



highland and people

- Background: A highland Khampa
agropastoralist of Tibet
- *Tej Partap*
- Top Inset: Tibetan women farmers taking a
break from field work
- *Tej Partap*
- Bottom inset: Highland yak herders on the
pasturelands - resting while yaks
graze
- *Tej Partap*



A street corner of Naqu town - Nyima Tashi

Highland and People

Tibet has a beautiful, unique, and wild landscape that gives it an aura of mystery. To add to this natural grandeur, the Tibetan people over a long period of history have created a unique cultural heritage and agricultural practices that sustain their livelihoods in the harsh conditions of the plateau.

The Geographic Location and Administrative Regions of Tibet

Geographic location

Tibet is situated in the south-western part of China, from 26° 50'N to 36° 53'N (2,000 km), and from 78° 25'E to 99° 06'E (1,000 km). It borders the Chinese provinces of Qinghai and Xinjiang to the north, Sichuan and Yunnan to the south-east; and India, Nepal, and Bhutan in the south-west. The total area of Tibet is more than 1.2 million sq.km. It occupies more than a third of the Hindu Kush-Himalayan region and an eighth of the entire territory of China. It is one of the largest Chinese provinces in area, but one of the least developed and least populated.

With an average altitude of more than 4,000 metres above sea level (masl), the vast and magnificent Tibetan plateau is known as the Roof of the World. In the south-west, on the border with Nepal, there is the highest and the most magnificent mountain range in the world, the Himalayas. In the north-east, there is open, vast pastureland, the Changtang (which means "the vast land in the north" in

Tibetan). It is the native land of yak, and the nomads of Tibet live by yak husbandry. The centre of Tibet contains valleys and mountains between 3,500 and 4,500m; this is the land of barley farming. In central Tibet the majority of Tibetans live and eat barley as their staple food.

The administrative regions of Tibet

Within the Tibet Autonomous Region, there are six prefectures, Shigatse, Shannan, Naqu, Changdu, Ali, and Linzhi; and one municipal city, Lhasa (Figure 2.1). There are 71 administrative counties; one county under the jurisdiction of a city, the downtown area of Lhasa; one city at county level, Shigatse; and one special administrative office, the Shuanghu Administrative Office. The seven prefectures have nearly 900 townships and more than 7,000 villages.

The Physiogeographic Divisions and Climate Types of Tibet

In 1992 the Chinese Academy of Sciences classified Tibet into seven different physiogeographic units. This was more a natural, vegetation-oriented classification than an exclusively topography-oriented one (Leber et al. 1995). These seven physiogeographic units were described as follows.

- The southern slope of the Himalayan zone includes rainforest and mountain evergreen broadleaf forests. This area lies

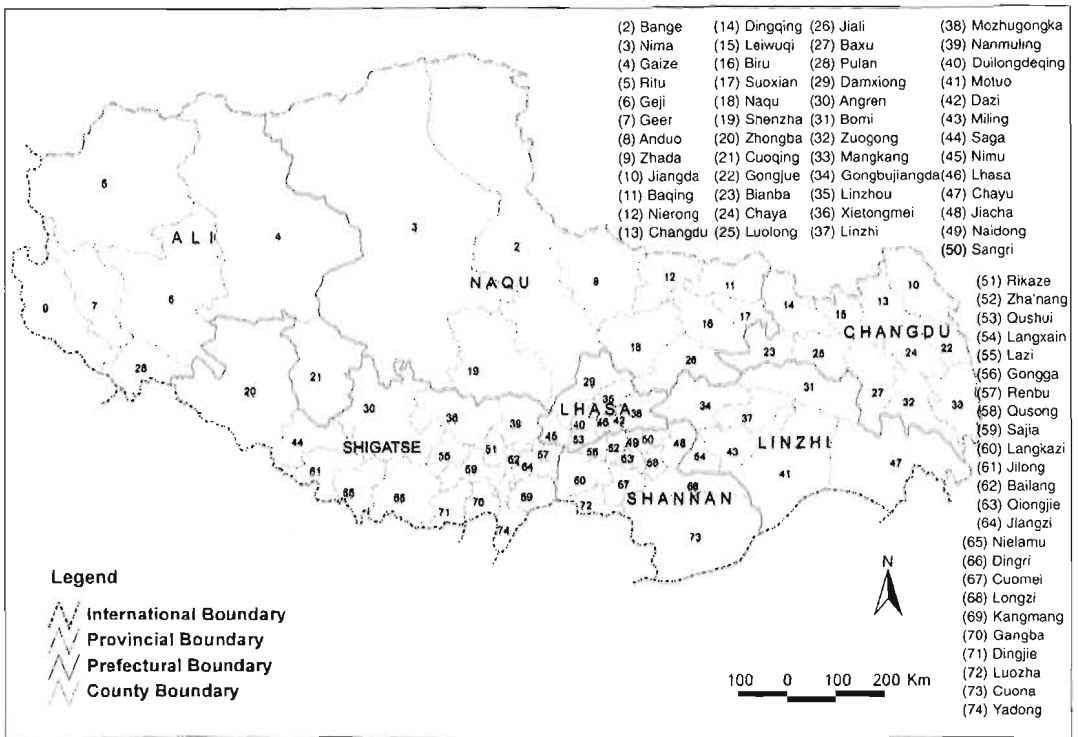


Figure 2.1: Administrative Map of Tibet Autonomous Region

mainly between 2,500m and 500masl, and has tropical and subtropical monsoon types of moist climate, with mean monthly temperature of 18-24°C, annual mean temperature above 10-18°C and annual precipitation of 800-2,500 mm. This region borders with north-eastern India along the lower reaches of Yalongtsangpo River. Most of Chayu county, Motuo county, and Cuona county are in this region.

