

Carrying Capacity Study of Teesta Basin in Sikkim

Volume-X

SOCIO-CULTURAL

ENVIRONMENT



Commissioned by :

Ministry of Environment & Forests, Government of India

Sponsored by :

National Hydroelectric Power Corporation Ltd., Faridabad



CISMHE

**CENTRE FOR INTER-DISCIPLINARY STUDIES OF
MOUNTAIN & HILL ENVIRONMENT**

UNIVERSITY OF DELHI, DELHI

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**CENTRE FOR INTER-DISCIPLINARY STUDIES OF
MOUNTAIN & HILL ENVIRONMENT
UNIVERSITY OF DELHI, DELHI**

&

Centre for Himalayan Studies, University of North Bengal

CARRYING CAPACITY STUDY OF TEESTA BASIN IN SIKKIM

THE SOCIO-CULTURAL AND SOCIO-ECONOMIC STUDY



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Principal Investigator

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CHAPTER - 1

INTRODUCTION

INTRODUCTION

1.1 INTRODUCTION

In the parlance of social science, carrying capacity is defined as the maximum number of people that a place can sustain before there is a reduction in the quality of life experience or adverse effects on either the physical environment or the resident community. Carrying capacity also indicates the utmost limit that a person or a place can endure. The concept of carrying capacity is closely linked with the concept of sustainable development. Development cannot be sustainable if the physical limit of endurance is crossed. However, it is difficult to put into practice because; the threshold levels of physical endurance vary from person to person and from place to place.

Experience has shown that a carrying capacity study is imperative before starting any development project that involves utilization of natural resources. It is important because going beyond capacity invites disaster. Prior to the initiation of any developmental activity we also need to know the extent of need for the present and future. Therefore, carrying capacity study requires a thorough screening of all sorts of resources that a place can offer over a certain period of time.

The present work is a study on socio-economic resources of Sikkim. The mountain state of Sikkim is one of the smallest states in India as far as its geographical area is concerned, but one of the richest in terms of certain natural resources, especially forests and water - two vital ingredients of its physical environment. Sikkim's location in the Eastern Himalayas in a humid tropical regime makes it exceptionally rich in water and natural vegetation. The socio-economic well being of the state is crucially linked with the judicious utilization as well as conservation of these two vital natural resources.

Sikkim is fortunate to have a very small population. The total population of Sikkim (550,000 approx) is even less than any of the major cities in India. More than fifty per cent of Sikkim's total area lies uninhabited. The inhospitable terrain and harsh climate have restricted the extent of human habitation in the state within the altitudes of 3500 m. The fact that a very large portion of Sikkim lies, above and much beyond 3500 m makes it clear that an extensive landmass is not available for human activities. However, the small size of population of the state does not necessarily mean that the state has low carrying capacity. The socio-economic carrying capacity of the state seems to be flexible and can be increased substantially if judicious exploitation and distribution of resources is ensured.

The mountain environment of Sikkim is fragile as well as vulnerable. However, being comparatively new to modern planning processes, there is enough scope to learn from the past experiences and problems faced

by other mountain states, so that there is no repetition of blunders committed by others. Since the state is breaking new grounds to tap the resources that were not reachable to the masses so far, it is important to undertake carrying capacity studies in respect of all future developmental activities. As far as the socio-economic development is concerned, it is necessary to study the demography, economy, occupational structure, civic amenities, social norms, cultural activities, conflicting interests of various ethnic groups and particularly, the quality of life of the people residing in the state of Sikkim. It is of utmost importance to know the human perception and aspirations since the ultimate goal of any developmental activity is to improve the quality of life.

1.2 OBJECTIVE

The primary objective of the present work is to prepare the socio-cultural and socio-economic profiles of Sikkim to have an understanding of the carrying capacity of the state. To achieve the said objective, the cultural profile, the demographic profile, the amenities available in Sikkim and the quality of life in the state were studied thoroughly. The other objective of the work is to make observation on the quality of socio-economic environment at the sites of existing and proposed hydroelectric power projects on Teesta at various stages (I to VI) and to recommend measures to be adopted for the sustenance of the carrying capacity of the areas concerned. The thrust areas of the present work are as follows:

Cultural Profile of Sikkim

- Ethnic Diversity

- Religions, Tribes, Communities
- Social Norms and Community Behaviour
- Cultural Activities
- Festivals and Environmental Resources
- Conflicting Interests

Demographic Profile of Sikkim

- Human Population and Trends
- Economic Profile
- Occupational Structure

Amenities Available in Sikkim

- Educational Institutions
- Communication
- Industry
- Health and Medical Facilities
- Drinking Water
- Energy
- Housing
- Markets

Quality of Life in Sikkim

- The Existing Scenario
- The Perceived Scenario
- The Aspired Scenario

Observations and Recommendations for Teesta Hydroelectric Project
Stage III, IV and VI

1.3 METHODOLOGY

The present study as a part of the project on the Carrying Capacity Study of Teesta Basin in Sikkim concerns the socio-economic and socio-cultural aspects of Sikkim. During the course of last four years (2001-2005), the socio-cultural and socio-economic carrying capacity, particularly the quality of life in Sikkim has been studied in great detail in three phases. Since the state of Sikkim has four districts, namely, North, South, East and West, it was convenient to study the socio-cultural and socio-economic carrying capacity of the state district wise. The study on the North district was completed in the first phase; the South district in the second phase, and all Sikkim including the East and West districts was studied during the third and final phase.

The methodology adopted in preparing the present report involved intensive use of primary and secondary data. The key areas that were surveyed for the collection of Primary data are Lachen and surrounding villages, North Sikkim (Stage-I), Lachung and surrounding villages, North Sikkim (Stage-II), Chungthang and surrounding villages, North Sikkim (Stage-III), Mangan and surrounding villages, North Sikkim (Stage-IV), and villages within the radius of 10 km (approx) of Dikchu, Singtam, Rangpo in the East and South Districts of Sikkim (Stage-V and VI). In addition to the areas mentioned above a sample survey was also done in the West District.

The project work required a thorough understanding of the ethno-

demographic as well as socio-economic situations in Sikkim. For the purpose, more than three months were spent in the field at different phases. The work involved intensive field investigation, collection and analysis of primary data. A detailed interview schedule consisting of about a hundred open as well as close-ended questions was structured to obtain maximum possible information. About 50 villages within 10 km on either side of the river Teesta were visited and 150 individuals were interviewed. The sampling was purposive and only key informants were selected for interview. For almost every village, at least one Panchayat member was interrogated. The other respondents were selected from a wide range of income groups covering the primary, secondary and tertiary sectors. Given the fact that Sikkim is home of various ethnic groups, particular attention was paid in selecting respondents with different ethnic and cultural backgrounds. A cross section of Lepchas, Bhutias, Nepalese and Plainsmen in age groups ranging from 21 to 75 was interviewed. Besides, a deliberate attempt was made to avoid gender bias. More than 25% of the respondents were female.

Most of the secondary data were collected from the Directorate of Economics, Statistics, Monitoring and Evaluation, Government of Sikkim and Directorate of Census Operations, Sikkim Branch, Government of India. Besides, relevant data and information were collected from the Departments of Mines and Geology, Forests, Agriculture and Horticulture, Rural Development, Tourism and Culture, Government of Sikkim. For useful references, books and journals available at the Documentation Centre of the Centre for Himalayan Studies, North Bengal University, Central Library of North Bengal University, Community Centre Library, Gangtok, Library of the Namgyal Institute of Tibetology, Gangtok, etc. were consulted.

CHAPTER - 2
THE SOCIO-CULTURAL
PROFILE OF
NORTH DISTRICT, SIKKIM

THE SOCIO-CULTURAL PROFILE OF NORTH DISTRICT, SIKKIM

The North District, the largest among the four districts of Sikkim (4,226 sq km) is the least populated (41,030 persons in 2001) in Sikkim and has an environment that is least disturbed by external agencies. The district covers nearly 60% of the total land area of the state but houses less than 8% of the state's population. The density of population in the district is only 10 persons per sq km. The district consists of two sub-divisions, namely, Chungthang and Mangan. There are 45 revenue blocks in the district of which 5 are in Chungthang sub-division and 40 are in Mangan sub-division. The district also has 8 forest blocks. Mangan, the district headquarters is the only town of North district. There is no town in the Chungthang sub-division. The dominant ethnic groups living in the district are the Lepchas and the Bhutias. The remoteness and the hostile landscape of North district not only checked indiscriminate inflow of population, but also helped preserving the traditional mode of life of the indigenous ethnic groups.

2.1 ETHNIC DIVERSITY

Compared to the other three districts of Sikkim, the North district has been able to maintain the ethnic purity of the indigenous inhabitants.

The ethnic groups residing in the district are indo-mongoloids belonging to two dominant groups, namely the Lepchas and the Bhutias. A third group consisting of the people of Nepalese origin inhabiting the southern villages of the district includes a host of tribes and castes belonging to Indo-Aryan, Indo-Mongoloid and Proto-Australoid groups.

The Lepchas are believed to be the earliest settlers of Sikkim. The origin of the Lepchas is somewhat obscure. According to the early anthropologists, the Lepchas migrated to Sikkim from the East, i.e. from the border regions of Tibet and Myanmar. The exact period of their entry in Sikkim could not be ascertained as the anthropologists and historians never established proven facts about their place of origin and reason of migration. According to some the Lepchas belong to a Naga tribe while others have found likenesses with some tribes in Arunachal Pradesh. Still others contend that the Lepchas came from the west, i.e. from the Mech country in neighbouring Nepal. However, the Lepchas or the *Rongs* (the ravine folks), as they prefer to call themselves, are of firm belief that the land of Khangchendzonga is their own country and they know of no other country as their habitat. To quote a Lepcha writer, “On the slopes of these magnificent hills (Khangchendzonga) the Lepchas are born; there they live and there they die” (A.R. Foning, 1987). It is commonly agreed that the Lepchas are the most ancient inhabitants of Sikkim and adjoining hills of Darjeeling, Kalimpong and Ilam in Nepal. The fact that most of the rivers, mountain tops, and places in the area have Lepcha names further substantiate the fact that the Lepchas had knowledge of all these landmarks much before the Bhutias or any other tribe reached this country.

The Lepchas exhibit pronounced mongoloid features. They are of short to medium height, have fair complexion and powerful limbs. They have strong calf muscles fit for steep climb and long walk. In North district the Lepchas are mostly confined in Dzongu and Chungthang area. The pure stock of Lepcha is fast dwindling in number and their hold on tribal land is decreasing day by day. The uninhibited and accommodative nature of the Lepchas have earned them sobriquets such as 'docile' and 'timid' and made them vulnerable and prone to submergence by powerful cultural and social influences. The Lepcha population in Sikkim is getting alarmingly low and pure stock of Lepcha is difficult to find outside the confines of the Dzongu area. The intermarriage of the Lepchas with the Bhutias and Limbus of Sikkim for several generations has brought significant changes in their physical appearance, social behaviour and traditional culture. Alarmed by these changes, the erstwhile rulers of Sikkim reserved certain areas in North Sikkim for the Lepchas only and they were encouraged to preserve their blood as well as culture in pure form. Thus Dzongu became one of the prominent areas of Lepcha Reserve. The exact period whence Dzongu came to be known as a 'Reserve' is not known. Dzongu is a Bhutia term that literally means 'nine districts'. At present, the enclave of Dzongu covers an area of 15,845 hectares and consists of seven Panchayat units, and thirteen revenue blocks. For administrative purpose the area is divided into Upper Dzongu and Lower Dzongu.

Chungthang town and surrounding villages of the North district have a sizeable Lepcha population. However, unlike Dzongu area, here

most of the Lepcha families have blood relation with either Bhutia or Tibetan or the Nepalese.

The ethnic Bhutias of Sikkim are a dominant race, both physically and spiritually. The Bhutias belong to the Tibeto-Burman stock and are fair complexioned, tall and robust. They imported from north a distinctly “Tibetan culture, Tibetan language, Lamaistic Buddhism, and a combination of pastoralism and semi-settled agricultural pattern” (A.C. Sinha, 1975). The Tibetan traders, farmers and the lamas are said to have visited this land since tenth or eleventh century. At that time the country was very sparsely populated and was inhabited by the primitive Lepcha and Limbu tribes. The pre-existing tribes were mostly concentrated in the humid forests and river valley areas leaving vast stretches of highland meadows empty. On the other hand, the Tibetan pastorals found the Alpine grasslands in the upper reaches of the Himalayas most suitable for their yak and sheep herds and started to set up semi-permanent villages in the heart of grasslands of North Sikkim. The Bhutias, though not very skilled in crop farming, gradually started cultivating and inhabiting the lower valleys. The wandering habits they inherited from their pastoral and trading ancestors made them down to earth and tactical in their dealings with others. Taming of animals as well as trading of merchandise came easily to them and they did not take much time to naturalize themselves on the new soil of *Demazong/Denzong* (valley of rice), i.e. Sikkim. The mendicant lamas of Tibet, especially those of old non-reformist school, too found a safe haven in Sikkim. It is believed that a group of lamas initiated the Bhutia

regime in Sikkim by enthroning a layman as the *Chogyal* or king of Sikkim in 1642. The Bhutias ruled the land for over three centuries.

In the North District of Sikkim, the Bhutias are the dominant ethnic community and have stronger hold on land excepting those areas reserved for the Lepchas. Beyond Chungthang, most of the private land belongs to the Bhutias and they exercise control over the economic, religious and political affairs of the area. The places like Lachen, Lachung, Yumthang, Muguthang and Thangu are as good as 'Bhutia Reserves' since no other ethnic groups are found to settle their.

The Nepalese are present in North Sikkim as workers and business people but they are not permitted to settle in the reserved areas of Dzongu and beyond Chungthang in the North district.

2.2 RELIGION AND CULTURE

Religion played a significant role in shaping the culture that distinguishes Sikkim from other Himalayan states. The people of Sikkim – Buddhist, Hindu or Christian - are devout in character and tolerant by nature. All the religious ceremonies are observed with traditional fervor and people from all walks of life participate in religious festivities. Religion in Sikkim has never been a reason for social or political conflict. Rather it acted as a binding force in achieving social solidarity. Buddhism, though practiced by a comparatively smaller section of population, has become a way of life in Sikkim and manifests it at each and every occasion of the Sikkimese society. The presence of *shortens*

at every nook and cranny, the rows of bamboo poles with fluttering prayer flags, the *many* walls inscribed with the sacred words and the imposing monasteries on hill tops have left their distinctive stamp not only on the landscape but also on the psyche of the average Sikkimese who, irrespective of their ethnic background and religious affiliation, have imbibed the values of tolerance, harmony and dignity.

2.3 TRIBES AND COMMUNITIES

The first official census of Sikkim taken in the year 1891 enlisted 13 communities belonging to three ethnic groups, namely, the Lepcha, the Bhutia and the Nepalese, as the resident communities of Sikkim. The list included 1) Lepcha, 2) Bhutia, 3) Limbu, 4) Gurung, 5) Murmi, 6) Rai, 7) Khambu, 8) Kami, 9) Brahman, 10) Mangar, 11) Chhetri, 12) Newar and 13) Darzi. The list was prepared according to the numerical strength of each of the communities and it clearly showed that the Lepchas and Bhutias were the dominant communities in Sikkim, but the collective strength of the Nepalese exceeded the total number of persons belonging to the Lepcha-Bhutia communities. At present, Sikkim has five ethnic groups, namely, Lepcha, Bhutia, Tsong, Nepalese and plainsmen of Indian origin, and includes no less than twenty-five communities (K.S. Singh, 1993). These are: 1) Lepcha, 2) Bhutia, 3) Limbu or Tsong, 4) Mangar, 5) Rai, 6) Gurung, 7) Tamang, 8) Thami, 9) Yakha, 10) Kagatey, 11) Sherpa, 12) Drukpa, 13) Tibetan, 14) Newar, 15) Brahmin, 16) Chhetri, 17) Thakuri, 18) Sunuwar, 19) Majhi, 20) Bhujel, 21) Kami, 22) Damai, 23) Sarki, 24) Bihari and 25) Marwari. Of these, the Lepchas, the Bhutias, the Sherpas, the Kagateys and of late,

the Limbus and the Tamangs are treated as scheduled tribes. In the North district of Sikkim, except the Lepchas and the Bhutias, all other tribes and communities are insignificant; hence only these two tribes are discussed here.

2.3.1 Lepcha

The Lepchas or the *Rongs* are believed to be the original inhabitants of Sikkim. Though they are found to live in all four districts of Sikkim, they are more numerous in the North district. They speak in *Rong* or Lepcha language that belong to Tibeto-Burman family. By religion, most of them are Buddhists but some of them have adopted Christianity in recent years. Many of them are still found to practice animism. Traditionally the Lepchas are skilled hunters, food gatherers and shifting cultivators but these days they prefer to practice sedentary cultivation and animal husbandry. The land-owning Lepchas raise cardamom and ginger as cash crops, and maize and millets as cereals.

The Lepchas have a low spatial mobility and they prefer to stick to their own place as long as they can. Unlike the Bhutias, they seem to be very reluctant to leave their home. They are not affected much by the prospects of better income and comfortable life style. Renowned botanist J.D. Hooker who came in close contact with the Lepchas of Sikkim about hundred fifty years back observed, “They detest any fixed employment”. About Lepchas it is often said that they are docile to the extent of being lazy. On the other side, it is also believed that “Their simplicity and accommodative nature is often mistaken as their

ignorance and servility” (R.N. Thakur, 1988). However, time is changing for them too, and the urban and educated Lepchas are found to take up jobs in the offices and educational establishments. They are now conscious about their identity and are more assertive in voicing their views and opinions.

2.3.2 Bhutia

The Bhutias who once ruled the land are distributed in all the four districts of Sikkim and are found to occupy most vantage locations. Their concentration is particularly dense in the colder and less humid tracts of North, East and West Sikkim. They are the descendents of migrant Tibetans who shifted their base from southern Tibet to Sikkim. The Bhutias were instrumental in bringing Buddhism to Sikkim and till date they practice the religion in traditional manner. The language of the Bhutias is a variant of Tibetan that has gathered local flavour over centuries of stay in Sikkim.

The Bhutias are a land-owning class and own large landholdings. They are also skilled in animal rearing and trade. An average Bhutia in Sikkim owns several acres of land, cattle, yak, and sheep and quite often, a business establishment. The Bhutias of North Sikkim, especially of Lachen and Lachung, practice transhumance. The people of Lachen, for example, shift to the plateau of Thangu in the upper reaches of North Sikkim every summer. Almost every family of Lachen has a piece of cultivable land and a semi-permanent residence in Thangu. During the summer months when the ground-snow melts, the farmers of Lachen

move to Thangu and cultivate potato, radish and leafy vegetables. The cattle, yak and sheep herd-owners move even further north in search of fresh pastures. After the harvest of crop and the onset of winter, the whole lot returns back to Lachen. Some of them go further down to comparatively warmer places where they own cardamom plantations. They also do brisk business as and when they move from place to place. Their merchandise includes raw wool, blankets, rugs, *chhurpi* and other dairy products, potato, cardamom and a host of consumer items that they collect during their visits to towns. The Bhutias of Sikkim are economically progressive and exhibit a rare combination of traditional culture and modern life style.

2.4 SOCIAL NORMS AND COMMUNITY BEHAVIOUR

In the North district of Sikkim the social norms and community behaviour are distinctively different from the rest of Sikkim. There is a unique system of local self-governance (*Zumsa*) in some villages of North Sikkim. Lachen and Lachung villages of the district are exemplary in this regard and the Bhutias of North Sikkim often identify themselves as the residents (Lachenpa or Lachungpa) of either of these two villages that are seen as models of traditional village administration.

The institution of *Zumsa* (local self-government) is responsible for all major decisions taken for the development and welfare of the village community. Each adult member of the village is a member of *Zumsa*. The *Pipons* or the office bearers of the *Zumsa* are elected by the system of direct voting and their term of office is only one year. One senior

Pipon, one junior *Pipon* and one *Gyapon* (secretary) look after the office of the *Zumsa*. The villagers elect the *Pipon* and *Gyapon* from among the male members of the community. Women members are not eligible to contest for the posts of office bearers though they have the voting rights and can take part in the process of decision-making. The *Zumsa* meetings are held at least once in a month or more frequently if the situation demands. Such meetings are to be attended by at least one member from each family. Violation of this norm is treated as an offence and the offenders are fined and warned by the *Zumsa*. The responsibility of a *Zumsa* includes supervision of all development activities of the village concerned, and settling local disputes over property or familial matters. The *Zumsa* also reserves power to deliver verdict in criminal cases of local nature.

The Bhutias of Sikkim are not aware of *varnashram* and do not have caste system. However, they are divided into two groups and twelve sub-groups (*rus*). The first group known as *Tondu rus-shi* has four *rus* that are considered superior to the eight *rus* of the second group *Beb Tsen Gye*. The Bhutias, who by nature are extremely conscious of class and status, do not usually marry outside their own *ru* clusters. Among them marriage is endogamous at community level but exogamous at *ru* level. At present Bhutias are found to marry outside their community especially when they cannot afford to pay the bride price. In olden times, the system of fraternal polyandry was quite common in Sikkim and traces of it can still be found in North Sikkim. Elsewhere monogamy is the general practice. The Bhutia families by location may be both patrilocal and matrilineal. In rural areas, they usually have large joint families. The

modern educated Bhutias are more in favour of nuclear families. Most of these families are vertically extended, though traces of large horizontally extended families can still be found among the urban elites.

According to Bhutia custom, only the sons inherit property. The youngest son of the family receives the larger share, as he has to take the additional responsibility of looking after his mother, unmarried sisters and the household. Rest of the property is distributed equally among all brothers who are free to go out and pursue the profession of their choice. However, by tradition, one of the sons is sent to monastery. He too receives his share of property. Women have no right of inheritance but at economic, social, religious and political levels they enjoy equal rights.

The Lepchas and Bhutias though exhibit different social structures, have many things in common. Both the communities are racially Mongoloids, and the languages of both have branched out from a common stock – the Tibeto-Burman family. The racial and linguistic connections have helped them to come closer. The historical blood brotherhood ceremony performed by the two communities at Kabi in North Sikkim expedited the process of assimilation and integration of the two. Although it may be argued that the ceremony was a sort of “marriage of convenience”, the “marriage” proved to be a success. Barring the initial hiccups, the relationship of both the communities has remained cordial.

2.5 CONFLICTING INTERESTS

Although Sikkim is home of diverse ethnic groups, the interests of the groups are hardly conflicting. It is more so in the North District where the tribal Lepcha-Bhutia groups have coexisted for centuries in harmony. Having been brought under the religious fold of Buddhism, the Lepchas of Sikkim who by nature were accommodative share common interests with the Bhutias. The conflict situations that might have developed over the distribution of resources could not surface due to judicious distribution of land by the Sikkim ruler among the *Kazis* (landlords) of both Lepcha and Bhutia origin.

CHAPTER - 3
THE SOCIO-CULTURAL PROFILE
OF SOUTH DISTRICT, SIKKIM

THE SOCIO-CULTURAL PROFILE OF SOUTH DISTRICT, SIKKIM

The South District is the smallest of all the districts of Sikkim but is rather densely populated. It covers only 10.57% of the total geographical area of the state but houses about 24% of the total population of Sikkim. The district has the density of population of 175 persons per sq km while the state average is only 76 persons per sq km (2001). There are two sub-divisions, 138 revenue blocks, 8 forest blocks and two towns in the district. The Namchi sub-division has 92 revenue blocks, 6 forest blocks and 2 towns, namely, Namchi and Jorethang, while the Ravong sub-division consists of 46 revenue blocks and 2 forest blocks. There is no town in Ravong sub-division. The district headquarters is located at Namchi. South district is inhabited by Lepchas, Bhutias, Tsongs (Limbus) and Nepalese. The Nepalese in the district are more numerous than rest of the ethnic groups taken together. The district is open and can be accessed with comparative ease from the plains as well as from neighbouring mountainous tracts.

3.1 ETHNIC DIVERSITY

The openness of the district has encouraged migration of people from the west, south and east. The South district is home of indigenous

Lepchas and Tsongs, Bhutias and a very large number of migrant Nepalese. At present the Nepalese form the single largest ethnic community in the district. Characteristically, the comparatively high altitude areas in the northern part of the district, especially in Ravong sub-division, have dominance of Bhutias while the Nepalese inhabit the lower valley areas, mostly in Namchi sub-division. The Lepchas and the Tsongs are distributed in both the sub-divisions, usually within 2000 m elevations. The names of the prominent landmarks, streams and revenue blocks in the two sub-divisions are suggestive of the dominance of a particular ethnic community in a particular locality. In Ravong sub-division, almost all the peaks, rivers and revenue blocks bear Lepcha or Bhutia names. Mount Tendong and Menam, the two most revered peaks of the district are named by the Lepchas while the important places like Ravongla, Namchi, Kewzing, etc. are named by the Bhutias. On the other hand such names as Jaubari, Kerabari, Suntaley, Salgarhi, Chisopani, Shyampani, Rateypani, Manpur, Kartickey, Kamarey, Panchgharey, etc. in Namchi sub-division give clear indication of Nepali dominance in those areas. The diversity of individual ethnic groups is manifested by their religious practices, social norms, community behaviours, cultural activities and festivals, which will be discussed in following sections.

3.2 RELIGION AND CULTURE

The tribes and communities living in the district follow Buddhism, Hinduism and Christianity. Besides, a section of indigenous Lepchas and Tsongs practice nature worship (Animism, Yumaism) and a small

section of the Bhutias profess Bon religion, a precursor of Buddhism in Tibet and Sikkim.

The Buddhist population of the district comprises the Bhutias, Tamangs, and a good number of Lepchas who embraced Buddhism under the influence of the Bhutia rulers. Besides, a few Newars too are found to profess Buddhism. In South district, the followers of Buddhism are divided into two sects, namely, *Karma-pa* and *Nyingma-pa*. Though most of the Sikkimese Buddhists are the followers of Nyingma-pa sect, in this district, the Karma-pa sect has greater influence. The Ralang Monastery, located near Ravangla, is one of the oldest and most powerful seats of the *Karma-pa* sect. The monastery located at Namchi caters to the members of *Nyingma-pa* sect. Apart from Ralang and Namchi monasteries, there are many more monasteries in the district. The area has another religious significance for which the devout Buddhists from all over the state visit this district. It has the rare distinction of having four sacred caves, believed to be the resting and meditation places of Guru *Padma Sambhava*, the founder of Northern Buddhism or *Vajrayana*. Very recently a huge statue of Guru *Padma Sambhava* has been installed at Samduptse near Namchi to signify the religious importance of the place.

Hinduism entered the area with the immigration of Nepalese from the Hindu kingdom of Nepal. Since the majority of the population of the state is Nepalese and there is no restriction on their movement in the South district, Hinduism has spread wherever they settled. Most of the Nepalese are *Shaivaites* (worshippers of Lord *Shiva*); hence all the Nepalese settlements in the district are dotted with *Shiva* temples. The

Bahun, Chhetri, Thakuri, almost all the service castes, most of the Newars, Rais, Gurungs and even Tsongs profess Hinduism.

A section of Lepchas, Rais and some of the Nepalese castes of the district have adopted Christianity. For obvious political reasons, Christianity could not proliferate much during the reign of Bhutia rulers, yet some of the Sikkimese including a few Bhutias became Christians under the influence of Missionary school education they received from outside the state. South district has the unique distinction of having a village where majority of the people are Christians. The Lepcha village of Wak in Namchi subdivision is a Christian enclave surrounded by predominantly Buddhist (Bhutia) and Hindu (Nepalese) communities.

Bon is a religion that was prevalent in Tibet before the advent of Buddhism. A few of the early settlers in Sikkim are still found to practice Bon religion. They have their lone monastery at Kewzing. Though the number of Bon followers is not much, they preserved a very old traditional form of religion.

The indigenous Lepchas and Limbus, in spite of their allegiance to the greater traditions of Buddhism and Hinduism, still follow the little traditions of nature worship. The religious festivals of these two communities are usually based on obeisance paid to supernatural powers that they perceive to be associated with certain objects of nature. Both the communities practice Shamanism (Practice of religious faith healers). But Risley was of opinion that the word 'Shamanism' does not fit their religion. According to him, their religion is closely akin to the 'Pon' (Bon) religion of Tibet. According to Campbell, their religion is

neither Hindu nor Buddhist, and it is very difficult to name the religion they practice. Some of the Limbus prefers to name their religion as 'Yumaism' which in effect is very close to animism.

3.3 TRIBES AND COMMUNITIES

3.3.1 Lepcha

The early inhabitants of the South district are undoubtedly the Lepchas. Legend has it that the land bound by rivers Teesta in the east and the Rangit in the west was the home of the *Rongs* or Lepchas for thousands of years. Although the anthropologists are of opinion that the Lepchas migrated to this land from across the Himalayas through the northeastern states, the Lepchas do not subscribe to this hypothesis. They always regarded the land drained by the *Rangnyo* (Teesta) and the Rangit as their own territory. The Lepcha folklore refers to an earthquake that damaged all the lakes of Sikkim and raised the water levels of Rangit and Teesta. In consequence, flood waters submerged their land called *Nye-ma-yel* (Sikkim), and the Lepchas climbed up the hills to find safer place in Mount Tendong. Till date, the Lepchas maintain this belief that they owe their survival to Mount Tendong, which is located in the South district. The legends relating to the benevolence of Mount Tendong and the relation of Teesta and Rangit are integral to their religiosity and festivity. Folklore apart, the influence of Mount Khangchendzonga, Mount Tendong, Teesta, Rangit and many other landmarks of the region are so deeply embedded in the psyche of the Lepchas that they cannot imagine of any land other as their homeland.

