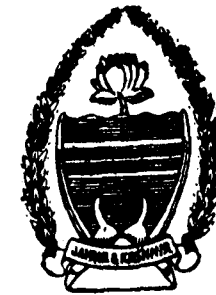


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JAMMU AND KASHMIR STATE GAZETTEERS

1338/93



LADAKH REGION

STATE EDITOR
PROF. ABDUL HAMID MALIK

SRINAGAR
GAZETTEERS DEPARTMENT
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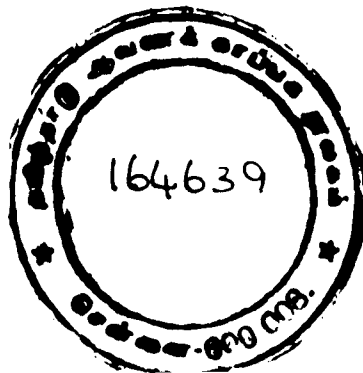
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Sushma Choudhary, IAS

MESSAGE

It gives me immense pleasure to record the release of the first of the series of the Gazetteer of India, Jammu and Kashmir State for Ladakh Region which has been under preparation and compilation for quite a few years. It marks the culmination of the unctuous and pains-taking enterprise of a team of dedicated persons spanning over years. The whole exercise has been imbued with the under-lying spirit to strive for impeccable and meticulous work. The Gazetteer is not to be viewed as a mere chronicle of the historical events or a compendium of data of the region impinging on variegated aspects like physical, geographical and others but it manifests the process of evolution and its historical movement in time. The Gazetteer pulsates with a living spirit unfolding the cultural background, the life styles, the innate strength, physical aspects and other nuances of the region. Succinctly this Gazetteer is an ensemble of socio-economic, politico, geographical features to stimulate a better understanding of the characteristics of Ladakh Region. The Gazetteer particularly assumes a great deal of relevance in the context that Ladakh still remains an unexplored domain on account of deficient literature. The raid through the Gazetteer would provide an innovative experience by bridging the hiatus in regard to the information base. A great deal of effort in research, analytical study and indepth examination of the whole profile of Ladakh Region has gone into in the preparation of this Gazetteer. It would immensely help the researchers, readers, writers and intellectuals to purvey a deeper insight and knowledge about the Ladakh Region. This is the first of the series and hopefully the profile of other two regions namely Jammu and Kashmir in the form of Gazetteer would be brought out soon.

(Sd.) Sushma Choudhary

Ajit Kumar, IAS.
Commissioner-Secretary to Govt;
Education Department.
Jammu and Kashmir.

INTRODUCTION

In view of their great utility and importance, the Gazetteers have gained universal acceptance as authentic sources of information and books of reference. They are encyclopaedic in nature as they cover a very wide range of topics pertaining to the region they concern. Useful information with essential details compiled in a systematic way about subjects like geography, geology, fauna and flora, agriculture, industry, banking, trade and finance, revenue, general administration, law and justice, police administration, history, education, culture, public life, medical systems and places of interest etc. is provided in these valuable compendium.

The concept of Gazetteers has emerged out of administrative exigencies and developed in the courts of rulers. In the beginning such documents were mainly biographical and in praise of the kings and gradually acquired historical and cultural content. The ruling kings had the tradition of keeping learned men around them who produced works of art, languages, history, literature and even State Administration. The Gazetteers as such developed in the British period with an emphasis on collection and compilation of data and information. The Imperial Gazetteers of India and District Gazetteers were monumental works in this regard without any parallel.

After Independence, the Government of India renewed this scheme in the light of changed social conditions and rapid economic development. The aim, strategy and approach of the Gazetteers then shifted to include economic development and technological change and its impact on the society. This duty was, therefore, entrusted to skilled and experienced staff with creative ability.

The Regional Gazetteer of Ladakh is the first of its kind in the State. I hope that this compendium covering a wide range of topics will serve its purpose well. Persons entrusted with administration and developmental activities of the region as well as students and scholars will all benefit from it.

