



Review Paper

Life in Ladakh (India): the Changpas of Changthang

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Abstract

The Changpas are the nomadic pastoral communities living in the Changthang plains of Ladakh. With limited agriculture, their lives rely majorly on livestock farming. The Pashmina goats are prime among these and unique to the region. The world-famous Pashmina wool and fabric are produced in this region. While Pashmina is an economic occupation, it is also the name of a cultural identity of the region. However, the socio-economic conditions in these plains do not allow a very high quality of life. The development activities in Ladakh have been centered around Leh and Kargil only. The plains in the other parts of Ladakh have remained mostly underdeveloped. Harsh climatic conditions, poor quality of life and uncertainties associated with pastoralism are some of the major factors that have resulted in large scale migration among the young generation of the Changpas. This has put an old sustainable socio-economic and ecological system under threat. Major development initiatives are required along with scientific methods of saving the grazing land and planning sustainable agriculture in the region. This paper studies the lives of the Pashmina growing Changpa community of the Changthang plains in order to understand the nature and causes of their socio-economic backwardness, pattern of pastoralism and trends of migration that have affected the sustainability of life in the region.

Keywords: Ladakh, Changpa, Changthang, Pashmina, Sustainability, Pastoralism, Nomads.

Introduction

Ladakh is a mountainous cold desert in India. It is surrounded by the ranges named Zaskar, Ladakh and Karakoram. The word 'La-dags' means the land of passes which are plenty in this region. Ladakh is a union territory administered by India and was part of the Indian state of Jammu and Kashmir till recently. It is bordered by Tibet in the east, the Lahaul-Spiti valley of the state of Himachal Pradesh in the south and the Valley of Kashmir, Jammu and Baltistan (now with Pakistan) in the west. The elevation of the Ladakh region varies between 2900 meters and 5900 meters. The Ladakh range has no major peaks with the average height less than 6,000 meters and very few of its passes are at heights less than 5,000 meters. Suru and Zaskar valleys are formed by the Himalayas and the Ladakh range. The valleys are formed by the Shyok, Indus and Zaskar rivers and provide habitation to most of the population of Ladakh. The rivers Shyok and Nubra form the well-known Nubra valley. The historical Indus River is the lifeline of Ladakh and many of the current cities are situated close to it (Figure-1)¹.

The climatic condition in Ladakh is grossly different from the rest of the country. The temperature varies between +30 and -30 degrees Celsius. The winter is severe in this region. Heavy snowfall causes closure of the Zojila, Rohtang and other passes during winter, thus making it inaccessible by road from Srinagar. Apart from the freezing temperature, this region also

experiences fast winds blowing at the rate of 40-60km/hr., usually in the afternoon. Being a cold desert and on the leeward side of the Himalayas, this region receives less than 50mm precipitation annually, mostly in the form of snow during winter. The monsoon does not reach Ladakh as it falls on the rain shadow side of the Himalayas, thus leaving Ladakh very dry. Therefore, it is categorized as a cold desert².



Figure-1: Map of Ladakh¹.

Ladakh is one of the highest places in the world where people inhabit. People of the Indo-Aryan and Tibetan descent live in this trans-Himalayan region. Despite the harsh climatic conditions, local people have thrived here for long and preserved their ethnic culture. In terms of land area, Ladakh was around 2/3rd of the state of Jammu & Kashmir (formerly), while the share of population was a mere 2%. The total population of Ladakh is 274,289 with a low population density of 4.6 persons per sq.km of area³. It is the most sparsely populated district not only in the Kashmir region, but in entire India. The habitations are scattered throughout the huge landscape in the valleys which provide an oasis in the midst of the cold desert⁴.

Ladakh consists of two districts, namely, Leh and Kargil. These are subsequently split into 19 development blocks. Kargil is the second most important town after Leh in Ladakh. The Ladakh Hill Development Council at Leh was formed in 1995 as the main development agency of the district. The Leh district has been divided into three sub divisions, namely, Nubra, Changthang and Khaltse and nine Community Development (CD) blocks, namely, Leh, Khaltse, Nyoma, Nubra, Durbuk, Kharu, Chuchot, Saspol and Panamik⁵. The Changthang region is home to the Changpas who produce the world-famous Pashmina.

Life in the Cold Desert of Ladakh

The geographical location has constrained the Ladakh region from any substantial economic development and comfortable livelihood for the inhabitants. Economic activities are mostly at the primary level with basic agriculture, horticulture and animal husbandry. Industries are primitive and mostly non-existent except for Pashmina. The overall human development indicators lag far behind the national average. All these have resulted in an overall backwardness of the region.