About a century and a half back, the famous naturalist Hooker wrote, “The Lepcha is the aboriginal inhabitant of the country. The race to which he belongs is a very singular one; markedly Mongolian in features, and a good deal too, in habit; still he differs from his Tibetan prototype, though not so decidedly as from the Nepalese and Bhutanese between whom he is hemmed into a tract of mountain country, barely 60 miles in breadth. The Lepchas possess a tradition of floods, during which a couple escaped to the top of a mountain (Tendong)...” (Hooker, J.D., 1855, p.117). Most of the early British travelers and administrators had written about the Lepchas at length. Apart from Hooker, White, Waddell and Risley described the tribe from all possible angles. In the words of White, “They are people of a mild, quiet and indolent disposition, loving solitude, and their homes are found in most inaccessible places, in the midst of forests if possible, and seldom above an elevation of 4000 feet”. (White, J.C., 1909, p.7). Risley observed, “The Lepchas, or as they call themselves, the Rong-pa (ravine-folk), claim to be the autochthones of Sikkim proper.... They are above all things woodmen of the woods, knowing the ways of birds and beasts, and possessing an extensive zoological and botanical nomenclature of their own” (Risley, H.H., 1928, p. 1).

From all the above descriptions it can be said emphatically that the Lepchas are the earliest tribe who inhabited this place well before other ethnic communities arrived. As their name *Rong-pa* implies, they lived in riparian sub-tropical forests and learnt the intricacies of nature from a very long-standing experience. Although with the passage of time they lost much of their forest-dwelling habits, their linkages with nature is

affirmed by the celebration of their prime festival, *Tendong Lho Rum Faat*, which is a form of worship of mount Tendong located in the South district. The South district has a pride of place in this regard.

3.3.2 Tsong

Another indigenous tribe of the tract west of Teesta is the Tsong or Tshong. The Tsongs are popularly known as Limbu or Subba but they prefer to call themselves *Yakthungba* (Subba, J.R., 1999, p. 15). According to Subba, “They are the original inhabitants of Limbuwan, a part of which is retained in Sikkim (West district, South district and a part of North district of present Sikkim)”. The *Akhil Sikkim Kirat Limbu Chumlung*, an organization of the Sikkim Limbus established in 1973, passed a resolution in its very first meeting that ‘Chongs’ (Tsongs) were not Nepalese but one of the indigenous tribes of Sikkim. (Subba, T.B., 1999, p. 114). The Tsongs or the Limbus of modern Sikkim believe that the very name Sikkim is derived from the Limbu term ‘Songkhim’ signifying New Home or ‘Singkhim’ meaning a wooden house, which was corrupted to ‘Sukhim’ and later on to ‘Sikkim’. According to Risley, the Limbus were distributed over ten districts, each subject to their headmen or Soubah, hence the title Subba (Risley, H.H., 1928, p. 38). One of the earliest accounts (Hamilton, 1819) stated that the mountains of Sikkim contained many people of the tribe called Limbu and it was estimated that of the whole population, three tenths were Bhutias, five-tenths Lepchas, and two-tenths Limbus. Hooker observed, “Next to the Lepchas the most numerous tribe in Sikkim is that of the Limboos (called Chung by the Lepchas)... They are more slender and sinewy than Lepchas... Their habits are so similar to those of Lepchas that they

constantly intermarry with them”. (Hooker, J.D., 1855, p.128-129). According to Waddell, Tshong meant merchants, since the Limbus were the chief cattle merchants and butchers in Sikkim. According to Sprigg, “The word ‘TSHONG’ or ‘TSONG’ is important because it occurs in the Tibetan phrase ‘LHO-MON-TSONG-GSUM’, which identifies the TIBETANS, LEPCHAS and LIMBUS as the three ORIGINAL RACES OF THE KINGDOM OF SIKKIM at the time of the First Chogyal (1642-70)”. Of late the Limbus have been accorded the status of Scheduled Tribes at par with the Lepchas and the Bhutias of Sikkim.

3.3.3 Nepalese

Numerically, the Nepalese are the largest ethnic group not only in South district, but also in entire Sikkim. The Nepalese are a heterogeneous group. They consist of many castes and tribes of which Bahun, Chhetri, Newar, Rai, Gurung, Tamang, Mangar, Sunwar, Bhujel, Thami, Thakuri, Kami, Damai, Sarki and Majhi are conspicuous. Each of these exhibits diverse physical and cultural characteristics. While the Bahun, Chhetri and Newar, belong to the so-called upper castes of Hindu Nepalese, the Kami, Damai, Sarki, and Majhi are the Scheduled Castes. Other backward classes of the region include Rai, Yakha, Gurung, Mangar, Sunwar, Bhujel, Thami and Thakuri. The Bahuns are the priests, while the Chhetris are traditional warriors. The Newars are the merchant class and have still retained their supremacy in trade and commerce. Risley commented that at his time they were the most

enterprising and influential, though their number was small. Since then, the Newars have increased manifold. A section of Newars profess Buddhism. Among others, the Rais are gaining prominence and at present they are figured as the most influential group in the state. The Rais have close affinity with the Limbus and quite often they are found to intermarry. The Gurungs are less assertive and prefer to live within themselves. The Tamangs, unlike the majority of the Nepalese, profess Buddhism, and have recently been recognized as Scheduled Tribes. The Mangars, Sunwars, Bhujels, Thamis and Thakuris are well known as warriors and the Indian Army regularly recruits many of them.

3.4 SOCIAL NORMS AND COMMUNITY BEHAVIOUR

Since Sikkim is a multi-religion state, the social structure is not based on Hindu caste system as is prevalent in most Indian states. Under normal circumstances, one community does not encroach upon another as far as social norms are concerned. Irrespective of the status they have achieved on the basis of political power, economic backwardness, or religious affiliation, each of the tribes, castes, sub-castes retains the identity of its community. For example, the Bhutias who ruled Sikkim for more than three centuries have retained their commanding position as an elitist tribe in spite of being enlisted as Scheduled Tribe. The Tamangs consider themselves as much Nepalese as, say, Mangars or Newars, even though their community status shifted from OBC to ST. Again a Rai or a Lepcha follows the norms of his/her community even after if he/she changes his religion.

In the South district, the majority of the people are of Nepalese origin. During the initial period of their migration to this area, all the Nepalese were bracketed as 'Paharia' by the Lepcha-Bhutias. The so-called Paharias, during the course of their adaptation to their new home, adopted many a social norms set by the Sikkim rulers. As a result, the behaviour of the Nepalese community residing in Sikkim acquired some distinctiveness in contrast to their brethren in mainland Nepal. For example, in spite of their affiliation to Hinduism, many of them perform Buddhist rituals, which is not so common in Nepal. On the other hand, the Bhutias who take great pride in their ancestry and heritage have accepted the language of the Nepalese as the means of communication. The Lepchas and the Limbus are less rigid and have free exchanges with the Nepalese.

3.5 CONFLICTING INTERESTS

In South Sikkim, the conflicting interests are not very apparent since the majority of the inhabitants are Nepalese. Though the Nepalese form the largest ethnic group in the district, they do not necessarily act as a homogenous group, especially in matters related to state politics. In recent years, some of the ethnic Nepalese are demanding their separate identity, distinct from the others, and are eschewing the habits and cultures they acquired from other, more powerful races over decades, if not centuries of co-existence. The Kirati communities, such as the Gurungs, Rais and Subbas are reverting back to their roots, customs and culture. There are definite signs of tribal revivalism against the dominance of Hinduism and Lamaism.

CHAPTER - 4

SOCIO-ECONOMIC PROFILE

OF SIKKIM

SOCIO-ECONOMIC PROFILE OF SIKKIM

The present work is a study on socio-economic resources of Sikkim. The report of the Phase III is divided into four parts as per specifications given in the project proposal. These are: Demographic Profile, Amenities, Cultural Profile and Quality of Life. The first two sections i.e. Demographic Profile and Amenities are prepared chiefly on the basis of secondary data collected from the Directorate of Census Operations, Gangtok and the Directorate of Economics, Statistics, Monitoring and Evaluation, Gangtok. Preparation of the third section, i.e. Cultural Profile involved both secondary and primary data. The final section, i.e. Quality of Life is entirely based on primary data collected during fieldwork.

4.1 DEMOGRAPHIC PROFILE OF SIKKIM

4.1.1 Human Population and Trends

The total population of Sikkim as per the Census of Sikkim (2001) is 5,40,851 comprising 2,88,484 male and 2,52,367 female (Fig. 4.1). The sex ratio in Sikkim is quite low. There are only 875 female per 1000 male. About 4,80,981 people of Sikkim live in rural areas while only

59,870 persons reside in urban areas (Fig. 4.2). The number of persons below the age of 6 years is 78,195. The total number of households in the state as of 2001 is 1,14,223. The average size of a Sikkimese household is 4.7, i.e. approximately five persons reside in each household. The overall density of population of the state is 76 persons per sq. km., which is one of the lowest in India. The general demographic information of Sikkim is given in the Table 4.1.

Table 4.1 General Demographic Information of Sikkim 2001

Sikkim	Persons	Male	Female
Total Population	5,40,851	2,88,484	2,52,367
Rural Population	4,80,981	2,55,774	2,25,207
Urban population	59,870	32,710	27,160
Population (0-6 yrs)	78,195	39,842	38,353
SC Population	27,165	13,807	13,358
ST Population	1,11,405	56,940	54,465
Number of Literates	2,34,135	1,37,745	96,390
Literacy Rate	50.6%	55.4%	45.0%

Source: Primary Census Abstract, Sikkim, Census of India, 2001.

Table 4.2 General Demographic Information in Percent, Sikkim 2001

Male	Female	Rural	Urban	Children (0-6 years)	SC	ST	Others
53.34%	46.66%	89%	11%	14.4%	5.0%	20.6%	74.4%

As per the Table 4.2, 53.34% of the total population of Sikkim is male and 46.66% is female. About 89% of the total population of Sikkim is rural. The share of urban population is only about 11%. Children in the

age group of 0-6 years constitute 14.45% of the total population. The scheduled tribes constitute 20.6% of the total population of Sikkim while the scheduled castes constitute only 5.0%. In other words, more than 74% of the total number of persons living in Sikkim belongs to general category, most of who are of Nepalese origin. Including the scheduled castes, the Nepalese make about 79% of the total population.

4.1.1.1 Major ethnic groups

The major ethnic groups living in Sikkim are the Lepchas, the Bhutias, the Limbus and the Nepalese. Besides, there are plainsmen most of whom are temporary residents of the state. The Lepchas, the Bhutias, the Sherpas, and of late, the Limbus and the Tamangs, etc. are scheduled tribes while a few Nepalese service castes like Kami, Damai, Sarki, etc. are scheduled castes. The total number of scheduled tribes in the state is 1,11,405 and the corresponding figure for a scheduled caste is 27,165.

4.1.1.2 Sex ratio

Compared to the sex ratio in India, Sikkim's sex ratio is very low. In India the number of female per thousand male is 933, whereas in Sikkim it is only 875. It is worth noticing that the sex ratio in Sikkim at birth is quite high. The sex ratio of the children in the age group of 0 to 6 years is 963. The lower sex ratio among the adults is supposedly due to a large number of male migrants who prefer to keep their family

members at their place of origin. The sex ratios of the scheduled tribes and scheduled castes at 957 and 967 are much better than the overall sex ratio of the state.

4.1.1.3 Literacy

The overall literacy rate in Sikkim is 50.6% while the rate of illiteracy is 30.8%. There is a visible disparity in the rates of literacy/illiteracy between male and female and between urban and rural areas. The literacy rate among the male is 55.4% while among the female it is only 45.0% (Fig. 4.3). There is also a wide gap in the rates of illiteracy between male and female. The illiteracy rate among the male is 25.5%, whereas, among the female the rate is 36.9%. The urban areas of Sikkim have registered 80% literacy while the same is only 46.7% in the rural areas. The total number of literates (7 years and above) in the state is 2,34,135 of whom 1,37,745 are male and 96,390 are female. The number of illiterates (7 years and above) in the state is 1,42,430 out of which 63,413 are male and 79,017 are female (Fig. 4.4).

4.1.1.4 Distribution of population in the districts

The state of Sikkim has four districts, nine subdivisions, 8 towns and 450 revenue blocks (villages). The population shared by each of the four districts is shown in Fig. 4.5.

The sex-wise distribution of population in the North, East, South and West districts of Sikkim is given in the Table 4.3.

Table 4.3 Sex-wise distribution of population in the districts of Sikkim, 2001

Districts	Persons	Male	Female	Sex Ratio
North	41,030	23,414	17,616	752
East	2,45,040	1,32,917	1,12,113	844
South	1,31,525	68,241	63,284	927
West	1,23,256	63,912	59,344	929

Source: Primary Census Abstract, Sikkim, Census of India, 2001.

It is obvious that the East District, where the seat of government of Sikkim and the capital town Gangtok is located, is the most populous of all districts in Sikkim. 45% of the total population of Sikkim lives in the East district. It is also the most densely populated among the four districts with 257 persons per sq km. But the sex ratio in the district is much lower than the state average (844 against 875). The South and West districts share 24% and 23% respectively of the total population of Sikkim. The densities of population in South and West districts are 175 and 106 persons per sq km. The sex ratios in these two districts are more or less balanced at 929 and 927, respectively. The North district, the largest of all districts in terms of area coverage, is least populated. Large areas in the district still lie uninhabited due to extreme climate and inhospitable terrain. The population shared by the North district is only 8%. The district has the lowest density of population (10 persons per sq. km) as well as lowest sex ratio (752) in Sikkim

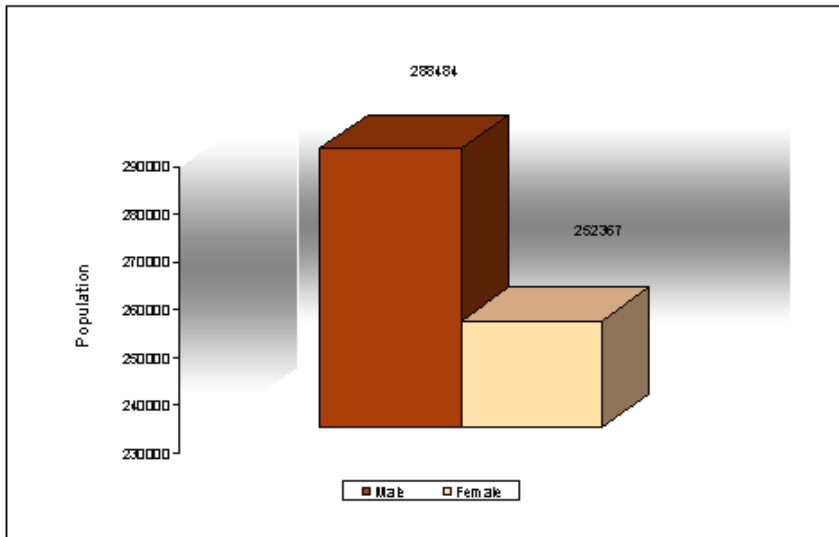


Fig.4.1 Population of Sikkim by sex

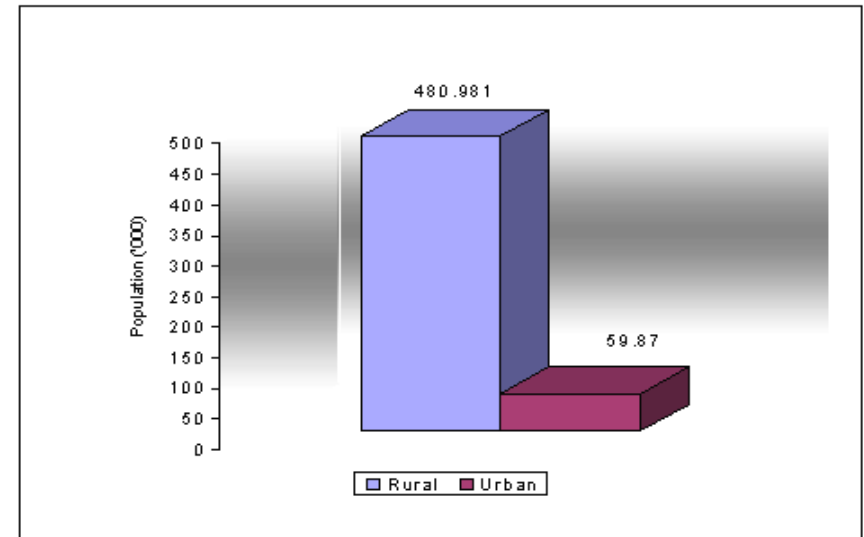


Fig.4.2 Rural and urban population

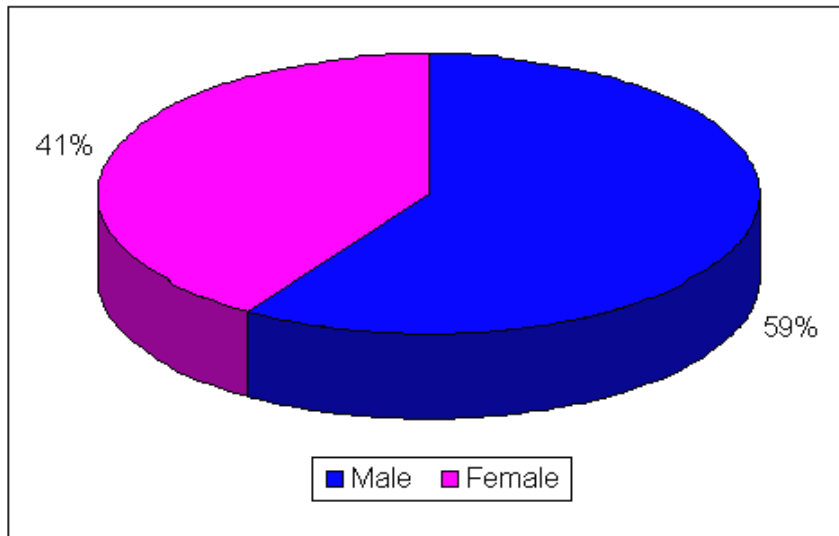


Fig.4.3 Literacy by sex in Sikkim

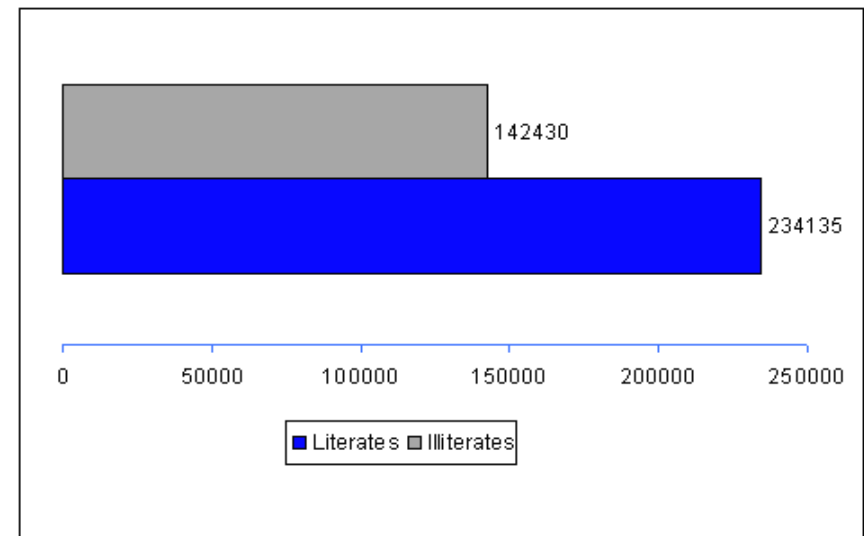


Fig.4.4 Number of literates and illiterates in Sikkim

Source: Primary Census Abstract, Census of India, Sikkim, 2001

4.1.2 Economic Profile

The economic profile of Sikkim is presented under three broad heads, namely, i) Agricultural sector, ii) Industrial sector, and iii) Service sector. The economic profile of the state shows an overwhelming dependence on agriculture and allied activities. While the industrial sector is slowly picking up, there is not much increase in the tertiary sector. Although there are eight towns in the state, the urban population is too meagre. Barring Gangtok, all other urban areas in Sikkim are too small for towns and some, viz. Mangan in the North District, Gyalzing and Naya Bazar in the West district, and Namchi in the South District are less populous than many villages. If the size of towns is any indication, then it can be said that the state has very limited scope of growth in the urban service sector.

4.1.2.1 *Agricultural sector*

The agricultural sector in Sikkim includes crop culture, horticulture, sericulture and animal husbandry.

Crop Culture

According to the provisional land utilization statistics of Sikkim (1995-96), the total area under agriculture is 1, 21,384 ha, out of which the net sown area is 62,043 ha, area under current fallow is 5,068 ha, other uncultivated land (excluding fallow land) is 9,807 ha, fallow land other than current fallow is 29,573 ha, cultivable waste land is 2,389 ha and land not available for cultivation is 12,494 ha. There has been a marginal decrease in net sown area since 1990-91 but almost threefold increase in fallow land other than current fallow. As per the Table 4.4,

only 52% of the cultivable area is net sown and 24% is fallow land other than current fallow. (Source: Sikkim: A Statistical Profile 2002. Directorate of Economics, Statistics, Monitoring & Evaluation (DESME), Govt. of Sikkim).

Table 4.4 Percentage Distribution of Area under Cultivable Land in Sikkim (1995-1996).

Classification of land	Area
Net area sown	52%
Area under current fallow	4%
Other uncultivated land (excluding fallow lands)	8%
Fallow land other than current fallow	24%
Cultivable waste land	2%
Land not available for cultivation	10%

Source: Sikkim: A Statistical Profile 2002. DESME, Govt. of Sikkim.

The district-wise break up of land holdings in Sikkim is given in the Table 4.5.

Table 4.5 District-wise Break up of Area and Number of Operational Land Holding in Sikkim (1995-1996).

Districts/State	North	East	South	West	Sikkim
No of operational holdings	5,124	20,271	12,854	14,448	52,697
Area operated (in ha)	15,444	34,450	29,336	32,072	1,11,302
Average area per holding (in ha)	3.01	1.7	2.22	2.28	2.11

Source: Sikkim: A Statistical Profile 2002. DESME, Govt. of Sikkim.

As per the Table 4.5, the number of operational holdings is maximum (20,271 nos.) in the East district and minimum in the North

district (5,124 nos). The East district also has the largest area operated under agriculture but poorest average in the state as far as area per holding is concerned.

According to the latest survey (2005) and new classification of land by the Department of Food Security and Agriculture Development, Government of Sikkim, the total operational area under agricultural land use is 127.05 thousand ha, out of which 11.31 ha is irrigated, 49.31 thousand ha is unirrigated, 6.22 thousand ha is not in agricultural use, 8.98 thousand ha is barren land, 17.38 thousand ha is under forest/jungle/bushes, 4.12 thousand ha is grassland, 8.54 thousand ha is uncultivated fallow and 21.22 thousand ha is under cardamom plantation. There has been a net increase of 5,666 ha of area under agricultural operation since 1995-96.

The major crops cultivated in the state are maize, rice, wheat, pulses, finger millets, barley, buckwheat and oilseeds. The state has about 8,100 ha under wheat, 6,710 ha under various pulses, 4,988 ha under finger millets, 2,050 ha under buckwheat and 1,140 ha under barley. The area under wheat is most extensive in the East and West districts (about 2,550 ha each), while pulses are grown mostly in the South and West districts (2,350 ha and 2,540 ha respectively). The East district too has considerably large area under pulses (1,740 ha) but the North district has very limited area (80 ha) under the crop. Finger millets and buckwheat are grown in all four districts.

Sikkim produced 52,834.4 tonnes of maize, 23,439.3 tonnes of rice, 12,849.8 tonnes of wheat, 1,677 tonnes of barley, 5,946.1 tonnes of

pulses, 4,713.3 tonnes of finger millet, 1,590.1 tonnes of buckwheat and 7,605.4 tonnes of oilseeds in the year 2000-2001 (Figs 4.6 & 4.7).

Sikkim is not yet self-sufficient in food grains. The total area under food grains in Sikkim is 78,289.6 ha and the total production of food grains is 1,03,050 tonnes (excluding oilseeds). Except maize and millets, none of the food crops grown in Sikkim is sufficient for its population. Therefore, large quantities of rice, wheat and pulses are imported from other states. The estimates of area, production and yield rates for the year 2000-2001 show decline in rice, wheat, finger millet and buckwheat cultivation as compared to the same during the year 1999-2000. However, there has been visible rise in area, production and yield rate of maize. (Source: Sikkim: A Statistical Profile 2002, DESME, Govt. of Sikkim).

Horticulture

Sikkim enjoys certain privileges as far as horticulture is concerned. The range of sub-tropical to cold-temperate climates in the state has favoured cultivation of a wide variety of fruits, vegetables, root and tuber crops, spices and flowers. Sikkim is a prolific grower of fruits like mandarin oranges, plums, peaches, pears, avocado, guava, banana etc., vegetables such as, cabbage, cauliflower, pumpkin, bitter gourd, cucumber, tomato, varieties of beans and leafy vegetables, and root and tuber crops like potato, radish, carrot, turnip, cassava, sweet potato, yams, etc. Among the spices grown in Sikkim, large cardamom

is by far the most important. Other than cardamom, ginger and turmeric are also grown profusely.

Table 4.6 Area, Production and Productivity of Major Horticultural Crops in Sikkim (2001-2002).

Sl. No.	Crop	Area ha)	('000 Production ('000 tonnes)	Productivity (tonne/ha)
1. Fruits	i.Sikkim Mandarin	4.25	6.55	1.54
	ii.Other fruits	1.75	2.45	1.40
2. Vegetables	i.Kharif vegetables	1.70	8.08	4.75
	ii.Ravi vegetables	1.65	7.35	4.45
	iii.Off season vegetables	2.02	9.55	4.73
3. Roots & tubers	i.Potato	3.55	16.83	4.74
	ii.Other roots & tubers	1.06	1.85	1.75
4. Spices	i.Cardamom	16.10	3.20	0.20
	ii.Ginger	2.75	15.50	5.64
	iii.Turmeric	0.46	1.52	3.34
5. Flowers		NA	0.36	

Source: Sikkim: A Statistical Profile 2002, DESME, Govt. of Sikkim.

As per the Table 4.6, potato is the single largest horticultural crop in Sikkim followed by ginger. In the year 2001-2002, the production of potato and ginger was to the tune of 16,830 tonnes and 15,500 tonnes

respectively. Both the crops are surplus crops and are exported to other states in India. However, large cardamom is the major cash crop of the state and its plantations are spread over 16,100 ha. Cardamom being a low volume high value crop fetches handsome revenue and is a major source of earning for the farmers. Sikkim mandarin orange is the other important cash crop. The state produces 6,550 tonnes of oranges, the major share of which is exported but its supply falls far short of demand from other states. Sikkim grows a variety of vegetables in three seasons, *viz.* kharif, rabi and off-season, but the supply of home grown vegetables is far less than internal demand at any given point of time and the state has to import vegetables round the year. The climate of Sikkim is also favourable for cultivation of decorative flowering plants. Sikkim is home of a very large variety of orchids, ferns and flowering plants. Floriculture, especially the culture of orchids and decorative plants is gaining ground in Sikkim.

Sericulture

In terms of sericulture Sikkim is still in a state of infancy. Sericulture is not a traditional economy of the state. It was introduced in Sikkim in late 1970s, i.e. after Sikkim's merger with India. Due to non-traditional nature, sericulture is not widely spread as yet. Although it is introduced in three of the four districts of Sikkim, the total area under sericulture is only 430 acres (Source: Department of Forests, Govt. of Sikkim). Of the 430 acres, 370 acres of land is under mulberry plantation, 30 acres under *muga* plantation and another 30 acres of land is under the plantation of tapioca and castor. Sikkim is believed to

have good potential in this sector, especially, for *muga* and *eri* cultivation. At present silk cocoons are produced on experimental basis in a few govt. sericulture farms and select villages in the East, South and West districts.

Animal Husbandry

Next to agriculture, animal husbandry is the most important economic activity of the people of Sikkim. Animal grazing is an age-old practice of the mountain people, especially in areas above 3000 m. This is the mainstay of a large number of semi-nomadic tribes and supplementary source of income for most of the settled agriculturists. Given the fact that a large area of Sikkim is grassland lying beyond the regime of crop culture, the resident people of those areas have no alternative but to rear livestock for their livelihood. The major concentrations of pastorals can be found in the grassy slopes of the mountains in the North, East and West districts. The settled agriculturists too rear livestock most of which are stall-fed. The animals reared in Sikkim include, cattle, buffalo, yak, sheep, goat, pig, horse, pony, mule, dog, rabbit and poultry.

Of all the animals reared in Sikkim (excluding poultry, which is almost ubiquitous in Sikkim), cattle rank first with a total of 1,43,024 followed by goat (82,938) and pig (26,975) (Fig.4.8). Cattle are reared in Sikkim as much for its milk as for the meat. Barring the Hindu Nepalese, all Sikkimese people consume beef, and there is always good demand for it. Goat and pig too are reared for their meat. Buffaloes are comparatively rare in Sikkim (1,970).

Sheep and yak are usually reared in high altitude areas in the North, West and East districts. The yak and sheep population in the state decreased after the closure of Sino-Indian border. The total number of sheep in the state is 5,023, while the number of yaks is only 3,140. Sheep are reared chiefly in the North and West districts. Yaks are most numerous (1,549 nos.) in the North district. There is no yak in the South district.

The number of the beasts of burden like horse, pony, donkey and mule is also dwindling as there is little demand for such animals, courtesy improved communication system. At present, there are only 5,436 horses and ponies, and 121 donkeys and mules in Sikkim. A very small number of rabbits (357) are also reared in the state.

