

Nomads of the Tibetan Plateau Rangelands in Western China—Part Three: Pastoral Development and Future Challenges

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Pastoral Development in Tibetan Rangelands

Modern pastoral development began in Tibetan nomadic areas in the late 1950s and 1960s. Thousands of years of traditional pastoralism were radically and abruptly changed with the formation of Chinese communist collectives and all animals and the tools of production became the property of the collectives. Large, state farms were established in many nomad areas. Nomads, who previously were largely responsible for their own livestock, although usually under the control of a large estate or monastery, now had their animals put into collectives and the collective made decisions regarding production and the use of the rangeland. The government, through the collectives, provided inputs for fencing, veterinary services, crossbreeding with improved breeds, and the growing of artificial forage. In many areas, pastures were fenced and set aside for winter grazing or as special lambing and calving pastures. Nomads built houses around commune headquarters and constructed barns and shelters for livestock. Many rangelands were plowed up to plant grain.

In 1983, the Household Responsibility System was initiated in Tibetan nomad areas. Communes were dissolved and all animals divided equally among the nomads. Each family became responsible for its own livestock production and the marketing of livestock products. Rangeland remained the property of the state but nomads used the rangeland communally, often in groups that reflected the previous communal structure. In other areas, the traditional tribal structure, in existence prior to the 1950s, became the basis for rangeland tenure.

Under the Household Responsibility System, many nomads that were more industrious or better skilled in taking care of animals were able to increase the size of their herds over time.

About ten years ago, in Tibetan nomad areas near Qinghai Lake, in Qinghai Province, pastoral development programs were initiated by the government that promoted the settling down of nomads and the division and allocation of rangeland to individual nomad households. Starting first in the traditional winter grazing lands, each nomad family was allocated a specific amount of rangeland on a long-term contract (30–50 years) in what was essentially a privatization of the grasslands. Pastures were also fenced to demarcate boundaries between pastures belonging to different nomads. The amount of land each nomad household was allocated was based on the supposed carrying capacity of the rangeland and the number of livestock the family had. The construction of houses for nomads, sheds for livestock, fencing, and development of ar-

tificial pasture was encouraged and heavily subsidized. Roads, schools, health clinics, and service centers were also established in nomad areas. Nomads were encouraged to restructure their herds to raise more breeding females and to sell stock for slaughter at a younger age. In some areas, with government concern about overgrazing, limits were placed on the numbers of animals nomads could raise.

This program was later expanded to privatize all the grazing lands used throughout the year, not just the winter pastures. This same pastoral development program of 'settling the nomads' and allocating and fencing the rangelands is now being rapidly extended throughout the Tibetan nomadic areas of western China.

Pastoral Policies

Pastoral development policies on the Tibetan Plateau, as elsewhere in much of the pastoral world, often maintain that nomads are 'backward' and that their traditional nomadic prac-



A modern Tibetan nomad house, near Zeku, Qinghai Province.

tices need to be 'improved'. Nomads' vast ecological knowledge and animal husbandry skills are often not well recognized or appreciated by scientists and development planners. As a result, nomads have largely been left out of the development process, with neither their knowledge nor their needs and desires considered. Nomads should, however, be thought of as 'experts' even though they may be illiterate. Many old Tibetan nomads have probably already forgotten more details about rangelands and yaks than many young range ecologists and animal nutritionists will ever learn in college.

Lamentably, the utility and economic viability of nomads' existing herd structures are largely unappreciated by most officials in Tibetan nomadic areas. Pastoral policies for restructuring nomads' herds usually do not acknowledge the reasons behind the existing herd structure in the first place. Too often, policies for Tibetan nomads are conceived by people who do not

know which end of a yak gets up first. Herd structures commonly found in commercial livestock operations in North America, Australia, or New Zealand are usually impractical for most Tibetan pastoral areas, yet many aspects of Western style livestock operations are often recommended for rangelands in Western China as 'modern' and 'scientific' means of livestock production.

