

THE IMPACTS ON THE PASTORAL NOMADS OF THE MELTING TIBETAN PLATEAU

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Overview: Melting Tibetan Plateau:

With an average elevation of 4500 meters, the Tibetan Plateau is one of the most distinctive land-features on this earth. For many generations, this Plateau has met the basic necessities to sustain life and flourish human civilizations beyond its vast border. The modern era now begins to acknowledge the significance of its strategic location for developing peace and harmony within the region or the opposite. The Tibetan Plateau, also referred as ‘The Water Tower of Asia,’ is the headwater of major rivers that flow into India, Bangladesh, China, Nepal, Pakistan, Thailand, Myanmar and Vietnam. The snow peaks and glaciers enable Tibet to be the source of major rivers that flow into Asia. As a result, approximately 1.3 billion people are dependent on the health of ten major rivers that originate in Tibet. The total river basin area is estimated above 5.6 million square kilometers. The Plateau provides Asia’s freshwater resource from the deserts of Pakistan and India to the rice paddies of southern Vietnam, from the great Tonle Sap lake of Cambodia to the North China plain.



Figure1: Tibet: The Third Pole
Image© NASA & D. Miller

Critical components to Tibet’s ecosystem are undergoing major transformations due to climate change. For instance, it has led to the receding of Tibet’s glaciers, shrinking and disappearance of thousands of lakes, drying of wetlands, thawing of permafrost, and reduced flow regimes in many rivers. Abnormal weather conditions due to climate change has made subsistence farming and herding more unpredictable, thus impacting the livelihoods of a majority of Tibetans. These days, on the Plateau, the spring thawing is earlier and the permafrost is melting away before the growing plants can access the water. This affects not only the crops but also the native vegetation of Tibet,

especially in wetlands and other low lying areas. The loss of wetland in turn threatens the migratory birds that are used to Tibetan stopovers during the mating season.

Endangering Pastoralism and Grasslands Stewardship in Tibet

It was mobility that was the very essence of herding. Pastoral nomads in the Old World Dry Belt, whether in the savannahs of Africa, the steppes of central Asia or the high altitude pastures of the Qinghai-Tibetan Plateau, have always needed to move their animals regularly to make use of the spatial and temporal patchiness of grassland resources. Nomadism was therefore more than just an ecological adaptation or an adaptation to the political environment. It was a 'region-specific, temporally and spatially ubiquitous survival strategy, an independent socio-ecological mode of culture' which was based on subsistence and coexisted as an alternative to the sedentary cultures of agricultural and urban societies. - Scholz (1995).

Nomadism is a strategy to optimize use of available natural resources and capitalise on socio-political conditions. While often ridiculed as primitive or even 'incomplete' by outsiders, it is in fact a highly sophisticated adaptation for exploiting energy captured in the grasslands of the region. - R. Merkle, (2000).

The local economy, which draws almost exclusively on Han migrants to staff schools, hospitals and other government posts, offers few opportunities to the Tibetan families who have traded their community assets for an uncertain future. – Matt Perrenson (2006)

The different approaches to grassland management reveal a tension that seems to be grounded in the different rationality of the 'modern' sedentary pastoral production system and the nomadic pastoral production system. Control is a central dividing component, as the nomadic pastoral practices are centered around mobility and flexibility, whereas the current semi-settled production system limits the herders' mobility, and grazing is sought to be better controlled. In the present situation, herders' level of decision-making in herding and grassland management appears to be decreasing, as the government is directing livestock numbers, pastoral practices, grazing systems, and grasslands are being set aside for rehabilitation". - Irene Breivik, (2007).

Mobility was crucial, moving on before grazing pressure destroys plants, exposing the dying turf to the icy gales and blizzards of Tibet which can strip soil, leaving only bare rock. Nomadic knowledge of how, when and where to graze, and the nomadic willingness to live in portable woven yak hair tents, summer and winter, with their animals, kept the pasture free of invasive toxic weeds, erosion, shrub invasion, and infestations of pests. None of this was known in the 1980s, except to the nomads themselves, and no-one asked them how they dealt with the risks of living at the third pole. It is only in the 21st century that Chinese and global science have caught up with what the nomads have always known. - Gabriel Laffite, (2010)

Pastoralism on the Tibetan Plateau is an 'adaptation to a cold environment at elevations above the limit of cultivation'. For centuries, the Tibetan nomads and herders have successfully maintained a sustainable and mobile lifestyle, traveling from winter to summer pasture lands and autumn to spring pasture lands (figure 6). The grasslands on the Tibetan Plateau represent one of the last remaining agro-pastoral regions in the world. The Plateau itself is covered in almost 70 percent of these precious grasslands. The pasture lands are made habitable through the co-existence of the Tibetan people and their yaks. Through their efforts they have maintained the sustainable use of this area for many centuries. China's introduction of different grassland policies over the years threatened the sustainability of this delicate environmental balance. The new policies restricts the flexibility and mobility of the nomads (which is the main ingredient in the nomadic pastoral production) and blames their livestock for overgrazing the grasslands.



