appointees (Sökefeld 2014). Despite these gestures towards greater self-governance, the region remains largely under the control of Pakistan's executive branch and without representation in the National Assembly. Gilgit-Baltistan continues to be defined ambiguously in the nation's Constitution, as a territory 'administered by Pakistan' (rather than a province; Hong 2013:78) and its inhabitants still have no right of appeal to Pakistan's Supreme Court (Hong 2013:81). As Caylee Hong (2013) outlines, Gilgit-Baltistan's residents exist in a state of constitutional and legal *liminality*, with implications for how individuals and communities deal with their peripherality, engage with development processes and manage natural resources. Locals' efforts to exploit resources sustainably and for their own economic benefit are severely hampered by legal and territorial liminality, which, as Hong (2013) shows, diminishes access to private and public investment, impedes advantageous revenue sharing agreements with higher levels of government, imposes restrictions on resource access and allows the state to pursue its own resource extraction agendas without legal restriction or local recourse. This political ecology, in which locals are marginalised from their resource base, is reinforced by broader national discourses that associate Gilgit-Baltistan with its natural environment (touristic scenery, water supply, mineral resources, wildlife), while systematically overlooking its human inhabitants (Ali 2014).

As in the past, Gojal is currently peripheral in the national context as part of constitutionally liminal Gilgit-Baltistan and in the regional context as a 'far-flung' district whose inhabitants comprise a linguistic, cultural and religious minority. This state of affairs has been crucial to the emergence of two distinct transnational non-state governance regimes: global conservation and the international Ismaili community.

Global Conservation

Global conservation appeared in Gojal in 1975, when the Northern Areas Wildlife Preservation Act was passed, entitling the government to declare any area in the Northern Areas a national park or limited-access conservation area (Ali 2010). Khunjerab National Park (KNP) was established that year, subjecting about a third of Gojal's territory to the guidelines of an IUCN Category II Park, which banned all productive human activities, including agriculture, grazing, hunting and resource extraction (Knudsen 1999). Affected communities were not consulted or

compensated and due to the region's constitutional liminality had little legal recourse to fight their dispossession. Although responsibility for KNP falls to the regional government's District Forestry Office, IUCN was heavily involved in establishing it and together with WWF has determined its boundaries, formulated its management plans and policies, provided resources and technical expertise and nurtured its legitimising discourse in which subsistence uses are represented as inherently degrading to mountain environments (Butz 1998; Ali 2010).

Global conservation agencies have been similarly involved in the formation and oversight of the Central Karakoram National Park (CKNP; established 1993) and the Mountain Areas Conservancy Project (MACP; inaugurated 1999) (Knudsen 1999; Ali 2010). The latter has adopted the rhetoric of 'community participation/management'; nevertheless each further reduces Gojalis' access to their subsistence resource base and places additional constraints on communities' management of environmentally oriented economic activities. Communities profit from their former grazing lands mostly through royalties from international trophy hunting, which they receive only if they relinquish other resource use rights (MacDonald 2005). Subsistence landscapes are commodified to serve Western consumers, and locals are forced into the circular logic of 'saving nature in order to sell it' and 'selling nature in order to save it' (Ali 2010:66). Meanwhile, global conservation governance helps the Pakistani government solidify control of its peripheral mountain territories by underwriting the conversion of 'commonly owned pastoral and agricultural land into state-owned territory' in which most local uses of nature are severely curtailed (Ali 2010:67). Conservation initiatives have simultaneously concentrated economic activity in valley floors, hastened the penetration of capitalist market relations into high mountain areas through international tourism and reduced Gojalis' access to much of their ancestral territory.

Gojalis have responded by attempting to ignore, negotiate with, exploit and actively contest this government/conservation partnership in resource dispossession, shaping themselves in the process into new environmental subjects. To retain even nominal control over formerly subsistence landscapes, they are compelled to police their resource use activities according to the values of global conservation and thus become self-regulating subjects of an imposed conservation regime. At the same time, their experiences with this territorial control (and lack of legal recourse) have become new sources of ambivalence towards the Pakistani state, which is perceived as more interested in governing Gojal's natural environment than in providing citizenship rights and social services to its people. Many Gojalis have come to understand themselves as the rightful stewards of a landscape more threatened than preserved by conservation or state intervention (Ali and Butz 2003). Such an environmental identity heightens symbolic and aesthetic values in local environmental discourse and imbues efforts to resist material dispossession through conservation with additional ideological justification.