Pastoral Misconceptions and Realities

Misconceptions abound regarding the rangelands, nomads, traditional nomadic practices, and pastoral development on the Tibetan Plateau. Sifting fallacies from facts is often confounded by the lack of good ecological information on the ecology of the rangelands and the poor understanding of nomadic pastoral production systems. In addition, information that does emerge about pastoral systems that contradicts official policies and development approaches is often ignored. In China, the prominence of cultural attributes such as 'loss-of-face', generally makes people reluctant to admit to past mistakes, especially of officials or senior people. The political and donor-driven pressure to develop the hinterlands of China and to alleviate poverty among nomads also often means that many of the underlying technical and scientific issues in pastoral areas are not adequately addressed before development programs are undertaken.

Popular misconceptions about the sustainability of Tibetan nomadic pastoralism include ideas such as: livestock numbers have greatly increased in recent decades; rangeland degradation is widespread; overgrazing by livestock is the cause of rangeland degradation taking place; degraded ranges could be improved if stocked at carrying capacity; large herds maintained by nomads are uneconomic and only a status symbol of wealth; and that new institutions and organizations need to be put in place to improve range resource management.

The realities are that in many Tibetan pastoral areas, livestock numbers have not increased greatly in re-

cent years and current attempts to limit animal numbers may be ill conceived. Even if seemingly uneconomical, nomads oftentimes will not be willing to reduce animal numbers since large herds provide insurance against losses and competitive advantage in exerting control over grazing resources in addition to social status and livestock products. The absence of viable markets and high transaction costs also often preclude nomads from selling more animals in the marketplace. Since costs for maintaining animals are low, it is usually profitable to hold animals, although critics of Tibetan pastoralism often claim that nomads keep large numbers of livestock just as a status symbol.

In China, views are widespread that Tibetan nomads wander freely across the grasslands in a migratory manner with no permanent home and without any management of the grazing lands. Current policies for privatization of grasslands are based on the mistaken belief that traditional pastoral systems did not give nomads any responsibility for the rangeland and that, therefore, nomads tried to maximize herd sizes with no regards to carrying capacity. The fact of the matter is that Tibetan nomads do not move randomly across the landscape and hardly ever have. Rather, their movements are usually well prescribed by complex social organizations and are highly regulated. In some areas, under the traditional pastoral system, quite elaborate systems were in place to periodically reallocate grazing land among herders depending on rangeland condition and livestock numbers.

It is a widespread opinion that grazing lands on the Tibetan Plateau are overgrazed and in a degraded state. While much of the rangeland in the agricultural valleys of Central Tibet is heavily overgrazed and in a badly deteriorated condition with desertification a spreading problem, the situation in many of the nomadic pastoral areas is not nearly so bad. Many rangelands in the pure nomadic areas of Tibet are, in fact, in good to excellent condition, despite centuries of livestock grazing. Overgrazing is an issue in some no-



Two old Tibetan nomads.



A herd of yaks moving to a new pasture. Mobility is an important feature of Tibetan nomadic pastoralism.

madic pastoral areas and rangeland degradation is a problem in places, but sweeping generalizations about overgrazing and rangeland degradation only confuse the issue. Due to concern about overgrazing, policies for limiting livestock numbers have been enacted, but they are inappropriate when applied to pastoral areas where rangeland conditions are still good and where the nomads could actually be raising more animals. Overgrazing and rangeland degradation needs to be looked at on a local level.

There is increasing evidence that a general climatic trend of desiccation and warming may be responsible for vegetation changes taking place in the alpine meadows of many parts of the Tibetan Plateau. Livestock grazing may just accentuate natural ecological processes taking place instead of being the cause for the vegetation changes. It is also becoming increasingly apparent that existing paradigms for explaining the dynamics of rangeland ecosystems have not captured the dynamic nature of Tibetan rangelands and, therefore, traditional measures for range conditions and carrying capacities may not be effective gauges for management in these grazing lands.

Future Challenges

Despite their extent and importance, rangeland ecosystem dynamics on the Tibetan Plateau are still poorly understood and good, scientific data on ecological processes taking place throughout the rangelands are limited. Many questions concerning how rangeland vegetation functions and the effect of grazing animals on the pastoral system remain unanswered for the most part. The socioeconomic dimensions of the Tibetan pastoral production systems are also not well known. This lack of information limits the proper management and sustainable development of the rangelands.