Figure2: Map of Tibetan Nomadic Pastoral Area © D.J. Miller)

Despite all these valid arguments, in the name of modernization and conservation, the Tibetan nomads are forcibly removed from their ancestral pastoral lands, compelled to slaughter and sell their livestock. They now have to live on the state rations and some of them sold their belongings to run small vendors. Furthermore, their lack of other skills prevents them from finding alternate means of making a living.

For centuries, the Tibetan pastoral nomads (Tibetan: Drogpa) and herders have successfully maintained a sustainable and mobile lifestyle, traveling from winter to summer pasture lands and autumn to spring pasture lands (figure 7). The grasslands on the Tibetan Plateau represent one of the last remaining agro-pastoral regions in the world. The Plateau itself is covered in almost 70 percent of these precious grasslands. The pasture lands are made habitable through the co-existence of the herders and their livestock. Through their efforts they have maintained the sustainable use of this area for many centuries.

Implementation of failed policies:

China's introduction of different policies over the years have not only punished these pastoral nomads and the herders but also threatened the sustainability of this delicate environmental balance. During the **commune system**, in the name of "democratic reform", the nomads were herded into communes, stripped of all possessions, reshaped into production brigades, and given rations according to their work points. No production meant no rations. From the outset, the new class of cadres in command saw the nomads not as stewards and curators of the landscape, but as ignorant, backward and irrational, utterly lacking in enthusiasm for class warfare. At the same time, under the commands of the new cadres, the herd size steadily grew to an unsustainable levels and the chain of grassland degradation began. Twenty years later, in the late 1970s, the communes collapsed, having failed except for one achievement: the number of animals, in all Chinese official statistics, had climbed steadily every year, to record levels: 30 million sheep and goats, six million yaks. In the early 1980s nomads were given their animals back, but not their land. As soon as they regained some control over their lives, they cut the number of sheep back to more sustainable levels. It is now widely known that the actual grassland degradation and the increased grazing pressure started from the commune system. The Chinese statistical year book also revealed a significant increase in the number of grazing animals by the end of the commune period (1979).

Household Contract Responsibility System (HCRS) or **the Grassland law** was adopted in the year 1985. This law was adopted in order to protect the degrading grasslands and to modernize the animal husbandry. Some researchers argue that this law has been implemented in order to gain more control over the pastures and to stop the over-exploitation of the grasslands, which the government appears to consider the most important cause for grassland degradation. Long after the Chinese farmers had been given such guarantees of their land (*land lease certificates*) the nomads were at last (*in the 1990s*) given certificated guarantees of long term leasehold to their land (*30 to 50 years*). This encouraged conservation of pastures, giving nomads a sense of ownership.



Figure3: Fenced Grassland in Damshung (Amdo)
Picture © Wild Yak

Along with the implementation of the grassland law, the state authority gradually implemented the so-called “**Four-Way Programme**” or ‘Si Pei Tao’, ordering region-wide fencing regimes and shelters for nomads and livestock. According to the Animal Husbandry Bureau (*one of the four actors of the programme*) stated that this programme was meant to improve people’s lives, and control livestock and grazing. On the ground, this program limited the mobility of the livestock and encouraged the herders to invest and spend more time in winter pastures leading to increased grazing pressure on a smaller land area. Thus the Four Way Programme at some point intensified or at least in part, responsible for the problems for which the herders are now being blamed. But at the same time, other policies, driven by China’s long standing disdain for mobile people, were also implemented. Limits on family size and herd size were gradually made compulsory. Gone was the annual cycle of overwintering in lower plateau pastures and herding up into the alpine meadows in summer.

In 1990s, even after implementing series of policies and measures, nothing much changed and it became obvious that everything on the grasslands was going wrong. The living turf was dying, eroding and slumping, only to be torn away in wild weather, back to bare rock or ‘black beach’ as Chinese scientists called it. Burrowing rodent populations exploded, in plague proportions. Toxic invasive weeds multiplied. The rangelands were degrading, including the arid area of eastern Tibet where both of China’s great rivers, the Yangtze and Yellow, rise from glacier melt. Chinese scientists and administrators turned to just one explanation. The nomads were to blame. They were overstocking, beyond the carrying capacity of the pastures, and this was the cause of degradation. The compulsory overstocking during the commune system could not be discussed; it was and is off-limits. So only one cause was possible: to blame the nomads. But some recent research revealed that overgrazing and degradation of the grasslands is not entirely dependent on the grazing livestock. The

herders even talked about weather changes, rodents and mining activities as important factors causing grassland changes.

