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## **Developments in Tibetan pastoral society in the last four decades and their impact on pastoral mobility in north-western Sichuan, China**

WU NING

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### **1 Introduction**

Nomadic pastoralism is the only way that the land can be used in most areas of the Tibetan Plateau due to the high altitude and the harsh environment (GOLDSTEIN et al. 1990; SCHOLZ 1995; WU 1997a). In the last four decades, however, numerous demographic and economic changes have occurred, triggering changes likely to significantly transform the traditional pastoral system (MILLER 1995; WU 1997a; 1997b). Research on the socio-economic consequences and the decision-making processes of China's new pastoral policies is, therefore, an important area of geographical investigation on the Tibetan Plateau. So far, little research information on this topic,

however, has surfaced and virtually none from the eastern region of the Plateau.

This paper begins to clarify this issue through an examination of the development processes taking place in a Tibetan pastoral area of northwestern Sichuan. It concludes with a study of the pastoral dynamics during the current process of privatization of the rangelands. Data was collected in the field in Hongyuan County, northwestern Sichuan. Field work was carried out in *Rozam (Longrang) Xiang* (township) from 1996 to 1998. Documentation and information collection was conducted in Chengdu and in Hongyuan, by visiting concerned institutions and interviewing a number of key informants. Traditional anthropological methods, such as participant observation and in-depth interview, and systematic measurements of ecological parameters provide the data utilized in this research.

## 2 Description of the Study Area

Hongyuan County, one of the 13 counties in Aba Tibetan and Qiang Autonomous Prefecture of Sichuan Province, is located on the eastern part of the Tibetan Plateau 500 km to the northwest of Chengdu (see figure 2-1, S. 155). It covers an area of about 8439.9 km<sup>2</sup>, of which 91.47% is natural rangeland. Administratively, this county includes 2 *Zhen* (towns) and 8 *Xiang* (townships), which are subdivided further into 33 *Cun* (villages). Geographically Hongyuan consists of a high-altitude plateau, with the average elevation exceeding 3,400 m. Baihe River, a branch of Yellow River whose drainage area comprises approximately 79% of the county's land surface, flows northwards through the county. The annual mean temperature is 1.1°C and there is no absolutely frost-free period. The annual precipitation is 753 mm, 86.4% of which occurs from May to October.

As of the census in 1995, the population of Hongyuan was 32,097 people residing in 7,655 households, with 24,594 Tibetan people, accounting for 76.62% of the total (SBS 1996). The population density is thus about 3.8 per square kilometer. After the Tibetans, the *Han* Chinese make up 21.16%, most of whom migrated there in the last four decades. The rural population in 1995 was 24,816, comprising 21,138 herdsmen (85.18%) and 3,678 farmers (14.82%). This means that livestock grazing absorbs most of the rural labor force. In 1995 the output value of animal husbandry formed over 78.83% of the GDP as a whole (SBS 1996).

*Rozam Xiang*, the case-study site, is located in the center of the county's territory and is inhabited almost totally by Tibetan nomads of the *Marshal* Tribe. There are three *Cun* (villages) included in this *Xiang*. The total population was 2,840 in 1996 residing in 597 households, including 1,687 in the work force. The total number of livestock was 34,230, of which 29,678 (86.7%) were yaks (including their hybrids), 1,878 (5.49%) horses and 2,674 (7.81%) sheep.