Transnational Ismailism

A second mode of transnational non-state governance that has shaped Gojali environmental identities and practices is represented in Ismaili Islam's secular *imamati* and religious *jamaati* institutions, the importance of which has been enhanced by the absence of effective state institutions and services. Beginning with the Aga Khan Rural Support Program (AKRSP) in 1982, the Aga Khan Development Network (AKDN) introduced a suite of development programmes to provide services and organisational capacity to the Northern Areas' population, whether Ismaili or not. Due to their strong identification with the Ismaili imam—the Aga Khan—these AKDN *imamati* institutions have been especially influential in Ismaili areas. By the mid-1980s, every community in Gojal had established AKRSP village organisations (VO) and women's organisations (WO), to which households paid regular dues and through which they could access credit, training and technical development expertise. VOs and WOs constituted new decision-making structures, which were used to organise social and economic development activities and coordinate collective labour for AKRSP-funded productive physical infrastructure (PPI) projects. Most initial PPI projects focused on irrigation agriculture (mainly building feeder channels), followed by link roads and bridges: communal projects that would benefit individual or household enterprise (Butz 1993).

AKRSP intended to integrate rural households advantageously into a regional—and ultimately global—market economy by increasing agricultural productivity, replacing subsistence activities with production for market, modernising farming practices, diversifying household economies, building collective organisational capacity and facilitating interaction between rural communities and regional centres. This development approach contributed to a number of human ecological effects in Gojal: more irrigated farmland, a sharp decline in high altitude grazing, increased reliance on intensive cash cropping (mainly of potatoes and fruit), less variety of subsistence agriculture (more wheat and less barley, buckwheat and peas), greater concentration of economic activity along the KKH, more off-farm employment and a diminishing proportion of Gojalis using land resources for productive purposes. In terms of local environmental governance, the authority of elders and their ecological knowledge and experience waned, replaced by a younger generation of VO office holders wielding the power of literacy, numeracy, AKRSP connections and training. Agricultural and pastoral decision-making—along with many areas of social organisation—were subsumed under the rubric of 'rural development', with an associated focus on modernisation, rationalisation and market-integration.

Since the early 2000s, AKRSP has supported the creation of local support organisations (LSOs), which are clusters of VOs and WOs across several communities, often at the same territorial scale as government union councils or Ismaili local councils (LC). LSOs are registered with the government as non-profit organisations under 1984's Company Ordinance and are administered by a volunteer board and small professional management teams. They support existing VOs and WOs in forging and funding an 'integrated development vision' by pursuing independent

project-oriented partnerships with government, the private sector and other development or conservation agencies including AKDN (LSO Network 2014).

Gojal has three LSOs that manage projects in partnership with numerous government departments and non-governmental agencies. Projects are diverse, ranging from micro-health insurance schemes and computer training programmes to the construction of infrastructure, provision of agricultural inputs and sponsorship of cultural events (LSO Network 2014). Gojal LSOs cooperate with various local *jamaati* institutions, including LCs, which are responsible for the ‘social governance, administration, guidance, supervision and co-ordination of the activities’ of the Ismaili community under its jurisdiction (Ismaili Universe 2012), and with Ismaili Scouts, Guides and Volunteers who often provide volunteer labour for development projects. LCs have deep and wide-ranging authority, so their support has been important to the success of LSOs and other AKDN programmes. They are part of a regional, national and global hierarchy of Ismaili councils, which along with other *jamaati* institutions ensure a highly standardised Ismaili worldview, doctrinal understanding and approach to social and moral behaviour. As detailed by Jonah Steinberg (2011), this vision is strongly invested in modernity, rationality, progress, accountable governance, education and global integration. AKDN agencies are understood by many Ismailis as the instruments for implementing such a worldview, which helps to account for their remarkable uptake.

