



Rangeland Policies in the Eastern Tibetan Plateau Impacts of China's Grassland Law on Pastoralism and the Landscape

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Rangelands - a complex environment - are more than just a resource to sustain livestock. This paper focuses on policy changes in the Eastern Tibetan Plateau, located in the Chinese provinces of Qinghai, Gansu, and Sichuan. Little effort has been made to monitor the impacts of such policies on either the environment or the people most affected. The paper, based on participatory action research carried out, concludes that the potential for rangeland and pastoral development is vast, given that certain pastoral friendly policies are put into place that facilitate a slow and sustainable trend towards market-oriented enterprises on the Plateau.

Introduction

Rangelands of the Hindu Kush-Himalayan region, primarily located on the vast Tibetan Plateau, are much like rangelands in other parts of the world. They are a marginal resource, naturally low in productivity and diverse in character in terms of both precipitation and availability of forage. They also represent a diverse cultural landscape, concurrently shaped by physical forces and human use. In this context it is important to view rangelands as something more than just a resource to sustain livestock. They are rather as a complex environment with a diverse array of amenities and possibilities and a rich cultural milieu. In total, rangeland resources encompass approximately 2 million sq. km or over 60% of the region (Miller 1995) and are managed as a common property resource by millions of farmers and pastoralists.

The rangelands of the Tibetan Plateau are important for a number of reasons (Miller 1995). First of all they form the headwaters of the six major river systems of Asia. They comprise diverse ecosystems ranging from forest-alpine ecotones, high Himalayan alpine valleys rich with medicinal herbs, the vast basin and range alpine meadows of the Eastern Plateau, to the high and dry alpine desert steppes of the Western Changtang. Much of the region provides an important habitat for many wildlife species such as blue sheep (*Pseudos nayaur*); *kiang* or the Asiatic wild ass (*Equus kiang*); Tibetan antelope (*Pantholops hodgsoni*), which are rapidly being hunted to extinction for their fine underbelly hair called *shatoosh*; black necked crane (*Grus nigricollis*); and the endangered snow leopard (*Panthera uncia*), prized for its pelt. Consequently, many areas are now designated as Protected Areas and have substantial potential for tourism development. Last, but certainly not least, these rangelands, especially the verdant pastures of the Eastern Plateau, offer vast reserves of forage for grazing livestock, which make up a significant percentage of the Gross National Product of these areas (Wu 1997). Of course, the king of the domestic breeds is the yak. Domesticated merely 10,000 years ago, it has not genetically diverged from its wild relative, the wild yak (Han Jianlin, pers. comm.), nor has it diverged in grazing behaviour. Domestication of this animal has led to the evolution of an extremely rich cultural heritage on the Tibetan Plateau.

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Characteristics of Traditional Pastoral Production Systems

Diversity and mobility characterise the pastoral production systems of this region. Pastoral production systems are diverse in order to minimise risk in unpredictable conditions. Pastoralists engage in multi-resource economies and usually maintain large, varied herds. Livestock products are, of course, the base of subsistence, providing such goods as dairy products, meat, live

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animals for trade, wool, manure, fuel, and labour. Pastoralists also engage in other occupations such as cropping, timber extraction, handicrafts for both tourism and local consumption, trade in manufactured goods, and medicinal plant extraction, to name a few. Traditionally they have always been itinerant traders; modern opportunities have merely helped them to expand their networks.

It is also an ecological reality that livestock must be mobile to maintain rangeland health, the basis of extensive grazing systems. This is true whether one is talking about large arid rangelands or small intensively managed pastures. The mere difference is that, as the environment becomes harsher, the further herders must move to acquire forage for livestock. Livestock mobility

has been shown to be a good indicator of sustainable rangeland health (Sneath 1996), and can be compatible with biodiversity conservation (Wu and Richard 1999). If one can identify the factors that lead to changes in mobility, one can often address the causes of rangeland degradation. Factors that have led to restriction of mobility include growing populations of people and livestock; expanding agriculture into best quality rangeland areas; forestry or protected area initiatives that restrict grazing rights; government policies that promote settlement; and the changing aspirations of the pastoralists themselves.