- The mountain ranges and gorges of the East Tibet zone are mountain coniferous forests characterised by plateau temperate monsoon semi-moist climate, with annual mean temperature ranges from 3-9°C, although in some areas can reach 8-12°C and total precipitation can vary from 400-1,000 mm. This region is mountainous and cut from north to south by several rivers such as the Nujiang, Lancang Jiang, and Jinshajiang rivers. A vertical differentiation of above 1,000m elevation can be found in this region of many gorges. Most

of Changdu Prefecture lies in this region.

- Naqu and the upper reaches of Nujiang zone are mountain shrubby steppe, covered mostly by alpine meadow in the south and alpine shrubby steppe and meadow in the west, with annual mean temperature ranges from -3 to 1.5°C. Rainfall varies from 400 mm in the west to 700 mm in the eastern part of the region. This region is a typical plateau cold monsoon type semi-moist climate. Counties in Naqu Prefecture, such as Baqing, Nierong, Biru, and Suoxian, belong to this region.
- The South Tibetan zone includes broad valleys and basins of mountain shrubby steppe, and this region is the main producer of grain and crop products in Tibet. Most of the population is concentrated in this region along the Yalongtsangpo, Lhasa, and Nyachu rivers. It is characterised by a plateau cold monsoon type semi-arid climate, with a mean temperature of 1-7.5°C Annual precipitation

ranges from 200 mm in the northwest and to 500 mm in the southeast. Precipitation is concentrated in the months of June to September, which account for about 90% of the total rainfall in a year. The major parts of Shigatse, Lhasa, and Shannan prefectures are in this region.

- The Changtang Plateau zone of alpine steppe, which is now largely a protected natural preserve for wildlife, has an annual mean temperature of only about 0 to -3°C, and total precipitation is about 150-300 mm. This region is a very typical region of plateau cold monsoon type semi-arid climate. It includes most of the eastern part of Ali Prefecture and the western part of Naqu Prefecture.
- The Ali zone consists of mountain steppe and desert. With annual mean temperature of 0°C and annual precipitation of only 50-200 mm, this region is a very dry and cold area. The climate is plateau sub-cold monsoon type arid. Ge'er, Zhada, and Ritu counties belong to this region. Despite the dry and cold climate, or perhaps because of it, this region is the largest producer of cashmere goats in Tibet.
- The Kunlun mountain and basin zone of alpine desert steppe and desert, the major part of which is uninhabited by humans, has an annual mean temperature of about -4°C, and the annual rainfall is only about 100-150 mm. This is mostly under the area of the Changtang natural preserve for Wildlife. This region has a plateau cold monsoon type arid climate. The far northern part of Nima County of Naqu Prefecture, and northern Gaize and Ritu counties of Ali Prefecture, fall into this region.

In general, the climate types of Tibet were classified into five distinct types. Depending on the altitude and climate, different types of animals can be raised and different crops can be grown. The range of altitude for each climatic zone and farming system in western and central Tibet vs. eastern Tibet is different. (Table 2.1)

Main Agro-ecological Zones in Tibet

Tibet is very diverse in agro-ecosystems, with seven different agro-ecological zones delineated (Figure 2.2).

There is a hot, humid agro-forestry pastoral zone, in South-east Tibet, where the main industry is forestry, and livestock are raised depending on the forage and pasture available. Yak, cattle, pigs, and goats are common animals. It has distinct dry and monsoon seasons. Most of the croplands are not irrigated. Winter wheat, winter barley, corn, and even rice are the major crops.

This region contains a warm, semi-humid agro-forestry pastoral zone situated where major rivers such as Jingsha Jiang, Lan Cangjiang, and Nujiang flow down to the southern part of Tibet. Moisture comes through the river valleys, and the climate is affected by the monsoon. Shrubbery pasture is the main source for livestock fodder. Yak are the predominant livestock produced. Diverse crops can be found, including rice and other warm-climate crops.

A warm, semi-dry agricultural zone is formed with increase in altitude. It is a mixed agricultural zone, with more than 70% of livelihoods of local farmers dependant on crop production. Barley, wheat, and rape seed are the dominant crops, while cattle; yak, sheep, and goats are the main animals.

A cool, semi-dry agro-pastoral zone lies in the transitional region from cropping areas towards the pure pastoral zone. Fields of barley, rape seed, and peas are found. The particular varieties of these crops raised mature early and are drought resistant. Cattle, sheep, and yak are the main animals.