(Sd.) Ajit Kumar

P R E F A C E

While preparing his plan for the compilation of the Imperial Gazetteers of India, Sir William Hunter, wrote to the Viceroy in 1870, "Nothing, nothing is more costly to a Government than ignorance". What Hunter wanted to impress upon the Viceroy was that the British Government should take in right earnest the compilation of District and State Gazetteers in the interest of administration. The Gazetteers were, at that time, guide-books containing worth-while information for the benefit and ready reference of persons incharge of the administration. A good example of such work is "Gazetteers of Kashmir and Adjacent Districts of Jammu....." compiled by Captain C. E. Bates, and published from Calcutta in 1873.

Now-a-days, the importance of Gazetteers has increased, their scope has widened and approach changed. The emphasis has shifted from the ruler to the ruled. In other words, the modern Gazetteers focus attention on the people and their problems and high-light the economic and technological development that are going on in the country. However, the modus operandi adopted in compiling Gazetteers is not to sever the link with the past rather, it is to project the present in the light of the past.

Being encyclopaedic in nature, the compilation of Gazetteers is a herculian task. As innumerable subjects are to be covered, It requires vast information and, therefore, involves the co-operation and response of numerous departments and agencies.

The present volume is the result of the contributions made in one way or the other by Prof. S. A. I. Tirmizi, Prof. F. M. Hussain, Prof. Pirzada Ali Mohammad and Prof. Sarwar Hussain all of whom served as State Editors from time to time. My thanks are specially due to Dr. P. N. Chopra, Editor, Gazetteers, Central Gazetteers Unit, who scrutinized this work as well as to Shri S. A. S. Qadiri, IAS, former Financial Commissioner, Shri Sheikh Ghulam Rasool, IAS, Chief Secretary, Shri M. Y. Taing, Director General Culture for showing their keen interest in the present work.

C O N T E N T S

I must acknowledge the valuable contribution made by Ghulam Mohi-ud-Din, the senior most officer in this department who by dint of his untiring efforts made this work a success. Various officers of the State Government especially Dr. Abdul Ahad, Shri M. A. Afzal, Shri B. A. Dhar, Shri B. L. Chowdhary and S. K. Bhan who served on the Editorial Board of this Department from time to time also deserve my thanks for their contributions they made in the compilation of this work. My thanks are also due to Shri A. R. Mubarki for valuable assistance rendered by him.

I must express my thanks to Miss Sushma Choudhary, IAS, and Shri Ajit Kumar, IAS both of whom showed their keen interest in the execution of this work and were also kind enough to write a Message and Introduction.