4.1.2.2 Industrial sector

Compared to the agricultural sector, the industrial sector of the state is still weak and under-developed. The industries of Sikkim can be classified as cottage, small and medium scale industries. There is no large-scale industry in the state. The locational factors are not yet conducive for the establishment of large-scale industries in Sikkim. The mountainous terrain and geographical isolation, small and scattered

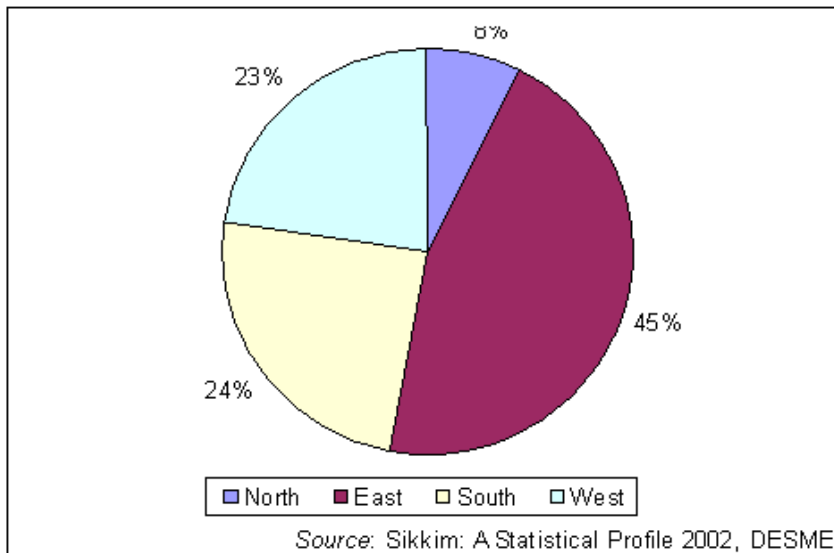


Fig.4.5 Area under principal crops

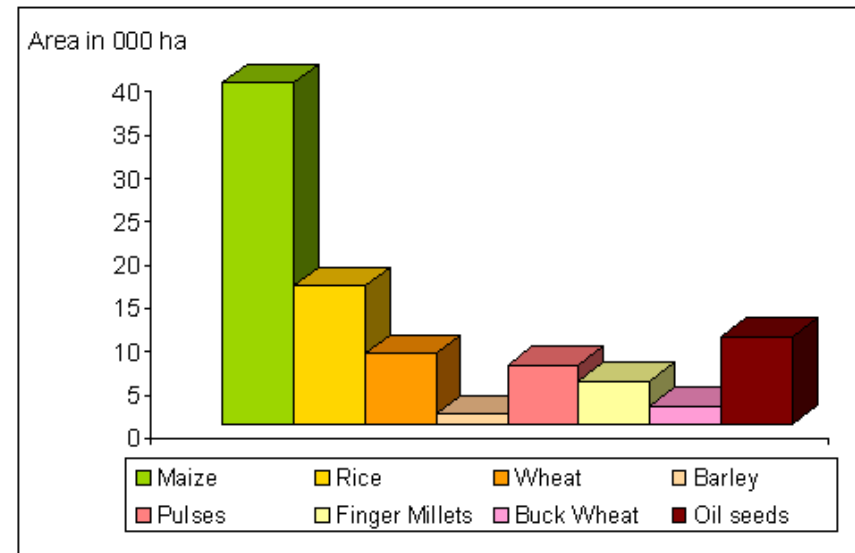


Fig.4.6 Area under principal crops in Sikkim

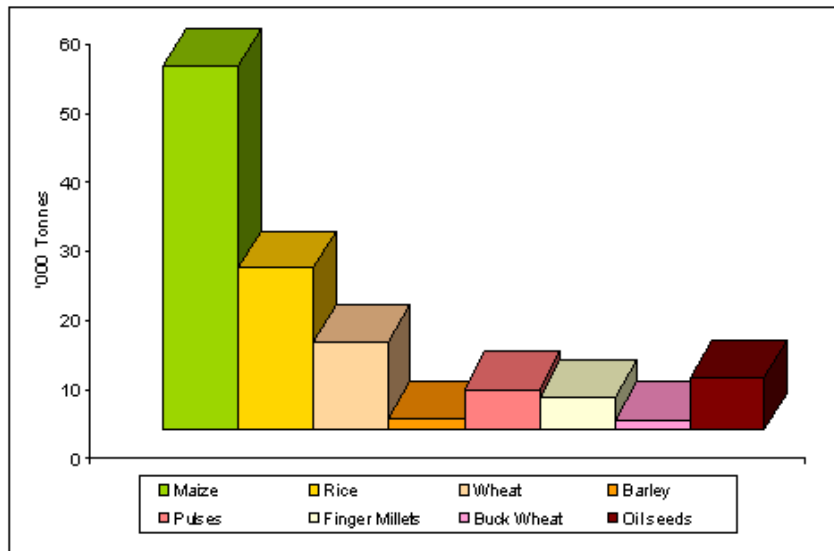


Fig.4.7 Crop production in Sikkim

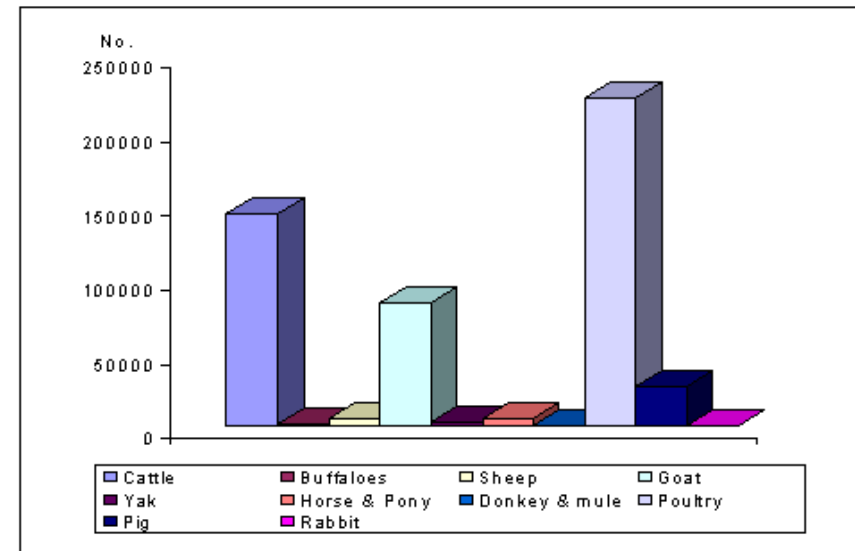


Fig.4.8 Livestock population in Sikkim

Source: Sikkim: A Statistical Profile 2002, DESME, Govt. of Sikkim.

domestic market, and limited mineral resources make large-scale industry non-viable. Therefore, industrial development in Sikkim is restricted to small-scale and cottage industries and a few medium-scale industrial units. Altogether there are 367 small-scale units, 36 cottage industries, 3 medium scale industries and 3 Public Sector Undertakings (PSUs) in the state. The total number of non-functioning units is 87. The district-wise break up of different categories of industries in Sikkim (Table 4.7).

Table 4.7 District-wise distribution of Industries in Sikkim, 2000.

Industries	North	East	South	West	State
Provisionally registered	25	244	51	66	386
Small scale units	6	276	54	31	367
Cottage Industries	1	19	6	10	36
Medium scale industries	NA	3	NA	NA	3
PSUs	NA	3	NA	NA	3
Non-functioning units	3	65	10	9	87

Source: Sikkim: A Statistical Profile 2002, DESME, Govt. of Sikkim.

The industries in Sikkim are primarily mineral and agro-based. Among others, precision industries are gaining ground, thanks to a comparatively pollution-free environment and cool climate. Industries like copper smelting, steel forging, watch making, distilleries and breweries, fruit preservation, and tea have already made their presence felt in the industrial scenario of Sikkim. Most of these industries are concentrated at and around Rangpo, Singtam and Gangtok in the East

district. The copper mining town of Rangpo can be called the only industrial town in Sikkim. It can be mentioned here that the copper reserves of Sikkim are almost exhausted and the copper industry of Sikkim is on the verge of extinction. The border town of Rangpo is now known for its distilleries rather than copper. The Rangpo Distillery, a joint undertaking of a private company and the state government, and Mount Distillery, a private enterprise, are producing a wide range of liquors. Of late, a steel-forging unit has come up in the outskirts of Rangpo. Sikkim Time Corporation (SITCO), a premier precision tool industry and a prized state government undertaking, is located in the outskirts of Gangtok. The town of Singtam is the hub of many small-scale units. At one point of time, the town was well known for its fruit preservation factory. Some new industries have come up at Melli, Jorethang and Temi in the South district. Worth mentioning are the Yuksam Brewery at Melli and Sikkim's lone tea producing factory at Temi.

The tea industry of Sikkim, though presently based on only one garden, deserves special mention. The Temi tea garden is a state government undertaking. The quality of tea produced at Temi tea estate is comparable to that of standard Darjeeling tea. The tea grown at Temi is processed in the garden itself. Several varieties of tea are produced at Temi, of which the orange pekoe and orthodox are in high demand. Tea could be one of the most promising industries in an industry-starved state like Sikkim.

The household industries of Sikkim include biscuit factory, floor mill, spices factory, noodle factory, pickle factory, ice cream factory, garment factory, knitting factory, wrought iron furniture and grill factory, soap factory, and a host of others. The cottage industries of Sikkim are based on handloom, carpet weaving, woodcarving, scroll painting, mask and artifact making, etc. The handicrafts of Sikkim have a favourable market both within and outside the country.

4.1.2.3 Service sector

The geographical isolation and difficult terrain of Sikkim has restricted the scope of agricultural and industrial expansion. It is believed that the 'engine of economic growth' in Sikkim has to be the service sector (Sikkim Today, p. 94). However, service sector in the state still maintains a low profile. Absence of large towns and limited development of modern infrastructure kept the tertiary sector small and stunted for a pretty long time. However, the scope of tertiary activities expanded to a great extent ever since Sikkim became a constituent state of India. Establishment of various government as well as private offices and enterprises created job opportunities in the state and the number of tertiary workers increased manifold during the last three decades. Requirement of workers by various state and central government departments has provided a boost in the service sector. The major job-providing departments of the state are Public Works, Power, Education, Police, Health, Rural Development, Transport, Agriculture, Animal Husbandry and Tourism. The departments of Public Works and Power are the two major employers of both trained

professionals as well as unskilled labourers. They engage huge labour force to construct and maintain roads, bridges, government buildings and power plants. The departments of education and health, the two most important departments so far as human resource development is concerned, provide job to thousands (7,771 and 2,402 persons respectively, as of 2002. Source: Sikkim: A Statistical Profile 2002, DESME, Govt. of Sikkim).

Among the central government organizations, defence, banking and insurance sectors are the major job providers. Sikkim has a long international border on three sides and the strategic location of Sikkim necessitates deployment of huge armed forces consisting of all ranks of defence personnel. The recruitment of local youth in several defence contingents is considerable.

The banking sector has made its presence felt in Sikkim with a total strength of 69 public sector banks. Along with the banks, numerous insurance companies and non-banking financial investment companies have spread their network and provided job opportunities to many local people as well as outsiders.

Other than government services, trade and commerce, transport, construction and tourism related activities by private enterprises engage a large section of tertiary workers. It is estimated that non-government workers are more than twice the number of government employees. Of late the state has experienced a spate in trade and commerce. Sikkim's inclusion in the North Eastern States' Council (NEC) and opening of the

traditional trade route via Nathula may be crucial for the future development in trade and tourism related activities.

Till very recently the transport sector of Sikkim was a monopoly of the state owned Sikkim Nationalized transport. But with the rise in number of local commuters as well as tourists, private bus and taxi owners have become the dominant players in this sector.

In recent years Sikkim has witnessed a boost in construction of buildings. Hotels, lodges, resorts and shopping complexes have increased the demand for architects, masons, carpenters, plumbers, electricians and unskilled construction labourers. Most of the construction workers in Sikkim are migrants from outside the state.

Over the years, the number of private practitioners and trained professionals like doctors, lawyers, tutors, beauticians, barbers, tailors, etc. has increased in accordance with rising demands. However, the total number of these professionals is still small in Sikkim.

As far as the private services are concerned, the most remarkable development has taken place in the tourism sector. Even two decades back, very few people visited Sikkim and even fewer people took interest in tourism related activities. With the lift of ban on certain areas in Sikkim, tourism started in the state in a big way. The increase in the number of tourists and demand for hotels, lodges, guest houses, tourist taxis, drivers, travel agencies, tour operators, guides, porters, interpreters, etc. suggest that tourism can become the leading economy

of the state in the near future. The job opportunities in the field of tourism proliferated due to demand for specialized services required by domestic and foreign tourists. Diverse forms of tourism, namely eco-tourism, adventure tourism, village tourism and cultural tourism, etc. have intensified the demand for skilled professionals in tourism sector.

4.1.3 Employment Profile/Occupational Structure

According to major occupation, the people of Sikkim may be grouped as under:

1. Main workers
 - a) Cultivators
 - b) Agricultural labourers
 - c) Workers in household industry
 - d) Other workers
2. Marginal Workers
3. Non-workers.

The total number of workers in Sikkim according to 2001 census is 2,22,500. The total number of main workers in the state is 1,86,222, of which 86,314 are cultivators, 10,837 are agricultural labourers, 2,791 are workers in household industries and 86,280 are other workers. There are 36,278 marginal workers, whereas 1,90,343 persons in the state are non-workers.

The economic classification of workers in Sikkim shows that primary workers consisting of cultivators and agricultural labourers comprise about a quarter of the total work force in Sikkim. The number of secondary workers in the state is negligible. The tertiary or other workers make slightly less than a quarter. A substantial percentage of workers are marginal workers and nearly half (46%) of the total population of Sikkim falls in the category of non-workers. The Table 4.8 shows the proportion of male and female workers.

Table 4.8 Male and Female Workers, Sikkim, 2001

Workers	Male	Female	Total
Cultivators	44,642	41,672	86,314
Agricultural labourers	5,328	5,509	10,837
Workers in household industries	1,777	1,014	2,791
Other Workers	65,513	20,767	86,280
Marginal Workers	14,132	22,145	36,278

Source: Primary Census Abstract, Sikkim, Census of India, 2001.

As per Fig. 4.9 and the Table 4.8, participation of female workers in different economic sectors is considerably high. In fact, the number of female workers is more than the male workers in the categories of agricultural labourers and other workers (Fig.4.10).

The Demographic, Economic and Employment Profiles of Sikkim indicate that the state, though disadvantaged due to geographical isolation, has many positive aspects in regard to human and economic

resources. No doubt the state has many limitations as far as utilization of resources is concerned. Yet, the profiles make it clear that the state's socio-economic environment is conducive to growth and development of both human as well as economic resources.

The Demographic Profile of Sikkim shows that every decade Sikkim is getting about a lakh of additional population. The density of population in Sikkim is still very low. Though migration factor plays a big role as far as growth of population is concerned, there is hardly any mechanism either to check or even record the entry of immigrants. Another demographic problem of the state is its low sex ratio. The low male-female ratio in the state hints at gender bias. Yet another intriguing feature is the small size of towns. The miniscule size of towns indicates very slow urbanization process. The literacy figures, though improving, are not very impressive as far as rural and female education is concerned.

The Economic Profile of the state shows growth in the sector of agriculture and allied activities. In spite of limited cultivable land, the state recorded growth in this sector. There was progress both in terms of quality and quantity. Sikkim has scopes to expand horticulture, animal husbandry and to some extent, sericulture sectors. As far as conventional industries are concerned, the state has very little scope. However, chances are aplenty for development and growth in tea and tourism industries.

The occupational structure of the state is more or less balanced. Though the number of non-workers in the state is pretty large, high work participation of both the sexes in primary, secondary and tertiary activities indicate healthy work environment. Unemployment is still not acute in Sikkim. There are scopes to expand self-employment opportunities and trade with the diversification of tourism sector and opening of Nathu-la pass in near future.

4.2 THE AMENITIES AVAILABLE IN SIKKIM

The amenities imply those facilities that augment the quality of life and act as necessary tools for human resource development. Once the three basic needs, *viz.* food, shelter and clothing are fulfilled, humans need specific facilities that build civil society and improve the quality of life. Civil society cannot move ahead in absence of certain amenities like educational institutions, communication network, industry, health and medical facilities, supply of clean drinking water, supply of energy resources, well-built houses, and infrastructure for trade and commerce. In the present section, an attempt has been made to take a stock of existing amenities available in Sikkim, their strength and weaknesses, and also to suggest ways and means to develop them so as to improve the quality of life. The amenities currently available in Sikkim are discussed under the following heads:

1. Educational Institutions
2. Communication
3. Industry
4. Health and Medical facilities
5. Drinking Water

6. Energy
7. Housing
8. Markets

4.2.1 Educational Institutions

Sikkim has a wide range of educational institutions ranging from pre-primary to graduate levels and varying from government to private. The types of government educational institutions in Sikkim (Fig. 4.11) and their district-wise break up is given in the Table 4.9

Table 4.9 Educational Institutions in Sikkim, 2000

Educational Institutions	North	East	South	West	State
Pre-primary school	76	235	212	216	739
Lower Primary School	21	35	48	75	179
Primary School	33	114	94	81	322
Junior High School	9	44	43	33	129
Secondary School	10	24	22	20	76
Senior Sec. School	2	14	7	6	29
Monastic School	14	16	12	8	50
Sanskrit Pathshala	-	8	2	2	12
Madrasa	-	1	-	-	1
Degree College	-	1	1	-	2
Law College	-	1	-	-	1
Sheda (Monastic College)	-	1	-	-	1
Sanskrit Mahavidyalaya	-	-	-	1	1
TTI	-	1	-	-	1
SIE	-	1	-	-	1
ITI	-	1	-	-	1

Source: DESME, GoS.

Along with formal educational institutions, there is a parallel system of traditional education in the state conducted by the Buddhist monasteries (*gompa*), Sanskrit *Pathshalas* and *Madrassa*. For higher education in Buddhist religious studies there is a monastic college (*Sheda*) in Sikkim. Besides, there is a Sanskrit college for students of Sanskrit language and literature.

The total number of schools in Sikkim is 1,952, out of which, 1,478 are state government schools and 471 are private schools as of 31.10.2002. Besides, there are 3 schools run by the Central Government. All the government schools of Sikkim are affiliated to the Central Board of Secondary Education (CBSE), while most of the private schools follow the ICSE curriculum.

The graph in Fig. 4.12 clearly shows that the strength of students sharply declines from primary stage to junior high stage. It may be noted that school education is free in Sikkim up to class XII. Therefore, poverty cannot be the reason for discontinuation of education at school level. Lack of awareness among the parents is one of the main reasons of disruption in education. The number of school dropouts among the adolescents is alarming. Lack of interest in studies and to some extent, easy access to certain jobs lures the adolescents out of school.

The overall enrolment structure for the year 2001-2002 shows that only about a quarter of students enrolled in pre-primary and primary schools get enrolled in the middle (junior high) schools, and a quarter of middle school students go to the secondary schools. The number of enrolled students reduces by half in the senior secondary schools and only 2.45% of the total number of students in the state is enrolled in the

state's colleges (Table 4.10). It should be noted that the number of educational institutions too decreases proportionately from 1,665 primary schools to 90 secondary schools and only 5 colleges.

Table 4.10 Student Enrolment in Schools and Colleges by Stages (2001-2002)

Stage	Pre- primary & Primary	Middle	Secondary	Senior Secondary	Degree college	Poly technic
No. of Students	1,00,211	24,622	8,246	4,577	2,459	122

Source: Sikkim: A Statistical Profile, 2002. DESME, Govt. of Sikkim.

For higher studies, the state has two government degree colleges, two private colleges and one Law College (govt.). It also has a State Institute of Education (Govt.), a Teachers' Training Institute (govt.), one polytechnic (Govt.), two B.Ed colleges (private), one pharmaceutical institute (private) and one technological university (Sikkim Manipal Institute of Technology) jointly run by the state government and a private organization. Sikkim Manipal Institute of Technology (SMIT) presently imparts education in Engineering and Medical Sciences. However, till date the state has no university of its own for regular post-graduate courses (as of December 2004). Since the number of colleges and other institutions of higher education in the state is insufficient, majority of the students prefer to study outside the state or even outside the country. A large number of students go to Delhi, Bangalore, Calcutta and other metropolitan cities in India in pursuit of higher studies. Sikkim has both

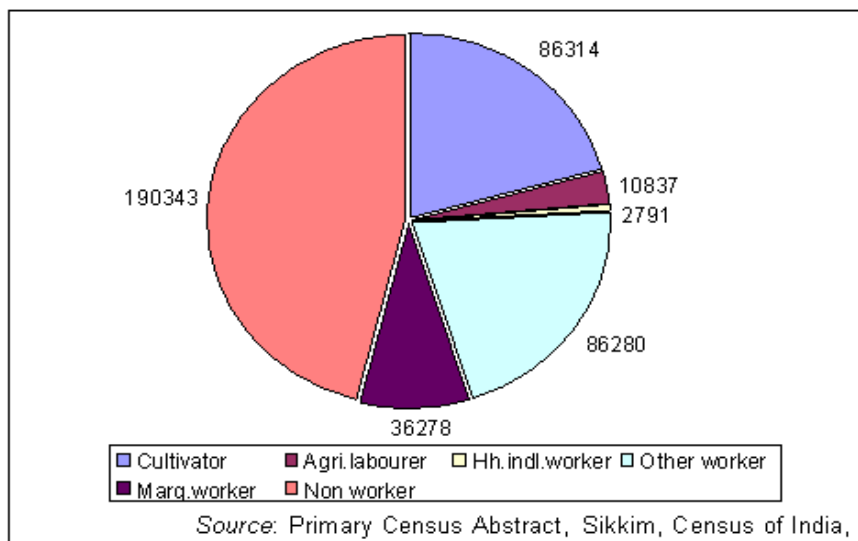


Fig.4.9 Economic classificatoin of population in Sikkim

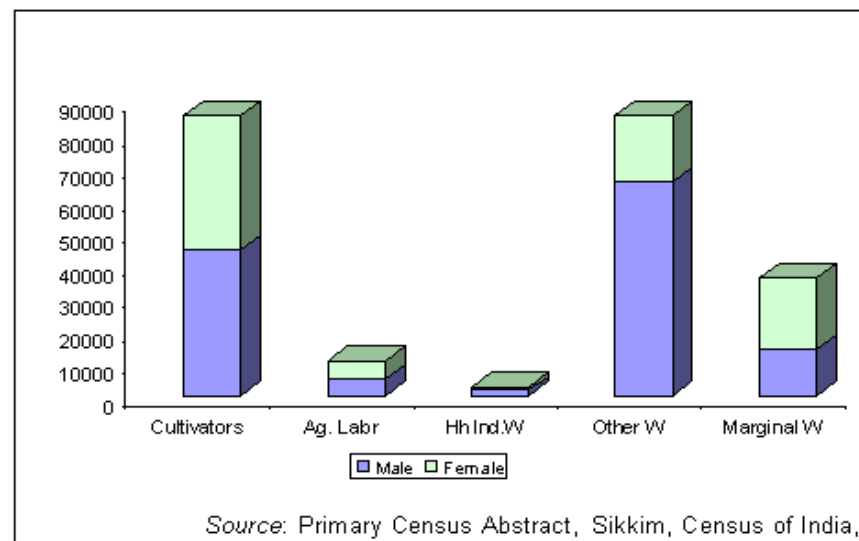


Fig.4.10 Male and female workers in Sikkim

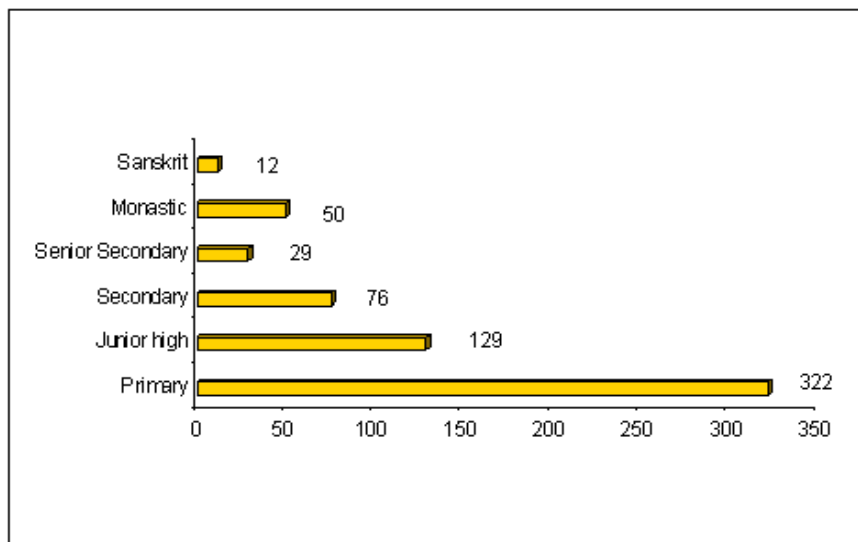


Fig.4.11 No. of Government schools in Sikkim

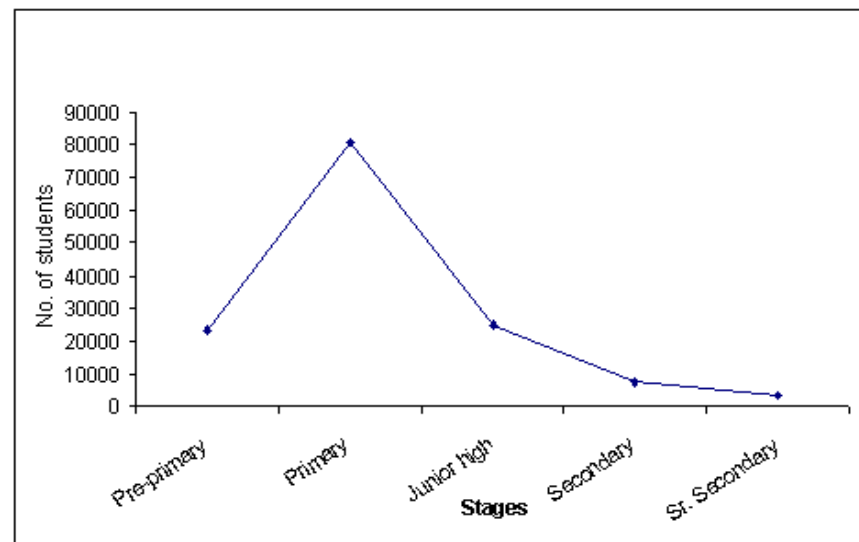


Fig.4.12 Strength of students at different levels of school in Sikkim

Source: Sikkim: A Statistical Profile, 2002. DESME, Govt. of Sikkim

scope and potential to start specialized courses in science, technology, management, tourism, rural development and mountain research.

4.2.2 Communication

Underdeveloped communication is still one of the major bottlenecks in the course of development in Sikkim. The resources stored in this Himalayan state cannot be utilized up to the required level unless there is improvement in communication network in inner Sikkim. Although Gangtok, the state capital has a very high level of motor vehicle intensity, the road connectivity in its hinterland is still poor.

Given the fact that Sikkim has neither railway, nor airway (barring occasional helicopter services), it has to depend only on roadways for transport and communication. The roads in Sikkim can be classified as: 1. National Highway, 2. State Highway, 3. Major District Roads, 4. Other District Roads, and 5. Bridle Path

The National Highway No. 31A connects Sikkim with rest of India. The road reaches up to Gangtok via Rangpo and Singtam. The length of the National Highway within the state is only 40 km. The National Highway and the roads near the border areas are under the Border Road Organization (BRO) while the state highways and district roads are under the Public Works Department of Sikkim (SPWD). The total length of roads in Sikkim is 2,447.45 km. Of these, 671.10 km is maintained by BRO while the SPWD maintains 1,776.35 km. The type of roads maintained by the SPWD are i) blacktopped, ii) water-bound

macadam, iii) earthen and iv) bridle path. The (Fig.4.13) shows the lengths (in km) of different types of roads maintained by state PWD.

The basic mode of transport in Sikkim is bus. Besides, jeeps and trekkers ply in areas where buses cannot reach. The major transport operator in Sikkim is the state-owned Sikkim Nationalized Transport (SNT) that provides both passenger and freight services. SNT has a fleet of 113 passenger service bus and 121 trucks and tankers. SNT operates on 84 routes within and outside the state. Other than SNT vehicles, hundreds of defence vehicles, private buses, trucks and tourist taxis/jeeps and thousands of cars ply on the roads of Sikkim. Road communication suffers heavily during monsoon months due to landslides. Landslides are recurring at several locations and during the rainy season many places in Sikkim remain cut off for days together. Even the National Highway breaches at several places due to landslides and every year the state remains cut off from rest of the country for a few days. The supply of essentials is often disrupted or delayed due to bad roads during the rains. The carrying capacity of the existing roads, especially of NH 31A, which is known as the 'lifeline of Sikkim', is far too low than the required level. Construction of railways in Sikkim is a far cry. The state needs an alternative route that will connect the state with plains so that the supply of essential commodities is not disrupted at any time of the year and the passengers are not stranded. The tourism sector, currently one of the highest revenue earning sectors for the state, faces setback due to landslide and road blockage. Airlifting of

stranded tourists by army helicopters has become a common phenomenon. Introduction of regular air services between Sikkim and neighbouring states has become a necessity.

4.2.3 Industry

Sikkim is industrially backward due to its isolated location and difficult terrain. Exploitation of mineral resources in the state is a challenging task. The known reserves are small and their extraction process is un-economical. Therefore, the state has hardly any mineral-based industry except copper, the production of which too is dwindling. Though Sikkim is rich in forest resources, forest-based industries are not encouraged since conservation of environment is far more important than immediate economic gain for this environmentally fragile state. The existing industries in Sikkim are medium, small-scale and cottage enterprises, based chiefly on agriculture and animal resources. Most of the medium-scale industries of the state are beverage industries (tea, beer and other alcoholic beverages) while the small-scale and cottage units are chiefly based on food products and handicrafts. The Fig. 4.14 shows the number of industrial units registered in 2000.

The industrial policy framed by the state government in 1996 speaks of certain incentives on capital investment, exemption from sales tax for seven years, exemption from income tax for five years, interest subsidy on working capital, subsidy on power, price preferences, etc.