The Changtang is a cold, semi-dry pastoral zone that occupies a large part of Tibet. Because of the low temperature throughout the year and very short growing season, crops do not grow in this area. Nomadism is the main practice of local people, who migrate following the availability of pasture

Table 2.1: **Climates, altitudes, and farming systems in Tibet**

Climate Type	Mean temp. in warmest month (°C)	Days $\geq 0^{\circ}\text{C}$	Days $\geq 5^{\circ}\text{C}$	Lowest temp. (°C)	Main livestock	Main crops	Farming system	Altitude (m)	
								West & central Tibet	Eastern Tibet
Freezing Cold	< 6	< 120	< 50		Yak, sheep, goats	No Crop can grow	Summer grazing	> 5,000	> 4,700
Frigid Cold	6-10	120-128	50-120	< -23	Yak, sheep, goats	Scattered barley distribution	Predominated by pastoral system	4,500-5,000	4,200-4,700
Cool	10-18	180-330	120-250	> -23	Yak, sheep, cattle	Spring barley, spring wheat and rape seed, peas	Agro-pastoral system, one crop per year	4,000-4,500	3,800-4,200
Temperate					Yak, sheep, cattle, pigs	Spring barley, winter wheat, maize, apple, peach	Spring and winter crop, cropping dominated system	< 4,000	3,000-3,300
Warm and Hot	> 18	> 330	> 250		Cattle, pigs, goats	Winter wheat, maize, rice, apples, oranges	Agro-pastoral forestry mixed system, multiple cropping		< 3,000

Source: Tibet Bureau of Land Management, *Land Use in Tibet Autonomous Region*, Science Publication House, 1992, minor modifications by the author.

and water. The northern part of this zone is especially dry, with less than 200 mm of annual precipitation. Yak, sheep, and goats are the main livestock. Yak dominate the eastern part of the zone, while in the western part sheep and goats dominate. Pashmina goat is found in this zone, especially in the far western area adjoining Nepal and India.

The warm river valley irrigated zone and the temperate river valley irrigated zone are the major grain bowl of Tibet. Barley, winter wheat, and rape seed are the main crops. Nevertheless, diverse livestock species also can be found in this zone. Particularly, cattle raising and poultry production are growing very rapidly with the increased demand for dairy products and meat by the urban

population. Livestock production in these two zones is becoming more intensified following the introduction of modern methods.

Land Resources

The total area of useable land in Tibet is about 76.03 million ha, which is about 63% of the entire territory of Tibet. This varies among the prefectures. Naqu and Ali prefectures have about 50 and 60% useable land respectively, whereas in Changdu, Shannan, Lhasa, Linzhi, and Shigatse prefectures, it is 81, 79, 78, 71, and 70% respectively. The proportions of arable land, rangelands, and forestry lands to total area are about 0.4, 12, and 5%, respectively. More than 36% of the total land of Tibet cannot be used for any