Improved pastoral production in Tibetan nomad areas requires that ecological principles regulating rangeland ecosystem functions are linked with the economic principles governing livestock production and general economic development processes. New perspectives emerging about non-equilibrium ecosystem dynamics and new concepts about plant successional processes in pastoral systems provide interesting frameworks for analyzing Tibetan rangelands. Exploring the relevance of these new perspectives could have important implications for the management of Tibetan pastoral

areas. Innovative, pastoral development paradigms that actively involve nomads in the development process also suggest new possibilities for and fresh approaches to working with Tibetan nomads.

Greater efforts should be directed towards developing a better understanding of current nomadic pastoral production systems. Practices vary considerably throughout the Tibetan rangelands and these differences need to be analyzed. Why do nomads in different areas maintain different livestock herd compositions? What are current livestock offtake rates and how do increasing demands for livestock products in the marketplace affect future livestock sales? What constraints and opportunities for improving livestock productivity are recognized by the nomads themselves? What forms of social organization exist for managing livestock and rangelands? How have these practices changed in recent years and what are the implications of these transformations? Answers to these, and related questions, will help unravel many of the complexities of Tibetan pastoralism, of which we still know so little. Analyses of the socioeconomic processes at work in Tibetan pastoral areas are a key challenge for researchers. It will also be important to determine which aspects of indigenous knowledge systems and traditional pastoral strategies can be used in the design of new development interventions for pastoral areas on the Tibetan Plateau.

With current pastoral development policies, Tibetan nomads are being transformed into commercial livestock ranchers. While these developments are certainly improving nomads' standard of living, the long-term sustainability of the large subsidized investments in fences, buildings and range improvements needs to be questioned. Fencing and barns are expensive, relative to the benefits. Is the huge investment in buildings and fences really economically sustainable? Given the generally poor experience with settling of nomads in other pastoral areas of the world, it will be interesting to watch the process of sedentarization as it unfolds

on Tibetan rangelands. What effect will the privatization of the grazing lands have on rangeland condition? Will nomads overgraze pastures that they view as their own property now? What effect will private rangeland and fences have on traditional mechanisms for pooling livestock into group herds and group herding? These, and other related questions, will be important questions to seek answers to in the future.

Pastoral development programs for Tibetan rangelands must involve the nomads themselves in the initial design of interventions. Nomads' needs and desires must be heard and the vast body of indigenous knowledge nomads possess must be put to use when designing new projects. An important message for pastoral policymakers and planners is the need for active participation by the nomads in all aspects of the development process and for empowered nomads to manage their own development.

Conclusion

The challenges facing Tibetan nomads and the sustainable development of the rangelands on the Tibetan Plateau are considerable. Opportunities do exist, however, for improving the management of rangeland resources, increasing livestock productivity, and bettering the livelihoods of the nomad population. Programs stressing multiple use, participatory development, sustainability, economics, and biodiversity could be realized through complementary activities in range resource management, livestock production, and wildlife conservation. Implementing such programs requires a better understanding of the rangeland ecosystem, greater appreciation for nomads and their way of life, and consideration of new information and ideas emerging about nomadic pastoral systems. It may also require a rethinking of existing pastoral development policies in light of new information becoming available about Tibetan nomads, their production systems, and the rangeland environment in which they thrive.

The North American experience with range management and livestock production can play a significant role in



Rangeland at 3,500 m near Hongyum, Sichnan Province.

assisting Tibetan nomads and range and livestock specialists working on the Tibetan Plateau in Western China. The range science skills that North American range scientists possess can help unravel the complexities of rangeland ecosystem processes in rangelands on the Tibetan Plateau where ecology as a science is still new. Knowledge of the nutritional aspects of livestock production on rangelands in the Great Plains, especially in the winter, could also be of tremendous value in improving livestock productivity in Tibet. The North American experience with rangeland planning could also have great relevance on Tibetan rangelands as the tenure patterns are changing with the division and allocation of land to individual nomad families. Tibetan nomads, who have been raising livestock for thousands of years, also have a vast amount of knowledge about their rangelands and rich experiences to share with the rest of the world.

Additional Reading

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Editor's Note: This is the concluding part of a 3-part series. Part 1 was in the December 1998 *Rangelands* and Part 2 in the February 1999 issue.