These incentives are made available to the existing as well as new units in the thrust areas. The thrust areas are,

1. Agro-based industries
2. Floriculture
3. Animal Husbandry and Dairy Products
4. Minor Forest based Produce
5. Handloom, Handicraft and Village Industries
6. Tourism
7. Precision-oriented High Value Low Volume Products
8. Electronic and Software
9. Hydel Power, and
10. Tea

The state authorities have taken an ambitious plan to form a Tea Development Corporation of Sikkim, which will act as the nodal agency to propagate and expand tea industry in Sikkim. In addition to the Temi tea estate, new gardens will be set up and small growers will be encouraged through special schemes and incentives. The Fig. 4.15 gives an overview of tea production in Sikkim.

Since development of mechanized industry has too many limitations in a mountainous state like Sikkim, the people as well as the state authorities are keen to utilize the tourism resources and develop tourism as an industry. The tourism resources in Sikkim are still under-utilized due to late entry of the state in tourism business. The state has enormous potential to develop the tourism sector. In spite of limited

infrastructures, the total number of tourists in Sikkim is already estimated to cross 1,00,000 persons per year. To promote tourism industry, a new master plan has already been chalked out for fifteen years (1997-2012). The total tourist arrival at the end of the plan period has been estimated at 3,72,000, out of which 38,000 are likely to be foreigners. The plan emphasizes on developing three independent tourist destinations at Gangtok in East Sikkim, Namchi in South Sikkim and Pelling in West Sikkim. The plan also aims to disperse tourists to interior regions, so that there is equity in distributing the benefits of tourism.

At present many of the industries in Sikkim are sick and they need to be rehabilitated. The state of the Public Sector Undertakings (PSUs) in Sikkim is not very encouraging. The role of PSUs is being reviewed and some of them are to be privatized. The Sikkim Industrial Development Corporation (SIDICO) has been assigned the responsibility to revamp the sick units in the state as well as to provide escort services to the new entrepreneurs.

4.2.4 Health and Medical Facilities

Sikkim claims to have achieved the national norms of 1 Primary Health Centre per 20,000 people and 1 Primary Health Sub Centre for every 3000 people. Considering the small size of population, it was not very difficult for Sikkim to achieve the national norms, but the ratio is in no way satisfactory. In a mountainous area, only 1 health centre for 3000 persons is much less than sufficient. The health facilities in Sikkim

include hospitals, health centers, family welfare centers, maternity and child welfare centers, blood bank services, drug de-addiction centers, etc. The amenities for medical and public health in Sikkim (2002) are shown in the Figure 4.16.

Sikkim has 174 registered govt. doctors and 160 staff nurses. The East district alone accounts for 107 doctors and 125 nurses. The North, West districts have 16, 31 and 20 doctors and 10, 15 and 10 nurses respectively. The total number of hospitals in Sikkim is 5, out of which 2 are in the East district and the North, South and West districts have 1 each. Besides, there are 24 Primary Health Centres (PHC) and 147 Primary Health Sub Centres (PHSC) in the state. The Table 4.11 shows the distribution of PHCs and PHSCs in the districts of Sikkim (2001-02).

Table 4.11 Distribution of PHCs and PHSCs in the Districts of Sikkim (2001-2002)

Health Centres	North	East	South	West
PHC	3	8	6	7
PHSC	19	48	39	41

Source: Sikkim: A Statistical Profile, 2002. DESME, Govt. of Sikkim.

4.2.5 Drinking Water

Though Sikkim is located in one of the most humid regions in the country it faces shortage of drinking water at many places. The capital

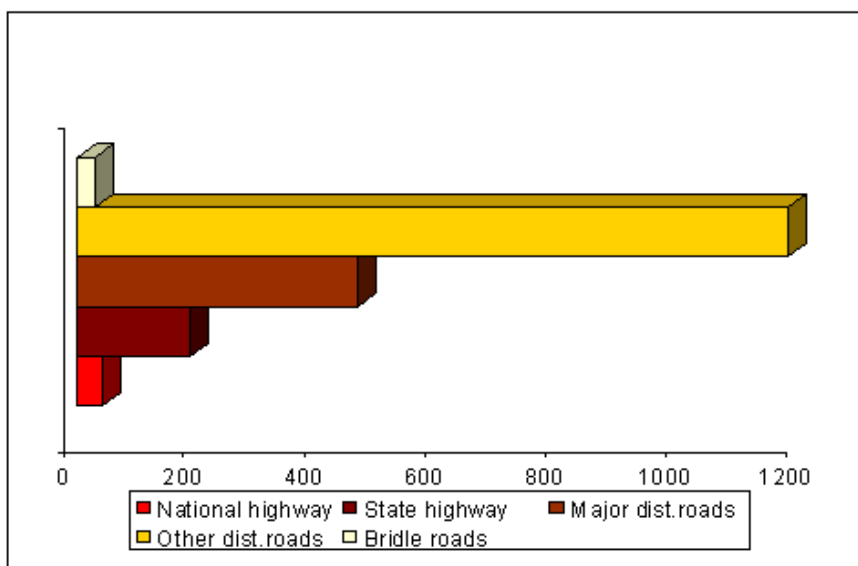


Fig.4.13 Length of roads (in km) in Sikkim

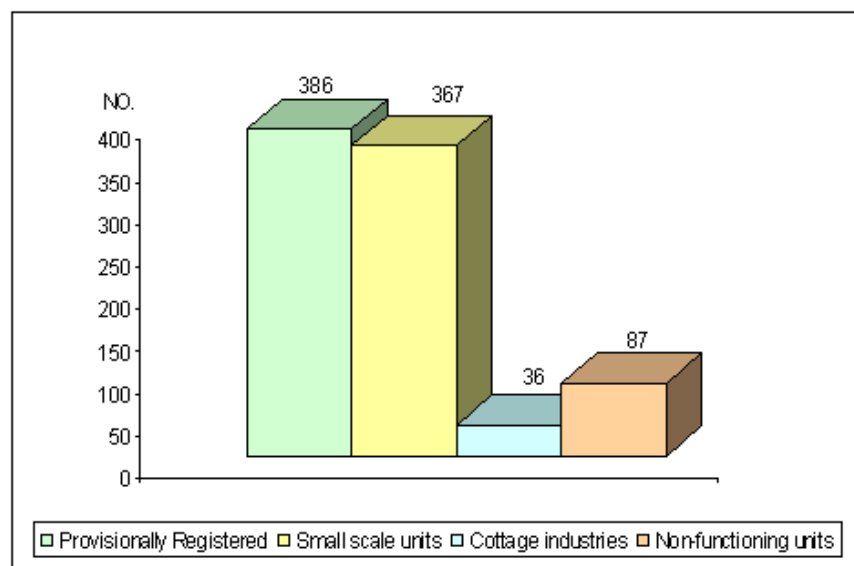
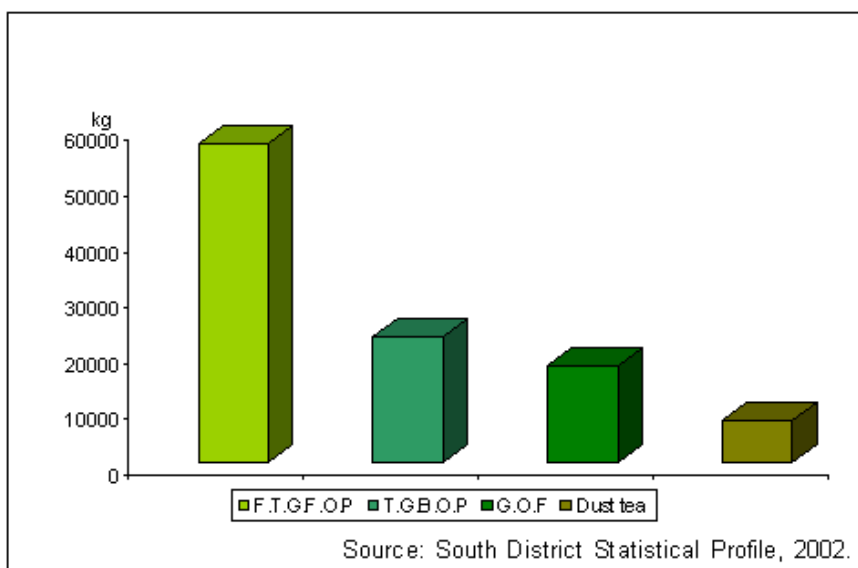


Fig.4.14 No. of industrial units in Sikkim



Source: South District Statistical Profile, 2002.

Fig.4.15 Production of tea in Sikkim

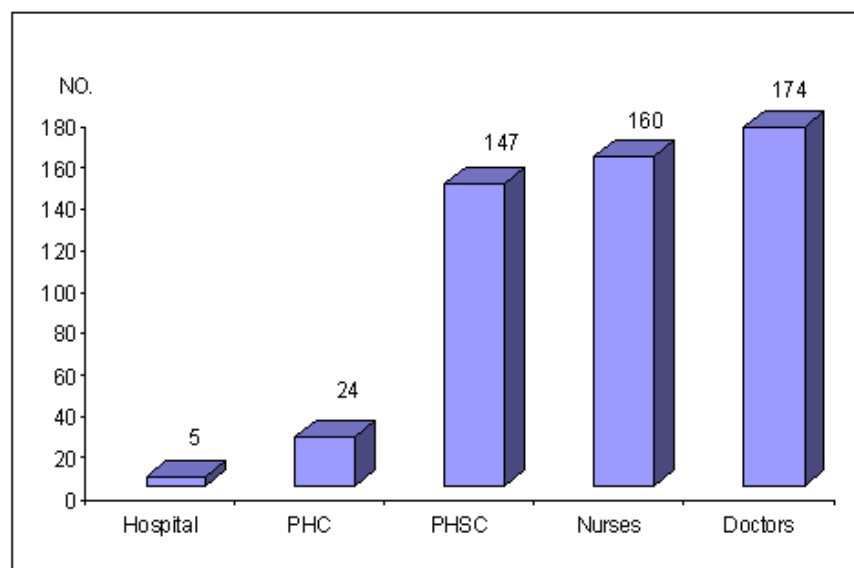


Fig.4.16 Amenities for medical and public health (Govt), Sikkim

Source: Sikkim: A Statistical Profile, 2002. DESME, Govt. of Sikkim

town Gangtok itself faces water scarcity during the monsoons when disruptions occur in the water distribution system due to damage of pipelines. At Gangtok, water is brought from reservoirs at Selep, located at a distance of 16.5 km from the town. The capacity of Selep reservoir has recently been increased to 6 million gallon (MGD) of water per day, still it is not sufficient to meet the growing demand. The water distribution system needs to be improved to ensure equitable water supply.

The Department of Public Health Engineering (PHED) provides water to the towns in Sikkim. Most of the earlier water supply systems are augmented to cope with an ever-increasing population. In North Sikkim water supply schemes exist at Mangan and Chungthang. Mangan receives drinking water from a source located at a distance of about 10 km from the town. A water treatment plant has recently been installed near Mangan. Chungthang draws its drinking water from the sources located at Bop. The water supply system at Chungthang has a capacity to meet the demand of 3,000 consumers. In the South district, there are 13 intake tanks to provide drinking water to Namchi, Temi, Ravangla, Melli, Jorethang and other areas. Namchi receives 3,70,000 gallons of water per day. However, water connectivity in the South district is still very poor. In the entire district, only 2938 consumers have PHED water connection as of March 2002. At Temi water is sourced from a place near Damthang and the local water supply system has the capacity to serve about 2,500 consumers. Supply of water in Ravangla sub-division of South district is extremely scant. Ravangla receives only 64 gallons of water supplied by the PHED every day. In the West district,

Gyalshing, Pelling, Rabdentse, etc. have been brought under water supply scheme of the PHED.

In rural area the PHED supplies drinking water under various schemes. Out of total 1,679 habitations in Sikkim, 696 are fully covered by rural water supply scheme and 983 habitations are covered partially. In most areas the villagers arrange to draw water from the natural springs or streams by means of rubber pipes.

4.2.6 Energy

The various sources of energy in use in the state are electricity, kerosene, LP gas, firewood, cow-dung and solar power. Till date, firewood and electricity are considered as the chief sources of energy in Sikkim. Since use of wood as fuel is highly restricted in Sikkim, people are encouraged to use electricity and other renewable sources of energy like biogas and solar power. Though the state authorities provide training to use biogas and solar power at village level, these are not yet popular in the state. Rural people still prefer firewood for cooking and heating purposes, while they use electricity only for lighting. In urban and semi-urban areas, use of LPG for cooking is common and for heating and lighting people depend on electricity. Kerosene has limited use, mainly for cooking and also for lighting purpose in areas where supply of electricity is erratic.

Sikkim claims to have achieved 100% rural electrification. Although electricity reached all the villages, all the villagers cannot afford to have it.

Due to limited supply, people in rural areas use electricity only for lighting purpose. In the urban areas the people combine different sources of energy for day-to-day living, but electricity dominates over others.

Sikkim is generating power since 1966. The oldest power plant of Sikkim is the Jali Powerhouse at Rongni Chhu Stage-I. At present (2001) there are 12 mini and micro powerhouses in the state with a total installed capacity of 37.5 MW. Together they produced 44.14 Mkw in 2001. Out of the 12 power plants, 10 are hydel power plants and two are thermal power plants. Of the two thermal power plants (diesel power houses) only the powerhouse at Gangtok is generating electricity. Surprisingly, there is no state power plant in the South district of Sikkim. However, a major NHPC power plant is located at Rangit Nagar in the South district.

The state-owned power generating units, their location, installed capacity and generation are given in the Table 4.12.

Table 4.12 Power Generating Units of Sikkim, 2001.

SI. No.	Name of the Power Plant	Location	Installed Capacity in MW	Power Generation in Mkw
1.	Jali Powerhouse	Topakhani,	2.10	0.82
	Rongnichu Stage-I	E. Sikkim		
2.	Rimbi Stage-I	Rimbi	0.60	-
		W. Sikkim		
3.	Lower Lagyap Hydel Project	Ranipool	12.00	28.98
		E. Sikkim		

4.	Rongnichu Stage-II	Topakhani E. Sikkim	2.50	1.05
5.	Rimbi Stage-II	Rimbi W. Sikkim	1.00	1.86
6.	Chaten Micro Hydel Powerhouse	Lachen N. Sikkim	0.10	0.02
7.	Lachung Micro Hydel Powerhouse	Lachung N. Sikkim	0.20	-
8.	Meyongchu Hydel Powerhouse	Meyong N. Sikkim	4.00	5.32
9.	Upper Rognichu HEP	Nimtar N. Sikkim	8.00	3.80
10.	Kalez Khola HEP	Dentam W. Sikkim	2.00	1.34
11.	Diesel Powerhouse Gangtok	Gangtok E. Sikkim	4.00	0.95
12.	Diesel Powerhouse Ranipool	Ranipool E. Sikkim	1.00	-

Source: Sikkim: A Statistical Profile, 2002. DESME, Govt. of Sikkim

The Lower Lagyap Hydel Project (LLHP) at Ranipool in East Sikkim is the largest of all state-owned power plants in Sikkim. The LLHP produced 28.98 Mkw in 2001. The share of power generated by the 12 state power plants is shown in the Figure 4.17.

The consumers of power in the state are of four categories. They are: i) domestic, ii) commercial, iii) LTI and iv) HT. The Figure 4.18 shows the share and number of various consumers of electricity in the state.

The domestic sector is the biggest consumer of power. The total number of domestic consumers in the state in 2000 was 48,164 and the number of commercial consumers was 6380.

However, the power generated by the state power plants is too insufficient to meet the demand of the state. In the year 2001, the state consumed 103.15 MkwH of electricity whereas the state plants generated less than half of the total requirement.

The state purchases energy from outside the state to meet the domestic demand. Power is purchased from the Power Grid Corporation of India, National Thermal Power Corporation, NHPC Rangit Nagar and WBEB, Ramam. The Figure 4.19 shows the amount of energy purchased from various agencies during the year 2001-02.

The generation pattern of the state-owned power plants has registered a downslide in production. In the year 2001-02, the state plants produced only 29.55 mkwh.

4.2.7 Housing

The housing pattern in Sikkim varies according to regional climatic type. Sikkim is a land of different climatic sub-regions. Depending upon climate the house types vary from place to place. Generally cold winters and rainy summers in the mountains of Sikkim necessitate construction of dwellings that prevent cold and moist winds. Besides, the earthquake and landslide-prone mountains necessitate use of light construction

materials. The people of Sikkim live in houses ranging from split bamboo and mud huts to wooden country houses and RCC buildings depending upon the income of the household.

The culture and tradition of different ethnic groups determine the pattern of housing to a great extent. The Lepchas, Bhutias, Limbus and Nepalese of Sikkim follow their own ethnic traditions in the construction of their dwellings. While the Lepchas and Bhutias in rural areas prefer stone and wood as construction materials, the Limbus and Nepalese prefer bamboo, mud, straw thatch and tin roofs. The rooms in Bhutia households are usually spacious since they prefer to have their hearth, altar, and lounge, dining and sleeping areas in one big room. They prefer to live in two-storied houses built on stone foundations and keep their domestic animals in the ground floor instead of separate animal shed. On the contrary, most of the Nepalese, Limbus and Lepchas are comfortable in small, single-storied houses. The Nepalese usually have separate chambers for cooking and sleeping and unlike the Bhutias, they keep their cattle and pig in separate sheds.

Most of the houses in rural Sikkim are semi-pucca, popularly known as *ikra* cottage (Assam type house) - a wooden structure with tin roof, and walls made of split bamboo plastered with mud or cement. These houses are light, warm and environment-friendly. However, in high altitude areas, where both wood and bamboo are scarce, people are left with little alternative but to use stone.

In urban and semi-urban areas, people are now opting for RCC buildings. The skylines of Gangtok and other towns of Sikkim are dominated by modern multi-storied structures. The building materials for the RCC buildings (brick, cement, iron rods, marble, granite, glass, etc.) are brought from great distances. The quality of housing in the towns is often compromised due to non-availability of building materials in the state. There are instances of crumbling multi-storied buildings that are constructed with poor building materials.

The poorest of the poor, most of whom are migrant labourers, live in shacks made of tin, wood and polythene sheets. Since shelter is the basic need, the state authorities have taken a rural housing scheme for the local poor and provide one-time grant for housing, land under Land bank Scheme and GCI sheets to the people living below poverty line. Thus, rural housing in Sikkim has largely improved in recent years.

4.2.8 Markets

Market places are integral parts of any settlement. The type and strength of markets indicate the quality and prosperity of a place. Sikkim has developed a number of Rural Marketing Centres (RMCs) and Bazars spread over all four districts. All total there are 108 RMCs and 46 Bazar areas in Sikkim. The Bazar areas are classified as Class-I, II and III according to their size and volume of transaction. The distribution of different categories of market in Sikkim (Fig.4.20).

There are only 2 Class-I Bazars in Sikkim, namely, Gangtok and Singtam. The number of Class-II Bazar is 16, out of which 6 (Rangpo, Ranipool, Pakyong, Rhenock, Tadong, Rongli) are located in the East district, 5 (Mangan, Chungthang, Dikchu, Phensong, Phodong) in the North district, 4 (Jorethang, Namchi, Melli, Ravangla) in the South district and only 1 (Gyalshing) in the West District. The Class-III bazaars are most numerous in the West district (16 nos.), followed by South (8 nos.) and East (4 nos.) districts. There is no Class-III Bazar in the North district. As for the Rural Marketing Centres, they are most numerous in the East district (44 nos.), followed by the West (24 nos.) South (21 nos.) and North (19 nos.) districts.

The state of Sikkim has taken various steps to create and improve the amenities and infrastructure. New infrastructure for education, health, tourism, communication and power sectors indicate the trend of development in Sikkim. It may be mentioned here that a number of professional and vocational training courses have been introduced in the state to strengthen the education sector. To improve the health sector, construction of two 100-bedded hospitals has started in the North and West districts. In a bid to expand communication network, many new roads of economic importance have been added to the existing road network. Specific plans have been chalked out and implemented to promote tourism in the state. In regard to power sector, the 510 MW Teesta Stage-VI hydro-electric project has been cleared for construction by NHPC.

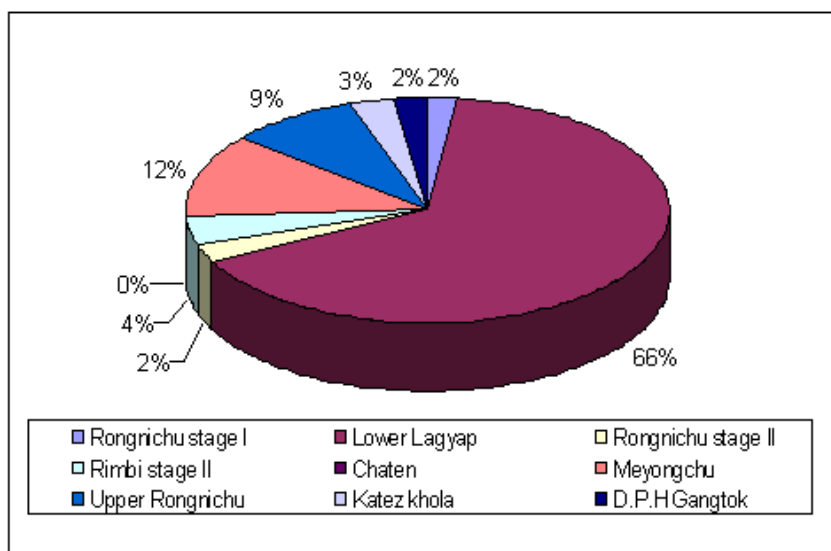


Fig.4.17 Power generated (in MkwH) in Sikkim

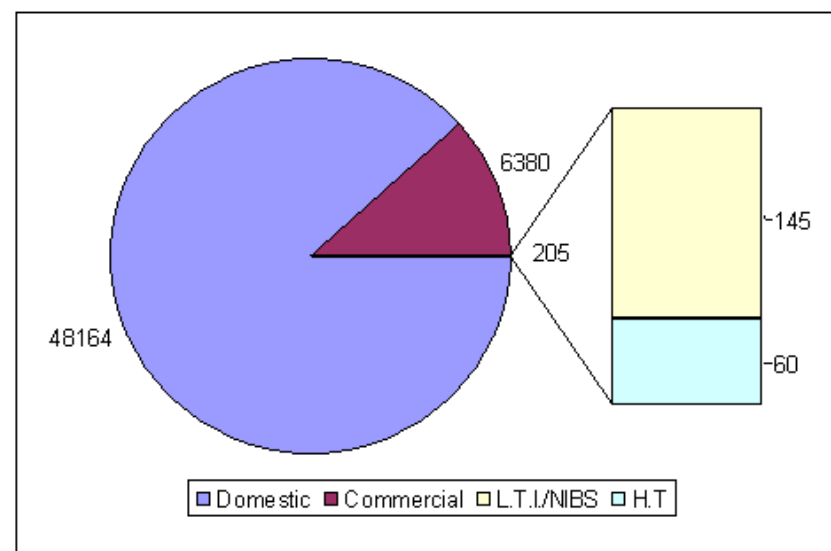


Fig.4.18 Consumers of power in Sikkim

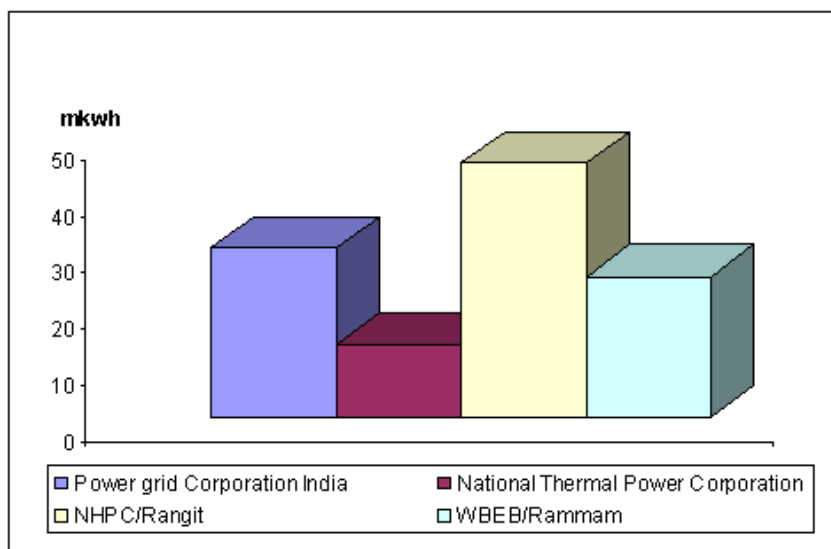


Fig.4.19 Energy purchased (in MkwH) from outside the State, Sikkim

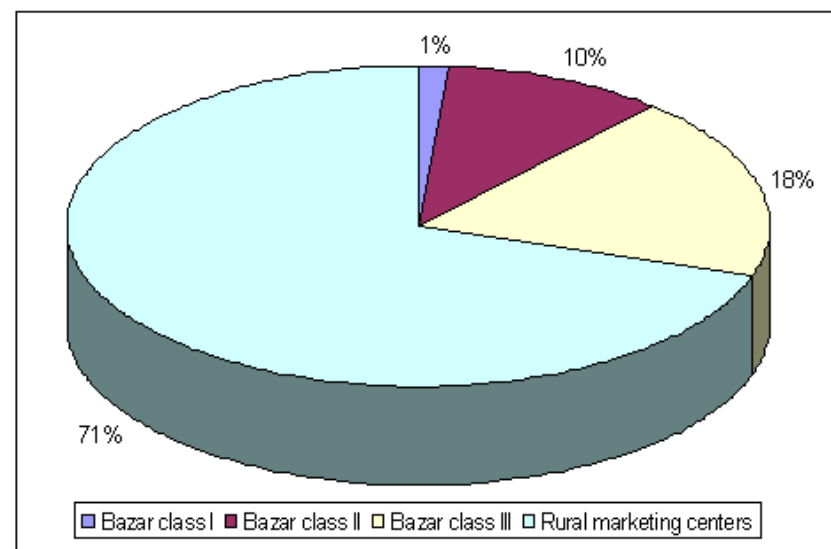


Fig.4.20 Distribution of markets, Sikkim

Source: Primary Census Abstract, Census of India, Sikkim, 2001.

4.3 THE CULTURAL PROFILE OF SIKKIM

The culture that developed in Sikkim is the outcome of a fusion of three distinct societies and two great religions. The mixing of indigenous Lepcha-Limbu customs with those of Buddhist Tibetan and Hindu Nepalese traditions has given rise to a distinctive culture that is precisely Sikkimese. The location of Sikkim at the interface of two great civilizations on either side of the Himalayas has given a distinctive shape to its traditional culture. The influence of Bhot culture from the north and Indo-Aryan culture from the south, brought respectively by the Tibetans and Nepalese, is responsible for the development of present socio-cultural mould. On top of that, the British influence in the previous century has lent its own stamp on the life style of the people who came in close contact with them. The juxtaposition of oriental (Tibetan) and western (British) cultures in a remote Himalayan state is indicative of cultural adaptability of the local tribal inhabitants. Ever since Sikkim became a part of India, the mountain tribes of Sikkim came in close contact with the plainsmen from all over India and overcame the cultural barriers to a considerable extent.

4.3.1 Ethnic Diversity

The ethnic diversity in Sikkim is very aptly represented by the Tibetan sobriquet “Lho-Mon-Tsong-Tsum” that identifies the three original races coexisting in Sikkim since the reign of the first ruler of Sikkim in the seventeenth century. The word ‘Lho’ means south and refers to the early Bhutia settlers who migrated to Sikkim from southern Tibet. The term ‘Mon’ refers to foothills, indicating the Lepchas who

inhabited the lower slopes of the Eastern Himalayas, while ‘Tsong’ refers to the Limbus, another indigenous tribe of Sikkim. However, the dominance of Lepcha-Bhutia-Limbus was toppled by the Nepalese who started to inhabit the state since the nineteenth century and added more diversity to the ethnic scenario of the state. Undoubtedly, the diverse castes, sub-castes and tribes of the Nepalese have given shape to the present cultural fabric in Sikkim. Of late, the presence of people from mainland India and a set of cultures from all corners of the country have contributed to further ethnic diversification.

4.3.2 Religions, Tribes and Communities

4.3.2.1 Religions

The tribes and communities living in Sikkim follow Buddhism, Hinduism and Christianity. Though the early inhabitants of Sikkim, viz. the Lepchas and the Limbus were not known to have great religious traditions, they practiced various forms of nature worship. Buddhism entered Sikkim with the advent of Bhutias from Tibet, and took a firm root in the soil of Sikkim with the establishment of Bhutia monarchy by early seventeenth century. The religion of the new rulers became the religion of their subjects. However, Buddhism in Sikkim embraced the little traditions of animism, Bon religion, etc. into its fold and gave rise to local forms of Buddhism. It is not uncommon to find local communities practicing animism in the guise of Buddhism or vice versa. Hinduism, the other major religion, entered the state much later. It was not until late nineteenth century that Hinduism had a proper start in Sikkim. The

majority of the Nepalese and most of the plainspeople profess Hinduism. Christianity made an appearance in the state during the British period but could not flourish due to the distance of cultures. However, the Christian influence re-surfaced in the twentieth century due to a spurt in missionary activity. At present many of the Lepchas and other economically backward classes are found to adopt Christianity. A section of indigenous Lepchas and Tsongs still practice nature worship (animism, Yumaism) and a small section of the Bhutias profess Bon religion, a precursor of Buddhism in Tibet and Sikkim. The other important Asiatic religion Islam has a very limited following in the state.

4.3.2.2 Tribes and Communities

The ethnographic survey conducted by the Anthropological Survey of India has enumerated 25 tribes and communities in Sikkim. These can again be grouped under four ethnic stocks, namely, Lepcha, Tsong (Limbu), Bhutia and Nepalese. While the first three are single, more or less homogenous entities, the fourth one comprises several castes, sub-castes and tribes. Numerically, the Nepalese are the largest ethnic group in Sikkim. The Nepalese are a heterogeneous group. They consist of many castes and tribes of which Bahun, Chhetri, Newar, Rai, Gurung, Tamang, Mangar, Sunwar, Bhujel, Thami, Thakuri, Kami, Damai, Sarki, and Majhi are conspicuous. Each of these exhibits diverse physical and cultural characteristics. While the Bahun, Chhetri and Newar, belong to the so-called upper castes of Hindu hierarchy, the service castes like Kami, Damai, Sarki, and Majhi are enlisted as Scheduled Castes. Other backward classes of the region include Rai, Yakha, Gurung, Mangar,

Sunwar, Bhujel, Thami and Thakuri. The Tamangs, unlike the majority of the Nepalese, profess Buddhism, and have recently been recognized as Scheduled Tribes.