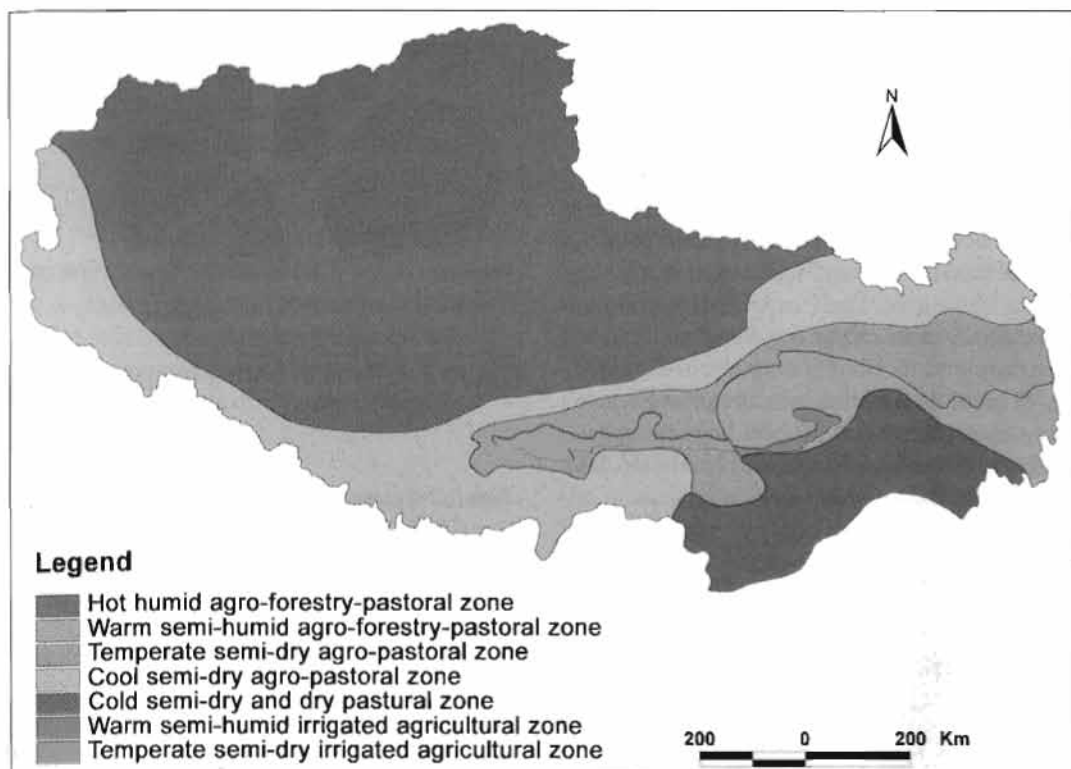


Figure 2.2: Agro-ecological zones of Tibet (source: author)

purpose of cropping, livestock, or forestry development. The total areas of arable lands, rangelands, forestry lands, and barren land of Tibet are shown in Table 2.2 by prefectures. Chapter 9 will elaborate more on the characteristics and potential to use different land resources in making Tibet food secure.

The total areas of arable land in Tibet is about

493,190 ha. Of this, 36.6 and 19% are distributed in Shigatse and Shannan prefectures, respectively. Very little arable land is found in Naqu and Ali prefectures, and comprises less than 2% of the total arable land in Tibet. The rangelands in Tibet total about 61.61 million ha, of which about 32 and 29%

Table 2.2: Land resources in Tibet

Prefecture	Arable land		Rangeland		Forest land		Barren land	
	Area ^a	% ^b	Area ^a	% ^b	Area ^a	% ^b	Area ^a	% ^b
Lhasa	67.9	13.6	2,073.1	3.4	168.6	1.2	642.20	1.4
Changdu	89.5	18.2	4,818.7	7.8	3,818.5	27.4	2,140.93	4.8
Shannan	94.7	19.2	3,075.3	5.0	3,099.7	22.3	1,617.94	3.6
Shigatse	180.4	36.7	12,112.1	19.6	319.9	2.4	5,522.09	12.4
Naqu	8.4	1.7	19,455.9	31.6	422.6	3.0	19,653.15	44.8
Ali	7.0	1.4	18,029.7	29.3	7.5	0.	11,592.67	26.1
Linzi	45.3	9.2	20,39.3	3.3	6,095.3	43.7	32,14.39	7.2
Total Tibet	493.2	100	61,604.2	100	13,932.0	100	44,376.70	100

Source: Tibetan Bureau of Land Planning (1992a)

a. Area of the land ('000 ha)

b. Proportion of the land area of each prefecture to the total area of the land in Tibet

61.61 million ha, of which about 32 and 29% are found in Naqu Prefecture and Ali Prefecture, respectively. Shigatse Prefecture also has nearly 20% of the rangelands of Tibet. About 14 million ha of land are suitable for forestry. Most of it is distributed in Linzhi, Changdu, and Shannan prefectures. These prefectures include about 44, 27, and 22% of the total area of forestry land in Tibet, respectively.

Croplands and crops for food

The cropland in Tibet is only about 230,000 ha. A great deal of this is in Shigatse Prefecture, which alone has 80,580 ha; Changdu Prefecture has 51,670 ha, and Lhasa 37,800 ha (Figure 2.3).

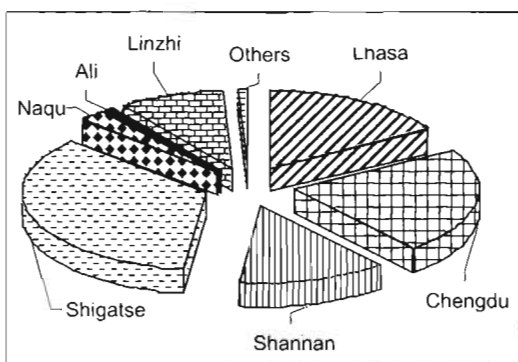


Figure 2.3: Total area of crops by prefectures

Barley, the staple food of Tibetans, is cultivated on more than 50% of the total cropland — about 126,310 ha in 1998. Shigatse Prefecture has 50,230 ha of barley production, Changdu Prefecture has about 34,530 ha, Lhasa 18,450 ha, and Shannan Prefecture 13,410 ha. Barley in Naqu and Ali prefectures accounts for 3,910 ha and 1,890 ha, respectively (Figure 2.4).

The agro-climatic diversity in Tibet allows Tibetan farmers to grow all kinds of crops such as rice, wheat, corn, millet, potatoes, vegetables, pulse crops, forage crops, and barley. Rice, corn, and millet, among others, are grown in south-eastern Tibet. At above 3,200m, barley (hull-less barley), wheat, potatoes, peas, and rape seed are the major crops grown (see Table 2.3).