Gojal is the site of one local manifestation of a network of Ismaili institutions that extends across the Pamirian region and into the metropolitan centres of South Asia, Europe and North America. The trans-Pamirian nature of this network helps to constitute Gojal as liminal in a more positive nonlegal sense. Gojalis are also liminally situated in that aspects of their identities, governance context and daily experience with development, social change and social service provision are more strongly shared across national borders than with other Pakistani citizens. Pamirian Ismailis are transnational subjects who straddle and transcend conventional notions of state-based citizenship (Steinberg 2011).

Ismaili *jamaati* and *imamati* institutions help constitute Gojalis as modern developmental subjects who understand themselves as socially progressive, competent, well educated, well connected and well organised (Steinberg 2011): savvy actors in the contemporary context of neoliberal development. Ismaili institutions have emphasised formal education for both genders, which has paid off in Gojal’s rapid emergence as one of the most literate areas in Pakistan. By providing opportunities for advanced education down country or overseas, they have also widened locals’ social capital and enabled some to occupy positions of influence in development agencies and the civil service. These characteristics give Gojalis the confidence and capacity to negotiate with government and global conservation in support of their collective political ecological interests, thereby reducing some of the consequences of peripherality and legal liminality. LSOs, for example, have drawn on the expertise and connections of Gojal’s new educated elite to find routes through Pakistan’s legal apparatus that allow communities to retain or regain control of ecological resources (Hong 2013). Given that Ismaili teachings and AKDN development initiatives have emphasised both integration into capitalist markets and the

commensurate formation of subjectivities characterised by rational individualism (Steinberg 2011), these new bureaucratically and legally formalised ecological relations have taken increasingly commoditised forms (bioprospecting, trophy hunting, adventure tourism).

Even as Ismaili institutions shape Gojali subjects capable of defending their ecological rights in a context of liminality and peripherality, they have also created a population less interested in using the environment for productive agricultural or pastoral purposes. The combination of high education, capitalist market orientation and social networks that extend beyond the region has produced a generation whose capabilities and identities incline them towards off-farm economic activities and in many cases permanent or seasonal outmigration. Modern subjects code farming and herding as ‘backward’, unprofitable ways to make a living. At the same time, global Ismailism values cultural heritage, which in Gojal is intimately connected to the mountain environment and its productive use. The natural and agricultural landscape, therefore, is valued more for its power to inform Gojali identity than for its ability to provide a livelihood. Gojalis are becoming tourists in their own land as they return to their natal villages for holidays and visit former or remaining high pastures to restore cultural authenticity. This process of cultural change has been facilitated by the construction of a regional road network.

Road Infrastructure

Gojal was not practically accessible by road until 1971. A seasonal motorway was completed from Abbottabad over the Babusar Pass to Gilgit in 1949 and extended to Hunza in 1957 (Kreutzmann 1995). But not until the KKH was constructed did regular vehicular traffic reach Gojal. This all-weather highway—built between 1964 and 1978—linked lowland Pakistan to its northern periphery and established a year-round road connection with China. Its northern portion, which was constructed mainly by the Chinese army between 1968 and 1971, follows the Hunza and Khunjerab Rivers through Gojal’s most densely populated valley before reaching the Chinese border at Khunjerab Pass, where it links to China’s Friendship Highway. The KKH opened to trucks in 1975 and to regular international traffic in 1986 after the Chinese portion of the highway was completed to Tashkurgan. The highway was constructed to strengthen geopolitical and trading relations between Pakistan and China and to solidify Pakistan’s control over its mountainous northern border area (Khalid 2011). The two countries shared an interest in stifling Indian and Soviet territorial interests in the region, and China was keen to establish a road link to the Arabian Sea. Its construction alleviated Pakistan’s concerns (shared by China) regarding territorial control of a politically liminal frontier without requiring a legal or constitutional resolution. It also marked the start of China’s involvement in Gojal’s economic and infrastructural development, a transborder relationship that adds another dimension to the region’s ongoing political liminality.