4.3.3 Social Norms and Community Behaviour

4.3.3.1 Social Norms

Sikkim is a multi-ethnic, multi-lingual, multi-culture state. Over the years it has become home of the Lepchas, Limbus, Bhutias and Nepalese. Each of these ethnic groups has its own social norms shaped by the exigencies and ways of life.

As per social norms, in a Lepcha household both the parents share the position and responsibility of family head. The Lepchas also have a tradition of both female and male priests (*Mun* and *Bongthing*), the former being more powerful than the latter, which is rather unconventional. In Lepcha society, blood relation plays an important role in matters related to marriage and death. The social system of the Lepchas approves of only monogamous marriage. To the Lepchas the daughters are precious and during marriage the groom has to pay the price for the bride. As a rule, marriage with cross or parallel cousins is forbidden. To them, the institution of marriage is sacrament. Divorce among the Lepchas is a rarity. However, the norms about widow re-marriage are quite liberal. Rather it was compulsory even a few decades back. (Thakur R. N., 1988, p. 82). Many of the Lepchas freely marry

within neighbouring communities. After marriage, most of the Lepchas leave their parental house and live as neolocal families.

The social relationships of the Limbus are governed by a set of norms, ritual and rites. Most of the Limbu families are patrilocal. They live with their parents even after marriage. Limbu marriage is usually an arranged marriage that takes place in the house of the bridegroom. The Limbus believe in physical chastity and do not co-habit before marriage. Their marriage is exogamous, and marrying into same clan is strictly prohibited. The persons who violate the custom are liable to punishment. The Limbus have a custom of adopting members of other clan or tribe. As in Christianity, they too have a system of conversion after which the new convert will be treated at par with any other Limbu. They also have a system of bond-friendships with members of other ethnic communities, which are established through rites performed by a Brahmin priest. (Tandukar, G.M., 1980, p. 21).

The social norms of the Bhutias have undergone many changes, especially in matters related to marriage and kinship. Previously polyandry was the system of marriage in all Bhutia households. In late nineteenth century Risley observed that if the elder brother took a wife, she was common to all his brothers. (Risley, H.H., 1928, p.55). Nowadays, wife sharing among brothers is obsolete. In Bhutia society, unlike the Limbus, co-habitation before marriage is not considered a serious offence. The marriages may be both within and outside the clan. The marriage ceremony consists of an elaborate feasting and paying the price of the bride in cash and kind. Buddhist lamas do not participate in

marriage ceremonies. Usually, village headman performs the ceremonial rituals. The nuptial bond is not very rigid among the Bhutias, and can be dissolved at any time. Unlike other Sikkimese, late marriage is quite common in Bhutia households. Though neolocal families are the order of the day, many Bhutias continue to have joint or extended families.

The social norms of the Hindu Nepalese are very much akin to the norms prevalent in any Hindu society. The caste system is still very rigidly followed and any marriage outside one's own caste is frowned upon. Upper caste-lower caste division is visible in all social functions and religious ceremonies. The service castes like Kami, Damai, Sarki and Majhi are treated as impure by all the upper castes and are not allowed inside the latter's kitchen, especially in rural areas. During community feasts, the service castes eat in separate line and the conservative castes do not accept water and food offered by them. However, the system is slowly changing, courtesy spread of education and competition for livelihood. The non-Hindu Nepalese are socially more liberal, though some of them do have the notion of touchable-untouchable. The groups like Rai, Gurung, Mangar, Sunwar, Thami, Bhujel, etc. have their own set of norms regarding marriage, kinship and society. But they are more flexible and easy-going in matters of marriage and religious practice.

4.3.3.2 Community Behaviour

Since Sikkim is a multi-ethnic and multi-religious state, the social structure is not based solely on Hindu caste system as is prevalent in

most Indian states. Each of the ethnic groups has its own set of dos and don'ts. Under normal circumstances, one community does not encroach upon another as far as social norms are concerned. Irrespective of the status they have achieved or assigned on the basis of political power, economic status, or religious affiliation, each of the tribes, castes and sub-castes retains the identity of its community. For example, the Bhutias who ruled Sikkim for more than three centuries have retained their commanding position as an elitist tribe in spite of being enlisted as Scheduled Tribe. The Nepalese upper castes still maintain social distinction and follow norms of caste purity/impurity. The Tamangs consider themselves as much Nepalese as the Mangars or Newars, even though their community status shifted from OBC to ST. Again a Rai or a Lepcha follows the norms of his community even if he changes his religion.

In the East, South and West districts, the majority of the people are of Nepalese origin. During the initial period of their migration to this area, all the Nepalese were bracketed as '*Paharia*' by the Lepcha-Bhutias. The so-called *Paharias*, during the course of their adaptation to their new home, adopted many a social norms set by the Sikkim rulers. As a result, the behaviour of the Nepalese community residing in Sikkim acquired some distinctiveness in contrast to their brethren in mainland Nepal. For example, in spite of their affiliation to Hinduism, many of them perform Buddhist rituals, which is not so common in Nepal. On the other hands, the Bhutias who take great pride in their ancestry and heritage have taken the language of the Nepalese as the means of

communication. The Lepchas and the Limbus are less rigid and freely exchange with the Nepalese.

Each of these ethnic groups has its own language. Even among the Nepalese, each sub-group has its own dialect. However, Nepali is the language of communication at both intra-community as well as inter-community levels. Though the Nepalese form the largest ethnic group, they do not necessarily act as a homogenous group, especially in matters related to state politics. In recent years, some of the ethnic Nepalese are demanding their separate identity, distinct from the others, and are eschewing the habits and cultures they acquired from other more powerful races over decades, if not centuries of co-existence. The Gurungs, Rais and Subbas are reverting back to their roots, customs and culture. There are definite indications of tribal revivalism against the dominance of Hinduism and Lamaism.

4.3.4 Cultural Activities

The cultural activities of the Lepchas, Limbus, Bhutias and Nepalese have distinctive stamp of their root. However, due to the shift of power from one group to other, the comparatively submissive and minority groups have lost much of their originality. For example, the Lepcha culture is partially assimilated with the Bhutia culture and partially with the Nepalese. Again, those Lepchas who have adopted Christianity in the twentieth century are highly influenced by western culture. The Limbus too have adopted much of Hindu culture under the influence of the Gurkhas in West Sikkim in eighteenth and nineteenth

centuries. The Bhutias, though have retained the essence of a Tibetan culture, are found to have changed with the tide of time.

The cultural activities of all the ethnic groups are strongly influenced and guided by the religions they profess. The cultural activities of the Buddhist Bhutia-Lepcha revolve around the Buddhist festivals. Similarly, the Hindu religious festivals have shaped the Nepalese culture to a large extent. The animistic traits of the Lepchas and the Limbus have curved out an altogether different culture that helped them reviving and maintaining their cultural identity.

The Lepchas live on the borderline of two great cultures – Tibetan in the north, and Nepalese in the south and west. A third culture brought by the British also influenced them to a large extent. As a result, they have lost much of their traditional animistic culture. The Lepchas are the most gullible of all ethnic groups in Sikkim and are found to change their religious affiliations and cultural traits most frequently. During the time of Bhutia rulers, many of the Lepchas adopted Tibetan cultural attributes brought by the Bhutias. Thereafter, due to long and close association with the Nepalese for over a century, a large number of Lepchas acquired Nepalese cultural traits through participation in Nepalese cultural activities. Again, during the advent of British and the Christian missionaries, they experienced an altogether different culture and were greatly influenced by it. Some of them were so fascinated by the western ways of life that they left their age-old habits to become Christian. Of late, a change has been noticed among the Lepchas in the socio-cultural sphere. They are reverting back to their own tradition and culture. In

most Lepcha villages they have formed ethnic organizations (*Shezum*) that are playing key role in reviving the traditional way of life. The *Shezum* organizes cultural activities during the social functions and festivals. During the celebration of *Tendong-Lho-Rum-Faat*, *Shezums* in Sikkim organize cultural extravaganza for all the Lepchas in the region irrespective of their religious and political affiliations. The *Tendong-Lho-Rum-faat* is celebrated in the first week of August every year, and a very large number of Lepchas from neighbouring Darjeeling, Kalimpong and even from Bhutan assemble in Sikkim to take part in special religious and cultural activities of the community (Statesman, 13 August, 2004).

The indigenous Tsongs or the Limbus too are exhibiting signs of cultural revivalism. Like the Lepchas, they too are influenced by the Buddhists and Hindus. The influence of the Hindu Nepalese on the tribe is far deeper than that of the Buddhists. Many Limbu social rites such as solemnization of bond-friendship require the presence of Nepalese Brahmin priest. Nowadays, the ethnic Limbu organizations (*Chumlung*) arrange most of the cultural activities of the Limbus. *Chumlung* means a body of like-minded people who assemble to express their views and it has always been an integral part of Limbu culture. The cultural activities of the Limbus are based on *Mundhum* or *Muddum*, (as the Rais call it) which is a collection of oral narratives on nature, man, customs, traditions, rites, rituals, crops and almost all economic pursuits of man in the midst of nature. *Mundhum* is recited by the *Phedangma* (Limbu priest) during the Limbu rituals and ceremonies. Ritualistic group dances, especially paddy dance (*Dhan Nach*) at the time of harvest plays a conspicuous role in the cultural activities of the Limbus.

The culture of the Bhutias has its root in Tibet. Like the Tibetans, the Bhutias have a very strong sense of religion and culture. Religion is inseparable from their cultural practices. The Buddhist lamas take lead in almost all the Bhutia cultural activities. The Bhutias perform rituals on all occasions related to Lord Buddha and Guru *Padma Sambhava*. Besides, they regard certain peaks and water bodies as sacred and many Bhutia cultural activities revolve around them. The Bhutias organize ceremonial dances or *chhams* in reverence of Mt. Khangchendzonga, lake Gurudongmar, etc. Besides, the Bhutias engage themselves in weeklong religious and cultural activities during *Losong/Lhosar* (Bhutia/Tibetan New year).

The Nepalese culture is closely linked with their religions and recreational activities. Though dominantly Hindu, the Nepalese do take part in Buddhist cultural activities. For example, the Bhutia-Lepcha festival of *Pang-Lhab-Sol* allways has a contingent of Nepalese drummers and dancers. The Nepalese are prolific dancers and singers, and their religious occasions like Tihar, Bhai Tika, etc. are always associated with group songs and dances. Each Nepalese caste or tribe has its own set of cultural activities. The culture of the so-called *Matwalis* (drinking, non-puritan backward classes) is vastly different from the *Tagadharis* (puritan, upper castes who wear sacred threads,). While the cultural activities of the *Matwali* classes are manifested through reveling in the forms of dancing and merry-making, those of the *Tagadharis* are expressed through religious gatherings and observations.

4.3.5 Festivals and Environmental Resources

4.3.5.1 Festivals

The festivals of Sikkim are of two types – religious and social. Again, the religious festivals are of different categories depending upon the religion involved. Social festivals too are varied due to the presence of various ethnic groups. The religious festivals according to the dominant religions practiced in Sikkim may be grouped as under:

Buddhist Festivals

Losar: The Tibetan New Year, celebrated for seven days in February-March. The festival also marks the preaching of Lord Buddha to the devil. The festival is celebrated with much pomp and gaiety. The households get a facelift for the purpose and the front door of each Buddhist house wears a special curtain with religious symbol. People visit each other to wish prosperity and treat guests with sumptuous food and gift. All official establishments and educational institutions in Sikkim remain closed to observe the *Losar* celebrations.

Bum Chhu: Local Buddhist festival held at the Tashiding monastery on the full moon day of the month *Magh* (February-March). *Bum Chhu* is the festival of holy water. The water of the Rathong Chhu is stored in a vase for a year in the sanctum sanctorum of the holy monastery. Every year on this day the vase is refilled with fresh water from the Rathong Chhu. It is believed that changes in the quantity and quality of the vase water indicate the destiny of Sikkim and its people in

the coming year. People from all over Sikkim congregate to the monastery ground on the day to be blessed with the holy water.

Lhabab Duchen: Observed to celebrate the descent of Lord Buddha from the thirty-third heaven.

Saga Dawa: The date of birth, enlightenment and Nirvana of Lord Buddha. Observed on the full moon day in the fourth month of the Tibetan calendar (May-June). This is the most auspicious day to the followers of Buddhism. On this day, the lamas carrying the *Kangyurs* and *Tangyurs* (holy scriptures) on their head make rounds on the streets while the lay people follow the procession.

Drukpa-tseshi: Observed on the fourth day of the sixth month (July) of the Tibetan calendar to celebrate the first sermon of the Buddha at Sarnath.

Hindu Festivals

Maghey Sankranti: The day is celebrated on the last day of *Magh* (mid-January) according to Nepali calendar. A fair is held on the day at the confluence (*Beni*) of the rivers Rangit and Teesta near Melli, where people congregate to offer prayers and to take holy dip at the confluence. This as a major festival celebrated by the Nepalese of Sikkim and its surrounding areas.

Kusey Aunsi: Father's Day, observed by several Nepali communities on *Bhadra Amabasya* (new moon in August-September), when fathers are worshipped by children and given presents.

Dasain: Most important of all the festivals of the Hindu Nepalese of Sikkim. The festival is celebrated in the month of *Ashwin* (September-October) according to the Nepali calendar to worship Goddess *Durga*. The day is celebrated in all Hindu-dominated areas with great fervour.

Bhimsen Puja: Worship of *Bhima* is performed by the *Sunuwars* at the time of *Dasain*. The *puja* is performed in jungle or in front of a stone and a hen is sacrificed.

Tihar: Nepali festival, corresponding to *Diwali* celebrated in other parts of India, when Goddess *Laxmi* is worshipped. The festival is observed in the month of *Kartik* according to the Nepali calendar (October-November). The *Tihar* continues for five consecutive days, one day each dedicated to crow (*Kag Tihar*), dog (*Kukoor Tihar*), cow (*Gai Tihar*), ox (*Goru Tihar*) and brother (*Bhai Tika*).

Bhai Tika: A ceremony for brothers when sisters apply *tika* of sandal wood paste on the forehead of their brothers wishing them a long and happy life. *Bhai Tika* is ushered by *Dewsi* when groups of young boys visit houses in the neighbourhood and sing *Dewsi* songs to collect money.

Tribal Festivals

Losong: Celebrated on the first four days of the eleventh month (December-January) of the Tibetan calendar, this is essentially a harvest festival of the Buddhists. The local Buddhists symbolically sow a few seeds of wheat in a pot and offerings are made to the household deity.

Each Buddhist household busies it to prepare delicacies with the newly harvested crops, offer it to household deity and distribute among the relatives and friends.

Pang Lhab Sol: Local Buddhist festival in honour of Mount Khangchendzonga, the guardian deity of Sikkim, held on the fifteenth day of the seventh month (August-September) of the Tibetan calendar. Lama dances are organized on this day and the Royal chapel (*Tsukla Khang*) at Gangtok is thrown open to the public for the day.

In Sikkim the Lepchas and Limbus organize a number of local tribal festivals. The important ones are *Tendong Lho Rum Faat* (worship of Mount Tendong) *Chasok-Thisok* (Harvest Festival and worship of Goddess *Yuma*), *Yokwa* (Worship of Ancestors), Limbu New Year's Day (*Maghey Sankranti*), Limbu Cultural Day, *Sirijanga* Birth Anniversary, etc.

The social festivals of Sikkim include the New Year celebrations, *Holi*, the festival of colour and flower festival – all of which are recent additions and grafted on Sikkim soil by the outsiders.

4.3.5.3 Environmental resources associated with the festivals

The environmental resources that are associated with the festivals celebrated in Sikkim are explicit in various religious motifs, offerings and chanting of hymns. The resources include the crops, flora, fauna, soil, water, and the environment as a whole. The major festival of the local people revolves around the harvest of crops. As is custom elsewhere in

the country, in Sikkim too, the people invoke the benevolent deities and worship them to be blessed for another year of bountiful crops. The village folks who still maintain a tribal culture are in awe of the malevolent spirits and therefore, they continue to propitiate them by worshipping both inanimate and animate objects of environment. The symbolic use of leaf, sheaf of crop, certain fruits and flowers are common in almost all religious festivals. Sacrifice of animals is also not uncommon.

Most interestingly, certain festivals of the Lepcha–Bhutias involve worship of mountains and water bodies. As a general rule, every mountain peak of Sikkim is revered as the abode of certain God or Goddess. The naming of peaks by a God or Goddess is a common practice in Sikkim. Association of a place with a deity ensures conservation of environment while celebration of particular festival linked with a particular environmental landmark strengthens its impact on the local psyche. The *Pang Lhabso* and *Bum Chu* festivals are unique in this regard. The former is celebrated to invoke the deity of Khangchendzonga, the majestic peak towering above the horizon of the state. This festival makes all the Sikkimese aware of the fact that the environment of their land is sacred and it should not be polluted. A similar festival, though on a smaller scale, is observed by the Lepchas of Sikkim on Mount Tendong, a peak in South Sikkim. According to folklore, Mount Tendong provided shelter to the inhabitants of Sikkim during a mythical flood, much in the manner of biblical Mount Ararat. Hence Mount Tendong is much revered by the Lepchas of Sikkim.

The Bum Chu festival of the Bhutias upholds the sanctity of the life-sustaining water of the rivers in Sikkim. The crystal-clear water of the snow-fed Rathong Chu is used to perform a religious ceremony. The religious predictions associated with *Bum Chu* festival send the message to all concerned that water is a precious resource and the purity of water should be maintained at any cost. It also cautions the lay people about the consequences of polluting water and makes them aware of environmental ethics.

According to Hindu tradition, the confluences of all major rivers are sacred. In Sikkim, the confluence of the rivers Teesta and Rangit is revered as a sacred place.

Mention may be made of the festival of *Tihar* celebrated by the Hindu Nepalese of Sikkim when rituals are performed in honour of five living objects representing avifaunal, faunal and human resources. The *Dewsi* songs sung during the festival speak of natural resources like soil, water, plant etc. and the innuendos embedded between the lines of songs speak of the environment as a whole.

4.3.6 Conflicting Interests

Conflicting interests are bound to arise when the population is composed of various ethnic groups. The aspiration levels of different ethnic groups vary depending upon their access to resources and level of freedom they enjoy in exploiting the same. However, in a state like Sikkim, conflicts among the ethnic groups are almost non-existent.

Although Sikkim is home of diverse ethnic groups, the interests of the groups are hardly conflicting. It is more so in the North District where the tribal Lepcha-Bhutia groups have coexisted for centuries in harmony. Having been brought under the religious fold of Buddhism, the Lepchas of Sikkim who by nature are accommodative, share common interests with the Bhutias. The conflict situations that might have developed over the distribution of resources could not surface due to judicious distribution of land by the Sikkim ruler among the *Kazis* (landlords) of both Lepcha and Bhutia origin.

However, stray conflict situations did arise in the past when a third group, the Nepalese entered Sikkim and started monopolizing in the copper mining and minting business. The enterprising and zealous Newars from neighbouring Nepal were the first to acquire land in Sikkim on lease. A section of the *Kazis* and the king himself were not in favour of giving land rights to the *Paharias* (Nepalese). A conflict did take place between the Bhutias and the Nepalese at Rhenock in East district in the year 1880. Eventually the Sikkim ruler relented to popular demand in favour of the Nepalese and accepted them as Sikkim subject.

In recent past, Sikkim witnessed another potential conflict situation between ethnic Bhutias and the state administration run by the majority Nepalese over the issue of Rathong Chu Hydro-electric Project in West Sikkim. The ethnic Bhutias, especially the Buddhist lamas were up against the state administration over the construction of a power project in close proximity of sacred heritage sites. For quite some time there was an impasse over the construction of the power plant. Before the

conflict took destructive proportions, the state administration scrapped the power project. There are reported demonstrations by the Lepcha-Bhutia communities of North Sikkim against the construction of Teesta Hydro-electric Project. The local communities fear encroachment upon their land by the construction workers brought from outside and submergence of their traditional culture by alien influence.

The superiority of the Bhutias for more than three centuries over the submissive Lepchas nipped the conflict situations between the two in bud, but the 'Paharias' (migrant Nepalese), more popularly known elsewhere as the 'Gurkhas' were not as timid as the Lepchas. Though divided in many castes and tribes, the ideology and social collectivity of the 'Gurkha's was strong enough to create an organized society. Consequently, they unified under the umbrella term Nepalese in the interest of all 'Paharias' and were successful in felling the elite Bhutias from the seat of power. In the initial phase of democratic rule in Sikkim, the power was in the hands of a popular tribal leader backed by the Nepalese, but very soon it went to the hands of upper caste Nepalese. Within a decade, the differences between upper class and lower class developed rift and finally, the backward classes emerged victorious. However, there still is a conflict of interests between the tribals and non-tribals, both claiming to be backward. The formation of Sikkim Lepcha-Bhutia Apex Committee (SIBLAC) is the outcome of the schism between the two.

In recent years there has been a sudden spurt in reviving identities and emerging interests. It is observed by one of the contemporary

anthropologists that, “In the geographically contiguous areas of Darjeeling, Sikkim and Nepal there has recently been a mushrooming of organizations which seek to preserve and develop their indigenous language, culture and religion ...half dozen have emerged in Sikkim” (Subba T.B., 1999, p.1). Consequently, differences of interests between the indigenous and non-indigenous tribes, and the upper castes and backward classes have become implicit. Sikkim being a peaceful state and the communities being tolerant, no ethnic clash has so far been explicit, but the differences in matters of politics and culture are quite apparent.

4.4 QUALITY OF LIFE IN SIKKIM

The study of quality of life (QL) may be 1) need-based and 2) want-based (Mukherjee, R.K., 1989). According to Mukherjee, need-based study focuses on elite perception while want-based study considers mass perception of QL. The model adopted in the present study has been improvised according to situational demands. In this case, basic need perceptions of the mass and desire or want to have additional comfort in life by the elite are taken into consideration to determine the quality of life. Measuring the quality of life in accurate quantitative units is a difficult proposition. However certain indicators can be formulated on the basis of assets acquired and aspirations aired by the target groups. The QL indicators formulated on the basis of the perception of masses (perceived scenario) are basically economic indicators and are subjective in nature. The economic indicators of QL include housing characteristics, household assets, ownership of

livestock and agricultural land (Singh, P. & Chand, S., 2000). The indicators formulated on the basis of aspirations (aspired scenario) are objective social indicators. The social indicators include the quality of family life, freedom to have choices for decision-making, non-discriminatory society, etc. (Suvarna Rani, G., 1996). A third set, the environmental indicators are formulated on the basis of availability of clean, pollution-free air, safe drinking water, natural energy resources, natural drainage, green belt, etc. Careful and judicious use of both natural and human resources is also considered as environmental indicator of the quality of life. (Suvarna Rani, G., 1996).

4.4.1 Methodology of Measuring Quality of Life

Measurement of QL covers all aspects of well being by combining a number of variables. A variety of indices have been proposed to measure various aspects of QL. The Physical Quality of Life Index (PQLI) developed by Morris (1979) is based on three variables, namely, i) Life Expectancy at age one, ii) Infant Mortality, and iii) Literacy rate. The Quality of Life Index (QLI) devised by the United Nations Research Institute for Social Development (UNRISD, 1966) consists of nine components of living, namely, i) Health, ii) Food consumption, iii) Education, iv) Employment, v) Housing, vi) Social security, vii) Clothing, viii) Recreation, and ix) Human freedom. (Singh, P. & Chand, R., 2000).

For the present work, an interview schedule was structured on the basis of the needs and wants of the people at three levels, viz. individual, family and society. Three sets of indicators – economic, social

and environmental – were used. The economic indicators included the a) quality of housing in terms of construction, number of rooms, separate cooking area, toilet facility, sources of energy, water, etc. and b) ownership of assets in terms of household goods, livestock and agricultural land. The social indicators, due to their objective nature, were based on a set of open-ended questions on people's perception of QL and aspiration for a better QL at the levels of individual, family and society. The environmental indicators were inclusive of both natural and man-made environments. Particular emphasis was laid on the availability of natural resources like clean air, water, vegetation and human endeavour for the upkeep of natural resources.

The present study is based entirely on case studies and sample survey. Fifty villages were selected for sample survey and 150 persons were interviewed. On an average three key informants were selected from each of the villages. The selection of informants was purposive but a non-probability approach was maintained in selecting sample villages. The questionnaire design took into account a) facts, b) opinions, and c) attitudes of the respondents. A score sheet was prepared to collect data for ten variables (economic indicators), namely i) Type of House, ii) Number of rooms, iii) Separate room for cooking, iv) Fuel used for cooking, v) Source of light, vi) Source of drinking water, vii) Toilet facility, viii) Livestock owned, ix) Ownership of household goods and x) Ownership of land. The Quality of Life Index (QLI) for Sikkim was prepared on the basis of scores obtained by the households. Each of the variables is represented graphically in Figures 4.21 - 4.28.