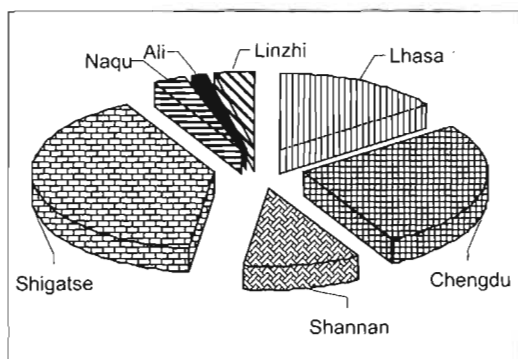


Figure 2.4: Area of barley by prefectures

Table 2.3: Farming activities and their altitude limits in Tibet

Activities	Crops and lands	Upper limit of the altitude (m)	Locality
Cropping	Spring barley	4,750	Jia Jia, Sajia County
	Spring wheat	4,460	Dalong, Langkazi County
	Winter wheat	4,320	Linzhou
	Rape seed	4,700	Wenbu, Shencha County
	Potatoes	4,850	Jia Jia, Sajia County
Forestry	Natural forestry	4,400	Biru County
	Walnut	4,200	Lazi County
	Apple	4,040	Jiangzi County
	Tea	2,500	Dongjiu, Linzhi County
Livestock and pasture	Seasonal pasturelands	5,500	Changtang
	Yak grazing area	6,000	Himalayas
	Sheep grazing area	5,000	Himalayas

Barley is the staple food for Tibetans. Tibetan traditional medicine believes that roasted barley flour (tsampa) has the most 'jue' (safety and nutrition), and is regarded as a 'mengarbu' (white medicine). Studies on barley have confirmed that barley has medicinal properties and value. In particular it has the potential to contribute fibre (soluble

and insoluble) and beta-glucan to the diet. It has an inhibitory influence on cholesterol absorption from the small intestine and so inhibits or prevents diseases such as colon cancers and heart disease. In rural Tibet, large quantities of hull-less barley are consumed, approximately about 155 kg/person/year. For the farmers and herders it is the only significant source of fibre in the diet. Local governments and researchers believe there could be markets for barley outside of Tibet, and production of barley therefore increased from 109,380 ha in 1995 to 127,100 ha in 1999.

Wheat is the second major crop, with a total sown area of 55,040 ha. As shown in Figure 2.5, most wheat cultivation is distributed in Lhasa, Shigatse, and Shannan prefectures, which account for 13,720 ha, 13,320 ha, and 11,220 ha, respectively. Spring wheat is one of the traditional crops of Tibet. Winter wheat was new to most of the farmers in central Tibet when introduced in early 1960s. By 1978 wheat was cultivated on nearly 52,000 ha of cropland, making up almost 30% of the total area of grain production. Since 1980, with introduction of the household responsibility system, the cultivation of winter wheat has decreased gradually. In recent years, the area under winter wheat cultivation expanded again, mainly because of the higher yield of winter wheat compared to barley or spring wheat, but the area of winter wheat production is now declining once again

because of the poor quality of grain and low market competitiveness. High quality wheat flour is these days imported from both Nepal and central China.

Some cropland is also put under pulses — mainly peas (12,470 ha), potatoes, and other tuber crops that have been added to Tibetan agriculture (110 ha). Rape seed dominates the oil-bearing crops. The total area of rape seed cultivation was 16,950 ha in 1998.

For the last few years, the area of vegetables, particularly greenhouse vegetables, under cultivation has increased very rapidly, with the present total area being around 7,500 ha. With development and expansion of greenhouse vegetable growing in Tibet, all types of vegetables are now produced locally and available in the market. Even so, more than 40% of the vegetable supply comes from outside of Tibet. Lhasa is the largest consumer of vegetables. To meet this demand, there are only 1,700 ha of vegetable growing area and 67,800 tonnes of production. Changdu produces 4,500 tonnes on 1,400 ha. Shigatse Prefecture has 1,140 ha vegetables under cultivation and produced 46,550 tonnes (Figure 2.6).

The area devoted to forage and fodder crops has also increased considerably in recent years, and now stands at 4,500 ha, of which more than 50% (2,940 ha) is in Changdu Prefecture.