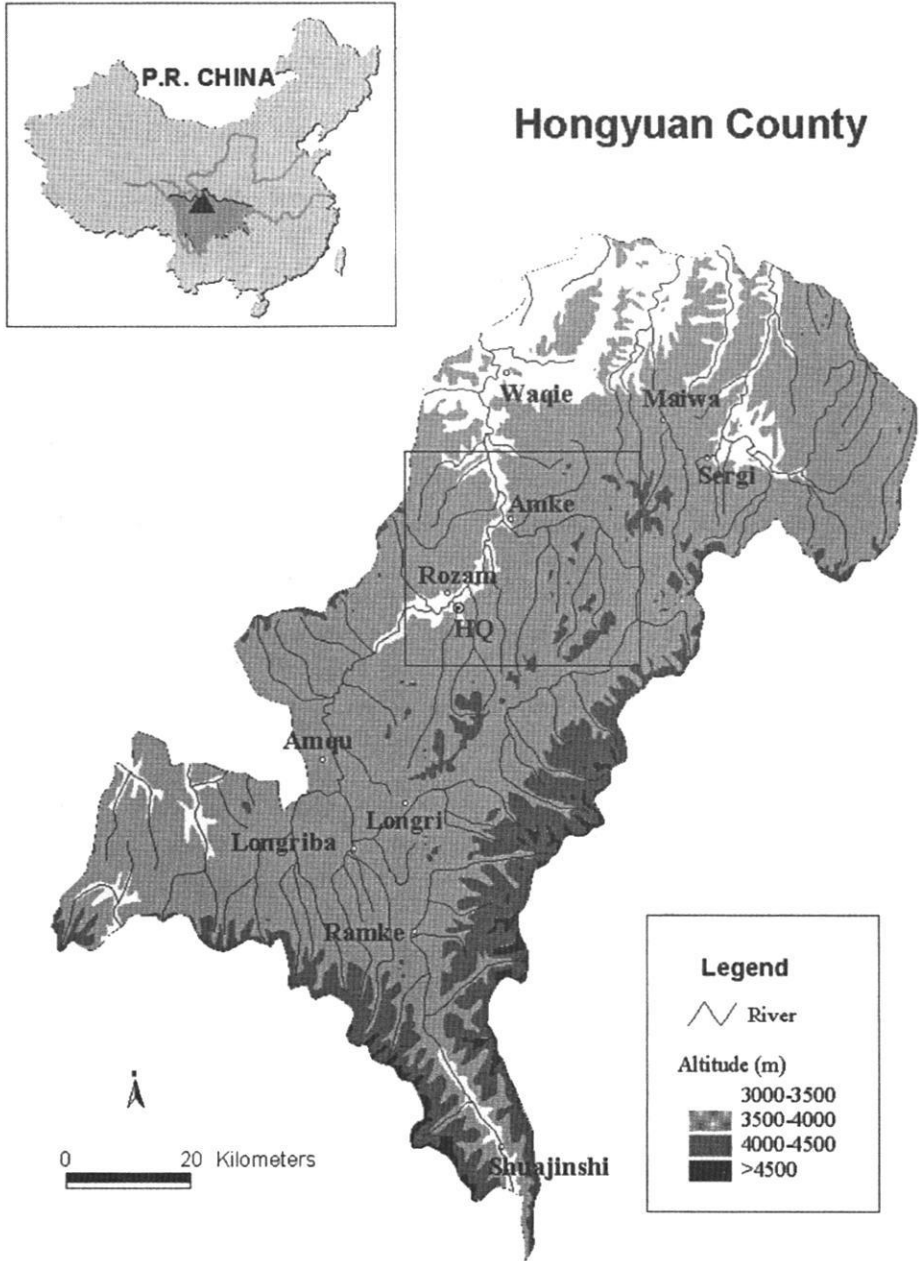


figure 2-1: Hongyuan County

### 3 The Changes in the Last Four Decades

#### 3.1 Historical Background

Before the establishment of Hongyuan County in 1960, this region belonged to Songpan County and then Lixian County administratively and was occupied by some 20 Tibetan nomadic tribes. Before 1952, *Rozam* was inhabited by *Dozarekun* Tribe, a branch of *Maiwa* Tribe. In the summer of 1952, after a tribal conflict, *Marshal* Tribe fled from their original homeland - the southern bank of *Yellow River* in Qinghai Province. After requesting permission from *Gongtang Lama* of *Lapunen* Monastery (in Gansu Province), they migrated into Hongyuan County after a 18 day trek. The total population that migrated in that time included 90 nomadic households and about 30 monks of *Benbo* and *Ningma* School.