Historically, subsistence agriculture and livestock rearing have played major roles in the economy of Ladakh. Cultivation of barley and wheat is limited to the summer months. The nomadic tribes of Ladakh carry out the pastoral job in the vast plains. The pastoralists trade wool, dairy and Pashmina goat fiber. The Pashmina fiber is the basic input for the world-famous Pashmina wool and fabric.

The economy of Ladakh has expanded slowly. With the gradual rise in the demand from the Indian Army posted in the region, rapid investment has been made for infrastructure development. The service sector including tourism has grown in this region over the years. The traditional subsistence agriculture has slowed down as a consequence. Ladakh was opened to tourists in 1974. Thousands of jobs were created and it contributes up to 50% of Ladakh's total income at present. The population in Leh district has increased by 44% in the last twenty years, largely due to rural-urban migration⁴. Migrants are being drawn towards Leh and nearby urban areas away from the villages throughout Ladakh in search of better amenities of life. As a

result, Leh records one of the highest rates of urban growth in India⁵. However, the economic activities of the tribal people of Ladakh have remained mostly primary. Industries have developed on the basis of these primary occupations while tertiary services have come up in a very moderate way.

Agriculture and allied activities provide the most dominant occupation in Ladakh. More than 70% of the working force are engaged as cultivators, agricultural laborers and livestock rearers. Horticulture is concentrated mostly in Khaltse, Leh and Nubra blocks of the Leh district with Khaltse block producing almost 70% of the total output. Apple and apricot are the main fruit products along with other items such as, almond and grapes. The marketing of fruit is limited to Leh town and to the defense forces which are stationed in this region. The department of Horticulture organizes training programs on juice making and food processing for the fruit growers. Several initiatives of knowledge transfer and skill development have been taken by different departments for the development of this sector. However, floriculture still remains unexploited among farmers as a commercial enterprise.

Animal husbandry is an allied sector to agriculture in this region. It generates substantial income to the rural population. The Department of Sheep Husbandry looks after the sheep and goat while the Department of Animal Husbandry looks after the development of other livestock. The different livestock reared in Ladakh are cattle, horses, yaks, dzos (hybrid of yak and cow), donkey, camel and poultry. The current production of animal products such as, milk, meat and egg, are insufficient to keep people's consumption at levels required to meet the nutritional standards announced by the World Health Organization. The developmental programs run by the said departments have not been able to match with the people's consumption needs. The sheep and goat (Pashmina and non-Pashmina) rearing activity is mostly confined to the Nyoma and Durbuk blocks of the Leh district. Since Pashmina farming and wool production are important for the economy and give a cultural symbol to the region, it has received special attention from the government as well as from the private players. The Department of Sheep Husbandry has set up several institutions, farms, health care and training centers along with some initiatives for the development of this sector. There are 1058 hectares of grazing land including permanent pasture in Leh while the area of barren and uncultivable land is much higher at around 26590 hectares⁵. Several pasture development schemes for the Changthang plains have been taken up under the district plans and the Border Area Development Project. However, there is ample scope, as well as need for further development of the pasture lands, improvement in farming techniques and optimization of resource management in this region.

The District Industries Center was established in Leh in 1978. The purpose was to motivate the educated youths to setup self-employment units. It provided incentives to the entrepreneurs in the form of subsidized loans on easy terms and land to set up

industrial sheds. However, the district could not develop as a significant industrial centre due to various input bottlenecks related to raw materials, power supply and communication. Handloom and tourism are the major industries of the region. The Department of Handicrafts provides training in various crafts to young males and females of the region with the objective of generating employment, output and income. Several young entrepreneurs have received help from the department in setting up their own units. These training programs focus on raw materials that are available locally, with the main stress on handloom production based on Pashmina. Tourism has emerged as an important industry in Ladakh since 1974 when it was opened for tourists. It has created employment opportunities for a large number of people in the allied sectors such as, transport, hotels, catering service and cottage industries for the tourists. The main tourist attraction of Ladakh lies in the landscape and environment on one hand and the age-old culture and tradition on the other. Adventure tourism has a potential to flourish in this region because of its unique geographical contour. With the ever-increasing popularity throughout the nation and outside, tourism in Ladakh has large potential to flourish and contribute significantly in the economic development of the otherwise backward region. However, the ecological implications of tourism need to be analyzed carefully for the long-term sustainability of the region.