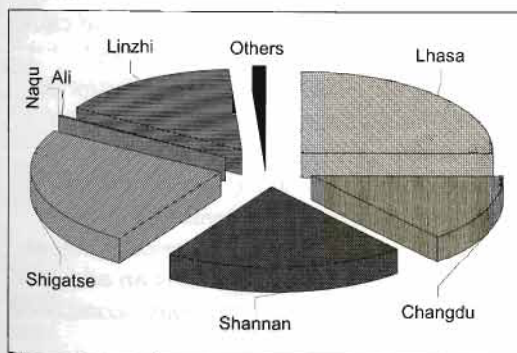


Figure 2.5: Area of wheat by prefectures

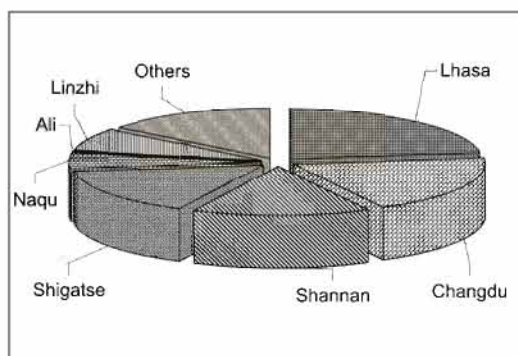


Figure 2.6: Area of vegetables by prefectures

Grasslands and livestock for food

The rangelands of Tibet total about 77.38 million ha (both controlled and disputed areas). Out of this, about 55.62 million ha are usable rangelands, with nearly 80% of that in Naqu and Ali Prefectures (Table 2.4). By 1995, there were 5.42 million ha of fenced rangeland for winter grazing and rangeland protection. About 4.17 million ha of this fenced rangeland is in Naqu Prefecture. A total of 4.4 million ha of irrigated rangeland is mostly distributed in Shigatse Prefecture. In recent years, there has been major progress in promoting fenced and irrigated rangelands in Tibet. However, with increasing population of livestock in the pastoral areas of Tibet, overgrazing of rangelands is common and they face serious degradation.

Table 2.4: **Area of usable, fenced, and irrigated rangelands by prefectures in Tibet**

Prefectures	Total area	Area usable	Area fenced	Area irrigated
Lhasa	1,528.7	1,112	12.7	75.3
Changdu	5,975.3	4,965.3	4.7	5.3
Shannan	2,263.3	1,731.3	14	26
Shigatse	9,849.3	4,331.3	29.3	309.3
Naqu	36,046	26,041.3	416.7	0
Ali	21,513.3	17,324.7	0	0
Linshi	206	115.3	64.7	23.3
Tibet	77,382	55,621.3	542	439.3

Tibet has all kinds of livestock, the most common large animals being yak, cattle, donkeys, horses, mules and zo (cross-bred from yak and cow); there are also sheep, goats, pigs, chickens, and so on.

In 1997, the total population of large and small animals in Tibet was 23.1 million, of which 3.38 million were yak, 1.96 million cattle, 0.35 million horses, 0.13 million donkeys, 11.26 million sheep and 5.83 million goats. Goats are largely found in western Tibet and sheep in north-west and in central Tibet. There are 1.14 million milch

cows. With the promotion of livestock in crop dominated areas of Tibet and increasing demand for dairy products, especially butter, cattle raising has become a very profitable farming activity. Pig raising is also becoming popular these days. With the increase in the urban population, there has been a greater demand for pork. In 1997, there were 210,000 pigs in Tibet, of which 57.6% was off-taken to produce 6,700 tonnes of pork.

Foods and Food Production

Traditionally, yak meat, tsampa, butter tea, potato, radish, lamb, and mutton have been the common foods in Tibet, all of them locally produced. With the introduction and expansion of greenhouse vegetable and winter wheat production in the lower river valleys, consumption of wheat and vegetables has become very common in rural Tibet. Better road connections to cities in central China have increased access to rice and other food items.

Barley is still the staple food of Tibetan farmers. Of the total 1997 grain production of 800,000 tonnes, more than 60% (500,000 tonnes) was barley. Rural Tibetans get more than 80% of their total calories from barley. The way barley has been processed and consumed is not only unique but also very friendly to environmental conservation. In the process of preparing tsampa from barley, sand is used both to distribute the heat evenly to prevent the barley kernels from burning and to increase and to preserve temperature for roasting, which significantly saves fuelwood which would otherwise cause drastic loss of habitat in shrubland and deforestation. The atmospheric pressure on the Tibetan Plateau is very low due to the high altitude, and therefore food cannot be cooked quickly. Fuelwood is quite limited in most areas where barren land and pastoral land dominate. Thus the choice of barley as a staple food crop by Tibetans is an adaptive mechanism to survive in the harsh conditions of highland areas.

The People and the Population

The majority and the minorities

The total population of Tibet in 1997 was 2.42 million. The population density of about 1.96 persons km⁻² has doubled since 1959. There were more than 20 different nationalities, including Tibetan and Han Chinese. The total population of Tibetans was about 2.34 million, and there were nearly 70,000 Han Chinese, making up 96.4 and 2.85% of the total population of Tibet, respectively. However, this total population of Chinese does not include those who live temporarily in Tibet. The Monba nationality is the third largest population, with a total of 8204. The Lhoba nationality accounted for 2699 people in 1997. Both Monba and Lhoba nationalities are mostly distributed in the south-eastern part of Tibet in Chayu County and Medog County. Other nationalities with small populations include the Sherpa, who live in

the western part of Tibet bordered with Nepal with a total population of 1836; Dengba, who live in southern Tibet (1432 persons in 1997); and the Nashi nationality who live in the south-eastern part of Tibet near the border with Yunnan province (total population of 1087). In addition to these nationalities, other minorities of Mongolian, Nu, Zhuang, Derung, Lisu, Tu, Man, Bai, Uygur, Bouyi, Miao, and Yi are also settled in Tibet with total populations of less than 500 (Table 2.5)

People from different regions and prefectures

Besides the diversity of nationalities in Tibet, people who come from different regions or prefectures have been given different names such as Tsampa, from Shigatse region; Uhba, regions of Lhasa and Shannan Prefecture; Khampa, from Chamdo; Hor, from Nagchu (Naqu) in Northern Tibet; Dueba, from western Shigatse and Ali Prefecture in western Tibet; and so on. All these have distinct dialects but share the same written Tibetan language, culture, and religion. Comparing the population of different prefectures, Shigatse Prefecture has the largest population with a total of 630,000. Changdu Prefecture is the second with a total population of 557,000. Lhasa municipality has a total population of 400,000. Ali Prefecture has the smallest population with a total of 73,000 (see Figure 2.7).