During the tribal era, animal husbandry was totally nomadic. Rangelands were a common resource, but there were clear borders between tribal territories. The head of a tribe had the right to allocate the grazing-use of rangelands, such as the location and duration of campsites for each household and the moving time for all the tribe. The time spent in summer pastures was generally from the end of April to the middle of October; nomads changed their campsites 5-6 times. Natural calamities such as snowstorms and diseases were the most serious factors affecting livestock production. Survival rate of calves was often only about 70%. From 1950 to 1956, the total number of animals in Hongyuan only increased from 98,600 to 118,000, an average growth rate of 2.81% per annum. The very low productivity of the grazing lands used by nomadic herders means that a very large area is needed to sustain the animals and as a result (human) population densities are very low in the nomadic herding regions. From 1950 to 1956, the nomad population increased from 9,425 to 10,614, an average annual growth rate of 1.8%. The population density was thus 1.12 - 1.26 per square kilometer. During the same period the percentage of yaks in livestock herds was 77.54 - 81.95; while sheep were 6.16 - 11.76 %, and horses 10.45 - 11.90 %. Therefore, the yak is the main livestock species traditionally raised by the nomads in Hongyuan.

#### 3.2 The Early Period of Collectivization: 1958-1972

After the establishment of the Peoples' Republic of China (PRC) in 1949, nomads in Hongyuan were not collectivized immediately. The traditional nomadic social structure lasted until the „Democratic Reform” in 1958. When „Democratic Reform” was carried out in northwestern Sichuan, the 164 nomadic households of *Marshal* Tribe were newly classified as „pastoral lord” (6 households); „wealthy” (14 house-

holds); „middle” (32 households); and „poor” (112 households). Some livestock and property of „lords” or „wealthy” households were confiscated and distributed among poor households. At the end of 1958 *Xingfu* (happy) *Xiang* was established in the territory of the two tribes - *Marshal* and *Dozarekun*. The collectivizing policy called „mutual aid” was implemented. Households from the „middle” and „poor” classes were formed into mutual aid groups that jointly held pastures and cooperated in tasks such as herding, although economic decisions remained the prerogative of individual households, as did all income. In the following year, a more rigorous collectivization was implemented and 31 „Mutual Aid Cooperations” were established in the present territory of Hongyuan. The total of 2,046 households (83.56%) and 130 thousand animals (99%) were brought into these „cooperations” and nomads had to share their profits based on their investment (animals). *Tuanjie* (union) *Xiang* (*Amuke*) was merged into *Xingfu Xiang*. The land tenure of pastures was transferred to the state and the animals and production tools belonged to the collectives as well. All livestock production business was managed by collectives. Owing to the premature advance of development policies, the death rate of animals in 1959 was recorded as high as 8.3%. For sheep the death rate was 25.74%. In 1960 *Dozarekun* Tribe was separated from this *Xiang* and formed *Amuke Xiang*. *Xinghu Xiang* was only inhabited by the members of *Marshal* Tribe and named *Rozam* (means ‘long valley’ in Tibetan). In 1960 the collectivization was accelerated greatly. The total 143,508 animals in Hongyuan, state farms owned 20.70%; collectives 72.74%; and private households only 6.55%.

The emergence of the „Great Cultural Revolution” in 1966 introduced a new phase of more radical political intrusions into daily life in *Rozam*. In 1967 *Rozam* and *Amuke* were combined together again and named *Amuke Xiang*. During the 15 years from 1958 to 1973, the number of animals in Hongyuan increased from 120,300 to 400,350, with an average growth rate of 15.52% per annum. It should be mentioned that the percentage of yaks in the animal herds decreased from 77.41 in 1958 to 62.20 in 1973, but that of sheep increased from 14.98 to 33.88. This phenomenon resulted from the encouragement of the government and the fact that collectives who could organize enough labor for the management of sheep. Although „People’s Commune” was not implemented in this region during this era, the social and political organizations were dramatically restructured by transferring ownership of the means of production and all marketing and production decisions from the household to the collectives. Some permanent settlements were built up around the *Xiang* Headquarters and formed small townships, such as that in *Rozam*. Winter houses instead of tents were established, and the ownership of livestock became communal rather than individual. At the same time, the percentage of non-rural population increased from 7.59 to 25.26.