In 2003, a grassland rehabilitation policy is implemented throughout the country and in pastoral areas this policy is referred to as the '**Restore Grassland Policy**' or 'tuimu huancao' in Chinese, meaning "closing pasture to restore grasslands". In recent years, moving herders from the grasslands to state build housings is being largely intensified and has now become the central measure in protecting these grasslands. The land lease certificates guaranteeing nomads long term land tenure have been nullified by the new command. Instantly, all their skills, risk management strategies, environmental services, traditional knowledge and biodiversity conservation are gone, redundant, as if they had never existed. The most hard-line policies are enforced in Golok and Yushu prefectures, in the area China considers to be the source of its great rivers, where, in Chinese eyes, the downstream water supply is threatened by rangeland degradation which is caused by destructive nomads. In this large area, nomads are frequently "villagised" in "line villages" that are far from their customary grazing land, they are required to sell their livestock, and the new concrete settlements they are moved to are very far from their usual pasture.

For decades, the policies such as de-stocking and rodent poisoning were carried out that goes strictly against the religious sentiments of the herders. For instance, it was made compulsory that one person from each family should join in the drive to poison the rodents (*Tibetan pika*). Over the past 40 years, the Chinese government has sponsored the systematic poisoning of pikas, most recently using grain laced with *Botulin C* strain toxin (*Clostridium botulinum*). Approximately 320,000 square kilometers were poisoned! However some past and recent researchers have argued that these rodents are the keystone species of the grasslands and that large-scale killing of rodents may even be harmful for the grasslands, and is almost certain to affect other wildlife and the broader environment.

This new policy, 'tuimu huancao' like most simple ideas, it is overly simple. It assumes the only way to conserve China's upper watersheds is to remove animals and nomads. Yet China's own scientists have now learned, through patient observation, that the grasslands of Tibet, when grazed moderately and intermittently, moving herds on well before the short summer growing season ends, actually maintains a higher biodiversity than on ungrazed pastures, where toxic weeds invade and biodiversity declines.

The compulsory "ecological migration" of the Tibetan nomads is grounded in ignorance, prejudice, a failure to listen and learn. China is far from alone in assuming its nomads are backward, and to blame for degrading land. But around the world, governments increasingly recognize that pastoral nomadic mobility holds the key to sustainability on the dry lands of the world. There are other solutions to the problems of degradation of Tibetan lands. Tuimu huancao, closing pastures to convert them to grassland, is not the only way. Nor is it helpful to assert climate change as the catch-all cause of all problems.

Status quo:

Joblessness and alcoholism amongst the youth are prevalent in those new settlements where the elders are often seen cherishing their past lives and reliving in their memories and the younger ones are scavenging waste to earn little extra money. From our recent interactions with 'drogpas' and

herders who fled into exile (India) and from those documented research papers conducted inside Tibet, we came to know that the current policy of forced 'villagization' is in fact a very strategic move (from the state) to have all the mobile pastoral wanderers in tight leash and to have open access to pastures for extractive industries without facing any resentment. It also favors the central state in boasting that they have invested such amounts in upbringing the lifestyles of local residents. For many anthropologist and scholars, the term development has nothing to do with external materialistic life, it is the freedom to chose and to lead the life one values and respects. Given the choice of livelihood, almost all the residents of these newly constructed concrete settlements would love to roll back to their previous lifestyle without a second thought, even it if meant to live without a two bedroom house.



Figure4: Nomads settlement Serashul in Kham (2010)
Picture © EDD-DIIR

In his own words, Prof. Olivier De Schutter (the UN Special Rapporteur on the Right to Food) after his mission to the PRC (15 -23 December 2010) and having seen the conditions of the newly settled 'drogpas' and herders in the new concrete camps. He has mentioned strongly against the policy of settling the herders. Again on 6 March, 2012 at the UN Human Right Council in Geneva, he spoke about his concerns regarding those people living in the "new socialist" villages.^{1,2}

For PRC, another aspect of development where more income could be generated from Tibet is the tourism industry, which is now further enhanced by the railway networks connecting different places in Tibet. According to the latest information, around 49 million travelled in the railway line linking Gormo to Lhasa since its opening in 2006. It is estimated that passengers on the railway have increased at 10.3 percent annually³. It is indeed good news for the travel agencies, hotels and the street shops but sadly almost all of them are owned by Han Chinese and those who have good 'Guanzi' (the connection). This boom in tourism industry is has adversely affected the local Tibetan guides, who are now required to sit for an exam to earn a new tour guide license from the tourism authority/ department, the implication of which is very clear. Our Desk recently came across a sad documentary film and a short report about the 'drogpas' of Mogru town (south of Kokonor Lake),

¹ UN – A/HRC/19/59/Add.1 Human Right Council 19 Session, Agenda item 3.

