



TIBET'S NOMADIC PASTORALISTS

Tradition, Transformation and Prospects

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Milking goats. Goats provide the drokpa with meat, milk and cashmere. Photo: Michael Buckley

Introduction

The Tibetan Plateau, known today as the Earth's third pole,¹ averages over 4,500 meters in elevation and covers some 2.5 million square kilometers in south-central Asia. The size of Western Europe, the region is bounded to the south and west by the Hindu-Kush Himalaya complex of mountains, to the north by the vast Taklamakan Desert, and to the east by lowland Han China. The region, which receives most of its scant rainfall in summer from the Indian monsoon to the south, is largely semi-arid to arid, with strong, persistent winds, long arctic winters and hot summers punctuated by local thunderstorms. Extreme fluctuations in daily temperature are common year round.

Evidence suggests that humans arrived on the plateau during the Middle Paleolithic, some 30,000-50,000 years ago. In historical times, an independent Tibetan polity developed in relative isolation, an isolation abetted by the sheer size, natural mountain barriers and extreme environment of the plateau.

This isolation would lead to the development of a unique language and culture, social structures and, for the past 1,400 years, religious traditions rooted in Tibetan Buddhism.

More than two-thirds of the plateau is grasslands, a resource that, along with the domestication of the wild yak, has meant the development of a pastoralist livelihood. Since the hypothesized origin of pastoralism on the plateau some 4,000 years ago, and perhaps as far back as 8,800 years ago, these livelihoods and lifeways have demonstrated a persistence that suggests a strong co-evolutionary relationship between the grasslands ecosystem and human lifeways, in service to families and clans, monastic communities and the larger polity.

The conditions of Tibet's unique form of nomadic pastoralism and its environmental relations, the transformation of both under communist Chinese rule since the 1950s and their future under renewed and rapidly changing political, environmental and climatic conditions are the focus of this paper.²

*(left) Typical scene on the high-elevation grasslands of Tibet
Photo: Michael Buckley*

Enduring traditions

The Tibetan Plateau's extreme environmental conditions make for a unique ecological context for pastoralism. The semi-arid and arid rangelands of the region are subject to high seasonal and inter-annual variability and intensity of summer rainfall and winter snowfall, the latter a critical variable that strongly affects the survival of livestock. Precipitation also varies significantly on relatively local scales, necessitating the regular movement, again both within and across seasons, of livestock in order to ensure sufficient forage and safety.

Within this ecological context, Tibetan nomads, called *drokpa*, graze several forms of domesticated livestock, including yaks, yak-cattle hybrids, sheep, goats and horses. Sheep are typically the most abundant domesticated animal in *drokpas'* herds. They supply wool and milk, and often the dominant form of meat for subsistence consumption. Goats, in turn, provide meat, milk and cashmere, a high-quality wool that is an increasingly valuable market commodity. Nomads also keep horses, mainly for riding, never for meat, and in some regions they serve also as pack animals. *Drokpas'* herds also include the iconic Tibetan yak.

The value of the yak in the nomads' culture cannot be overestimated. Yaks are the main beast of burden; they provide milk and milk products, hides, dung fuel and occasional meat. According to Miller (1999), thirty to forty milking yaks, in a herd of about 100 overall, is about the maximum number a typical-sized nomad family can maintain before needing to hire additional labor. The yaks also provide the raw materials for the nomads' tents, which are made from the yak's long, coarse hairs, woven into strips and readily transportable. It is no surprise that the Tibetan term for yak, *nor*, also translates as "wealth".

The *drokpas'* herds typically consist of a mix of these species, a strategy that serves to mitigate risk while taking advantage of the livestock's complementary feeding strategies: each species grazes different plants or parts of plants, thus more efficiently using the assemblage of pasture species. Maintaining not only abundance but diversity of the overall composition of one's livestock also minimizes the risk of loss from disease or extreme weather events.

A common stereotype with regard to all nomads, Tibet's included, is that they move randomly across the landscape. There is, however, nothing random about the *drokpas'* daily and seasonal movements across the plateau's rangelands. Rather, their movements are, in the words of one researcher, "well-prescribed by complex social organizations... [that] are



Yak wool is the basis of the nomads' tents and other essential household products. Photo: Michael Buckley



Yak dung, an important fuel, is piled for drying. Photo: Michael Buckley



Yaks are the primary pack animal for moving between summer and winter pasture. The Tibetan term for yak, *nor*, also translates as "wealth". Photo: Michael Buckley



In this propaganda image, heroic Chinese workers urge Tibet's people to work in order to harness the power of the rivers and mountains of the region. Photo: Michael Buckley

highly regulated" and environmentally contingent (Miller 1999).