Impacts of the Grassland Law

This paper focuses on policy changes in the Eastern Tibetan Plateau, located in the Chinese provinces of Qinghai, Gansu, and Sichuan. This region is undergoing drastic changes in land tenure, with settlement policies promoting the 'individualisation'¹ of rangeland stewardship as a means of mitigating the effects of the perceived 'Tragedy of the Commons'². The Chinese government, citing the success of Deng Xiao Peng's reforms of the early 1980s, specifically the Individual Household Responsibility System in cropping areas, formulated the Grassland Law in the mid-eighties, based on the assumption that grasslands in China were deteriorating due to lack of stewardship (Williams 1996; Thwaites et al. 1998).

The Chinese government offers sound rationale to justify settlement policies such as the Grassland Law. For one, it has been difficult to provide nomads with social services such as education and health care, and heavy snowfalls have historically lead to loss of livestock (Wu and Richard 1999). It was felt that fencing could help provide reserve pastures during these critical periods. However, underlying these justifications is a general lack of faith in traditional migratory grazing systems. Factors often mentioned are the 'irrational' structure of nomads' herds, with too few breeding females and too many unproductive animals, and the consequent severe overgrazing and desertification due to lack of individual responsibility (Zhang Rongzu 1989).

Although late to come to the Eastern Plateau compared to other parts of China, implementation of the policy is rapidly taking place. In the past few years, pastures have been allocated to individual households and large areas fenced to demarcate these boundaries. However, little effort has been made to monitor the impacts of such policies on either the environment or the people most affected. The International Centre for Integrated Mountain Development, in partnership with regional research institutes in the provinces of Qinghai, Gansu, Sichuan, and Yunnan has initiated a participatory action research project to evaluate the affects of such policies and to identify sustainable alternatives where needed.

Table 1 highlights the preliminary findings of these studies. Not all positive and all negative characteristics are found in each site studied. This table merely summarises some of the general findings. The actual situation reflects the local policies that have been adopted to implement the general guidelines of the Grassland Law. For example, in Hongyuan County, Sichuan, individual households can not recombine individually allocated land that would help to facilitate the economy of scale in operations. Meanwhile, in Maqu County, Gansu, local officials have allowed recombining of land, provided that households initially accept an individual allotment, a requirement for future government subsidies for rangeland improvements. Issues such as access to water and high individual household costs will more likely be reflected in situations similar to

¹ The term 'individualisation' is used here in lieu of the term 'privatisation' as the Grassland Law of China facilitates long-term leasing of land to individual households rather than land ownership.

² A term coined in the now much refuted writings of Garrett Hardin (primarily 1968), perhaps the one theory to do more damage than any other with regards to rangeland tenure throughout Africa and now Asia.

those found in Hongyuan where individual households bear all the burden of pasture management. More details of these studies will be forthcoming in publications by ICIMOD and partner institutions.

As these policies sweep the region, it is important to look at the situation for what it is – an attempt to convert a pastoral way of life into an 'efficient' ranching enterprise. This is based on the assumption that a simple change in land tenure will facilitate a shift from subsistence to market-oriented behaviour. However, the behaviour and rationale of pastoralists are dictated first and foremost by an awareness of the realities of the marginal landscape in which they live, a landscape that has sustained their way of life for centuries. A rapid conversion to a new mode of thinking and living cannot take place without resulting in substantial socioeconomic and ecological consequences. To illustrate this point, I make a comparison between a western ranching operation (for example, from Colorado, USA, with a similar environment to the Eastern Plateau) and Tibetan pastoralism, in Table 2. This table is not meant to make a value judgement, such as one system being better or worse than the other type. It is mainly meant to show that, if ranching is to work well, the socioeconomic context must be amenable to such a mode of operation, something that is far from the current reality on the Tibetan Plateau.