### 3.3 Commune Period: 1973-1980

In 1973, the nomadic areas in Hongyuan were organized into communes. In the territory of Hongyuan, 10 people's communes were established, which administered 20 pastoral communal brigades, 8 farming communal brigades and 7 communal farms. In 1974 *Amuke Xiang* was divided into two parts again and called „*Rozam* People's Commune" and „*Amuke* People's Commune" respectively. During this period, the government encouraged nomads to greatly increase the number of animals. The growth rate of animals in 1973 rose to 16.34% and then to 19.27% in 1974. Since the rangelands could not support such an abrupt increase, the growth rate of animals decreased greatly in the following two years. In 1977, the debilitated base of animal industry in Hongyuan was hit by harsh weather conditions, with about 10,950 livestock dying from snowstorms and 8,700 head dying from disease. Government became aware that not enough attention was being paid to pastoral production, and a large-scale fencing project was initiated from 1976 onwards. A lot of long fences were constructed from soil and turf, which led to serious destruction of the vegetation (WU 1997a).

During the commune period, no attempt was made to reduce the geographic scope of pastoralism by expropriating nomad pastureland or resettling nomads in agricultural areas. Because the commune was mostly kept in the frame of the original tribe, the seasonable movements to traditional pastures were still allowed and some traditional migration routes could be used. From 1973 to 1980, the number of animals increased from 400,350 to 483,390, with an average growth rate of 2.59% per annum. The percentage of yak decreased further from 62.20 to 55.23 and that of sheep increased from 33.88 to 41.07. Some improved breeds of cattle were introduced to crossbreed with yaks and some species of forage grasses were cultivated for hay-making (WU 1997b). In the 1970s, under the commune system, veterinary facilities were made available, and winter livestock shelters were constructed on a large scale.

### 3.4 The Period of Responsibility System

After 1978 the government of China recognized the need for corrective measures in the economy and made a major shift in policy. It slowly moved away from state control and ownership towards a more market-oriented economy and formulated policies to encourage a more liberalized economic structure. As in the rest of China, the major program of rural economic reform in Hongyuan was known as the „Household Responsibility System". This system restored many of the incentives for herdsmen to increase pastoral output and productivity. In the fall of 1983 this program was initiated in *Rozam*. The commune was dissolved and renamed *Xiang* (the brigade *Cun*). All the commune's animals were divided equally among the nomads regardless of age. That year, each *Rozam* nomad received 16.7 head of livestock: 10.4 yak, 0.66 horse, and 5.7 sheep. Overnight, each household became completely responsible for its own produc-

tion and marketing as in the pre-1958 era. Subsequently, the percentage of sheep in the livestock herd decreased rapidly. In Hongyuan, the percentage of sheep declined from 41.75 in 1982 to 23.33 in 1985 and then to 9.88 in 1995, which was similar to that before „Democratic Reform”. The percentage of yak increased considerably. In *Rozam*, it grew from 61.87 in 1983 to 85.82 in 1996. Three possible reasons for this restructure of livestock herd composition are:

- ◆ Ecological conditions, such as high precipitation, humid air, and *Cyperaceae* dominated pasture, are more suitable for the grazing of yaks than Tibetan sheep;
- ◆ The production unit based on household, as opposed to collectives, can not provide enough labor for the raising of sheep as that in collectives; and
- ◆ Nomads in Hongyuan traditionally prefer yak-raising.

It should be stressed that the total population of animals did not increase dramatically under the conditions of private economics, although *Rozam* nomads also believed that more animals provided extra insurance against livestock losses in times of harsh weather. From 1983 to 1995, under the newly liberalized policies, although the number of yaks increased by 41.48% in *Rozam*, the number of sheep dramatically decreased by 76.83%. Therefore, for *Rozam* nomads one of the development strategies is to regulate the structure of their livestock herds and pay more attention to the raising of more productive animals. Meanwhile, the livestock off-take from the pastoral sector has also increased under the private economy. From 1983 to 1995, the off-take of beef (including sold and eaten by nomads themselves) was raised by 91.78%. Therefore, allegations that the wealth of the nomads is only judged by the number of animals they possess and that in nearly all nomadic societies the objectives are only to increase animal numbers, are not valid for Tibetan nomads in Hongyuan.