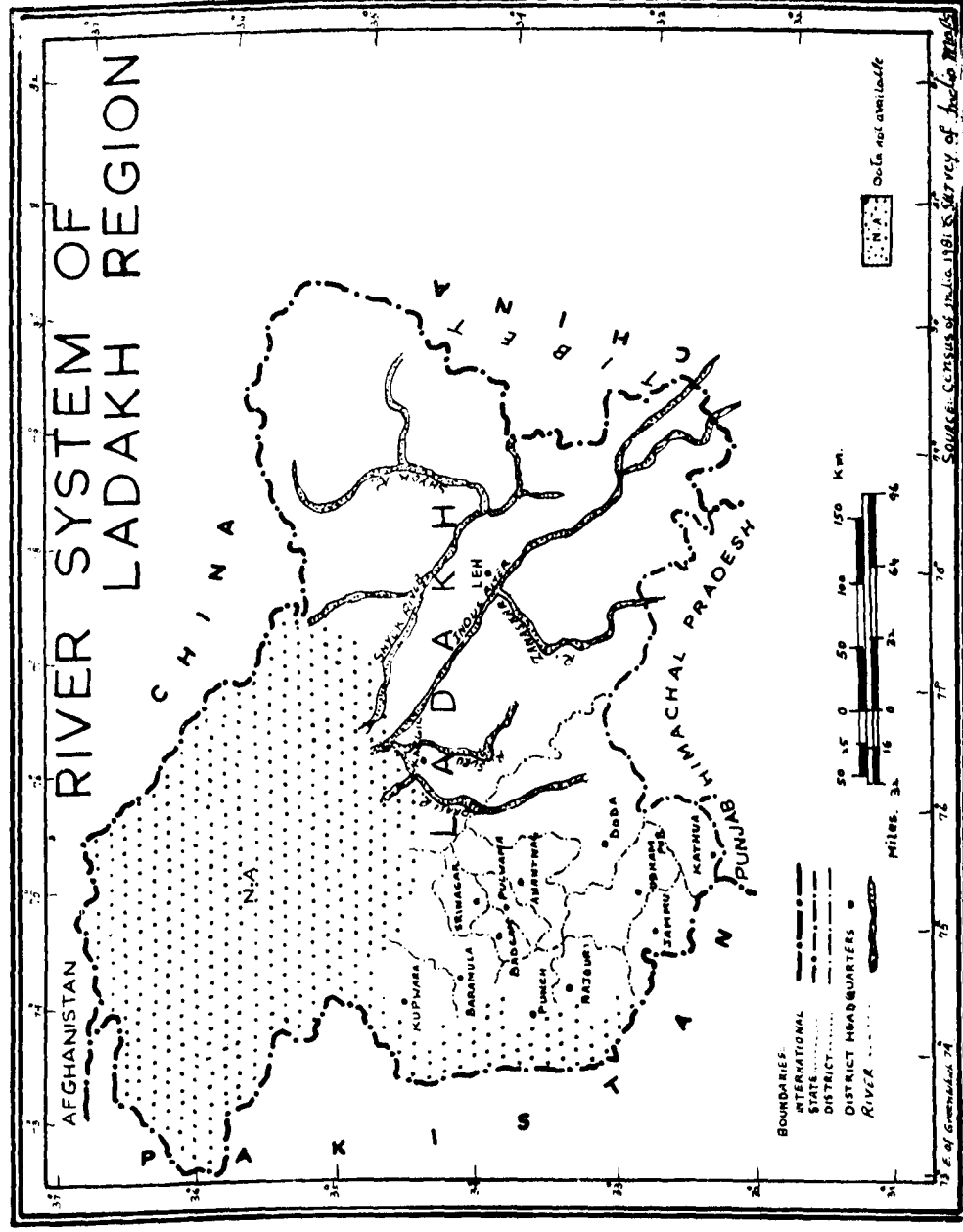
The officers and officials of various sections of Stationery and Printing Department, J&K Government, Srinagar deserves my thanks for their keen interest in bringing out this publication.

Shri Mohammad Sultan Beigh, Stenographer of this department deserves appreciation and encouragement for his dedication to duty and for the patience he showed while typing out the whole manuscript after every revision. Shri Nisar Ahmad Wani, Head Draftsman who prepared the maps and diagrams as well as other officials who did their own bit of service also deserves my appreciation.

Srinagar

State Editor, Gazetteers.

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INTERNATIONAL

STATE

DISTRICT HEAD QUARTERS --

RIVER.....

PHYSIOGRAPHIC DIVISION

ROAD.....

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SOURCE:-CENSUS OF INDIA 1981 TOURIST OF INDIA 1974 & SURVEY OF INDIAN R&A

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CHAPTER I

GENERAL

Origin of the name :

In its immediate neighbourhood (Tibet), Ladakh was known by two names in the past. Generally it was called **La-Taghs*** which literally means a mountainous country with passes.¹ It was also known as **Mang-Yu¹**, meaning a country inhabited by people with different origins as well as Mar-yul which indicates low land². According to Cunningham, **Fa-Hien**, a famous traveller has described the region as **Kie-cha³**. But many scholars believe that Ladakh did not fall on the route which Fa-Hien had chosen for his passage to India in 400 A. D. while Legge has identified **Kie-cha** as Skardu in Baltistan, Dr. Stein regards it as Kashgar in Turkistan⁴.