Much has been written about the KKH's transformative impacts on social, economic and environmental relations in northern Pakistan (Allan 1986, 1989; Kreutzmann 1991, 1995, 2004, 2006; Kamal and Nasir 1998), including a decline in subsistence agriculture and pastoralism, increased involvement in cash cropping, off-farm employment and other market activities, greater reliance on government-subsidised food staples imported from the Punjab, the erosion of traditional systems of resources management, generally improved living standards combined with increased social stratification and the concentration of wealth along the road corridor, the introduction of agency-led rural development, the construction of link roads into side valleys and expanded social networks and mobility. Few of these impacts stem directly or mechanistically from the highway; rather, as recent mobility scholarship indicates, they are the contingent outcomes of a new mobility platform in relation to its broader social context (Hannam et al. 2006). These transformations could not have occurred as rapidly or taken their specific shape absent the influence of Ismaili institutions, global conservation governance or the region's constitutional liminality. On the other hand, these governance regimes would not have established themselves as firmly and ubiquitously or exerted their influence as powerfully without the vehicular access afforded by the KKH and its associated feeder roads. Cause and effect are inextricably tangled in these mutually constitutive processes. Nevertheless, we identify four ways that the KKH has influenced political ecological transformation in Gojal.

The *first* is the highway's construction itself. The prolonged presence of Chinese and Pakistani road crews disrupted Gojals' subsistence-dominated world. Gojalis engaged in a variety of exchange relations with these outsiders—labouring, buying and selling—thereby hastening the penetration of a cash economy, expanding locals' social networks and introducing new commodities. In terms of more direct political ecological implications, the highway's construction destroyed fields, removed land from local control and littered the landscape with road-building detritus. It also opened new areas to cultivation. Road crews supplemented their diets by hunting wild ungulates in valleys adjacent to the KKH, in the process endangering wildlife populations and a sustainable local dietary resource. cursory wildlife surveys in the mid-1970s (e.g. Schaller 1980) noted the rarity of ungulates in parts of Gojal, blamed it on local hunting and grazing practices and recommended the formation of KNP, marking the start of global conservation governance in Gojal.

Second, the KKH enhanced access to Gojal. It is a truism in rural roads literature that NGOs and government services follow roads (Wagner 1990), and Gojal is no exception. Vehicular access enabled the provision of education, health care, agricultural services, government-subsidised imported grain, communications facilities and electricity. AKRSP required the KKH to move its social organisers efficiently from village to village and extended the highway's reach by funding numerous link roads to villages in side valleys. Many aspects of Gojal's contemporary material culture would have been impossible without these roads (e.g., concrete and sheet-metal roofing, tractors, threshing machines, generators and electric sawmills). Their political ecological effects relate to the means and mode of agricultural production, the types of crops grown and the reorganisation of agricultural

labour sharing practices. The road network also provided tourist access to Gojal. Guiding, portering and hotel keeping became important sources of income for a proportion of Gojali households that, combined with cash cropping, provided the means to educate children, purchase imported consumer goods and otherwise subsidise subsistence agriculture in an increasingly market-oriented economy. Tourism, in tandem with global conservation, also introduced the idea of nature as a commodity in itself.

Third, the KKH affords mobility *beyond* Gojal for its residents and their produce (see Benz 2014). It created the possibility of agricultural production for distant markets. Households in villages adjacent to the highway and closest to central Hunza shifted much of their attention to cash cropping potatoes and fruit, while communities more distant from the road system continued to rely heavily on subsistence agriculture and pastoralism. Cash cropping inserted households and their environmental resource base into the capitalist economy at the most intimate levels of household reproduction, with significant implications for how people perceive and use the environment. Market efficiency came to govern the production practices of households invested in cash cropping, which hastened the spread of farm machinery and chemical inputs, contributed to a decrease in the variety of crops cultivated, encouraged some villages to abandon pastoralism and eroded conventions governing reciprocal labour relations and common property resources. Agricultural productivity became contingent on distant market forces, the cost of transport and the highway's passability, as well as the usual vagaries of weather and household labour supply.

The KKH also offered greater mobility to Gojal's residents. Although there is plenty of road travel in all directions, the flow has been predominantly downward, from side valleys to large communities adjacent to the KKH corridor and from the main valley downstream to Hunza, Gilgit and the Pakistani plains. Gojalis avail vehicular mobility for family and social purposes, employment, access to social services and education. LSOs and Ismaili institutions rely on roads to coordinate activities and governance across spatially dispersed communities, as well as to liaise with nonlocal partners. In these ways the KKH and its feeder roads have enabled local communities to organise in defence of their collective ecological interests.