The social indicators of development are not satisfactory in Ladakh. Although there are government hospitals and reputed health institutions in Leh, the plains lack major health care facilities. Immunization programs were initiated in the state during the 1980's with measles vaccination to curb the mass mortality of children due to measles⁴. Along with the practice of allopathy, the traditional Amchimedication system is also prevalent in Ladakh. Education has been one of the most stressed areas in this region. The earlier generations were literate mostly in Bodhi (Tibetan script) and Urdu. Modern education is imparted in the schools with English as the medium of instruction. However, the basic facilities of education in areas other than Leh do not meet the expected standards of development.

The Changpas of the Changthang Plains

The nomadic Changpas represent a prominent community of Ladakh because of their involvement in the production of the world-class Pashmina fabric. The region of habitation for this nomadic community is the northern plains of Changthang. 'Chang' means north and 'thang' means plains in the 'Bodhyig' language. Since the northern plains of Changthang is adjacent to the Tibetan plateau, the people share several common features with the Tibetans in terms of language as well as culture. The Changpas speak Changskat which is a mixed dialect formed out of the Ladakhi and Tibetan languages⁶.

The villages in the Changthang region are at heights between 3900 and 4500 meters above sea level and are exposed to an 8-

month long winter with temperatures dropping down to -35°C. The region is classified as a 'high altitude desert' and is one of the highest, driest and coldest inhabited places on earth. Like all other ecosystems, even this high-altitude desert supports beautiful and large mammals like, *Procaprapicticaudata*, the Tibetan Gazelle, *Equus kiang*, a species of wild ass, *Pseudoisnayaur* the Blue Sheep, *Ovisammon* Tibetan Argali and their predators such as *Pantherauncia*, the Snow Leopard, *Canis lupus*, the Tibetan Wolf, *Vulpes vulpes*, the Red Fox and *Vulpesferrilata*, the Tibetan Sand Fox. The area is also rich with the presence of diverse species of birds and small mammals.

The villages of Changthang are part of the Nyoma Block (Figure-2). The Nyoma Block, established in 1966, has its block headquarter at the Nyomavillage which is situated at a distance of 183kms from the district headquarters at Leh. The Nyoma Block consists of 17 census/revenue villages. It is divided into 11 Panchayat Halqas for the ease of carrying out development programs. The total area of the block is 1587 hectares, of which 647 hectares are cropped area. People in this region are engaged mainly in livestock rearing and agricultural activities with Pashmina as the most valued and popular product. There are two High Schools, one Higher Secondary School and 39 other educational institutions. However, the distribution of these institutions is highly skewed with most of these located at the block headquarters of Nyoma and Puga. The Indian Astronomical observatory at Anlayis the highest observatory in the world which is located at 4500 meters above the sea level. Although, the villages are connected with motorable roads, telephone facility is available in Nyoma only⁵.



Figure-2: Map of Nyoma Block⁵.

Nomadic pastoralism is a distinct form of animal husbandry based on mobile pastoralism. The nomadic people are largely pastoralists and practice limited farming⁷. The nomadic pastoralists migrate periodically with their herds over large areas in order to adjust with the uncertainty and risks related to climatic and geographical conditions. The sparse vegetation in these areas are often used for subsistence food production⁸. The rugged topography and harsh climatic conditions have given

birth to the economic occupation of nomadic pastoralism in Ladakh. The large grazing lands are formed by the mountain ranges, river valleys and lake basins⁹. The pastoral practices of this region are distinct and differ from the nomadic pastoralism of other areas, such as, Africa and Eurasia. The major constraining factor in the semi-arid areas of Africa and Eurasia is water. In contrast, high altitude is the characteristic feature and prime reason behind pastoralism practiced in Changthang^{10, 11}.

The plains of Changthang is an extension of the Tibetan plateau. These rangelands are characterized by high altitude, extreme climate and resource scarcity. As a result, the only meaningful occupation that can prevail in this region is mobile pastoralism. The Changpas produce the fine Pashmina wool in the world from the Changra goat *Capra hircus*. The smaller communities of the Changpas are spread over the villages of Samad, Kharnak Rupshu, and Korzok. The pastoral migration cycles of the different communities are maintained separately because the pasturelands are well-defined and communally regulated. The households cultivate limited quantities of food grain and fodder for internal consumption while mobile pastoralism remains the primary activity for subsistence and trade^{12, 13}.