#### **4 The Current Process of Privatization of Rangelands**

The introduction of household contracts evidently does raise problems about collective resource management (WU 1997a). When communal livestock was divided among households, the tenure of the rangeland remained with the state. Aiming at the alleviation of contradiction between communal land-tenure and private ownership of livestock, the government has accelerated the process of rangeland privatization in the last decade. Furthermore, since the serious and continuous loss of livestock through heavy snowfalls on the Tibetan Plateau, many government officials believe that this is mainly because nomads are backward and do not practice modern, scientific animal husbandry methods. The structure of nomads' herds is thought to be irrational and uneconomic, with too few breeding females and too many unproductive animals. It was



said that these unproductive animals are just status symbols. Many officials also believe that the traditional migratory grazing practiced by nomads does not allow for proper management of the grasslands, which are overgrazed and degraded. In addition, since the nomads are not settled, officials often claim that it is difficult to provide them with social services such as education and health care. It is widely believed that only settling down nomads successfully would help prevent large livestock losses during snow disasters, improve rangeland management, increase productivity and raise overall living standards.

At the beginning of the 1990s, the government began a project to settle nomads and divide rangeland between individual households in areas of Tibet. In 1995, a large integrated development program was further launched by the government, entitled „Integrated Socio-Economic Development in the Pastoral Regions”. There are 25 counties in western China to be selected as demonstration sites for rangeland privatization. Based on the investigation in Hongyuan County, the program proclaimed by the government aims to:

- ◆ substantially increase livestock off-take and pastoral incomes through more intensive management, such as sedentarization and fencing open rangeland;
- ◆ raise the nomads' enthusiasm for rangeland management through the privatization of rangelands;
- ◆ rationalize land use by limiting livestock numbers to carrying capacity; and
- ◆ increase the nomads' level of technological capability and strengthen their marketing sense through improvements in rural infrastructure.

Starting in the traditional winter grazing lands, each nomad family was allocated an area of rangeland on a long-term contract in what was essentially a privatization of the previously communally managed grassland. Land allocation was based on the supposed carrying capacity of the rangeland and the number of livestock each family had. The construction of houses for nomads, sheds for livestock, fencing, and development of artificial pasture was also heavily subsidized. This program, deemed a success by officials, was later expanded to privatize grazing lands used throughout the year, not just the winter pastures.

In Hongyuan County, for example, every settled household must construct a 70 m<sup>2</sup> house for family, a 80 m<sup>2</sup> shed for animals, and a 20 m<sup>2</sup> barn for storing hay. Among the selected 1,600 households for demonstration, 500 *mu* (1ha=15*mu*) pasture per household must be fenced, including 2 *mu* artificial pastures and 8 *mu* semi-artificial pastures. In the fall of 1995, Sichuan provincial government issued „Measures for Contracting Pastures of Sichuan Province” in order to guide and force the implementation of the development plan. In 1996, a special working group was set up in Hongyuan, responsible for organizing, training and managing the affairs of this program. In 1997, the division of rangelands was practically completed. Altogether, the area of

contracted winter pasture comprises 70% of the total rangeland, on which the grazing time must be for 8-9 months. A license for rangeland use, good for 50 years, is given to every nomad household.

Period	Administrative structure below county level		Ownership of Rangeland	Ownership of Livestock
Tribal era (before 1958)			Tribe	Private
Collective period (1958 -1972)	1958	<i>Xiang</i> (Township)≡ <i>Zu</i> (mutual aid group)	Mutual aid group	Private
	From 1959	<i>Xiang</i> = <i>He zuo se</i> (Mutual aid cooperation) ≡ <i>Cun</i> (village)	State	Collectives
Commune period (1973 – 1980)	<i>Gong se</i> (People's commune)≡ <i>Dui</i> (Brigade) ≡ <i>Sheng chan dui</i> (Production team)		State	Commune
Responsibility period (1981 - 1994)	<i>Xiang</i> (township)≡ <i>Cun</i> (village) ≡ <i>Zu</i> (family group)		State	Contracted to private
Privatization period (1995 - ?)	<i>Xiang</i> ≡ <i>Cun</i> ≡ <i>Zu</i>		Contracted to private	Contracted to private

table 4-1: Changes of administrative structure below county level and ownership of rangeland and livestock in pastoral northwestern Sichuan, China