Another famous traveller Hieun-Tsang visited Ladakh in 640 A. D. He has described this region as **San-Pho-Ho** meaning the country of the Indus river. He used the name **Ma-La-Pho** for Western Tibet. Another name by which the region, especially the Upper Indus Valley was known was **Mar-Yul**, the name being a corrupted form of **Smra-Yul**. According to Francke and Gergan, **Smra-Yul** was a Central Asian Tribe which had settled in the Upper Indus Valley in early historical times.⁵

However, the Tibetan name, **La-Taghs** describes quite appropriately the most prominent features of the region, namely its numerous mountains and its equally numerous passes. The name being brief and apt, it became popular with the people with the passage of time.

* La.....Passes
Tagh.....Mountain

1 Datta, C. L; Ladakh and Western Himlayan Politics, P. 1

2 Cunningham, Elexander; Ladakh (Physical Historical and Statistical) P. 4

3 Ibid. P. 1

4 Francke, A. H; A History Ladakh, P. 74

5 Ibid. P. 75

Two more names, **Lad-Wag** and **La-Dog** by which the territory was also known are, in fact, phonetic variations of its Tibetan name **La-Taghs** which became Ladakh by way of aberration in course of time.

Location and boundaries :

Ladakh is situated in the Indus Valley region south of Karakoram within the complex net work of Himalayan mountains. It lies between 32°—25' to 36° Latitude North and 75°—15' to 80°—15" Longitude East and extends right up to the international frontiers, in the north and north-east as these existed on 15th August 1947. On its north-western sides, the region is contiguous to tehsil Skardu and the Gilgit district whereas the State of Himachal Pradesh touches its borders in the south-east. The districts of Baramulla, Srinagar, Anantnag and Doda are contiguous to and flank the region from south-west to the south-east.

Area and population :

At the time of Independence, the total geographical area of the region was 96,701 sq. kms., of this 42,735 sq. kms., are under the illegal occupation of China and Pakistan while the rest of it i.e. 53,966 sq. Kms. constitutes the existing area of the region¹. Even so, Ladakh remains the largest geographical region of the State.

So far as the size of its population is concerned, the region accounts for a mere 2.2% of the total population of the Jammu and Kashmir State with a density of 2.12 per sq. kms., the lowest in the country. The first census was taken in 1891 A. D. followed by another census in 1901. According to these census reports, the population of Ladakh including Skardu tehsil was 1,38,599 in 1891 and 1,65,992 in 1901. There was no significant increase in the population of the region during the first half of the 20th century for various socio-economic reasons, such as the absence of adequate medical facilities, out break of epidemics and the prevalence of polyandry as the popular system of marriage among the Buddhists. However, after independence, the population of the region has considerably increased. It went up from

88,651 in 1961 to 1,05,291 in 1971 and 1,34,372 in 1981 indicating an increase of 18.8% during 1961-71 and 27.7% during 1971-81 census decades¹. The district-wise break-up of population according to 1981 census is as under :—

District	Population
1. Leh	68,380
2. Kargil	65,992
Total :	1,34,372

Administration :

During early times, the administrative set up in Ladakh was essentially tribal in character. The administrative units were controlled by bodies of chosen elders known as **Gan-mi**, **Jush-ters** and **Aksakal**. At the helm of affairs, however, were the tribal chiefs themselves. There were no written codes, rather loyalty to the tribe and the local customs and institutions were the main basis of administration in each tribe.