The Changpas live in tents called rebos which are made of yak-hair wool. They move to one-room houses made of stone and mudduring the winter season. All settlements have monasteries at their headquarters and these monasteries are maintained by monks who perform rituals, prayers and other religious activities. The monks also predict herd movements to different pastures based on the Tibetan astrological predictions. The losar festival marks the new year in Ladakh when all the Changpa women wear their traditional dress gonchas¹⁴. The Changpas have been exposed to the outside world and seen several changes in the last four decades. A number of political changes and developmental activities have taken place in recent times. These have brought in social changes in their traditional customs too. For example, the traditional system of polyandry whereby a woman used to get married to two or more brothers, helped prevent division of the land. It also helped in keeping the population within the level that is required for a sustainable use of rangeland. Although some families still follow the system, polyandry was banned by the Government of Jammu and Kashmir way back in the early 1940's¹⁵. A study has shown that 13.3% of the female respondents in the age group of 35-50 years believe in polyandry a preferable system¹⁴. This change has resulted in a reduction in available manpower in the family farms for the traditional tasks, such as, herding, milking and combing of the Pashminagoats. A large number of individual families or households are aiming at upward social mobility and moving out of the traditional occupation. Another socio-political change came after the Sino-Indian dispute in 1962. Many Changpas were forced to leave behind their traditional winter grazing areas due to the army posting and refugee infiltration around the border. This affected their conventional migration pattern and they were forced to search for new winter pastures.

On the other hand, the population of both livestock and people increased with the in-migration of a large number of Tibetan refugees who moved into the Changthang plains with thousands of livestock. The Changpas of today are facing various transformations in terms of composition, customs and economic practices.

Socio-Economic Conditions of the Pashmina Growers

The real-life story of the Changpas who produce the expensive Pashmina for the whole world does not describe a commensurate level of economic prosperity and quality life. The socio-economic conditions of the region show certain deficiencies in the current state and indicates the need for more intensive development initiatives. At present, the dominant occupations of the region comprise of primitive agriculture and animal husbandry.

Agriculture in the high-altitude dry plains of Changthang has very limited prospects. Traditionally food used to be produced for the purpose of subsistence. With the changing socio-economic conditions, the region is experiencing livelihood diversification. As a result, land-based food production is reducing and a supply-oriented food system is emerging. The role of the market and governmental food subsidies are on a rise, bringing in new socio-economic disparities, erosion of old social customs and greater dependence on outside factors¹⁶.

Animal rearing is the dominant occupation that the Changpas have been following in a sustainable way for a long time. It is an activity which enables the Changpas to earn an income for their hard work all along the year. Moreover, the meat and milk obtained from the animals provide the basic source of nutrition to the people of this region⁶. The Changthang plateau has a very thin cover of vegetation. Rearing the Pashmina goats is the prime form of occupation for the Changpa community. This scarce resource is the most important foundation for the development of the region. The Pashmina culture manifests in a multitude of economic activities, namely, animal husbandry, manufacturing of pashmina wool and trade in the pashmina fabric¹⁷.

Livestock is the main source of livelihood for the Changpas. They raise a mixed livestock such as sheep, goats, yaks and horses. While it provides guaranteed economic sustenance, the mix also acts as a guard against the possible loss of a particular species at times due to epidemics or heavy snowfall. The pastoral system produces a wide range of items, such as, milk and meat for consumption purposes, wool and skin for commercial purposes, dung-fuel for meeting the energy requirements and animals for use as a mode of transport. The region is extremely deficient in conventional sources of energy, such as fossils, fuel and wood¹⁸. The products over and above the subsistence requirements are sent to the markets. Food rations and other items are procured from the markets in return.

These include food items such as, barley, wheat, rice and vegetables and other consumables such as, clothes, utensils and other personal effects. Additional fodder is often procured from the government departments⁷.

The major component of animal husbandry in this region is the Pashmina goat. These goats provide the costliest, softest, warmest and versatile animal fibre known to the textile world as 'Pashmina' which comes from the famous Changra goats of Changthang¹⁹. They also give milk during the summers, mainly in July. Horses are used for riding, transport and also as pack animals. With the development of roads and automobiles, horses are now losing the importance of the past. However, they are still kept as a symbol of wealth and social prestige. The Changpas raise yakalong with sheep, goats and ponies for fetching milk, meat, khulu (yak fibre) and yak hair for tents. These are used as pack animals as well⁴.