## 5 Effects of Present Development Project on Pastoral Nomadism

In western Sichuan, the modern sedentarization of nomads has occurred since collectivization, and especially during the commune era (WU 1997b). However, before the implementation of the present project, most attempts were limited to semi-sedentarization, i.e., in winter, nomads with their grazing animals are settled in winter pastures where there are fixed winter settlements, but in summer they still migrate to summer pastures. This system means that it is easier for administrative units to control the utilization of communal pasturelands and nomads' seasonal migration. Generally speaking, sedentarisation offers opportunities for improved land management, permanent investments in land productivity, and the application of innovative technologies. Small favorable areas in the rangeland, such as run-off areas and drainage lines may be used for hay meadows. However, the changes from a wide ranging and mobile herding system to a close-range and sedentary one bear the potential for following negative effects:

(1) *Increasing risk of environmental degradation.* The emerging trends toward close-range herding systems can have deleterious effects on range vegetation. Over-

grazing is found in the immediate vicinity of permanent settlements. A clear contrast in vegetation in terms of grass yield and biodiversity between the outside and inside of fenced pastures is apparent (WU 1997a; see Photo 25 and Photo 26, p. 303). Grazing pressure on the residual open range is becoming exhaustive. Since areas with higher potential are usually enclosed first, the residual open range areas have lower capacities to support livestock and are prone to faster degradation. Furthermore, seasonal migration has not yet been carried out in all the households since the division of pastures, although the summer pastures are appointed. In the case-study site, only 2 households in a *Zu*, which has 8 households, moved to summer pastures in 1997 and the movement was equally for the purposes of the collecting medicinal plants. Owing to the area of winter pastures having expanded to 70% and because of the cultivation of forage for hay making in artificial pastures, it was reported that nomads will not move until the carrying capacity of winter pastures is overloaded.

(2) *Increasing production risks for the individual herd owner as well as for the industry as a whole.* One of the main purposes of settling down nomads is to maintain proper stocking rates on the rangeland and to practice 'modern' grazing techniques. If pastoral areas are sparsely populated and include access to reliable summer pastures, this presents no problem. Neither of these two conditions, however, can be met at present. Due to the improved conditions, the survival rate of yak calves has increased. Furthermore, under the present socio-economic conditions, compulsory destocking in a large scale would not be feasible, because it would reduce the already narrow base for the subsistence of nomads. It should be stressed that pastoralists are nearly all engaged in multi-resource economics and pastoralists' economic strategies are geared not just for current production but for long-term security under quite severe environmental fluctuations (SCHOLZ 1994; 1995). Consequently, attempts to change nomadism into a Western ranching system do not easily find acceptance among nomads. In addition, settling down nomads is always accompanied by the enclosure of pastures and the building of settlements. The high investment required for fencing and building implies an economically unsustainable system if there is not financial support from government. In Hongyuan, for example, the total investment on the project in 1995 was 7.5 million yuan, of which 3 million was from the state government, 1.8 million from provincial, 1.2 million from Prefecture and county level and 1.5 million yuan was raised by nomads themselves.

(3) *Accelerated breakdown of social structures which previously served as a form of social security system.* Traditional mobile livestock raising is founded upon a traditional social system, which secures the realization of multiple goals that pastoralists pursue rather than only economic goals (BEHNKE 1984; SANDFORD 1983; JANZEN 1986). Governments have thought, perhaps, that they could trade stabilized feed and technical supply for pastoralists through sedentarization in order to improve the

output of pastoral products. However, it oversimplifies the diversity of the real situation and undoubtedly neglects the particular diversity in a pastoral society. Nomadic economics requires distinguishable strategies both for short-term productivity and longer-term insurance (WU 1997a). Moreover, a nomadic society responds in its entirety to the change of environment and the availability of resources. Any attempt by which only part of a system is changed will lead to imbalance in the whole system.