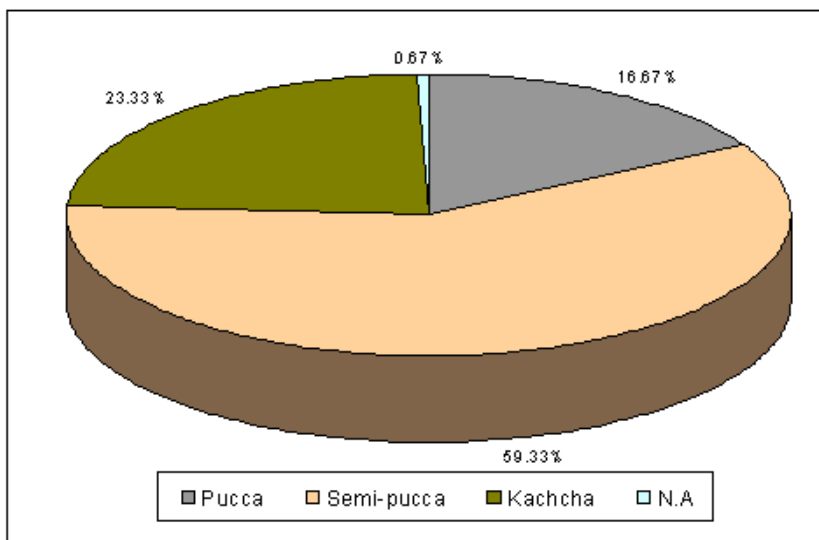


Fig.4.21 House type in Sikkim

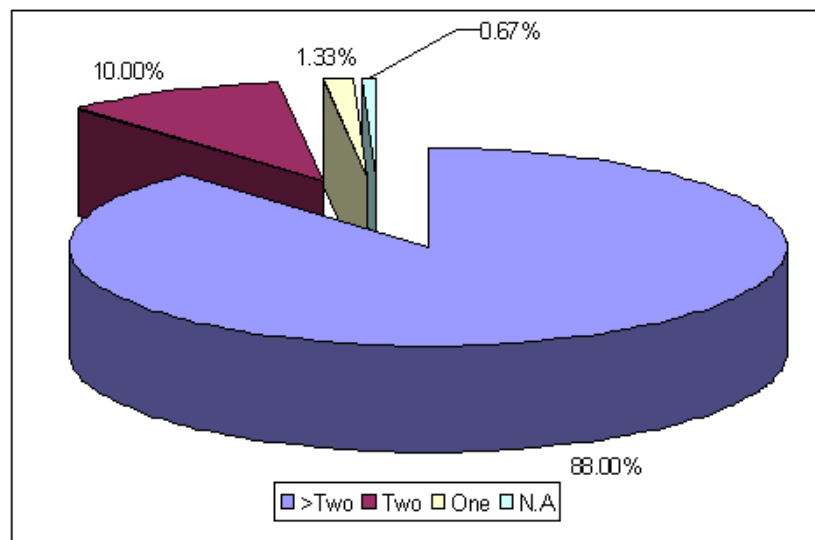


Fig.4.22 Number of rooms in house, Sikkim

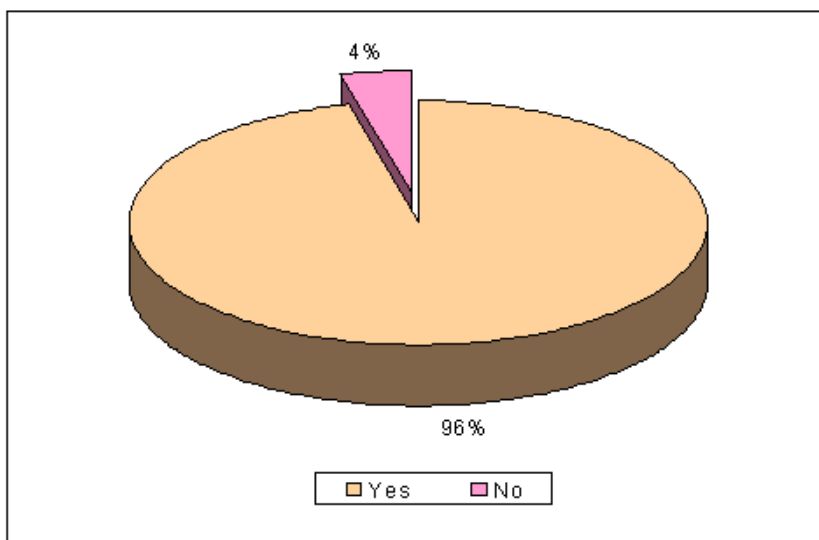


Fig.4.23 Separate room for cooking, Sikkim

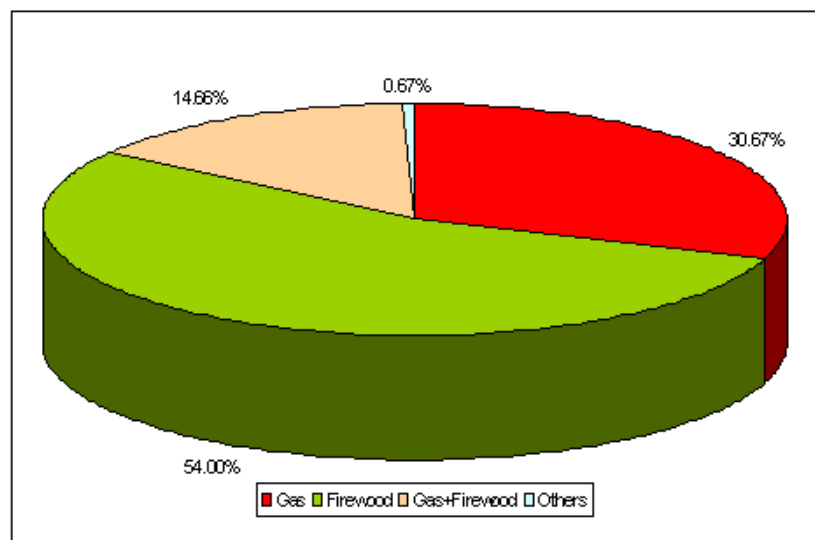


Fig.4.24 Use of fuel for cooking, Sikkim

Source: Field Survey

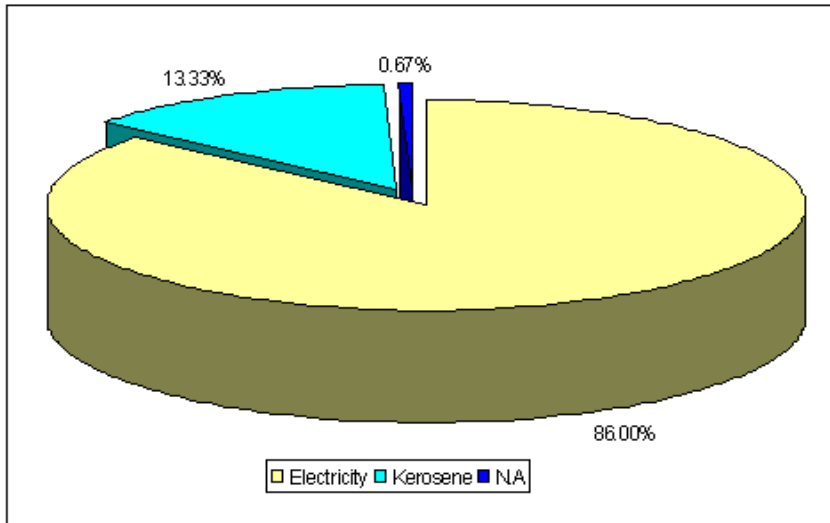


Fig.4.25 Source of light in Sikkim

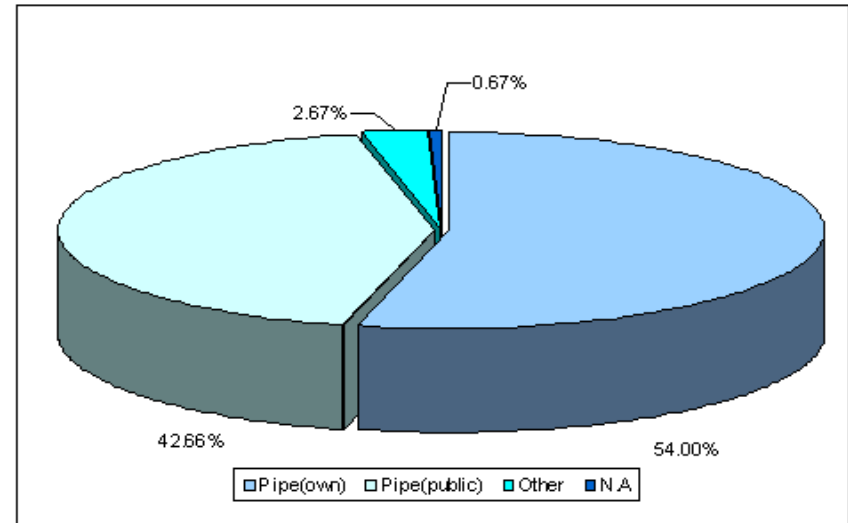


Fig.4.26 Supply of drinking water, Sikkim

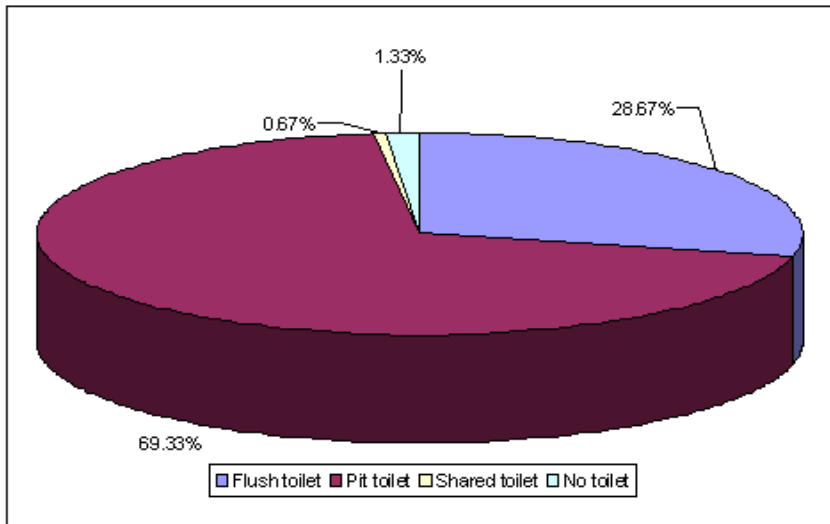


Fig.4.27 Types of toilet, Sikkim

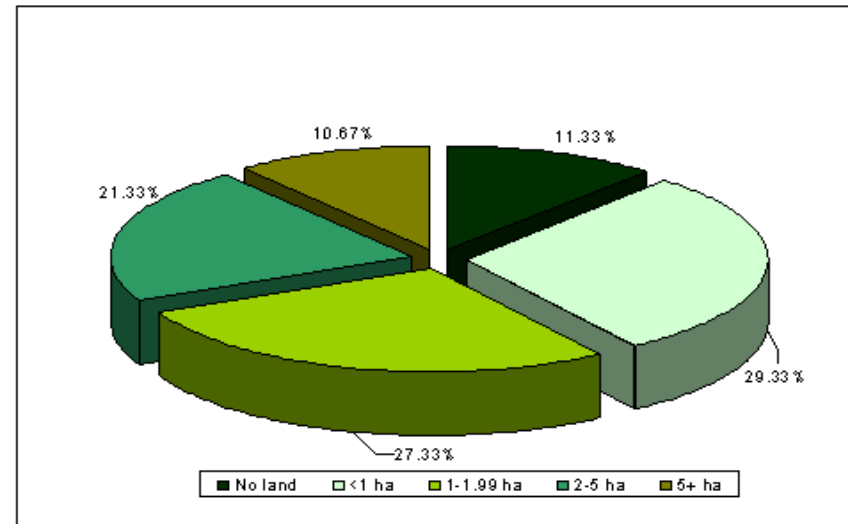


Fig.4.28 Ownership of land, Sikkim

Source: Field Survey

The minimum possible score on the basis of economic indicators was 9 while maximum was 75. In Sikkim none of the houses surveyed scored as low as 9 or as high as 75. The quality of life index for each of the three districts surveyed is given in Figures 4.29 - 4.31.

Four class groups were made on the basis of scores obtained by the households. The households that score below 20 are poor but stay above the poverty line. The households with scores below 30 fall in the category of lower middle class, and those scoring below 40 belong to the middle class. The few households scoring above 40 belong to the upper middle class. None of the families interviewed were found to be rich (minimum score required: above 50).

The figures show that in the East and South district, majority of the houses score between 10 and 20, while in North district, most of the houses score between 20 and 30. A fairly large number of households in the North district fall in the class of 30 to 40. The number of houses scoring below 20 and above 40 is more or less same. Compared to the North district, the number of houses that score between 30 to 40 and 40 to 50 is extremely scanty in the South district. Surprisingly, none of the houses surveyed in the villages of East district scored above 30.

4.4.2 The Existing Scenario

According to the QLI index, the North district, which is most remote and sparsely populated of all the districts in Sikkim, fares much better than other districts as far as the economic indicators are concerned, and

it appears that the quality of life in the North district in terms of environment is also better than the rest. The low density of population, higher per capita availability of land and multiple sources of income have contributed to a better quality of life in the North district. Besides, close-knit families, crime-free society and pollution-free environment in the district have made the living conditions simpler yet superior than the rest. In other words, the North district has a much higher carrying capacity in regard to utilization of resources and economic development.

The East district, which seems to be the most prosperous of all districts, does not pose a very fair picture as far as quality of life in rural areas is concerned. The QLI scores in the villages of East district are limited within 30. Presumably, urban-centric development in the district has retarded the growth of villages in the periphery.

In the South district, the scores are slightly better than the East and have more variations. Though the score below 20 dominates the graph, the range is wide and a few households, in spite of rural background, score above 30 and above 40.

Case Studies

Case studies of the existing scenario in 10 select villages of Sikkim are given below:

Lachung

Lachung is one of the most well known villages of North Sikkim. The village sprawls on either side of the Lachung Chu, one of the two.

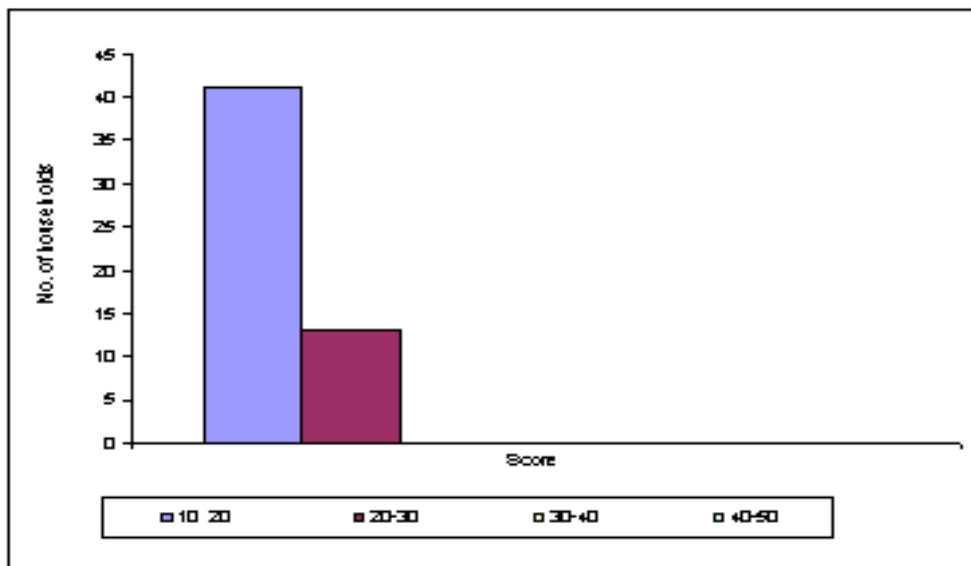


Fig.4.29 Quality of life index, East District, Sikkim

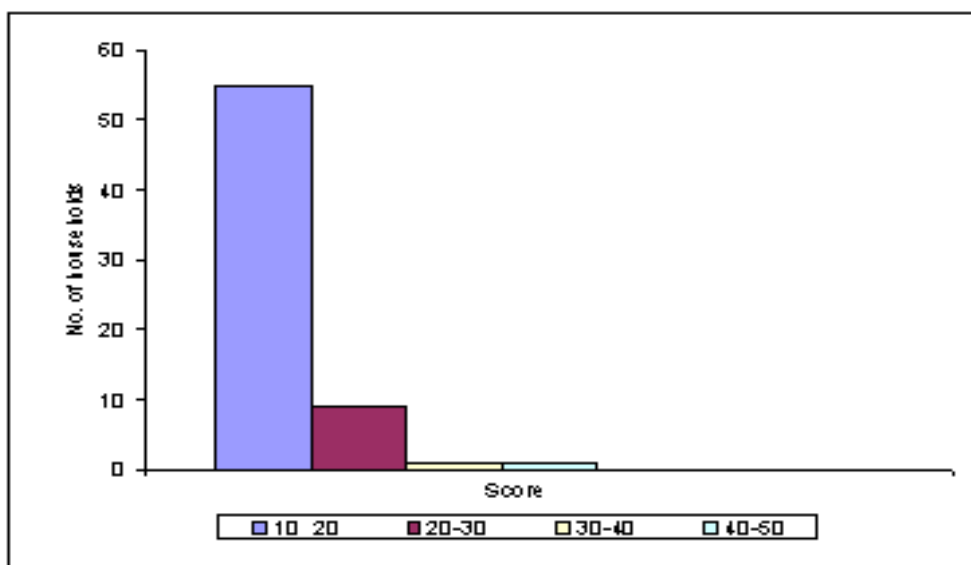


Fig.4.30 Quality of life index, South District, Sikkim

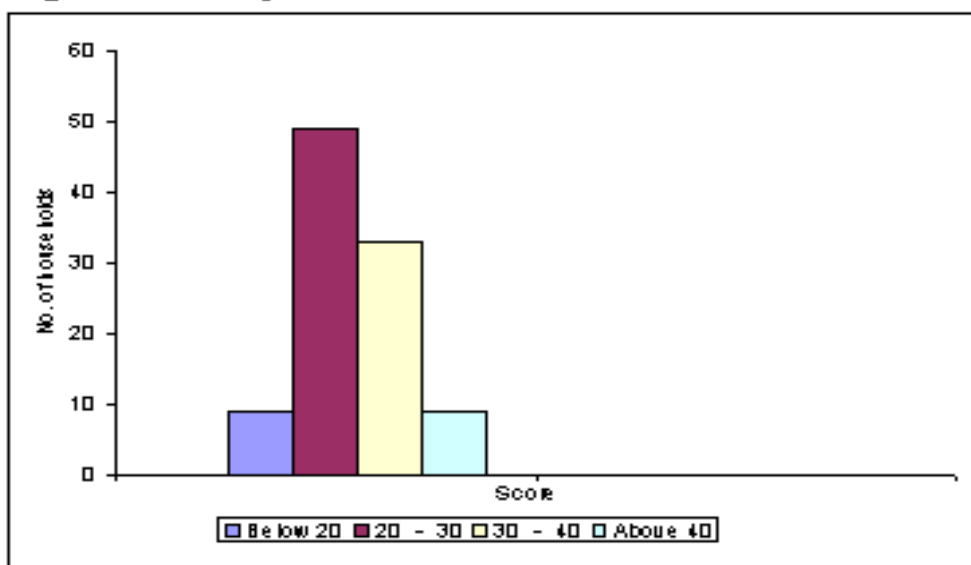


Fig.4.31 Quality of life index, North District, Sikkim

Source: Village survey

chief feeders of the Teesta. The average altitude of the village is 2,600m above mean sea level. The total population of the village according to the 2001 census is 2,800. The total area of the village measures to 2,805.82 ha. The density of population is only 1 person per ha. About 50% of the residents of Lachung are scheduled tribes. The number of scheduled castes in the village is negligible

Approach to the village is by metalled road although bus service is suspended for months (as of May, 2002). However, there is regular taxi (jeep) service to and fro Lachung-Chungthang, Lachung-Mangan, Lachung-Gangtok and if weather permits, Lachung-Yumthang. The distance of the nearest town (Mangan) from the village is 52 km. The village has one primary health sub-centre, two schools of which one is secondary and the other primary, a post office, a forest range office and a forest bungalow. The village monastery is located on a spur across the Lachung Chhu. The village extends on either side of Lachung Chhu and the part of the village on the other side of the river is known as Sharchok. Both the sides of the village are connected by bridge. The village gets electricity for a limited period of time but has no access to telephone. There is no supply line of drinking water but potable water is available from natural springs.

Lachung is basically a farming village. Most of the villagers own farmland. Out of the total area of 2,086 ha, 660.13 ha are cultivated (un-irrigated), 878.17 ha are culturable waste (including gauchars and groves) and 1,267.52 ha are not available for cultivation. The crops cultivated in the village are wheat, barley, potato and cabbage. Surplus

production and export of potato and cabbage have brought prosperity to the village, especially after the introduction of regular vehicular traffic. The cool temperate climate of Lachung is also favourable for the cultivation of a variety of temperate fruits, apple in particular, and if grown on a larger scale, apple can be a major cash crop of the region in a few years' time. A section of villagers traditionally graze yak, sheep and cattle. The alpine pastures in an around Lachung favour animal grazing. The people of Lachung are hard working and active. The main workers in the village account for 69.18% of the total population while 9.28% are marginal workers and 21.54% are non-workers.

In recent years, Lachung has gained prominence as one of the major tourist destinations of Sikkim. As a result, there is a profusion of lodges and hotels in and around Lachung. This has facilitated infra-structural development in the village and has brought affluence to the villagers who joined tourism industry as lodge-owners, taxi-owners and tour operators. The newfound prosperity of the villagers has improved the quality of life and raised their aspiration level.

Lachen

Lachen village is located on the right bank of the Lachen Chhu, the main feeder of the river Teesta. The average altitude of the village is about 2,700 m above mean sea level. The total population of the village as per 2001 census is 2,923. The total area of the village is 3,635.75 ha and the density of population is less than 1 person per ha. Though Lachen is known to be a tribal village, the proportion of tribes has reduced over the years and the scheduled tribes account for a little less

than half (49.2%) of the total number of population (2001). The number of scheduled castes in the village is negligible.

The village is connected with Chungthang, Mangan and Gangtok by means of metalled road. Motorable road beyond Lachen extends up to Thangu via Zema. Jeeps and trucks are the chief modes of transportation in the area. Mules and yaks are also used to maintain communication with areas where motor vehicles cannot reach. The distance of the nearest town Mangan is 58 km. The village has a primary health sub-centre, a secondary school, post office, police check post and an old PWD inspection bungalow. Besides, there is a village monastery, a community hall for *Zumsa* (local self governing body) meetings and a government handicraft centre. The *zumsa* is responsible for all developmental activities as well as social justice within the village area. The village has regular electric supply. Telecommunication facility is available at the army post at Chhaten, located at a distance of about 5 km from the village. The village has its own water supply line. Lachen avails of certain amenities due to its location near the army headquarters of 112 Mountain Brigade.

A peculiar feature of the village is that most of its residents practice transhumance. There is hardly any land to cultivate in the village proper. Neither is there much land for cattle grazing. However, stall-fed cattle are reared in almost every household. The villagers leave Lachen during the rainy season and move to the plateau of Thangu (3,900m above mean sea level) where they have their agricultural and pasture lands. For at least four months in a year (June-September) the

people of Lachen live in farmhouses or yak-huts in the plateau. Most of the village people own extensive farmlands in and around Thangu. These days some of the families, owing to fixed jobs at Lachen cannot move to their farmlands. As a result, vast stretches of land lie uncultivated. The transhumant villagers move back to Lachen after the harvest of crops, mainly potato, radish and cabbage, and some of them make a second move to warmer places down south, viz. to Chungthang, Mangan or even Gangtok to avoid the uncomfortable winter months at Lachen and to sell the crops and dairy products. The people of Lachen are hard working and many of them pursue multiple occupations as farmer-cum-trader-cum-transport operator. The main and marginal workers of Lachen account for 60.35% and 7.53% respectively, while the non-workers account for 32.12% of the total population.

Unlike Lachung, Lachen does not attract many tourists, but some of the adventure tourists and pilgrims make a stopover at Lachen on their way to the plateau, glaciers and sacred lakes located further north. The village wears somewhat dilapidated look, as most of the villagers do not live in the village continuously. Of late, a few prosperous villagers have introduced modern living in private houses, lodges and hotels at Lachen and Thangu. In spite of economic prosperity of the villagers, the quality of life at Lachen is apparently not very ambient due to harsh climate. The place requires energy resources and judicious planning to make it a more habitable place round the year.

Chungthang

Chungthang (1,630 m above mean sea level) is located above the confluence of the Lachen Chhu and Lachung Chhu. From this place the

joint flow of these two rivers comes to be known as Teesta. The place, as the name implies, is located on a small meadow (Chung = small, Thang = meadow). Chungthang is the entry point to the vast protected area of North Sikkim. The North Sikkim Highway culminates at this point and branches out into two roads – one leading to Lachen and Thangu plateau to the left and the other to Lachung and Yumthang valley to the right.

Chungthang, which was basically a small Lepcha village, has been made a sub-divisional headquarters due to its increasing importance as a transport node. Chungthang is spread over a land measuring 2,676.93 ha. A large part of the village is flat land. The total number of households at Chungthang according to the 2001 census is 1,567 and the total population is 3,766. The density of population at Chungthang is approximately 3 persons per 2 ha of area. The population of Chungthang is mixed. There are Lepchas, Bhutias, Nepalese and a good number of plainspeople (mostly in the defence enclaves) at Chungthang. The scheduled castes and tribes account for 34.17% and 0.47% of the total population respectively.

As an administrative centre Chungthang houses a number of government offices including sub-divisional magistrate's office, bank, post office, central water commission, power department, etc. The shops and business establishment are mostly concentrated on either side of the highway that runs roughly parallel to the Lachen Chhu. A number of offices and settlements have come up along the Assam Rifle road running parallel to the Lachung Chhu. At the centre of the *thang* (meadow) stand the local health centre and high school. The area also

has large army establishments and owes much of its development to defence. Due to its multi-ethnic and multi-religion population, there are gompa, temple, parish and gurudwara at Chungthang.

Chungthang is a transit point both for the local civilians and the army personnel. A number of amenity centres, especially, telephone booths, eateries and tourist lodges have cropped up in recent years along the highway. Although a rural area, Chungthang wears a semi-urban look due to the presence of government establishments and multi-storied concrete buildings. The energy requirements of the place is increasing day by day, as more and more people are using electronic wares. The dish antennae have made its presence felt even in distant villages.

Of late Chungthang is receiving much attention from planners. The enormous hydroelectric potential of the land lying beyond Chungthang has rendered the place a potential hub of future developmental activities in North Sikkim. Besides, tourism business is gaining momentum as large number of tourists visiting Lachung and Lachen pass through Chungthang and make brief stopovers. At present the place does not have much facility to accommodate overnight tourists. But Chungthang has every possibility to grow as a centre of tourism in its own right.

Singhik

Singhik in North district has recently been identified as a model village in Sikkim. Ideally located along the North Sikkim Highway, Singhik falls on the route to Lachen and Lachung valleys on one hand and Mangan and Gangtok on the other. The temperate climate,

pollution-free atmosphere and natural scenic beauty made the village one of the finest places to live. The total area of the village is 384.57 ha and the total population is 1,898 (2001). The total number of households in the village is 412 and the density of population is 5 persons per ha.

The dominant community at Singhik is Lepcha. Other communities of the village include Bhutia, Nepalese and Bihari. At present 38% of the total population of the village are Scheduled tribes and a little more than 5% are scheduled castes. 66.17% of the villagers are literates.

It is but obvious that farming is the chief occupation of the villagers. Singhik is gifted with a climate that is conducive to the growth of a variety of crops. Cardamom is the chief crop of the area. Almost all the farmers of Singhik own cardamom plantations. Other crops grown in and around Singhik include maize, potato, vegetables and orange. The farmers rear cattle, goat, pig and poultry. Surprisingly, the majority of the people of Singhik are non-workers (54.21%). The main workers of the village account for only 34.51 % and the marginal workers constitute 11.28% of the total population. Large size of the landowning families consisting of many dependents and financial security may be the reasons behind poor work participation.

The quality of environment in the village is undoubtedly good. The clean air and water, opulent forests and sprawling cardamom plantations are the chief assets of the place. There are plenty of natural water sources, green belt, and open space for common use. The quality of housing is also good. The village has a secondary school, a primary

health center, an all weather road, regular supply of provisions and fuel, tourist amenity center, etc. and the villagers have assured income from cardamom plantations, fruit orchards and field crops.

The few problems that the residents of Singhik face include landslides during the rainy season and poor garbage disposal system. Although the villagers are aware of the need of education, healthcare, sanitation, etc. they are not much active in protecting the environment they are endowed with. However, a small population and plenty of resources kept the villagers satisfied. But lure of urban amenities and increasing number of traffic on highway have their effects on village life. The concrete structures are raising their heads obscuring the view of majestic snow peaks and large buildings are gradually replacing unobtrusive village structure.

The North Sikkim Highway connects Singhik with rest of Sikkim. Even a few decades back, Singhik was a small sleepy village, where the houses could be counted on hand. But some years back a devastating landslide at Manul a few kilometers upstream changed the village profile. A number of displaced people from Manul were given land to settle at Singhik. Moreover, construction for hydroelectric project nearby brought infrastructure development. Further, the state government declared the place as a model village and generously sanctioned grant to build model houses for disadvantaged villagers. The award of best panchayat by the state government catapulted the village into fame and now Singhik is considered an ideal village where urban amenities blend with rustic way of living.

Dikchu Bazar

Dikchu Bazar, located on the river Dik Chhu that marks the border between the North and East districts is a well-known and oft discussed village of Sikkim. The name Dikchu is in use for two villages in North and East districts on either side of the river. Dikchu has been in the news for quite sometime for the construction work undertaken by NHPC. Dikchu Bazar is located in Rakdong revenue block in East district. Rakdong is a large revenue block with an area of 928.29 ha. All total there are 387 houses in the revenue block and the total population of the block is 2,156 as per 2001 census. The revenue block is divided into two sections – Lower Rakdong and Upper Rakdong. Dikchu Bazar is located in Lower Rakdong.

People of various races and communities inhabit Dikchu Bazar. Though originally the Lepchas dominated the place, nowadays the Nepalese, comprising mainly the OBCs and tribes like Rai, Gurung, Tamang, Subba, etc, far outnumber them. Besides, there are a few Bhutias, Sherpas and plainsmen. At present 33% of the total population of the village are scheduled tribes and about 3% are Scheduled castes. About 54% of the villagers are literate.

By occupation, the majority of the residents of Dikchu (Rakdong) are farmers. Most of the inhabitants, especially the Lepchas are big landholders. In the wake of land acquisition for NHPC plant, many villagers have lost their premium agricultural lands. Some of the villagers still rue the fact that they are not compensated enough for the loss of croplands. The major crops cultivated around Dikchu are cardamom, ginger, maize and

rice. The farmers also rear cow, goat, pig and poultry. The main workers of the village constitute about 48% of the total population, while 11.59% are marginal workers and 38.5% are non-workers.

The quality of natural environment around Dikchu Bazar is good. The air and water are clean. A number of streams and rivers namely, Rakdong, Dikchu and Teesta flow close to the place. The villagers get water for daily use from a source called Phi Khola. However much of the forest in the locality is lost forever. Much of the open land is also taken over by the NHPC for their construction work.

A national highway connects Dikchu Bazar with Mangan in North Sikkim and Singtam in East Sikkim. All types of motor vehicles ply to and from Dikchu. The Bazar has a post office, bank, health centre and several schools including a government secondary school and a private English school. The villagers rate the existing quality of housing, healthcare, and education in the village as good but at the same time they are not satisfied with the present state of affairs as far as business transaction, transport and maintenance of roads are concerned.

Once prosperous Dikchu Bazar has lost much of its importance after the construction of NHPC colony nearby. The colony has better infrastructure and is more or less self-sufficient. Though initially the market of Dikchu experienced brisk business due to the influx of workers for the NHPC project, it suffered setbacks after the completion of NHPC colony. The business community was worst hit and the people of the

area in general resent the hydroelectric project. Nowadays Dikchu Bazar wears a deserted look.

Sirwani

Sirwani is located on the bank of river Teesta in the East district of Sikkim. The total area of the village is 184.64 ha and the total population of the village is 966 (2001). Altogether there are 227 households in the village. The dominant community of the village is Nepalese comprising large number of backward and scheduled castes. Besides, there are a few tribal communities, most of who are Bhutias. The number of scheduled castes in Sirwani is quite high, constituting 27.33% of the total population. 59.42% of the villagers are literate.

The major occupation of the villagers is cultivation. The location of the village close to Teesta at an altitude of about 1,000 m above mean sea level favours cultivation of a variety of cereal crops. The major crops grown are rice, maize and millets. A number of tropical fruits like mango, banana and guava are also grown in the village. The villagers rear cattle, goat and pig. However, the number of workers in the village is much less than the non-working population. The non-workers, most of whom are women and children constitute 55.28% of the total population of the village while 36.23% is main worker and 8.49% is marginal worker. Limited cultivable land and lack of industries may be the reason behind low participation in work.

The natural environment of the village is good but not as good as it should be. The villagers still receive pollution free air, but pollution free

water is hard to come by. There is not enough free space for common use and the residents are not very keen or active in protecting their natural environment. However, there is a green belt around the village and the village is gifted with cultivable land. The river Teesta flows by the village and adds to the natural splendour of the area.

The residents of Sirwani are aware of the use of modern amenities. The quality of housing in the village is good, but the villagers rate the quality of healthcare and sanitation as poor. There is no garbage disposal system in the village and the residents dispose solid garbage into the river Teesta. They do not seem to be proud of the quality of their habitat.

Due to its proximity to Singtam, which is only 7 km away, Sirwani is privileged on many accounts. The residents of Sirwani avail of the services offered by the hospital, bank and market at Singtam to meet their medical, banking and market needs. The village children do not have to move out of the village to avail of school education since it has one senior secondary and two primary schools. The communication is also good. The village thoroughfare is metalled and connects Sirwani with Singtam on one end and Makha on the other.

Mamring

Mamring is a small riverside village located in the South district opposite the border town Rangpo, the entry point to Sikkim. The village is spread over an area of 69.72 ha and is divided into two parts – upper and lower. The total number of households in the village is 185 and the

total population is 825. Mamring is a predominantly Nepalese village and most of its inhabitants belong to the privileged castes.