Table 2.5: Population of nationalities in Tibet

Nationality	1985	1995	1997
Total Population	1,994,808	235,540	2,427,357
Tibetan	1,909,693	2,268,749	2,339,796
Chinese	70,932	67,772	69,205
Hui (Chinese Muslim)	1,529	2,357	1,933
Lhoba	2,036	2,690	2,699
Monba	6,445	8,084	8,204
Nashi	871	1,092	1,087
Mongolian	72	118	96
Nu	227	394	258
Zhuang	31	31	45
Derung	80	21	40
Lisu	62	23	75
Tu	90	150	158
Man	81	171	186
Bai	36	61	91
Bouyi	12	5	13
Uygur	6	4	8
Miao	42	82	87
Yi	21	35	37
Sherpa	1,403	2,131	1,836
Dengba	1,097	1,494	1,432
Others Nationalities	42	76	71

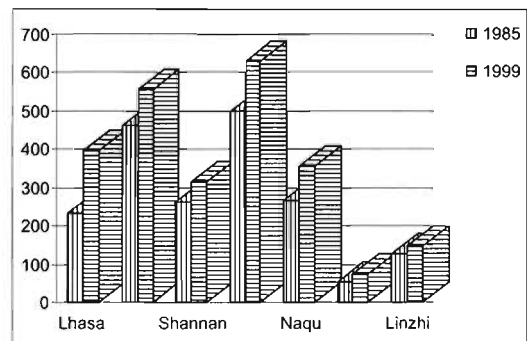


Figure 2.7: The total population in each prefecture of Tibet

Birth rate, death rate, and the natural growth rate of population by prefectures in 1998 are listed in Table 2.6. It shows that the birth rate of the population in Naqu Prefecture was highest with 2.17%, followed by Ali Prefecture, 1.96%. There is no big difference in death rate among the prefectures. The highest natural population growth rate was in Naqu at about 1.35%, followed by Ali Prefecture at 1.19%. The average natural growth rate of population in Tibet was 0.93%. However, on the basis of the 1990 national population census and the sample survey on population changes (the sampling fraction was 1%) in each year, the total resident population in 1998 was given as 2.45 million and the average growth rate was about 1.59%.

Table 2.6: Birth rate, death rate, and natural growth rate of population by prefecture (1998)

Regions and prefectures	Birth rate (%)	Death rate (%)	Natural growth rate (%)
Average in Tibet	1.62	0.69	0.93
Lhasa	1.18	0.71	0.47
Changdu	1.79	0.53	1.17
Shannan	1.35	0.68	0.54
Shigatse	1.59	0.65	0.82
Naqu	2.17	0.79	1.35
Ali	1.96	0.74	1.19
Linzhi	1.30	0.61	0.62

Urban populations

Lhasa is the capital city of Tibet and it is the centre of Tibetan culture, economy, and politics. It is also the largest city in Tibet. In 1999 its total population reached 140,000. Shigatse is the second largest city with a total population of 91,293. In south-eastern Tibet, Chamdo is the largest town, with a total population of 23,119. Tsetang town is one of the oldest towns located in the Yalong valley, the cradle of Tibet culture, but its total population is only 21,398. The capital town of Linzhi Prefecture, Bayi, is the fastest growing town in Tibet and now has a total population of 15,304. Gyantse town used to

be one of the main towns in Tibet, due to its trade connections with Bhutan and India. However the population of Gyantse has not grown much for the last few decades, and in 1999 was only 10,356. In all these cities and towns, there are considerable numbers of people from outside of Tibet who are not included in the above figures. Therefore as far as food consumption is concerned, the actual consumers are a much greater population than that indicated by the demographic survey. In recent years, with the adoption of the policy of pairing two well-developed provinces of China with one prefecture in Tibet, and within that policy, two prefectures or cities also paired with one county or town, to provide support of cadres and staff as well as investment in development of infrastructure, all the cities and towns have developed very fast in terms of road construction, telecommunication, office building, and supply of goods. With this progress, the populations of those towns have been increasing very rapidly during the last decade. Urbanisation has begun to take place in Tibet, leading local governments to focus on the economic development of rural areas.

Farmers in different farming systems

Based on their different farming practices, people are named 'shingba', the cropping farmers; 'drogba', the nomads; and 'samadrog', farmers who are practising both cropping and animal husbandry. The farming systems on which people depend are quite different, and their livelihood systems and patterns also differ from each other.