Management and reduction of risk to both pasturelands and livestock are distributed not only ecologically but also socially. Before communist Chinese control of Tibet ended traditional nomadic practices in the late 1950s, access to and control over pasture resources were undertaken through common-property regimes. The *drokpas'* range-use practices were defined by a dynamic mobility of livestock, proprietary but overlapping pastureland territories, and adaptive decision-making for access based on local and seasonal conditions. These practices linked strongly with social structures that created a somewhat fluid landscape of access, again dependent on local-scale resource abundance.

Transformation: Maoism invades the grasslands

In 1950, communist China invaded the once-independent Tibet, and quickly began implementing what would become a half-century of disastrous land-use policies across the plateau. These policies were rooted in Maoist ideology, in a lack of capacity in grassland science and studied indifference to pastoralism's most basic practices, along with a disdain for Tibet's nomads as backwards, superstitious and in need of China's civilizing hand. The effect has been to transform

the *drokpas'* social relations and pastoralist practices, and Tibet's grassland ecosystem has become degraded. More than a half-century later, China's policies continue to create human rights and environmental crises on the Roof of the World.

The first of these policies occurred in the late 1950s, when Tibet's grasslands were suddenly in the hands of Chinese cadres, grassland "foreigners" who had come either from China's urban centers or small-plot farms. Productivism was the new ideology, the goal of which was to intensify meat production, in service to the influx of Chinese migrants building new towns, oil wells and mines and other resource extraction industries across Tibet and western China.

From the outset, the cadres saw the nomads not as enduring stewards of the land but as backward and irrational: unscientific, unproductive and in need of revolutionary regimentation. The cadres set about increasing herd size, slaughter rates and overall meat production. By the early 1960s, however, Mao's Great Leap Forward had become an agricultural nightmare, producing a famine across Tibet and China that killed between twenty and forty million people nationwide.

Deng Xiaoping's rise to power in the late 1970s ushered in an era of economic and political pragmatism. Under the so-called Household Responsibility System, nomads were given their animals back, but not their land. As soon as they regained some control over their livestock, they cut the number of sheep



China's fencing policies abet grassland resource overgrazing and therefore ecosystem degradation. Photo: CTA, DIIR, Environment and Development Desk

back from the unprecedented highs of 30 million sheep and goats and six million yaks to more sustainable levels.

Still, the ecological damage had been done and, by the early 1990s, it was becoming clear that the grasslands were in trouble. The grass was dying, and animal weights were dropping. Burrowing rodent populations were exploding, reaching plague proportions because predators had been extirpated. Toxic invasive weeds had multiplied, and desertification was on the rise. The rangelands and their capacity to support life, abundantly, were degrading. Yet the policy-driven, compulsory overstocking undertaken during the first thirty years of communist policy could not be discussed; it was and still is a taboo subject, a shameful loss of face that China's officials have yet to look at afresh.

In the 1990s, new state-mandated policies once again extended the reach of central authority across the grasslands. In an effort "to integrate all regions of China...within a centrally planned system", state authority implemented the so-called "Four-Way Scheme", mandated region-wide fencing regimes and shelters for nomads and livestock, soon obligating decade-long limits on herd sizes (Foggin, 2007). Livestock mobility, which had for millennia resulted in both sustainable livelihoods and abundant, resilient ecosystems, was gone. The state, still eschewing any dialogue with the backward nomads as to how these policies might affect ecosystem abundance and resil-

ience, had still not realized that there was anything to be learned from Tibet's nomads.

A new crisis, and a new policy: China's water security

By the end of the twentieth century, as China's long-held dream of Tibet as a source of meat began to fade, a new concern was emerging for China: water security. The Yellow River, chronically and acutely overdrawn for irrigation, industry and urban populations along its length in lowland China, ran dry in its eastern reaches for 267 days in 1997 (Yeh, 2005). In turn, disastrous flooding in 1998 in the Yangtze River basin of central China made the public acutely aware of the recognition that China's unregulated logging and watershed practices in eastern Tibet had created a tragedy downstream.