The Sheep Husbandry Department is the most important department in this region as it is responsible for monitoring the health of the livestock, namely the Pashmina goats. It works to improve the quality and quantity of Pashmina production. The department, through its different centers, provides the nomads with the required resources and knowledge for the betterment of their livestock. These include selective breeding methods, health coverage, feed and/or fodder provisions and training for the locals with basic veterinary medicine and treatment. The Department also runs a variety of schemes to reduce animal mortality due to diseases, harsh weather and inadequate nutrition. An average family with 100 goats produces 22 kilograms of Pashminafetching up to Rs. 77,000 in the market at the rate of Rs. 3,000-3,500 per kilogram of raw Pashmina. The family with around 60 sheep gives 90 kilograms of wool which could fetch Rs. 6700 in the market at the rate of Rs.75 per kilogram. A family with 10-15 yaks sells around 2 yaks every year to fetch Rs. 40,000. The average family also sells up to 22-25 animals (sheep and goats) for meat which fetches up to Rs. 60,000 on an average. A family however consumes dairy within the household and converts surplus milk to butter and cheese, a portion of which is sometimes sold. The price of the common black Yak wool is Rs 200 per kilogram and that of the uncommon brown wool is Rs.800 per kilogram. On an average, a family produces around 20 kilograms with one yak yielding around 1.5-2 kilograms per annum. So, an average family may earn aroundRs.1,50,000-2,00,000 per year from livestock. The need for currency has emerged in the local economy with the introduction of the public distribution system for supplying subsidized rations to the people. This has further exposed the Changpas to the risks and uncertainties of price fluctuation. The decline of the traditional barter system has further aggravated the problem of availability of currency in hand, even if the barter system was considered to be exploitative for the Changpas who were naive in the worldly ways^{20,21}. Although the government subsidies may go up to 50%, the cash requirement has become reasonably large. The amount of subsidy varies from year to year depending on the economy and

the amount the Government allocates for the development of Changthang. According to the nomads, around 50% of their total income goes in buying fodder and barley. Other expenditures include consumables, health care, education for children, clothes, veterinary services, buying livestock, village taxes, monastery taxes, hiring labor etc²².

A recent phenomenon of the region is large scale migration. There are several reasons that have pushed the Changpas out of pastoralism towards urban life. People from the remote areas perceive life to be easier, richer and more respectable in Leh. The harsh climatic conditions make daily life difficult in the plains. Furthermore, this harsh and unpredictable weather changes cause loss of livestock. This makes the source of livelihood unpredictable and risky over and above being low⁶.

Changthang records poor quality of life in terms of the basic development indicators, such as, sanitation, safe drinking water and electricity. The changpas depend on stream water²³. Personal hygiene is often neglected due to the extreme climatic conditions. The long distance to the source of water has led to the practice of open defecation in most settlements. Dental problems and eye infections are common due to the lack of vitamin sources in the meal as their diet mostly consists of Tsampa (roasted barley flour), dried cheese, butter, milk, rice and a lot of meat.

The plains lack in basic amenities and services. Emergency medical services are not available except for in far off Leh. The situation becomes worse in winters when the area is cut off for six months. The education system is also deplorable. Mobile schools with classrooms in tents are insufficient as teaching spaces. Moreover, harsh climate and seasonal migration cause absenteeism among students as well as teachers. With no educational institutions nearby, most nomads are compelled to send their children to schools away from the families and to live in hostels. The lack of development and a poor quality of life have caused outmigration in the Changthang plains in a large scale. One in every three of the Changpasis settled in the outskirts of Leh at present. Many elderly Changps have also moved to Leh in order to join their children. Life is not easy for them because of the heat in summer, fear of thieves, confinement at home and lack of social mixing. They miss the open spaces, green meadows and the clear streams²⁴.

Conclusion

The nomads of the Changthang Plains are continuing with the old tradition of Pastoralism. However, the migration rate has been high with most nomads already settled around Leh. The migration may continue in future if the local living conditions do not improve. The nomadic way of living has been followed for generations. Pastoralism and Pashmina production form a cultural asset of this region. However, with the advent of technology, development and better living standards in some other parts of Ladakh, the nomads do feel left behind in the

plains and consider Leh as a model of development. The next generations of the Changpas who will be educated in the cities and will get exposed to the modern comforts instead of the harsh struggle of the day to day life of a nomad, are not probably going to continue with the age-old Pashmina culture of the region²⁵.

However, the high economic value of Pashmina has the potential to attract the young generation, who may hire laborers to continue with herding while they can reap the profits. Developing pasturelands, changing land-use patterns and modern techniques of goat farming can make life easier even in these harsh conditions. Planned agriculture for regular supply of food and fodder is needed along with saving the grazing land. Development of infrastructure and basic facilities of life will help sustain the pastoral tradition of the Changpas and retain them in the Changthang plains that have been their home for generations. Preservation of historical societal norms practiced by people and use of them for natural resource management are necessary for the overall development of the region. Policies aimed at an optimal quantity of Pashmina production along with the conservation of the wild herbivores can help in maintain the ecological sustainability of the region²⁶. A comprehensive development program with focused policy planning, targeted goals and state intervention can bring in socio-economic development to this long-neglected region of India that produces a world-class fabric. The region has all potentials to flourish economically while retaining its sustainable ecological tradition of the past.

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