Fourth, these flows of people and goods *concentrate* social, economic and ecological activity in the main valley along the highway corridor and south out of Gojal (Allan 1986). As a result, communities at the greatest distance from the KKH became relatively more peripheral socially and economically (Butz and Cook 2011). Without the same access to rapid and cheap mobility, higher-altitude villages were slower to receive electricity, telecommunications facilities, well-equipped schools, access to LSOs and full involvement in *jamaati* institutions. Moreover, lacking easy access to the KKH, they were unable to exploit new cash cropping opportunities and relied instead on subsistence production and remittances from family members working seasonally outside the region. Some villages suffered depopulation of working-aged men and youth, resulting in shortages of male labour for subsistence activities and an associated expansion of women's farming responsibilities. As market orientation deepened in Gojal's main valley, uses of high-

altitude environments that could not be profitable according to market logics were devalued, as were systems of common property resource governance, further peripheralising subsistence-reliant communities. High-altitude environments across the region were used less intensively, except for tourism. At the same time, land use intensified along the main KKH corridor out of Gojal as populations increased, new areas came into market-oriented cultivation, new schools and other social services opened, and a passenger van business facilitated more and easier travel to central Hunza and Gilgit.

The Attabad Landslide

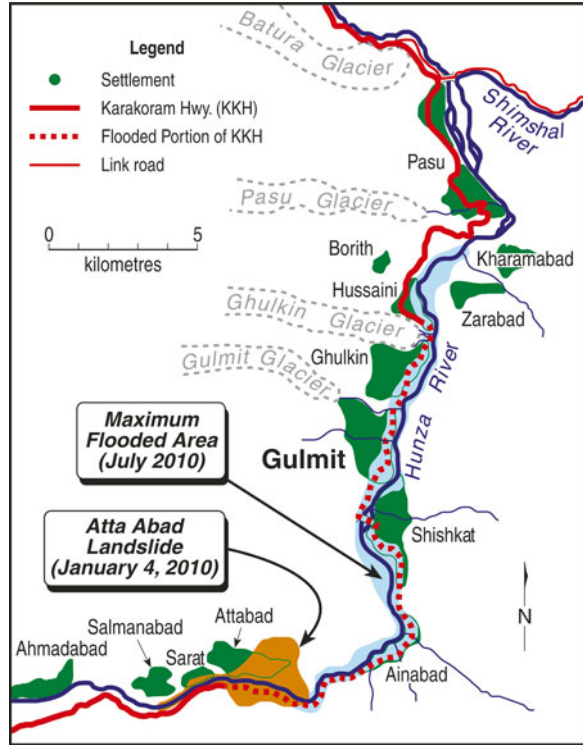
By 2003 link roads had been constructed to all Gojali villages, and virtually all households depended on vehicular mobility to accomplish reproduction (Cook and Butz 2013). Therefore, when in January 2010 a massive landslide destroyed 2 km of the KKH at the southern end of Gojal and dammed the Hunza River to a height of 120 m, life in the region was significantly disrupted (Cook and Butz 2013). Over the next 5 months, the dammed river flooded large parts of 5 villages and 25 km of the KKH, Gojal's only road link to the rest of Gilgit-Baltistan and down country Pakistan (Fig. 2).

The landslide and subsequent flooding altered the context for environmental governance and practice in Gojal in a number of intertwined ways.

The landslide killed 19 people and displaced 141 households in Attabad and Sarat, which were evacuated; 240 additional households in Ainabad, Shishkat, Gulmit, Ghulkin and Hussaini lost homes, fields and approximately 80000 fruit trees to flooding (NDMA 2010a, b; Butz and Cook 2011). For the first time in recent memory, some Gojali households found themselves homeless and landless, and many others lost their most valuable and productive agricultural resources. Although the lake has been partially drained, the trees are dead and the exposed land is covered with silt, making it unsuitable for agriculture until soil can be reestablished. This loss of productive land, in precisely those villages that had invested most heavily in market-oriented agriculture, had devastating effects on the farming economy, which were exacerbated by the sudden rupture of Gojal's only road link to relevant markets. A boat service was inaugurated in summer 2010, to help bridge this rupture, but at great cost in terms of affordability, convenience and reliability.