Now, the Yellow and the Yangtze, along with the Mekong – the three rivers with headwaters in the semi-arid *Sanjiangyuan*, which means "three rivers plateau," or headwaters – would engender a new slogan and national policy: "Tibet is China's Number One Water Tower".

The drive to protect the sources of water quantity and quality coalesced into a new policy, embodied in a Marxist explanation of the new situation: that there was a "contradiction" between grass and animals.

Grasslands policy was now a simple zero-sum proposition: China must protect the grass in order to protect the watersheds, to protect the water – in quality and quantity – from degradation. And since the grasslands were not producing enough meat through traditional pastoral practices, the grazing animals would have to be removed – and, with them, the herders.

The new policy, *tuimu huancao* in Chinese, means, “closing pastures to restore grasslands”, and assumes that the only way to conserve Tibet’s grasslands ecosystems, as the headwaters of China’s great rivers, is to remove the *drokpa* and their livestock. Yet ecosystem scientists, including China’s own, are beginning to realize that the grasslands of Tibet, when grazed moderately, intermittently and using dynamic mobility of livestock, produce an abundance of forage and maintain a higher biodiversity than ungrazed pastures, where exotic weeds invade and biodiversity declines (Klein, Harte and Zhao, 2007, 2004).

Chinese policy lags far behind the latest scientific knowledge, and the *tuimu huancao* policy is the latest disaster in a half-century of disastrous land-use policies. The certificates guaranteeing nomads’ long-term land tenure have been torn up, nullified by the new edict. The installation of fencing across large areas, meant to instill a sense of ownership over plots, continues to disrupt customary access and social relations, and has led to overgrazing, exacerbating stressed and degraded ecosystems. State power is uprooting and displacing the *drokpa* – nearly 50,000 in the Sanjiangyuan alone, and several hundred thousand across the plateau so far – from their homelands and socio-cultural and socio-ecological lifeways and traditions, and doing so without prior, free and informed consent or participation in the decision-making process.

Instantly, the *drokpas*’ husbandry skills and traditional ecosystem knowledge, their risk-management strategies, environmental services, carbon sequestration and biodiversity conservation are gone, made irrelevant, as if they had never existed.

Climate change and state imperative exacerbating

China’s water crisis is the recognition that climate change is warming the Tibetan Plateau and inducing glacial meltdown: according to the International Centre for Integrated Mountain Development (ICIMOD), some 18% of the Yangtze River is glacial meltwater, 7% for the Mekong River, and 2% for the already parched Yellow River (Eriksson et al 2009). The



China’s fencing policies abet grassland resource overgrazing and therefore ecosystem degradation, seen at left in the image - Photo: Michael Buckley

explanatory power of climate change is now too convenient for China’s policy makers to ignore. Under the increasingly dire predictions of how climate change will affect the plateau, China no longer worries that its past policy failures caused the degradation of Tibetan rangelands. Climate change explains what is now seen as desertification in Tibet. Climate change is the overriding cause of the accelerated desiccation of Tibet’s lakes and wetlands and the disruption of Tibet’s modest croplands. Climate change has become China’s *force majeure*.

But it does not follow that the only response to climate change is the exclusion of nomads from their lands. Yet they are being uprooted and displaced from their socio-cultural and socio-ecological lifeways in the name of a plateau-wide greenwash conservation scheme to protect the water quantity and quality of the Tibetan Plateau’s China-bound river waters. The nomads’ practices are now a threat to what China’s state-run media characterizes as the “fragile ecology” of the region, and the nomads are now officially “ecological migrants”, victims of a conveniently impersonal force called climate change (Xinhua 2009).

Common traditions, common solutions

Like the dispossession of the American Indians and Australian Aborigines, the compulsory “ecological

migration" of the Tibetan nomads is grounded in ignorance, prejudice and a failure to listen and learn. China is far from alone in assuming its nomads are backward, far from alone in blaming them for degrading the land. But alternative models do exist, and can be found relatively close by in Mongolia.