The behaviour and rationale of pastoralists are dictated first and foremost by an awareness of the realities of the marginal landscape in which they live, a landscape that has sustained their way of life for centuries. A rapid conversion to a new mode of thinking and living cannot take place without resulting in substantial socioeconomic and ecological consequences.

Table 1: Impacts of the Grassland Law through individual tenure and fencing

Positive	Negative
Where fencing is used for reserve pastures, livestock mortality has been reduced.	Poor allocation of pastures in many areas with some receiving good quality land and others poor land
Reduced labour for household overall, although the gap between men's and women's labour has increased as men no longer spend time in long-distance herding	Individual pastures are often too small forcing herders to liquidate herds or rent pasture from those with excess land.
Serves as border protection which has reduced conflicts in some areas	Lack of water on individual pastures/lack of access to neighbour's water sources
Increased access to markets where fencing is used for constructing holding pens	Costs per household too high for improvements - high subsidies required by the government
Better access to veterinary care and other services	Degradation of surrounding 'commons' – no communal responsibility for landscape amenities such as riparian areas
Has forced herders to fix number of livestock (although this could reduce long-term flexibility under drought conditions)	Increased labour for children – as parents find time to seek employment in nearby towns, children now required to maintain herds and have lost opportunity to attend school
In some areas poorer households can combine their pastures which cuts cost for individual household	In other areas, households are not allowed to recombine, thus creating more economic hardship and reduction of herds

Sources of information: Field visits by author to Maqu County, Gansu, Dari County, Qinghai, and Hongyuan County, Sichuan, in 1999 and 2000; field study conducted by participants in Participatory Rangeland Management training in Hongyuan, Sichuan, July 2000; Regional Rangeland Programme Annual reports by Yan and Luo (2000), Ma et al. (2000), and Du and Zhang (2000).

Table 2: Tibetan Plateau pastoralism compared with a ranching operation in the Rocky Mountains of Colorado, USA

Tibetan Plateau Pastoralism	Colorado Ranching
Subsistence focus, diverse products for home consumption with some surplus for sale	Commercial, single product focus (e.g. meat)
Majority of population engaged in pastoralism (livelihood necessity)	Very few ranchers with most people engaged in other livelihoods (ranching is a lifestyle choice)
Several households have access to a large area which is communally managed	One operator has exclusive access to the same amount of area and livestock
De facto tenure (customary, common property)	De jure tenure (legal, individual)
Low capital and high labour investment	High capital investment - only larger operations are profitable
Risk averse, engage in multiple economic strategies	Risk-taking (insurance schemes and legal mechanisms to protect commercial interests)

The Need for Pastoral Friendly Policies

We need to improve our efforts to provide education, vocational training, and credit to promote diverse industries and vocations to get people off the range, so that those remaining can develop commercially viable and sustainable livestock operations.

The potential for rangeland and pastoral development is vast, given that certain pastoral friendly policies are put into place that facilitate a slow and sustainable trend towards market-oriented enterprises on the Plateau. Enterprise development should be based on the premise that animal husbandry and livelihoods on the Plateau are still based on subsistence and that the environment upon which these livelihoods depend is marginal, with limited potential for intensification. Given this, the following general policy guidelines are recommended for the Eastern Tibetan Plateau.

- Promote livestock mobility. Settlement of communities can work but livestock must stay moving to prevent environmental degradation. This is the basis of 'scientific' (and indigenous) pasture management.
- Promote economic diversification, keeping in mind that livestock cannot be a viable commercial enterprise for all those who currently depend on subsistence animal husbandry. We need to improve our efforts to provide education, vocational training, and credit to promote diverse industries and vocations to get people off the range, so that those remaining can develop commercially viable and sustainable livestock operations.
- Initially reduce risk to the individual household by legitimising communal tenure and management of pasture resources, so that households dependent on the rangeland resource can have equitable access to resources. This should be accompanied by development of credit schemes and legal mechanisms to protect both individual and communal rights to access resources.
- Build social cohesion through collaborative management of rangeland resources, with local communities in partnership with government extension, research, and administrative entities.
- Promote social and gender equity to ensure a fair livelihood basis for all.

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