It was in 975 A. D. that different parts of Ladakh were unified as a single kingdom by Nima-Con who, after fighting successful battles against the tribal chiefs, liquidated them thereby bringing unity to the land². His kingdom extended from Lahul in the east to Purang in the west³. His successors who being absolute rulers, did, however, permit old institutions like village bodies and the local customs to continue⁴. Nima-Gon's dynasty was over-thrown by Lhachen-Bhagan in 1470 A. D. who adopted the title of Namgyal and laid the foundations of Namgyal dynasty which ruled the region till 1330 A. D.⁵. The Namgyal kings restructured the administrative set up to improve its functioning. Jamyang Namgyal (1555-90 A. D.) built a palace at Leh which also served as the Secretariat. Nima Namgyal (1685-1720 A. D.) brought further improvements in both the administrative and judicial system of the region⁶.

- 1 Source : Census Department
- 2 Francke; op. cit., P. 89
- 3 Datta; op. cit., P. 48
- 4 Francke; op. cit., P. 103
- 5 Datta; op. cit., P. 50
- 6 Francke; op. cit., P. 109

¹ Surveyor General of India

The Ladakhi Kings, as a rule, administered their kingdom through a council of ministers who were in charge of different departments. The council of ministers was headed by a Prime Minister who was called **Ka'on**¹. There was a minister in charge of household affairs who was known as **Ka-dzad**, the ministers in charge of finance and administration were known as **Nam-Lon** and **Gun-Lon** respectively. The ministers were assisted by Executive Officers who were placed in charge of different departments or were charged with the responsibility of local administration of different parts of the region. The **Kor-Pon** (Steward) and the **Nang-So** (Executive Officer) exercised administrative powers in various parts of the region². **Togo-Chher** who held a position similar to that of a **Zaildar** in Kashmir exercised authority over a number of villages whereas **Zha'-Ski** or the **Lambardar** was responsible for the administration of a single village. They were responsible for the collection of the State revenue as well. There were Collectors of customs duties too who remitted the tax to the **Chag-Zot** and the Steward for depositing it in the government treasury.

So far as the judicial administration was concerned, there were Village Panchayats at the bottom which settled minor disputes, the cases of a complicated nature and serious crimes were referred by the Village Chief known as **Tong-Ston** to **Tong-Chee** who in turn, referred the case to the **Kalon** if the situation demanded. At the top, there was a sort of Supreme Court presided over by the king himself. For this purpose, a grand Judgement Hall was set up in the palace of the king, ample opportunities were provided to both the complainants and the defendants to present their cases in all these courts³.

It was through his general, Zorawar Singh, that Raja Gulab Singh of Jammu gained control over Ladakh in 1834. However, the region was not annexed until 1842 when the last Gyalpo was dethroned and its administration was put under the control of the Dogra Wazir, Magna Thanadar. Thus from 1842 onwards, the Dogras ruled the region as they ruled the Jammu principality, their homeland⁴. However, after 1846

when the State of Jammu and Kashmir was founded in accordance with the terms of the Treaty of Amritsar, the administration of the region was so changed as to suit the interests of a vast State comprising Jammu, Kashmir and Ladakh.

During the Dogra rule (1846-1947) Ladakh was administered by a **Wazir-i-Wazarat**. All the three tehsils of the region viz., Ladakh, Kargil and Skardu were placed under the over-all administrative control of **Wazir-i-Wazarat**. At the tehsil level, the Tehsildar exercised the same administrative powers as the **Wazir-i-Wazarat** did at the district level. The Naib-Tehsildars functioned as subordinate officers of the Tehsildars. However, the administrative set-up still bore the complexion of feudal system as the concerned officers down to the village level exercised arbitrary powers. The Zaildars and Lambardars who enjoyed feudal rights, also played a vital role in the district administration. One of the main functions of Wazir-i-Wazarat was the supervision of Central Asian Treaty Road which passed through Leh. For this purpose he was the ex-officio Joint Commissioner associated with the British Officer appointed by the then British Indian Government.