Mongolia is perhaps Tibet's closest geographic analogue, both ecologically and socially.³ Long, cold winters, a semi-arid and arid climate, vast pasturelands and high spatial and temporal variability in precipitation define both Mongolia's high-latitude grasslands and Tibet's high-elevation grasslands. The comparison ends, however, when we consider how Mongolia is adapting to climate change and thereby to the fate and future of its own nomadic herders, their lifeways and the grasslands ecosystem that defines them.

In July 2009, United Nations Secretary-General Ban Ki-moon visited Mongolia's nomads and government officials. During this meeting, he referred to the "moral imperative" of climate change adaptation and the need to act on behalf of "the one third of the world's population – two billion people – who are potential victims of desertification". He also declared that the climate negotiations, both in the United Nations Framework Convention on Climate Change (UNFCCC) process and within nations, should be "guided by the principles of equity and transparency, and involve all in the decisions that affect us all (Ban 2009)".

Secretary-General Ban visited Mongolia not only because it faces severe challenges in adapting to climate change but also because its response is becoming a model for action. In 2000, Mongolia launched its National Action Programme on Climate Change (NAPCC), a multi-decade framework for addressing climate change. The goals of the program include "economic sustainability of livestock production and the ecological sustainability of natural resources used in livestock production", and the "reduction of vulnerability of livestock to impacts of climate change." The means to these ends include the "education [of] herdsmen and farmers on sensitive issues of climate change... technology and information transfer to farmers and herdsmen... research and technology to ensure agricultural development capable of dealing with various environmental problems in the 21st century... [and the] coordination of information from research, inventories and monitoring".

Underlying this ambitious program is the full participation of Mongolia's nomads in all aspects of the long-term assessment, analysis, planning, restoration, management and use, and conservation of Mongolia's ecosystems, ecosystem services and conservation zones.

These efforts point to the fundamental nature of how adaptation to climate change is a human rights issue: that a people have a fundamental right to determine their own fate and future in terms of how best to adapt to climate change. Numerous UN officials have already made direct statements linking climate change adaptation and human rights, providing more "moral imperative" to the mandate of nations to engage their peoples directly in planning for climate change.⁴ Tibet's *drokpa* deserve no less.

Annealed in the ecological crucible of Earth's highest plateau, and until recently the stewards of a unique form of sustainable pastoralism, Tibet's *drokpa* learned millennia ago that only through effective stewardship can life on the Tibetan Plateau be humanly possible and ecologically sustainable. They possess a traditional ecosystem knowledge that, despite sixty years of relentless attack under occupation, provides the template for an enduring pastoralist livelihood and ecosystem stewardship, especially as Tibet and the larger region work to adapt to climate change.

Indeed, the *drokpas'* ecological knowledge and pastoralist practices are essential for undertaking long-term restoration and conservation of the ecosystems and ecosystem services that China so desperately craves, and must still come to understand. □

Notes

- 1 The Tibetan Plateau stores more freshwater, in the form of glacial ice, than any other region on Earth except for the North and South poles. The Third Pole is warming at least twice as fast as the rest of the world, causing a glacial meltdown and a growing water crisis for some 1.3 billion people who live downstream in ten nations.
- 2 Additional online resources for the issues addressed in this paper include www.tibetjustice.org, www.tibetthirdpole.org, www.tibetnetwork.org, and www.meltdownintibet.com.
- 3 Their cultures have been connected since the early thirteenth century and the so-called "patron-priest" relations between Tibet's high lamas and the reign of Genghis Khan; Mongolia's forms of Buddhism are derived from Tibet's.
- 4 Ms Navanethem Pillay, United Nations High Commissioner for Human Rights, has spoken on the vulnerability of the poorest and least-contributing peoples under climate change scenarios. In turn, Ms Kyung-wha Kang, UN Deputy High Commissioner for Human Rights, has spoken about the "striking climate injustice" that the most vulnerable in the world face in adapting to climate change, and that the "human rights perspective also underlines the importance of empowerment". Finally, Mr Feng Gao, Director of Legal Affairs of the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat was a panelist on a mid-June 2009 Human Rights Council panel, during which time he asserted that, "The UNFCCC negotiation process and the expected Copenhagen agreed outcome will undoubtedly have positive impacts on the full enjoyment of human rights."

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Note: The following works have informed the composition of this article. I extend my thanks to two anonymous readers for comments on the text and suggestions for references. All website references were active as of 16 November 2009.

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