(4) *Deepening differences between the wealthy and the poor.* An undesirable consequence of this privatization process is the potential for deepening differences between the wealthy and the poor. Present research studies have shown that intra-community wealth differences among nomads' households do exist. This implies that producers vary considerably in the size of their livestock holdings, in their access to essential elements of production, and in income and expenditures. As the division of pastures was carried out on the *Cun* level, which leads to the imbalance of pastures between households in different *Cun* where the area and quality of rangelands are different, the basis for pastoral development is different among nomads. Greater wealth opens increased possibilities of access to purchased livestock inputs. In contrast small stock owners must struggle to provide the minimum necessary for subsistence. This dilemma of a limited resource base among the poor pastoral families is further aggravated by the threat to herd survival by severe cold conditions and winter snow-storms which can decimate herds.

## 6 Conclusion

Over the past four decades the tribal based local administration system has been eliminated without being replaced by an effective and stable local administration (CLARKE 1987; GOLDSTEIN et al. 1991; MILLER et al. 1992). In the 1990s, new pastoral development policies that promote the privatization of rangelands, settling down of Tibetan nomads and fencing of the open range, have been promulgated. These policies are resulting in profound changes in traditional land tenure. The development of the pastoral sector can only be successful in the long term if development projects are economically, socially, politically and ecologically sustainable (SCHOLZ 1995; WU 1997a). Otherwise it is doomed to failure before it begins. At present, nomadic herders are being transformed into livestock ranchers operating on smaller tracts of rangeland. The excessively centralized settlements, undue expansion of enclosed pastures and irrational encouragement of longer periods of stay in the winter pastures, and abandonment of large-scale pastoral movements between seasonal pastures will inevitably result in higher input levels and reduced spatial mobility. In the end, these may prove to be economically and ecologically unsustainable. An additional problem has

been that the concept of establishing rights to the use of specific areas of land is inconsistent with traditional systems that provide for the sharing of pasture resources by different social groups. Nowadays, the contradiction between privately owned livestock and the common use of rangeland is an annoying problem facing all nomadic societies (SALZMAN 1980; BEHNKE 1984; SCHOLZ 1991). The privatization of rangelands in Hongyuan is undoubtedly a sincere attempt by the government to improve nomads' livelihoods. How to alleviate the negative effects of this process is still a question for development planners and academics. However, it should be stressed that as the primary user the nomad should be one of the decision-makers in this transformation taking place on the rangeland. His attachment to the land and his traditional customs should govern decisions regarding maintaining the long-term sustainability of the grazing land. Technological developments should supplement the nomads' conventional wisdom. Plans for rangeland privatization must take into account the basic needs of the local people and also must be oriented to improving environmental conservation.

## 7 Summary

Developments in Tibetan pastoral society in the last four decades and their impact on pastoral mobility in north-western Sichuan, China.

Based on field work in northwestern Sichuan, this paper documents the transformations in the last four decades that have taken place at the household, nomad group, and township level. Changes in pastoral land-use and livestock production practices began with the introduction of collectivization in 1958. In 1983, collectives were disbanded and the 'Responsibility System' was initiated, which allocated livestock to individual families but left the property of rangeland to the State. Now, in the 1990s, rangeland is being privatized and contracted out to individual families on long-term leases. Fences are being built to demarcate properties and to control livestock grazing. Houses for nomads and barns for animals are being constructed. While the current process of settling nomads is bringing improved access and services to nomads, it is also reducing the traditional spatial mobility of livestock herds, intensifying grazing use in winter pastures, and leading to increasing differences between wealthy and poor nomads. Previous government attempts to substantially increase livestock off-take through additional inputs and more intensive management have not sounded so economically sustainable. This paper questions the sustainability of current pastoral development programs with their large subsidized investments in livestock development and 'up-down' driven approach.

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