The total population of farmers in 1997 was about 2.09 million, along with about 336,000 non-farmers, making up to 86.2% and 13.8% of the total population, respectively. The total rural population was 2.01 million in 1997, and decreased to 1.8 million in 1999. There has been a rapid increase in urban population in recent years, from 200,000 in 1984 to 687,000 in 1999. The percentage of urban population increased from 10% in 1984 to 27% in 1999.

creased slightly from 51.3% in 1959 to 50.3% in 1999, when it stood at 1.246 million. However, the percentage of females varies considerably among the counties, with the highest being 56% in Jiangda County in eastern Tibet and lowest about 40% in Angreng County in western Tibet (Figure 2.8).

The number of women employed in different industrial sectors in 1998 was 59,971, which represents about 37% of the total number of staff and workers in Tibet. This percentage has been increasing for the last 20 years from only 34.45% in 1980. Of the total female staff and workers, 23% are working in the government agencies and organisations, but

this represents only 29.99% of the total staff and workers. Nearly 17% are employed in sectors like education, culture, arts, film, and TV. There were more women than men employed in health care, social welfare, and social services (see Table 2.7). In terms of management and leadership, there is at least one woman in almost all institutions and agencies. This is mainly because of the policy adopted for employing and promoting women staff. However, in most institutions, there is a preference for men, and women still face difficulties in procuring employment.

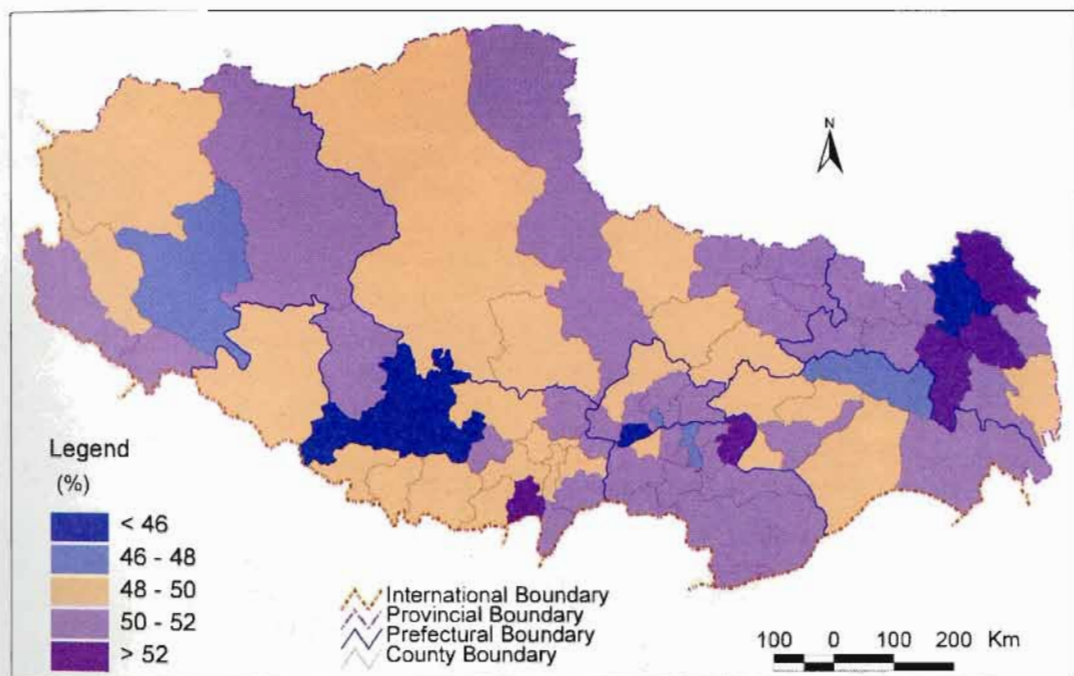


Figure 2.8: Percentage of female population in each county of Tibet (1998)

Table 2.7: Numbers and percentage of women staff and workers, by sectors

Sectors	Total staff and workers	Total women staff and workers	% ^a	% ^b
Agriculture	6,745	2,444	4.08	36.23
Government	46,938	14,078	23.47	29.99
Education, culture, arts, film, and TV	24,332	10,045	16.75	41.28
Transportation, post, and telecommunication	15,806	5,419	9.04	34.28
Health care, social welfare	11,665	6,140	10.24	52.64
Sciences and technology extension	2,501	1,011	1.69	40.42
Mining and quarrying	3,684	998	1.66	27.09
Production and supply of electricity and gas	5,494	1,986	3.31	36.15
Banking and finance	5,888	2,152	3.59	36.55
Retail trade and catering services	9,584	3,628	6.05	37.85
Manufacturing	11,402	4,673	7.79	40.98
Construction and building	9,642	3,246	5.41	33.67
Social services	5,694	3,088	5.15	54.23
Other sectors	3,967	1,063	1.77	26.80

a. Percentage of women staff and workers to total women staff and workers employed in all sectors

b. Percentage of women staff and workers to total staff and workers in each sector



*Tibetan highland women in festive mood
- Tej Partap*