The village has a dominance of Brahmins, closely followed by Chhetris and Newars. There are only 3.39% Scheduled Castes and 3.26% Scheduled tribes. Besides, there are a few Rai families who belong to OBC. 55.27% of the total population of this village is literate.

Mamring is a prosperous village where most of the households are large. Most of the residents of the village are new settlers who selected the place as their residence for its nearness to Rangpo, the industrial hub of Sikkim. The proximity to Rangpo has made the village modern in many ways, but at the same time, affected the development process. Since most of the urban amenities are available within a distance of 5 km at Rangpo, the villagers depend on Rangpo for most of their requirements. For example, there is no high school at Mamring. After the completion of primary education, the parents send their children to the high school of Sikkim Mining Corporation at Rangpo. Neither is there any health center in the village, nor any market. The villagers have to go to Rangpo for medical treatment and marketing/shopping. However, there is a post office in the village. The village road is metalled and linked to Rangpo on one side and Namthang on the other. There is a modern RCC bridge spanning over the Teesta and connecting Mamring with Rangpo. The houses in the village are a hybrid of rural and urban architecture. These are made of brick and cement with provisions of electricity, cooking gas and running water. The back yards of the houses are used for cattle, goat and bee keeping, composting, and also for

storing firewood. Almost all the families have their own farms where they grow maize, ginger and vegetables. The lands are not suitable for rice cultivation. Therefore, the food grains are procured from Rangpo market.

At Mamring, only 48.79% of the village population is registered as worker, out of which, 34.06% is main worker and 4.73% is marginal worker. An overwhelming 61.21% of the population is non-worker. The large size of households consisting of several dependents may be a reason for such a high percentage of non-workers. The number of retired and elderly persons in the village is comparatively high. Farming is obviously the main occupation of the working population. Some of the workers are service holders and industrial workers. The Rangpo Mining and Sikkim Distilleries draw workers from Mamring and nearby villages.

The people of Mamring are politically aware and take interest in state politics. They are proud to have their representatives in the state's political and administrative fields. They are also concerned about the environment and resent the fact that factories in the outskirts of their village are polluting the air and river water. They desire to have medical dispensary, veterinary services and dairy development in the village. They consider their village an ideal place to live since they enjoy the goodness of both urban amenities and rural living. The level of satisfaction of the villagers suggests social integrity, high level of awareness, freedom of work, healthy living and above all, a sense of well being, all indicating a good quality of life.

Donok

Donok is located in the South district at a distance of 10 km from Rangpo. The total area of the village is 70.88 ha. The village is sparsely populated and the settlements are scattered. All total there are 304 persons who live in 53 households. Donok is a tribal village dominated by a singular ethnic group *viz.* Tamangs who constitute 99% of the village population. Other than Tamangs, there are only 3 persons belonging to the Nepalese scheduled caste. There are no tribals other than Tamangs in entire Donok.

Donok is basically a farming village. There is no industrial or service sector within a radius of 10 km of the village. In this village 55.26% of the total population is literate. A little over 50% of the villagers are registered as workers, out of which, 42.76% is main worker and 7.56% is marginal worker. Close to 50% of the total population is non-worker. The villagers have extensive farmlands where they grow maize, pulses, ginger and vegetables. Almost all families rear animals and their livestock consists of cow, pig, goat and poultry.

The village of Donok is one of the most backward villages in Sikkim. The roads of the village are earthen and the villagers face trouble in communicating, especially when they need medical help. There is no health center in the village and inhabitants largely depend on ICDS for medical treatment. There is a primary school in the village, but no post office, nor any market. The houses of the village are mostly kachha, only a few are semi-pucca. There is no RCC building in the village. Tap water and cooking gas are luxuries for the villagers. Only

three houses in the village have the provision of LPG. Rest of the households (50 in number) depends on firewood for cooking and heating. However, they use electricity for lighting purpose. The only source of water in the village is Bimbung natural spring.

The village is connected with Rangpo and Namchi by a metalled road that skirts the boundary of the village. The climb to the road from the village is steep, and difficult for the sick and weak. Most of the villagers have very little exposure in spite of being located within 10 km of town.

The environmental quality of the village is good. The air and water are clean and there are forests all around the village. The villagers procure firewood from the nearby forests to keep their hearth burning, but do not necessarily destroy forests. They have extensive cultivable land and grazing land in the vicinity of the village. But the quality of material life is rated poor due to the hardship they face in day-to-day life. The population of the village being homogenous, there is no social tension among the villagers. Donok is a village devoid of the influence of Hinduism and to a large extent, mainstream Lamaism, though all the Tamangs are Buddhists by religion.

The dwellers of Donok, in spite of absence of modern civic amenities, are more or less self-contained. They have very little interaction with other villages and ethnic groups other than their own. They are not much aware of the developmental activities and are least bothered about political changes. They take life as it comes and do not

complain much about the absence of modern amenities. They do not consider their village an ideal place to stay, but at the same time, find no reason to leave the village in the pursuit of superior quality of life. Donok typifies the underprivileged villages of Sikkim that need better amenities and resources to make life easy.

Yuksam

Yuksam in the Gyalshing sub-division of West district is one of the most well known villages of Sikkim. The first capital of Sikkim was located in this village and the site of coronation of the first ruler of Sikkim is still preserved in the village. The village has immense religious and cultural significance for the Bhutias of Sikkim. Some of the oldest Buddhist monasteries of Sikkim are located in an around Yuksam. It is also the gateway to Mt. Khangchendzonga, and mountaineers from all over the world gather in this place on their way to the fabled peak. The village is also a trendsetter in regard to eco-tourism. The inhabitants of this village have most successfully adopted the concept of 'home stay' as a corollary of eco-tourism. As a result, Yuksam is treated as a model village for eco-tourism.

Yuksam is a largish village with a total area of 812.16 ha. The village is located in a basin-like valley surrounded by mountain ranges. There are 364 households in the village inhabited by 1,951 persons (2001), but due the place's attraction as a tourism and religious center, the number of visitors far exceeds the total population. More than a third of the village's population is scheduled tribe. The major communities in the village are the Bhutias and the Nepalese. Besides, there are a few

plainspeople who work in the service sector and do small time trade and business. The Bhutia community is the dominant ethnic community in Yuksam. Yuksam is a prosperous and growing village. It is connected by metalled road with Gyalshing and Gangtok. There are several schools in the village of which three are primary schools, one is junior school and one is senior secondary school. It enjoys most of the amenities in terms of primary health center, potable water, gas and electric supply, post and telegraph office, etc.

The environmental quality of the village is good, though in recent years, increasing number of tourist vehicles plying to and from Yuksam and construction of hotels etc. around the village have caused some concern. However, the village being inhabited by elitist tribe has been protected from the onslaught of mindless infrastructural development. Some years back, the village was at the center of controversy due to the construction of a hydel power project. The awareness level of the local people being high, the power project that would affect environmental quality and cultural heritage of the place was scrapped midway. The village is the hub of social activists who constantly monitor the environmental and economic quality of life in the village.

Nayabazar

Though Nayabazar in Soreng sub-division of the West district is treated as an urban area, it is markedly rural in character. Nayabazar is located at the southeastern end of the district. The place overlooks the confluence of the Rangit and Rammam rivers and is well connected with Jorethang and Melli in South Sikkim, and Darjeeling in West Bengal.

The population of Nayabazar as per 2001 census is only 996, which is much less than many of the villages in the district. Surprisingly, Nayabazar recorded the highest sex ratio among all the towns of Sikkim. However the literacy rate in the town is the least of all eight towns in Sikkim. In terms of main workers too, the town has poor work participation.

The rivers Rangit and Rammam skirt Nayabazar in the east and south respectively. Due to low altitude and proximity to rivers, the place has a warm and steamy climate. Dense sub-tropical forest around the town makes the place somewhat isolated from the rest of the district. As a result, the population of the town is much less than the neighbouring town of Jorethang in South Sikkim.

The place is inhabited primarily by the Napalese and a few plains people, most of who are engaged in primary and tertiary activities. There is hardly any industrial activity in Nayabazar. The rise of Jorethang as an industrial town on the other side of the Rangit has adversely affected the development process in Nayabazar. In spite of the fact that Nayabazar is located at a transport node, the place did not develop much in the last three decades. However, the inhabitants of the place do small-scale trade and commerce and export farm products such as cardamom, orange and ginger collected from the neighbouring villages. Metalled roads connect Nayabazar with Soreng, Legship, Gyalshing and Jorethang. Bridges spanning the rivers Rangit and Rammam facilitated communication with the South district in Sikkim and Darjeeling district of West Bengal.

Though Nayabazar is a low-end town in Sikkim, it ranks high as far as the environmental quality is concerned. Absence of industries and lesser number of vehicular traffic ensure a pollution free climate. Besides, the presence of forests and water bodies nearby make the environment congenial. Nayabazar could be a busy town and justify its name if a center for the distribution of local produce and goods imported from across the border is set up.

4.4.3 The Perceived Scenario

Perspective of the individuals has been taken into account to present the perceived scenario. The perceptions of quality of life of 10 key informants selected from a cross section of 150 individuals are described in the following pages.

1. *Name of the respondent: Yeshay Lachungpa, aged 35 years. Lachung, North District.*

Yeshay Lachungpa is the *Pipon* (Village head) of Lachung. He is a farmer by profession and owns about 20 ha of agricultural land. He also owns a sizeable yak herd and one automobile. He has been elected as the *Pipon* of the *Zumsa* (local self government) for the first time. He has good command and influence over the village people and takes keen interest in the nitty gritty of village affairs. Yeshay Lachungpa did not have an opportunity to finish school but his wife has studied up to class X. He has two sons, but none of them are interested in studies. Both the children discontinued their studies after reaching class III. According to

him, the quality of education in his own village is very poor and the number of school dropouts is ever increasing.

As a farmer Yeshay is reasonably well off. He grows potato, cabbage and apple that are sold to nearby towns. He also sells processed dairy products derived from the milk of yak. He owns twenty yaks, one cow and five pigs. He is a proud owner of a jeep and ferries his produce to nearby markets himself. During tourist season he also ferries the tourists to and from Chungthang, Mangan and even Gangtok.

Yeshay lives in a two-storied wooden house with four rooms. The main room of the house serves as kitchen-cum-family room. For daily cooking the family normally uses gas but firewood is also used occasionally. During winter months, firewood is used both for cooking and heating purpose. Although he has electricity connection, he cannot use it for heating, as the voltage is too low. He draws drinking water from nearby spring by means of rubber pipes. He does not have a flush toilet as it is still considered a luxury. His family uses traditional pit toilet.

Yeshay considers himself a self-sufficient man as he owns enough land to provide him food, a pack of yak to supplement his income and an automobile that gives him mobility as well as status. He owns a few household valuables but does not feel it is necessary to buy expensive, modern gadgetry. However he loves to watch movies at the village video parlour and spends liberally on that.

As a *pipon* of his village Yeshey feels that the major stumbling block in the course of development of his village is the forced unemployment during the four months of winter when people cannot take up outdoor work. Unlike some other villages in North Sikkim, the people of Lachung do not own much cultivable land and temporary shelters in low altitude areas. Hence they are forced to stay indoors in winter months. They spend those idle hours by consuming liberal doses of alcohol, playing mahjong (a game of stakes) and doing no work. This, according to him, is wastage of energy and savings. The road blockage during the monsoon months is another problem. Among the social problems, increasing number of school dropouts is his major concern. He could stop his own children from being school dropouts. He strongly feels that the teachers who come from outside lack involvement and enthusiasm in imparting teaching.

He considers his village a very safe place to stay, both ecologically and security wise. He criticizes the quality of education, health care and sanitation of his village, but at the same time, he is proud to be a Lachungpa and the *pipon* of Lachung. His perception of good quality of life is to be self-contained and to be able to enjoy life.

2. *Name of the respondent: Anu Lachenpa, aged 54 years, Lachen, North District.*

Anu Lachenpa is the *Pipon* of Lachen. He is the patriarch of a large family consisting of his wife, five children and dependents. Though not formally educated beyond primary school, Anu Lachenpa is a far-

sighted man. He has arranged higher education for his children, especially daughters, one of whom studies in a Calcutta college. He is a contractor by profession and owns extensive farmland and a pack of 20 yaks. He also owns a car and several houses at Lachen, Thangu and Gangtok. He represents the upper crust of North Sikkim and exerts influence on not only the affairs of his village but also various other matters of the region. As the head of the village, he looks after the administrative as well as social affairs and takes responsibility of most of the development activities of Lachen. The area under his jurisdiction extends much beyond Lachen village, as there are about 50 small villages under Lachen Panchayat. The Panchayat consists of 18 members headed by Anu Lachenpa.

Anu considers his village self-sufficient and does not entertain alien agencies in his village. He, as the representative of the village and its community, reserves the right to work independently, and maintains that community development should work on the principle of subsidiarity, i.e., without interference from upper strata of administration. He has strong reservation regarding the activities of certain government agencies too, and apprehends uncalled for complications arising from such activities. During the course of interview, he strongly resented the activities of certain agencies that, he believed, failed to understand the sentiments and aspirations of his community. The *Pipon*, however, is quite progressive in his outlook and welcomes modern development.

According to Anu, the Lachenpas (people of Lachen) are handicapped due to the practice of transhumance. They have to shift

their families four times a year and that causes a lot of inconvenience. During summer they disperse to distant Thangu, Kalep and Samdung for cultivation and animal grazing. He wishes to have more sources of income for the Lachenpas and opines that establishment of dairy farms, especially cheese farms will be of great help, as almost all the villagers rear cattle and yak. He believes that such farms will bring income for the villagers year round.

Anu rates the quality of air and water of his village as safe and pollution-free though he agrees that the village is getting dirty since there is no garbage disposal system. He agrees that the level of awareness of the residents regarding sanitation is not very high and that they are not very active in maintaining the quality of housing, village thoroughfares and community areas. According to him, as the *Pipon* his contribution to his village will be, i) helping all the illiterate villagers to overcome their ignorance and ii) inspiring all his men to work hard.

3. *Name of the respondent: Jagur Lepcha, aged 44 years, Chungthang, North District.*

Jagur Lepcha is a housewife. She is the wife of Chungthang Panchayat president Lendhup Lepcha. She lives with her family of seven members in a largish multi-storied building. Her house has a commanding position in Chungthang, and her husband being the head of Panchayat, every one recognizes the family. They are among the best-known families of the region and most of their relations are highly placed and figure quite prominently in the political scene of the state.

Although Jagur and her husband did not study much, all her children go to school and intend to go for higher education. The family owns farmlands and cardamom plantation and earns enough to spend at least Rs. 20,000/- per month on its family. The family income is further supplemented by house rent. They have let all but one floor of their house on rent. The additional income permits them to save for unforeseen and future expenditure.

Jagur is content with the quality of life she lives as she feels most of her requirements are fulfilled. Her family is financially secure and well settled. She has no further demand. Despite being the wife of the Panchayat head, she does not involve herself in the affairs of village administration. She considers Chungthang as a perfect place for herself and her family. According to her, Chungthang is a clean, pollution-free place. Here everything is just about good, and she has no complain about the services provided by the local administration. Her only, if any, reservation is about the standard of education in the local school. She thinks the place needs better arrangement for education.

4. *Name of the respondent: Chewang Jigmey Lepcha, aged 21 years, Mangan, North District.*

Chewang Lepcha represents the brash, young, educated, affluent and urban segment of the state. His father is one of the first graduates of North district and is a contractor by profession. His mother too is educated and working. Chewang's family has large farmlands and poultry in the vicinity of Mangan. The family owns a multi-storied building

in the town, a portion of which is given on rent. Income from various sources made the family reasonably well off. Chewang has finished his school and immediately after that stepped into his father's shoes. His siblings, one brother and a sister are studying in college and high school respectively. His own earning is not worthwhile as yet, but he has already adopted a life style that is no different from those living in a city. Chewang sees a lot of future prospects in the place of his residence. He admires the place since he is born and brought up here and wants to see improvements in this place. According to Chewang, the town holds prospects for the development of tourism activity as this is the only town in North Sikkim and every visitor to Lachen, Lachung or Yumthang has to pass through the area. He considers the environment of the town as good but rates the existing health care system as poor. He also opines that unless the roads and supply of essential commodities from Gangtok are properly maintained, the place will not be able to make much headway in the direction of tourism. He advocates wide publicity to develop the place as a tourist destination. He believes that the quality of life of the local inhabitants of Mangan will be remarkably improved if infra structure for tourism development is provided.

5. *Name of the respondent: Tshering Wangdi Lepcha, aged 37 years, Singhik-Sentam, North District.*

Tshering Wangdi Lepcha is one of the longest serving Panchayat members of the state and represents his area in the Zilla Panchayat. He is serving as a Panchayat member for seventeen years and is recipient of *Panchayatshri* Award instituted by the Government of Sikkim. He

started taking keen interest in the affairs of his village at a very early age and was elected as a panchayat member when he was barely twenty.

Tshering Wangdi belongs to the Lepcha Community and professes Buddhism. He is a second generation resident of Singhik. His father migrated to this place some fifty years back and he is born in this place. He has a largish family consisting of nine members. His family includes his wife, three children, three sisters and a cousin. He has studied up to class X, while his wife has studied up to class IX. All his sisters have studied up to higher secondary level and the cousin studied till class X. He has three sons and they are studying in class VII, VI and II.

Tshering Wangdi is reasonably well off. His average income is Rs. 6 lakhs per annum. He owns about 30 ha of farmland, the major portion of which is under cardamom plantation. Though he inherited some land from his father, he acquired most of his property himself. He owns bullocks, cows, pigs and goats that supplement his family income as well as food. He also earns money from houses given on rent. At present he resides in a medium-sized semi-pucca house, but is likely to shift to a new three-storied concrete building that is nearing completion. He also owns a car and has access to most of the modern amenities. His family budget shows that on an average he spends about Rs. 2 lakhs on food and 1 lakh on education of his children every year. Another fifty thousand is spent on clothings. By local standards, he is rich as well as influential.

In spite of social standing and economic solvency, Tshering Wangdi is not a satisfied person. For seventeen long years he has served his village and his community, and he wishes to continue his service for many more years to come. Though he has been instrumental in starting school, supply of drinking water by PHE and free housing at Sentam, he is not yet satisfied. He is keen to start tourism and take appropriate measures to prevent landslides in the vicinity of his village, especially along the national highway, so that communication remains unhindered all round the year.

As far as his family is concerned, high education for his children is his first priority. He wants to make further improvement in his financial status by enhancing his income from his farms. His perception of good quality of life is to have, first and foremost, financial security. He expects his children to become government officers and hopes they will look after the family. He does not aspire to leave his village for a better or bigger place since all his land and resources are located here.

6. *Name of the respondent: Chungchung Tongden Lepcha, aged 32 years, Dikchu, East District.*

Chungchung Tongden Lepcha represents the generation of educated, self-employed and progressive youths of rural Sikkim. He is vibrant, open and very much concerned about the state of his village as well as the state of Sikkim. He belongs to Lepcha community and his family is resident of Dikchu for several generations. He hails from an illustrious Lepcha family of the area. Chungchung is a graduate from

Delhi University and at present he is the owner-cum-principal of a private English School. He also serves as the general secretary of a local NGO.

Chungchung lives in a joint family of seven members. His family consists of his mother, wife, sister, brother-in-law, two children and himself. He lost his father sometime back, and as is the custom among the Lepchas, the oldest member of the house, i.e. his mother heads the family. His mother, Sm. Tshering Chhoden Tongden, herself illiterate, educated her children in reputed educational institutions. Chungchung studied English honours in a Delhi college. His wife too has a Bachelor's degree in Arts and helps him in running the school. He has two children who are yet to go to school. His sister has studied up to class XII while his brother-in-law is a graduate.

Though the school run by the family is the main source of earning, there are several other sources that supplement the income of the Lepcha family. Apart from the ancestral landed property, the family owns several houses at Dikchu that are given on rent, a hotel-cum-restaurant at Dikchu bazaar and two taxis. The average monthly income of the family is Rs. 30,000/- per month. The family lives in a well-furnished building and has access to all the amenities available.

Chungchung Lepcha is not satisfied with the present situation in his life, because he feels that a man of his age cannot reach the saturation point. According to him, one should do something in terms of name and fame. He also feels that he can improve his present status by

working for his community, which according to him, is in a bad shape. He thinks a secure environment is most important for the future of his and other's children. Unlike most of the respondents, he does not expect his children to reciprocate in lieu of what he has done for them; rather he expects that they should lead a happy, independent life. He believes that quality of life reaches the required level only when there is happiness in people's mind and life.

7. *Name of the respondent: Suman Sharma, aged 30 years, Rashyep, South District.*

Suman Sharma, wife of Indra Prasad Gautam, belongs to the Nepalese community. By religion she is Hindu and by caste she is Brahmin. She has a small family consisting of herself, husband, a minor son and her mother-in-law. Suman has studied up class XII and now teaches in a primary school. Her husband is a graduate and he too is a schoolteacher. Her only son studies in a boarding school.

Suman lives in her newly constructed house at Rashyep, very advantageously located along a state highway connecting Singtam and Namchi. She teaches at Dalep primary school and her husband teaches in a middle school. Since both of them earn, they lead a decent life. Her house is a reasonably large two-storied concrete building. She has given one floor on rent to supplement the family income. There are more than three rooms in her house, a well-appointed kitchen and flush toilets. She owns almost all the basic gadgets necessary for a comfortable living.

The family also owns about 2 ha of land in the village. They have given the land to sharecroppers.

Suman considers herself a happy person but she is not fully satisfied. On her personal level she aspires for more affluence in the family through business. As for her village, she wishes to upgrade the village school so that the children do not have to move out. She would like to improve the quality of living in her village by setting up social organization for the welfare of the underprivileged.

In her opinion, her village is an ideal place to live. The only major problem of the village is the shortage of power supply. Since the demand is much more than supply, and too many houses are connected with the existing facility, the supply line trips every so often. The village is located very close to the Teesta stage VI NHPC plant, and Suman hopes that the problem of power supply will be solved very soon. Her perception of well-being is to have a peaceful, hassle free life. She considers her village an ideal place because there is hardly any social problem in her village. The village is free of crime and has access to modern amenities. Suman does not aspire to live in a town or a city, since she perceives that the quality of life in her village is much better than crowded urban areas. She believes that, happiness at family level improves the quality of life. Besides, doing one's own bit for the society brings a lot of difference in the quality of life of a community.

8. *Name of the respondent: Khim Bahadur Rai, aged 40 years, Kerabari, South District.*

Khim Bahadur rai is a member of Karabari Panchayat, Namchi subdivision, South district. He belongs to the Rai community and professes Hindu religion. Some 60 years ago, his father migrated from Nepal and settled at Kerabari. He has a largish family consisting of himself, wife, three sons, two daughters and one unmarried brother. His eldest son is about 16 years old and the youngest child, a girl, is only 4 years old. Since he is the sole breadwinner in his family he has to work hard. By profession he is a farmer and owns about 2 ha of land. His only source of income is farming. He cultivates rice, maize, millets and vegetables.

Khim Bahadur lives in a semi-pucca house. There are three rooms for eight members of the family. There is a separate kitchen and a pit toilet in his house. Although the house has electricity connection, electric power is meant only for lighting purposes. For cooking the family has to depend on firewood. He cannot afford to have cooking gas, which is to be procured from Melli. He has water connection provided by the PHED. He has to spend most of his earnings on food and on education of his five children. He cannot afford the luxury of TV or refrigerator or any other movable asset. Saving the farmland and the house, he has no other property.

Khim Bahadur is not a satisfied man. As a member of Kerabari Panchayat, he has certain responsibilities. He wants to improve the village school, existing healthcare facilities and water supply. He is a literate person but could not finish his school education due to financial problem. As a parent he wants to make all his children educated so that

they can get decent jobs. At present all of his children except the youngest one go to school. He feels that economic problem is the biggest problem of life and so he aspires for economic solvency. He expects that his children should feel for the family and help to make it better by all means. His family and his village are equally important to him. Although he is a farmer, he is in favour of other more respectable services for his children. His main concern is to bring economic changes in his family and village. According to him quality of living depends first and foremost, on economic security.

9. *Name of the respondent: Khena Maya Gurung, aged 32 years, Upper Mangzing, South District.*

Khena Maya Gurung is a housewife turned Panchayat member of Upper Mangzing. She belongs to the Gurung community and by religion she is Hindu. She is married to a person of Rai community. Her family consists of seven members. Apart from herself and her husband, she has two sons and three daughters. She and her husband can read and write, but never had the opportunity to study in a high school. Her husband is a bus driver. Both of them are keen to educate their children in high school and beyond. All her children go to school. The eldest one, a daughter, is studying in class VIII, while the youngest, a son is going to a nursery school.

Khena Maya and her family live in a kachcha house. There are three rooms, a separate cooking area and a pit toilet in her house. They have connections of electricity and water supply but the power supply is

very irregular. For cooking, Khena Maya uses both gas and firewood. She has a very small plot of farmland, less than 1 ha in area, where she grows maize, rice and vegetables. She rears pig in the backyard of her house. Her household assets include a sofa set, clock and transistor. Her most prized possession is telephone.

Upper Mangzing is a remote village and the roads are rough. In her capacity of a Panchayat member, she wants to improve the quality of life in her village by constructing an all-weather road and making arrangements for a village market. She rates the quality of education, healthcare and sanitation in her village as poor and wants to improve their quality. According to her, human qualities like co-operation, honesty and unity can make major difference in the existing quality of life.

10. *Name of the respondent: Karma Chhoda Bhutia, aged 24 years, Ravangla, South District.*

Karma Chhoda Bhutia represents the young, educated youth of the area. He belongs to Bhutia community and by religion is a Buddhist. Karma Chhoda hails from an affluent family of Ravangla. His father is the president of a prestigious local traditional body known as *Dwichi* and a member of Ralang Panchayat. His family owns a medium size guesthouse and landed property in the outskirts of Ravangla.

Karma had his schooling in a private school at Gangtok. He received his college education from a reputed missionary college at Darjeeling and went to Delhi for higher study in Mass Communication. He is still unmarried and lives with his parents. The residence-cum-

guest house of the family is a large building built on modern lines. The rooms are spacious and well appointed with furniture, carpet and modern gadgetry. There is a separate altar room for the household deities. The kitchen and toilets are modern and well equipped. The family also owns a car.

Karma is not satisfied with the present situation in his life. He wants to set up something of his own. He does not want to be dependent on the family though he has a very secure life. He is the first and only graduate in the family. He wants to do something for the family by applying his education and training.

Being the son of the *Dwichi* president who is responsible for the distribution of land owned by the Ralang Monastery, Karma wishes to bring certain changes in the society by implementing land-related laws so that equity in distribution can be achieved. He is proud to be a youth of Ravangla and wishes to improve the quality of life in this place by proper planning of local development projects. His perception of a good quality of life is to have good earning from local resources, proper use of manpower and high level of awareness. He admits that his village has a very slow pace of progress, and he fears that misuse of public money and power may create difficult situation in this peaceful, un-spoilt land.

The quality of life in the state, as perceived from the primary data, is one of stable contentment in sharp contrast to the poverty-ridden villages in lower altitudes. The method of investigation veered more around need-based research rather than want-based, as the local tribal groups are elitist and self-contained. The empirical analysis clearly

indicates a sound environment, low level of development but high level of contentment.

From the study of a cross section of the people of Sikkim represented by Panchayat members, schoolteachers, farmers, businessmen and housewives, it was noticed that all of them do not necessarily relate their well being with economic situation. The common perception is, satisfaction in personal and community life is much more important than a highly progressive, modern society. Since the standard of living in most of the villages is above the poverty line, and the level of social security in almost all the villages is very high, the people do not seem worried about the quality of life. The villages of the area look self-sufficient and the villagers do not exhibit poverty. The existing scenario makes it clear that the quality of life of the area is untouched by the rigors of extreme poverty, social insecurity and political instability, while the perceived scenario hints at a traditional society that welcomes changes in infrastructure, but does not want to change their life style.

4.4.4 The Aspired Scenario

The people of Sikkim are a mixed lot. The ethnic Lepchas, Limbus, Bhutias and Nepalese, who have come to this area at different points of time and inhabited the area for periods ranging from several centuries to few decades, are bound to have different levels of aspiration. The indigenous Lepchas and Limbus, who are somewhat cornered by the assertive Bhutias and painstaking Nepalese, aspire for freedom from cultural submergence.

The situation changed after the merger of Sikkim with India. With increased exposure to the outer world and with mounting interest of scholars studying the indigenous people of Sikkim as somewhat extinct species, there has been a revival in their search for identity. So much so, that ethnic aspiration has become more important nowadays than the aspiration for economic well-being.

Undoubtedly, both Lepchas and Limbus lost much of their identity due to the processes of assimilation by other powerful races. For example during the regime of the Bhutia rulers, majority of the Lepchas adopted Bhutia culture and way of living. The less fortunate were reduced to minions who had no aspiration at all. Again, at the time of Gurkha invasion in the western part of Sikkim, indigenous Tsongs who could not flee their land were found to adopt Hindu ways of living. Now that the influence of the erstwhile ruling classes are minimized, and revolution in communication network has brought the world at everybody's doorstep, the aspiration levels of all the minority groups have risen. Now each and every ethnic community, large or small, aspires to establish its identity and acquire rightful place in the society. Thus, the first and foremost aspiration of the indigenous communities of the area is to make their presence felt and to reaffirm their right for equity. The Lepcha *Shezums* and Limbu *Chumlungs* are particularly vocal about the community rights and aspirations. The Bhutias too joined the fray after being reduced to a minority in the land they ruled for three hundred years. They have joined hands with the Lepchas and formed the Sikkim Bhutia-Lepcha Apex Committee (SIBLAC) to voice their resentments and aspirations.