One of the most devastating effects of disrupted mobility is the virtual disappearance of agricultural production for market as a viable economic activity due to the increased cost of transporting produce out of Gojal and bringing inputs like fertiliser into the region. Cash cropping was the most important money-earning activity in communities adjacent to the KKH, so its loss was catastrophic to household economies and constricted the range of ecological affordances Gojalis could avail. Some wage-earning activities emerged in the aftermath of the landslide, such as stevedore labouring, operating boats, constructing new homes and engaging in business across the Chinese border, with the effect of reducing households' integration with the

Fig. 2 Attabad landslide and barrier lake, Gojal subdistrict, Gilgit-Baltistan, Pakistan



local ecological resource base. One market-oriented activity enabled by the landslide contradicts this trend: the practice in Shimshal and the Chapursan Valley of marketing yaks in lower Gojal and central Hunza. Yaks are almost the only farm product that is sufficiently valuable to bear the cost of transportation across the lake, and yak has become more affordable in lower Gojal relative to imported meat. This burgeoning market has reinvigorated yak-based pastoralism in the highest altitude communities, with implications for the gendered division of labour and authority in pastures (Butz 1996).

Although the landslide created limited livelihood opportunities, its overall effect has been to constrict economic activity, reduce possibilities for survival from the ecological resource base and heighten Gojalis’ experiences of peripherality. It is now more difficult, costly and time-consuming to move out of Gojal, with the effect that economic options are constrained and social networks and services are less accessible. Moreover, households have less disposable income to overcome these constraints.

There is a political dimension to Gojalis’ increased sense of peripherality that stems from locals’ belief that the government could have moved more quickly to cut a spillway through the landslide, thereby preventing the lake from forming. The perception of government disregard has heightened as the state repeatedly fails to

meet its own targets for draining the lake, realigning portions of the highway, resettling displaced households and providing compensation to disaster affectees (Sökefeld 2012) and as politicians make insensitive remarks about the lake's potential benefits for tourism or electricity production. The current plan to lower the lake level by 30 m, which will uncover most stretches of submerged highway but not recover all agricultural lands, leaves Gojalis with the impression that trade with China is a higher government priority than the plight of local farmers.

The state's lacklustre response to the disaster has compelled Gojalis to strengthen local social networks and institutional capacity, provided impetus for political and social mobilisation on a larger scale and impelled new forms of political activism in the shape of rallies, protests and marches (Sökefeld 2012). LSOs and the Ismaili Scouts, Guides and Volunteers have enhanced their reputations through disaster mitigation efforts, and local news blogs have emerged as important sources of information and opinion. At the same time, organisations that rely on voluntary monetary contributions find themselves with diminished resources (Sökefeld 2012).

Many residents contrast Pakistani state indifference with the Chinese government's active response to the disaster. When Pakistan's Frontier Works Organisation failed successfully to cut the spillway and realign the highway, Chinese road crews became involved with rapid results. Moreover, the Chinese government provided a much larger share of disaster relief than did the Pakistani government. In 2010, 2011 and 2013, it delivered food relief via the KKH to sustain 23000 people for 6 months, as well as medicine, petrol, diesel, coal and kerosene. Although these deliveries were requested and negotiated by the Pakistani government, Gojalis perceive China as coming to their rescue. This perceived contrast between Pakistani and Chinese responses to disaster fanned discourses of liminality that were already fuelled by the region's uncertain constitutional status and Gojalis' identification with transnational non-state institutions.

Sustained food relief adds to other dimensions of the disaster that undermine agricultural activity in Gojal. Most of the population only suffered the constraints of the severed road link, yet they received roughly half the relief per capita of those who were also displaced or lost land to the flooding. Moreover, the largest portion of relief was wheat flour, the region's ubiquitous subsistence cereal crop. The quantity and quality of food aid undermined a temporary transition back to subsistence production in those villages that had depended on market production and lessened farmers' commitment to subsistence in villages that had not invested heavily in cash cropping. Some households with reliable off-farm or remittance income abandoned agriculture altogether, with detrimental implications for terrace maintenance, soil fertility, collective management of irrigation infrastructure and the reproduction of farming knowledge. In this way, food relief alleviates food insecurity in the short term while adding to it in the long term, by diminishing people's remaining capacity to meet their food needs through subsistence. Large quantities of nonlocal food-stuffs also reshape local dietary habits, making them more dependent on imported food and further eroding the connection between the ecological resource base and household reproduction.