² UN Special Rapporteur challenges China's forced resettlement policy in Tibet, <http://tibet.net/2012/03/07/un-special-rapporteur-challenges-chinas-forced-resettlement-policy-in-tibet/>

³ Tibet Policy Institute, CTA, Dharamsala, May 2012, <http://tibet.net/tibet-policy-institute/>

highlighting the impacts of tourism and how the state authorities are impounding lands owned by the 'drogpas' and local herders.

The Chinese tourists who visits Mogru town liked to be photographed with Tibetan children of the Mogru clan, who must dress as if they are timeless nomads, people without history, forever smiling. Perhaps not even knowing that the land of the clan was taken to build the tourist facilities, and the Mogru Tibetans have no source of income other than posing for happy tourist snaps. Attempts by the Mogru Tibetans to petition Beijing and seek justice have come to nothing. The film could be viewed from this [link](#) or

http://dl.dropbox.com/u/59960676/Nomads_of%20Mogru_Clan.mp4

Refer to this posting for more information;

<http://tibet-edd.blogspot.in/2012/02/last-of-mogru-nomadic-clan-documentary.html>

We have roughly found that total number of people being moved or lured to these concrete settlements under the different name tags (ecological migrants or comfortable housings projects) sums to approximately 3.2 million in whole of Tibet (including Amdo and Kham province). According to the Chinese state media (2011), another 185,500 families are expected to move into new homes by 2013. These figures in other words indicates the number of peoples whose life style are now directly under the control and mercy of the central command and nothing more.

WHAT SCIENCE SAYS?

Grassland degradations:

China's own scientists have now learned through patient observation that the grasslands of Tibet, when grazed moderately and intermittently actually maintain a higher biodiversity and healthier pastures. Many researchers have indicated in their findings that depopulating these grasslands and labeling the nomads as ecological migrants will not help to restore the pastures.

These days many researchers and rangeland specialist are arguing the applicability of these new policies. Recent scientific findings give us more technical view about the regeneration of the grasslands and the vital role of grazers in replenishing the grasslands. Few researchers even cited that carrying capacity of the grasslands may not even exist in most of the Plateau's extremely variable (unpredictable) environments.

According to these research papers, the carrying capacity of some grasslands were far exceeded partly due to inappropriate land-use and land management practices implemented in the 1950s. It was also mentioned that the major determinant for grassland productivity on the Tibetan Plateau is the rainfall rather than the past or the present livestock number. Some recent field studies also revealed that grazing actually helps in regenerating the grasslands by improving the soil Carbon/ Nitrogen ratio and prolonging/ extending the growing season. Even some Chinese researchers have blamed the degradation of these grasslands on many factors such as permafrost degradation, irrational human disturbance (mining, road construction, conversion of grassland to cropland, gold mining, overgrazing etc.,) and climate warming.

Field observations conducted on these grasslands have revealed positive connections between the grazing herds of the nomads and the grasslands. The researchers say that abandoning these

grasslands will lead to the domination of the invasive species, reduce biodiversity, and do more harm for the grassland which in turn would affect the permafrost soil.

These days, many researchers and rangeland specialist are arguing the applicability of these new policies, and how much these have actually benefited or affected. Recent scientific findings give us more insight information about the regeneration of the grasslands and the vital role of grazers in replenishing the grasslands. The researchers revealed that grazing actually helps in regenerating the grasslands by improving the soil Carbon/ Nitrogen ratio and prolonging/ extending the growing season. Some other researchers have blamed the degradation of these grasslands on many factors such as permafrost degradation, irrational human disturbance (mining, road construction, conversion of grassland to cropland, gold mining, overgrazing etc.,) and climate warming.

Conclusion:

Any development in Tibet should be based on the approach, 'listening to the land and listening to the people'. The land and its resources must be used within its capabilities and ecological limits; and any policy implementation and developmental activities must respect the cultural tradition of Tibetan, which is based on centuries-old practice of sustainable use.

The experiences and intimate knowledge of pastoral nomads should be incorporated into rangeland management practices. There should be a principle of collaborative management attending to the needs of the pastoral nomads and herders alike.

A healthy and sustainable Tibetan Plateau is important as it would benefit the entire Asian continent and would further enhance peace and harmony within the region, especially between two major super powers (India and China).

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