Ethnic aspirations apart, all the communities of the area aspire for economic security. The communities living in this part are aware of their natural resources. They are still fortunate to have un-spoilt, pollution-free environment over most of their habitat. They have learnt lessons from the errors committed by their neighbouring states and have become cautious in dealing with environment and ecology. They have taken ideas from the West and are keen to preserve and protect their resources. The communities have varying levels of ambition, and they do aspire for development, but they do not want to go the way some of the mountain communities in some other parts of the Eastern Himalayas have gone. All the communities want to have improved infrastructure, especially in terms of roads and communication. They are in favour of exploiting the local energy resources - water in particular, so that they get enough supply of electricity. However, the local people are not in favour of bringing factory-oriented industrial development, rather they would welcome industries like tourism.

Field observations in the area stretching from Rangpo to Lachen confirmed that the indigenous people of Sikkim are no longer in favour of isolation. There was a time when the ethnic Bhutias looked up to the Tibetan aristocrats and religious leaders for their worldly as well as spiritual developments. There were regular exchanges across the northern and eastern borders and every Bhutia family of the region aspired to adopt the life style and standards set by the Tibetan elites. With the closure of borders, the focus gradually shifted to the south. The merger of Sikkim with India took some time to settle in the psyche of the local communities. Reservation and inhibition in adopting Indian ways of

development is still not uncommon. But after almost three decades of association, the trends are changing and there is a conscious effort to learn and adopt the best of methods suited to their well-being. Nowadays, even the remote villagers are getting used to electricity instead of oil lamp, concrete building instead of wooden cottage, flush toilet instead of pit toilet, cooking gas (LPG) in stead of fire wood, packaged stuff in stead of home made ones and so on and so forth. The instances of sending children to study in a metropolitan city or abroad are no longer rare.

There has been a massive change in the social and economic scenario of some of the remote villages after the introduction of tourism business. For instance, Lachung in North Sikkim, Pelling in West Sikkim and Ravangla in South Sikkim have become tourism hotspots. To accommodate seasonal crowds, small cottage owners of Lachung, Pelling and Ravangla have converted portions of their households into tourist lodges while the affluents constructed villa and resorts. Lodges have come up even in remote Yuksam and Thangu. Once rare automobiles are now considered as objects of necessity and many villagers own four wheelers. The village shops sell all kinds of manufactured consumer goods ranging from packed instant food to synthetic garments to machine-made footwear.

Under such circumstances, it is but natural that the local people no longer remain isolated from rest of the world. There are limitations due to attitudinal differences but the people of Sikkim exhibit a rather high level of aspiration. Usually they have good control over all the developmental activities, especially in regard to infra-structural

development. The things they cannot do themselves are leased out to others but the reign of control remains in the hands of the local people.

The ethnic communities living in Sikkim are well aware of the carrying capacity of their native area. The man-land ratio that they maintained for centuries in far-flung pastures and villages is based on calculative experience. They are aware of the wealth of their forest, water and animal resources. Over-ambitious planners and administrators sometimes overlook or minimize the traditional wisdom of the local tribes. Therefore, utmost caution is needed in judging the aspired scenario.

On the whole, the people of Sikkim, though conservative, are not averse to the introduction of improved techniques that help them raise the quality of life. During field visit and investigation it was observed that the local communities are desirous to have, i) Life that is free of diseases, ii) Quality education for children, iii) All weather roads for better communication, and iv) Uninterrupted supply of fuel and power. In other words, the things that they consider most important to bring improvement in the existing quality of life are i)) Better healthcare facilities, ii) Education for all, iii) Improved communication network and iv) Energy resources. The life of the villagers being secure otherwise, they are not necessarily keen to bring in alien techniques, but aspire for an easy and comfortable living by improving upon the existing resources.

CHAPTER - 5
OBSERVATIONS ON PROPOSED TEESTA
STAGE-III, STAGE-IV AND STAGE-VI
HYDROELECTRIC PROJECTS

OBSERVATIONS ON PROPOSED TEESTA STAGE III, STAGE IV AND STAGE VI HYDROELECTRIC PROJECTS

5.1 OBSERVATIONS

The present work takes into account the socio-economic and cultural aspects in regard to the carrying capacity study of Sikkim. Therefore, the scope of the work is limited to the study of human aspect rather than physical or technical aspects.

During field survey in the state it has been observed that in general the residents in the East, West and South are not opposed to the Teesta hydroelectric project. But in some pockets, particularly in North district, the people are sensitized and to some extent, against implementation of the project unless “basic safeguards are guaranteed” (Joint Action Committee, North Sikkim). A section of the local people are against the project because they fear that the project will lead to large scale “submersion”. According to them, the total period required for the execution of the project is long enough to disturb the demography of the region “beyond recognition”. They fear a decline in ethnic culture, tradition and habitat due to infiltration of labourers from outside the state.

It has been noticed repeatedly that the local people are in favour

of infrastructure development but not at the cost of losing the traditional life style and culture. The local communities, especially the Bhutias and Lepchas value their religion and culture much more than material comfort. As long as there is no conflict between their religiosity and technology, the local people do not interfere with the developmental activities. However, over the years, many of them have come to terms with the fact that without losing some, they cannot gain.

The new generation of Sikkim is very much aware of the environmental resources of the state and is keen to preserve them. In every districts of Sikkim, there are Non-government Organizations (NGOs) that keep track of development projects and make their presence felt whenever conflict situation arises. NGOs like Joint Action Committee (JAC) in North Sikkim, Concerned Citizens of Sikkim (CCS) in East Sikkim, Khangchendzonga Conservation Committee (KCC) in West Sikkim raised their voices on various issues related to hydroelectric projects.

The local people in almost all the proposed project sites are aware of the benefits as well as problems associated with the project. During fieldworks in villages close to the site of stage-III near Chungthang, it has been observed that the local communities, Lepchas in particular, fear influx of outsiders. The Lepchas who have long been reduced to a minority in their land fear that the influx of project workers from outside the state will push them further and make them marginalized in their homeland. A section of the community opines that the project will be

problematic for them as it touches the Lepcha reserve of Dzongu in North Sikkim. During the construction of the hydel project at Dikchu the JAC president cautioned, “The Teesta river forms a natural boundary between Dzongu and East Sikkim. There are only three bridges to cross over to this protected area. When the cofferdams come up, the river will dry and thousands of labourers from the east bank will enter the protected zone”. (Hindustan Times, August 9, 2000, New Delhi).

However, the mindset of the local people is changing. In the words of a Zilla Panchayat member, “Our lands are already going due to nature’s fury. Much of the land near the proposed project site is sinking. If the project takes measures to save our land from sinking, the villagers will be benefited. Therefore it is better to have one, although there are both advantages and disadvantages”. The displaced people from Manul and other hazardous areas who have already lost their people, land and properties due to devastating landslides welcome the project as they hope to start their life afresh.

5.2 RECOMMENDATIONS

5.2.1 Recommendation for Teesta Stage-III

The area under proposed Stage-III of the Teesta Hydro-electric Project has a mixed population consisting largely of scheduled tribes like Lepchas, Bhutias, and a sprinkling of Nepalese and plains people. Chungthang is the nearest administrative headquarters and a string of villages are there along the highway that connects Chungthang with

Gangtok at one end and Thangu on the other. The Lepchas dominate the villages in the immediate vicinity of Chungthang.

During fieldwork in and around Chungthang in North Sikkim (Stage-III) it has been observed that the local residents are very much aware of the proposed hydro-electric project. During a meeting with the Panchayat President Lhendup Lepcha it has been learnt that the local people are somewhat skeptical about the proposed project. Since the villages in the area already have electricity, they do not see any reason to have a mega hydel project in their area. Given the fact that most of the households in the region are self-contained and the environment is largely undisturbed by external agencies, the local people are not in favour of a project that may bring outsiders and disturb their peaceful life. The local people are opposed to the project mainly for the fear of influx of outsiders who might bring disease, crime, and change in traditional culture as well as natural environment. However, the people are to some extent ready to accept the proposed project provided i) the local people are given priority in service, ii) judicious settlement of land is done, iii) the construction of superstructures are in harmony with the Sikkimese culture, iv) the outsiders are not given the voting rights, and v) outside labourers are given entry only after proper medical check up.

5.2.2 Recommendation for Teesta Stage-IV

The area under stage-IV falls in Dzongu area of North Sikkim. The place is the habitat of the indigenous Lepchas of Sikkim. Dzongu is a protected area and no community other than Lepcha is allowed to settle

in any of the revenue blocks under Dzongu Reserve. During the reign of the Chogyals of Sikkim Dzongu was proclaimed a protected land for the Lepcha community of Sikkim. The proclamation regarding the protected area continues even after Sikkim's merger with India and the land rights in Dzongu are still reserved for Lepchas only. The non-indigenous persons are denied entry in Dzongu without valid permit.

The Lepchas who are known to be the indigenous people of Sikkim have full knowledge of the Declaration on the Rights of Indigenous People drafted by the Commission on Human Rights. During fieldwork in the villages of Dzongu, the local people came forward and voiced their reservations in the context of proposed hydroelectric project. They cited the Article 3 Part-I of the above-noted declaration that said, "Indigenous people have the right of self determination". The members of the Zilla Panchayat and Gram Panchayat units as well as the lay people of the seven Panchayat units of Dzongu are outright against the construction of the proposed project. According to them, they know what is good for them and they should be given the right to decide whether they need a mega hydel project or not. They also cited the Article 7 Part - II of the declaration that stated, "Indigenous peoples have the collective and individual right not to be subject to ethnocide and cultural genocide". They clearly stated that, "Dzongu is the last refuge for indigenous Lepchas. We are already under the threat of extinction. People from outside bring not only cultural hazards but also health hazards. Already there are 150 reported cases of STD, which was unheard of even a few years back".

According to a local social activist of Hee Gyathang village, “the Lepchas are declared the indigenous people of Sikkim by the Supreme Court of India and the rights of the indigenous people are also defined by the UN. The Lepchas of Sikkim are far outnumbered by the Bhutias and Nepalese and at present their strength is reduced to 8,500 odd heads. The tribe is vanishing from other parts of Sikkim and we fear that our tribe and our environment would be destroyed once the people from outside come to settle in the protected areas of Dzongu”. Last but not the least, they cited Article 26 Part-VI that stated “ Indigenous people have the right to own, develop, control and use the lands and territories, including the total environment of the lands, air, waters, coastal seas, sea-ice, flora and fauna and other resources which they have traditionally owned or otherwise occupied or used. This includes the right to the full recognition of their laws, traditions and customs, land tenure systems and institutions for the development and management of resources, and the right to collective measures by States to prevent and interference with, alienation of or encroachment upon these rights”.

The people of Dzongu, irrespective of their social or occupational status, unanimously and vehemently oppose Teesta Stage-IV. Under such circumstances, it is recommended that the sentiments of the indigenous tribes be reckoned with before reaching any decision.

5.2.3 Recommendation for Teesta Stage-VI

Fieldwork near the site of Stage-VI has revealed a different and favourable picture. Most of the villagers openly extend their support to the project. The people around Singtam and Rangpo feel that the project under construction will bring development and comfort in their lives.

They look up to the project for improvement in power supply and hope for speedy completion so that they can enjoy the benefits as early as possible. Having been situated close to the project site, many of the local villagers expect to get jobs and expand their business. Although many of them have lost their farmland for the construction work, they have accepted their personal disadvantages for the cause of collective benefits.

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PLATES



Plate 1. Crop fields at Thangu, North Sikkim



Plate 2. Crop fields in East Sikkim



Plate 3. A model of Lepcha hut, Namprikdang



Plate 4. Bhutia hutments, Thangu



Plate 5. The village of Lachen



Plate 6. Semi-urban settlement at Chungthang



Plate 7. Tribal village folk, Thangu



Plate 8. Inside a village household, Lachen



Plate 9. A respondent from Dzongu



Plate 10. Village representatives from Dzongu

ANNEXURES

9. Given the power to make major decisions in improving the quality of life of your village, what would you want to do?
10. Given the power to make major changes, what would you want to remove to ensure better quality of life?

Quality of family life: Economic indicators

1. Name of household head:
2. Age:
3. Size of family:
4. Level of education of all members of the family:
5. Average monthly income of the family:
6. Sources of income:
 - I) Salary:
 - II) Wage:
 - III) Business profit:
 - IV) Sale proceeds:
 - i. crops:
 - ii. vegetables:
 - iii. fruits:
 - iv. milk:
 - v. meat:
 - vi. poultry:
 - vii. processed food:
 - viii. others:
 - V) House rent:
 - VI) Land rent:
 - VII) Pack animal rent:
 - VIII) Vehicle rent:
7. Average monthly expenditure:
8. Family budget (monthly):
 - i. Amount spent on food:
 - ii. Amount spent on house rent/maintenance:

- iii. Amount spent on clothing/utility items:
- iv. Amount spent on education:
- v. Amount spent on healthcare:
- vi. Amount spent on recreation:

9. Savings, if any:

10. Loans, if any:

Quality of life (economic indicators) score sheet

Variables	Score
1. Type of house: Pucca	3
Semi-pucca	2
Kachcha	1
2. No. of rooms: More than two	3
Two	2
One	1
3. Separate room for cooking: Yes	1
No	0
4. Fuel for cooking: Electricity/Gas/Bio-gas	3
Coal/Charcoal/Kerosene	2
Others	1
5. Source of light: Electricity	3
Kerosene/Gas/Oil	2
Others	1
6. Source of drinking water: Pipe (own)	3
Pipe (public)	2
Others	1
7. Toilet facility: Flush toilet (own)	3
Pit toilet (own)	2
Shared or public toilet	1
8. Type of livestock owned: Bullock	2
Cow	2
Yak	2
Pig	1

	Goat	1
	Sheep	1
9. Ownership of goods:	Clock/watch	1
	Radio/transistor	2
	Television	3
	Refrigerator	3
	Sofa set	3
	Scooter/motorbike	4
	Car	5
10. Ownership of land:	No land	0
	Less than 1 ha	1
	1-1.99 ha	2
	2-5 ha	3
	5+ ha	4

Total:

Questions related to village/neighbourhood

1. Name of the Panchayat:
2. Dominant community:
3. Other communities:
4. Nearest health center:
5. Nearest school:
6. Nearest market:
7. Nearest post office:
8. Type of main thoroughfare:
9. Linked to:
10. Mode of transport/means of communication:
11. Sources of water:
12. Sources of energy/fuel:
13. Major occupations:
14. Crops cultivated:
15. Animals reared:
16. Household industries, if any:
17. Means of recreation:
18. Cultural activities:
19. Festivals/fairs;
20. Community center, if any:

Broad questions:

1. What are the major stumbling blocks in the course of development of the community/village?
2. What are the social abuses?
3. What are the crimes reported?
4. Whether there is social security?
5. Whether social justice is availed of?

Quality of village/Town (environmental indicators)

Yes/No

1. Do you get clean, pollution free air?
2. Do you get clean, pollution free water?
3. Do you get enough fuel to keep home fires burning?
4. Do you get enough food from local resources?
5. Do you have proper garbage disposal system?
6. Is there any green belt/forest cover in and around your area?
7. Is there any water channel/natural lake close to your area?
8. Is there any pasture/cultivable land in the vicinity of your area?
9. Is there enough space for common use (market, playground, etc.) in your area?
10. Is there any chronic problem such as landslide, mud slip, etc. in your area?
11. Are the residents aware of the natural splendour of the area?
12. Are the residents keen to preserve the environment of the area?
13. Are the residents active in protecting the natural resources of the area?
14. Are the residents careful enough not to harm the bio-diversity?
15. Are the residents proud of the quality of their habitat?

Good/Moderate/Poor

16. How do you rate the quality of housing in the village/town?
17. How do you rate the quality of healthcare in the village/town?
18. How do you rate the quality of education in the village/town?
19. How do you rate the quality of sanitation in the village/town?
20. How do you rate the quality of transport in the village/town?

Opinions

21. What, in your opinion, should be an ideal village/town?
22. Do you consider your village/town an ideal place to stay? Why?
23. Given choice, will you prefer to stay here or elsewhere? Why?
24. What do you foresee about the future development of this place?
25. What do you suggest for the improvement in quality of life in this place?

Questions related to the NHPC project on river Teesta

1. Do you have electricity in your village?
2. Do you have electricity in your house?
3. Do you know where it comes from?
4. Have you heard of the forthcoming hydel power project?
5. What do you think about it?
6. Will you be affected in any way by this project?
 - i) If yes, which way?
 - ii) How will you cope up with the change?

7. How long are you residing in this area?
8. If migrant, from where?
9. Why did you migrate?
10. Why did you select this place?
11. In case you have to shift for the construction of the project, how will you react?
 - i) Readily agree on the basis of compensation
 - ii) Will impose certain conditions of your own

- iii) Do not agree
12. If you are displaced, you
- i) Will accept job in the project
 - ii) Will start afresh with a new job in a new place
 - iii) Will continue with the old job in a new place
13. You support the project because
- i) It will bring electricity to your village
 - ii) It will create job opportunity for the villagers
 - iii) It will improve the village infra-structure
 - iv) It will bring prosperity to the village
 - v) Any other reason
14. You do not support the project because
- i) You do not require electricity
 - ii) You will be displaced
 - iii) Outsiders will encroach upon your village
 - iv) The environment of the village will be disturbed
 - v) Any other
15. You do not want to enter into any controversy because
- i) You are not affected
 - ii) You do not expect any return from this project
 - iii) You are more concerned about other things in life.

Annexure-II

DETAILS OF THE RESPONDENTS

Sl. No	Place	Name of Respondent	Age	Sex	Comm-unity	Caste/ Tribe	Mother tongue	Religion
1	Lingmoo	Tomaya Sharma	52	F	Nepali	Brahmin	Nepali	H
2	"	Suman Gyatso Lepcha	47	M	Lepcha	ST	Lepcha	B
3	Pepthang	Dhan Bahadur Chettri	52	M	"	Chettri	Nepali	H
4	"	Mangal Bahadur Subba	51	M	"	ST	"	"
5	Kolthang	Purna Bahadur Cintury	57	M	"	SC	"	"
6	"	Suraj Gyatso Lepcha	49	M	Lepcha	ST	Lepcha	B
7	Tokdey	Gobind Karkey	50	M	Nepali	Chettri	Nepali	H
8	"	Nakul Rai	53	M	"	OBC	"	"
9	Rangang	Man Bahadur Sharma	52	M	"	Brahmin	"	"
10	Rangang	Karma Pincho Bhutia	49	M	Bhutia	ST	Bhutia	B
11	Upper Mangzing	Khenamaya Gurung	32	F	Nepali	OBC	Nepali	H
12	Mangzing	Hemant Kr Basnet	42	M	"	Chettri	"	"
13	"	Arimanda Thapa	51	M	"	OBC	"	"
14	"	Dhan Bahadur Basnet	56	M	Nepali	Chettri	Nepali	"
15	Upper Neh-Brum	Dil Ram Khanal	30	M	"	Brahmin	"	"
16	"	Lilaram Gurung	49	M	"	OBC	"	"
17	Neh-Brum	Purna Bahadur Thapa	42	M	"	"	"	"
18	"	Purna Bahadur Subba	42	M	"	ST	"	"
19	"	Bhanidas Bhandari	51	M	"	Brahmin	"	"
20	Sripatam	Krishnalal Timsina	44	M	"	"	"	"
21	"	Prakash Ch Subba	44	M	"	ST	"	"
22	"	Kuber Timsina	47	M	"	Brahmin	"	"
23	"	Megnath Timsina	56	M	"	"	"	"
24	Nampok	Son Bahadur Rai	57	M	"	OBC	"	"
25	"	Teg Bahadur Rai	46	M	"	OBC	"	"
26	Ravangla	Kashi Nath Shil	34	M	Bihari	SC	Hindi	"
27	Kerabari	Khim Bahadur Rai	40	M	Nepali	OBC	Nepali	"
28	"	Dhanpal Rai	69	M	"	"	"	"
29	"	Parbhu Singh Mangar	47	M	"	"	"	"
30	"	Pirthipal Rai	66	M	"	"	"	"
31	"	Kaluram Mangar	43	M	"	"	"	"
32	Mellidara	Narbir Tamang	47	M	"	ST	"	C
33	"	Tshering Tamang	62	M	"	"	"	B
34	"	Man Bahadur Tamang	61	M	"	"	"	C
35	"	Tilak Bahadur Pradhan	52	M	"	Newar	"	B
36	"	Bidhan Tamang	61	M	"	ST	"	"

37	Melli	Taradevi Bhutia	37	F	Bhutia	“	“	“
38	“	Passang Doma Bhutia	40	F	“	“	Bhutia	“
39	“	Dhan maya Pradhan	40	F	Nepali	Newar	Nepali	H
40	“	Dambar Rai	49	M	“	OBC	“	“
41	“	Dhirendra Prajapati	55	M	“	Brahmin	“	“
42	Payong	Tilak Sharma	47	M	“	“	“	“
43	“	Anjana Tamang	51	F	“	ST	“	B
44	“	Dhan B Pradhan	52	M	“	Newar	“	“
45	“	Deo Narayan Pradhan	62	M	“	“	“	“
46	“	Nayna B Dorjee	43	M	“	ST	“	“
47	Ramabong	Bhimkumari Chettri	44	F	Nepali	Chettri	“	H
48	“	Bal B Mangar	47	M	“	OBC	“	“
49	“	Bal B Chettri	58	M	“	Chettri	“	“
50	“	Harka Khaling	59	M	Bhutia	OBC	“	B
51	“	Kanchan Rai	53	M	Nepali	“	“	H
52	Temi	J.N Prasad	59	M	Bihari	Kalwar	Hindi	“
53	“	Prakash Pradhan	36	M	Nepali	Newar	Nepali	“
54	“	S.K Pradhan	36	M	“	“	“	“
55	Tarku	Lila Poudel	32	F	“	Brahmin	“	“
56	“	L.P Adhikari	45	M	Nepali	Brahmin	Nepali	“
57	Temi Tea	Hari Prasad Chettri	47	M	“	Chettri	“	“
58	“	Sangamaya Chettri	33	F	“	“	“	“
59	Lower Namphing	Krishna Gurung	27	F	“	OBC	“	B
60	Namphing	Rudramaya Sharma	48	F	“	Brahmin	“	H
61	Rashep	Sumon Sharma	30	F	“	“	“	“
62	Lower Mamring	Sanjit Kharel	29	M	“	“	“	“
63	Mamring	Birkha Bahadur Pradhan	67	M	“	Newar	“	“
64	Donok	Prem Kr Tamang	45	M	“	ST	“	B
65	“	Padam Bahadur Tamang	64	M	“	ST	“	“
66	Sirwani	Parasmani Pradhan	51	M	Nepali	Newar	“	“
67	“	Budhiraj Limbu	47	M	“	ST	“	C
68	“	Mohon Kumar Gurung	47	M	“	OBC	“	B
69	“	Bhimbahadur Limbu	43	M	“	ST	“	C
70	“	Kalpana Pradhan	38	F	“	Newar	“	H
71	Namgey-thang	Nim Lhaden Bhutia	27	F	Bhutia	ST	Bhutia	B
72	“	Phuchung Bhutia	50	M	“	“	“	“
73	“	Pem Tshering Bhutia	28	M	“	“	“	“
74	“	Silo Bhutia	41	M	“	“	“	“
75	“	Norbu Bhutia	47	M	“	“	“	“
76	Tshalung-	Suman Phuty Lepcha	54	F	Lepcha	“	Lepcha	C

	Thang							
77	"	Mani kumar Sharma	48	M	Nepali	Brahmin	Nepali	H
78	"	Bhagirath Giri	51	M	"	Chettri	"	"
79	"	Prem Lepcha	46	M	Lepcha	ST	Lepcha	C
80	"	Dal Bahadur Giri	39	M	Nepali	Chettri	Nepali	H
81	Beng	Sherimaya Biswakarma	42	F	"	SC	"	"
82	"	Chizing Bhutia	49	M	Bhutia	ST	Bhutia	B
83	"	Deonarayan Bhutia	37	M	"	"	"	"
84	"	Suman Lepcha	42	M	Lepcha	"	Lepcha	C
85	"	Sangamaya Lepcha	37	F	"	"	"	"
86	Lingzey	Chefar Bhutia	51	M	Bhutia	"	Bhutia	B
87	"	Thendop Wangyal Bhutia	42	M	"	"	"	"
88	"	Puspallal Sharma	47	M	Nepali	Brahmin	Nepali	H
89	"	Baichung Lepcha	52	M	Lapcha	ST	Lepcha	C
90	"	Tashi Tshering Lepcha	59	M	"	"	"	"
91	Dikchu	Chandramaya Chettri	42	F	Nepali	Chettri	Nepali	H
92	"	Nirmal kumar Bhagat	36	M	Bihari	Kalwar	Hindi	"
93	"	Chungchung Tshering Lepcha	32	M	Lepcha	ST	Lepcha	B
94	"	Achuk Lepcha	56	M	"	"	"	"
95	Kamrey Bhasmay	Hiradevi Chettri	60	F	Nepali	Chettri	Nepali	H
96	"	Pawan Khatiwara	48	M	"	Brahmin	"	"
97	"	Purbalal Khatiwara	58	M	"	"	"	"
98	"	Dhan Bahadur Rasaily	47	M	"	SC	"	"
99	"	Dilliram Khatiwara	45	M	"	Brahmin	"	"
100	Pochak	Puspa Gurung	30	F	"	OBC	"	B
101	"	Kinzon Bhutia	46	M	Bhutia	ST	Bhutia	"
102	"	Ashok kr. Rok	48	M	Keralite	SC	Malayalam	C
103	"	Sundarlal Bhandari	62	M	Nepali	Brahmin	Nepali	H
104	"	Mani Rai	53	M	"	OBC	"	"
105	Amba	Phurba Lepcha	51	M	Lepcha	ST	Lepcha	C
106	"	Kamala Pradhan	46	F	Nepali	Newar	Nepali	H
107	"	Gangaram Poudel	47	M	"	Brahmin	"	"
108	"	Nim Tshering Sherpa	53	M	"	ST	"	"
109	"	Dhanmaya Neopani	39	F	"	Brahmin	"	"
110	Taza	Surya Mishra	51	M	Bihari	"	Hindi	"
111	"	Lila Sharma	43	F	Nepali	"	Nepali	"
112	"	Hari prasad Sharma	49	M	"	"	"	"
113	"	Purna prasad Sharma	52	M	"	"	"	"
114	"	Bhimbahadur Chettri	53	M	"	Chettri	"	"
115	Tarethang	Maya Devi Sharma	45	F	"	Brahmin	"	"
116	"	Gopal Sing Chettri	48	M	"	Chettri	"	"
117	"	Bhimlal Sharma	51	M	"	Brahmin	"	"

118	“	Basudev Dahal	48	M	“	“	“	“
119	“	Bhola Rizal	52	M	“	OBC	“	“
120	Mangan	Deep Chand Joshi	62	M	Marwari	Brahmin	Hindi	“
121	“	Chewang Tismey Lepcha	21	M	Lepcha	ST	Lepcha	B
122	“	Bagatey Bhutia	45	F	Bhutia	“	Bhutia	“
123	Kimrong	Chewang Sangmo	49	F	Bhutia	“	“	“
124	Singhik	Tshering Wangdi Lepcha	37	M	Lepcha	“	Lepcha	“
125	“	Yangkit Lepcha	44	F	Lepcha	“	“	“
126	Naga	Dorjee Sherpa	32	M	Sherpa	“	Sherpa	“
127	Nadey	Dawa Lepcha	48	M	Lepcha	“	Lepcha	“
128	Naday- Sinchit	Ajit kr Prasad	51	M	Bihari	Kalwar	Hindi	H
129	Chungthang	Mingma Thendup	79	M	Tibetan	ST	Tibetan	“
130	“	Jagur Lepcha	44	F	Lepcha	“	Lepcha	“
131	“	Yenden Lhamu Lepcha	46	F	“	“	“	“
132	“	Nima Doma Lepcha	25	F	“	“	“	“
133	“	Tshering Yangzom	28	F	Bhutia	“	Bhutia	“
134	“	Sarah Biswakarma	24	F	Nepali	SC	Nepali	C
135	“	Gokei Lachenpa	40	F	Bhutia	ST	Bhutia	B
136	Lachung	Yeshay Gyatso Lachungpa	35	M	“	“	“	“
137	“	Tshering Thendup Lachungpa	51	M	“	“	“	“
138	“	Pema Lachungpa	27	M	“	“	“	“
139	“	Donka	48	F	Tibetan	“	Tibetan	“
140	“	Doma Lachungpa	40	F	Bhutia	“	Bhutia	“
141	Sharchok	Wangchuk Lachungpa	27	M	“	“	“	“
142	“	Thonky Lama	22	F	“	“	“	“
143	Bop	Pema Lhamu Lepcha	17	F	Lepcha	“	Lepcha	“
144	Rabom	Tashi Lachenpa	32	F	Bhutia	“	Bhutia	“
145	Lachen	Anu Lachenpa	54	F	“	“	“	“
146	“	Chejor Lama	66	M	“	“	“	“
147	“	Pema Lachenpa	26	F	“	“	“	“
148	Zema	Thinchok Lachenpa	56	M	“	“	“	“
149	Thangu	Sarita Lachenpa	18	F	Nepali	“	Nepali	“
150	“	Phutuk	49	M	Tibetan	“	Tibetan	“

DISTRIBUTION (NO. AND PERCENT) OF RESPONDENTS
ACCORDING TO COMMUNITY, LANGUAGE AND RELIGION

Community No. (%)

Brahmin-	29 (19.33)
Chettri -	16 (10.67)
Newar -	12 (8.00)
OBC -	21(14.00)
SC -	6 (4.00)
ST -	64(42.67)
Kalwar -	2 (1.33)

Language No. (%)

Nepali	- 91 (60.67)
Bhutia	- 29 (19.33)
Lepcha	- 19 (12.67)
Hindi	- 6(4.00)
Malayalam -	1(0.67)
Sherpa	- 1(0.67)
Tibetan	- 3 (2.00)

R (Religion) No. (%)

H (Hindu)	- 83 (55.33)
B (Buddhist)	- 38 (25.33)
C (Christian)	- 29 (19.33)

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