The Kardar was also an important functionary in administration. He exercised jurisdiction over a sub-division of a district. Besides assisting the Wazir-i-Wazarat in the collection of land revenue and in settling minor disputes between people, he had to ensure that all reasonable assistance was provided to the Central Asian Traders in Ladakh.

Since Independence, not only the structure but the very purpose of administration has undergone a change. In the past, the administrative machine was geared to strengthen the hold of autocratic rulers over the people of the region, but now, the administrative set up has been reformed and restructured to serve the people and to develop the resources of the region. It was with this aim in view that Ladakh was bifurcated into two districts in 1979. Planning and development has been integrated with administration and the Deputy Commissioners have been redesignated as Deputy-cum-Development Commissioners under the new scheme. The new pattern of administration known as Single Line Administration is development oriented, its main objective being to ensure the development

1 Cunningham; op. cit., PP. 257-59 & Datta; op. cit., PP. 33-37

2 Chohan, Amar Singh; Historical Study of Society and Culture in Dardistan and Ladakh, PP. 24-26

3 Cunningham; op. cit., PP. 262-69

4 Datta; op. cit., PP. 38-39

of the region through timely implementation of the Five Year Plans.

Administrative Units :

At present, the region comprises two districts namely Leh and Kargil. For administrative convenience both the districts are further divided into sub-divisions and revenue tehsils.

Leh is the district headquarter of the Leh District. Being situated on the Grand Silk Trade Route, Leh was an important commercial centre in the past. The Misli-Haqiat (i. e. the revenue record) does not indicate as to when the town came to be known by its present name. However, in Ladakhi, an oasis is called "Le" and it is likely that with the passage of time, this word came to be pronounced as Leh.

The district comprises four sub-divisions with a total population of 68,380 according to 1981 census.

Kargil district came into existence in 1979. The district is known after the name of its headquarter, viz. Kargil which is the only town in the district. Locally it is known as Purik. According to 1981 census the population of the district was 65,992. The district consists of three tehsils viz. Dras, Kargil and Zaskar with their headquarters at Dras, Kargil and Padam respectively.

Topography :

Ladakh is the loftiest inhabited region of the world. In its majestic mountains, deep valleys, high plateaus, towering peaks, vast table-lands as well as in its numerous rivers and green valleys, it possesses unique and fascinating charm which is unparalleled in the world. As most of its area is mountainous and uninhabited by man and animal and, as it comprises deserts and desolate plateaus intervened by difficult passes and valleys, the region naturally presents a stern and awesome appearance.

Some geologists believe that during the pre-historic times, this region, was under sea. Later when it emerged out of water, it had an ice cap on it which has kept on melting since

then. They further add that the perpetually ice-covered slopes of Karakoram are the remains of the original ice-cap¹.

Mountain Chains :

The parallelism of the mountain ranges of Ladakh stretches through the region from south-east to north-west. Geographically this natural direction of mountains is very much interesting and important because it determines the natural boundaries as well as the course of the rivers. In altitude, the mountains range from 5,180.60 metres to 6,400 metres in general, although some peaks are as high as 7,620 metres. No part of the region is below 2,438.40 metres from the sea level. The most complicated ramifications of mountain chains by which Ladakh is bounded are those of Karakoram Range, the Ladakh Range, the Zaskar Range, the Kuenlun Range, the Himalayan Range and the Mustag Range². A brief description of these mountain ranges is given below :—

Karakoram Range :

Karakoram is a Turkish word meaning "Black Mountain". For all practical purposes these black mountains and Kuenlun mountains form the northern boundary of Ladakh and constitute the biggest massif in the world. A glance along the peak line shows that the second highest mountain peak of the world, K-2 (8,710.60 metres) and the Broad Peak (8,229.60 metres) the Gasher-brun (7,924.80 metres) Teram Kangri (7,315.80 metres) and the Shyok and Nubra peaks of 7,315.20 metres and 7,620.09 metres respectively pass through this range. Between these peaks lie scores of nameless giants ranging from 6,400.80 metres to 7,010.40 metres³.