In addition to the landslide's direct human ecological effects, its outcomes of increased geographical peripherality, a heightened sense of liminality vis-à-vis the Pakistani state and disincentives to agriculture have combined to reshape Gojalis' ecological identities. They have become simultaneously more marginalised from the productive affordances of their ecological resource base while also gaining institutional and organisational—if not economic—capacity to defend their ecological interests via new forms of knowledge production and political mobilisation. In particular, the disaster has inspired in Gojalis both a sense of self-reliance in relation to the Pakistani state and 'the need to look elsewhere — both internally to communities themselves, and externally to other countries, international organisations and Ismailis around the world — for assistance and support' (Hong 2013:97).

Conclusion

Political ecology demonstrates that changes to environmental governance and systems of human-environment interaction usually create inequitably distributed costs and benefits that strengthen existing social and economic inequalities (Bryant and Bailey 1997). Empirical studies show that the losers in such transformations are typically local inhabitants of the environments in question, especially those already marginalised by their class, gender, ethnicity or educational positioning. In short, political ecologists show that the context of changes in human-ecology relations is structured by interests and power arrangements. In this chapter, we outline several key dimensions of the governance context within which human-ecology relations have been shaped in Gojal over the past half-century and trace some of their political ecological effects. By linking human ecological outcomes to the contingent particularities of governance context, we problematise the apolitical narratives of governments, NGOs, conservation agencies and local elites that represent human-ecological transformation as inevitable, innocuous or serving the common good.

Our analysis exemplifies three of the key themes Paul Robbins (2012) distils from the spectrum of political ecological scholarship. *First*, as resource use systems become subject to state intervention or integration into regional and global markets, locals often become marginalised from their resource base and environments undergo degradation. Gojalis' alienation from their environment's affordances is linked to the five contextual dimensions discussed in the chapter: peripherality and liminality, global conservation, transnational Ismailism, road development and the Attabad landslide. Although these factors may not have led to irreversible degradation of Gojal's environment, they have diminished locals' capacity and inclination to maintain agricultural and pastoral environments in a productive state.

Second, efforts to protect natural environments through conservation often cast local users as ecologically irresponsible and disable local systems of 'livelihood, production and socio-political organisation', with detrimental ecological effects (Robbins 2012:21). In Gojal this is most evident in global conservation interventions, which have removed large territories from local control and colluded with the

state to restrict local use and management of much of the remainder. Gojal's constitutional liminality denies locals various avenues of legal recourse and exacerbates the disempowering effects of conservation schemes. On the one hand, conservation initiatives have hastened the collapse of local mechanisms and institutions for subsistence-oriented resource governance; on the other hand, under the rubric of community-based conservation, they have reintroduced constrained forms of resource self-determination geared towards market-integration, mainly in the forms of trophy hunting and adventure tourism. One by-product of this new environmental governance context is communities' capacity to establish transnational partnerships that allow them to sidestep or resist some of the constraints of peripherality and constitutional liminality.

Third, transformations to environmental management regimes create 'new kinds of people, with their own emerging self-definitions, understandings of the world and ecological ideologies and behaviours' (Robbins 2012:22) and inspire new forms and targets of political agency. Gojalis are indeed 'different kinds of people' today than in the past, with different practical and notional attachments to their ecological environment. Although most people continue to identify deeply with their Pamirian mountain surroundings, fewer view those surroundings as the source of their livelihood or their full-time home. Farming identities in particular are becoming less central to local culture and social organisation, as subsistence production diminishes, market-oriented agriculture faces new challenges and young people seek formal education and off-farm opportunities. New environmental identities are emerging, which engage the local ecological environment as something to be conserved for its own sake, valued for cultural and restorative purposes, exploited for tourism income and, if regulations allow, mined for non-renewable resources. These identities are more cosmopolitan than previously, connected to the wider world through transnational Ismaili institutions, educational and occupational networks, involvement with international development and conservation organisations, labour migration and translocal media. As such, they are better resourced than their forebears to contest the alienating and marginalising effects of peripherality, liminality, disaster, conservation and economic globalisation, making greater human-ecological self-determination an open possibility for Gojal's future.

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