Ladakh Range :

To the south of the Karakoram Range lies the Ladakh Range. The Shyok river separates the two mountain ranges from each other. The summits of this range vary between 5,791.20 metres and 6,093.00 metres. The range is crossed by rough roads and

¹ Lead Bank Scheme Survey Report, Ladakh District, P. 2

² Khan, Khushi Mohammad; Report on Settlement of Ladakh District, P. 2

³ Bose, C. C; Geography of the Himalaya, P. 17

many passes, however its average altitude does not exceed 5,081.60 metres¹.

Zaskar Range :

Zaskar Range guards Ladakh on its southern side. It is cut off from the main chain of the Ladakh Range by the river Indus. On the whole, the Zaskar Range has the same height as Ladakh Range though towards the south it goes higher².

Plateaus :

Ladakh is a region of high mountain ranges, elevated plateaus and rocky gorges. On the whole, the territory is a vast desert of rock and sand characterised by its rugged topography. The altitude of the region increases towards the north and the Kashmir Valley as the table-lands it consists of also go higher and higher.

The Lingzi-Tang plateau extends from north to south over an area of 25.8 Kms., and from east to the west up to 90 Kms. With Pangkong as the base, its altitude ranges from 5,273 metres in the south to 5,180 metres in the north. All along the northern side of the plateau, lies the range of Lokzhung mountains, a veritable waste-land rising to the skies³.

The Kuenlun Plateau lies between Lokzhung and Kuenlun mountains at an altitude of 4,856.80 metres. Its surface consists of hard clay at some places and sand at other places. Its levels vary from those of Lingzi-Tang plateau. There is a 18.3 metre deep bay on this plateau⁴.

Valleys :

As already pointed out, the mountain ranges of Ladakh take an east to west direction and generally run parallel to one another. As a natural consequence, the course of rivers is determined accordingly and all the rivers ultimately drain into the river Indus. In between the mountain ranges and along the river beds lie long but narrow strips of land known as the river valleys of Ladakh. The rivers and streams that flow

1 Drew, Frederic; *The Jammu and Kashmir Territories*, P. 478-79
 2 Raina, A. N; *Geography of Jammu and Kashmir*, P. 10
 3 Bose; *op. cit.*, P. 116
 4 *Ibid.*

through the region are the only source of irrigation for the cultivated land which is spread along the river beds in the form of terraced fields. The river valleys are the main centres of settled population inhabiting small hamlets situated 8 to 10 Kms. apart. Among the cereals, millets, marley and wheat are cultivated and among the fruits, apples, apricots, and grapes are grown in the region. Willow and poplar trees grow along the river beds, and except these, there is no other source of timber available in the whole region. The following are the principal valleys of the region¹ :

1. The Dras Valley.
2. The Suru Valley.
3. The Indus Valley.
4. The Zaskar Valley.
5. The Nubra or the Shyok Valley.

The Dras Valley :

Situated beyond the Zojilla pass in the south-west of the region is the well known Drass Valley. It is contiguous to the Kashmir Valley. The Dras Valley is famous for its arctic cold and heavy snow fall. However, due to the high altitude of the valley, the atmosphere is dry although the Zojilla pass does permit some moisture carrying clouds to cross into this valley which cause light showers during the summer. The Valley has a length of 65 Kms., and a breadth of 3 Kms., near the Dras village. On either side, the valley is bounded by bare and barren hills and towering precipices of limestone rock. The Dras river originates from Zojilla and, after taking a north-westward direction, enters the valley through a rocky gorge and flowing about 8 metres below the lowest terrace, leaves the valley again through a narrow passage to join the Indus river in the west².

The Suru Valley :

The Suru Valley constitutes a major part of the Kargil tehsil. Unlike the Dras Valley, this Valley is surrounded by lower hills which consist of a soft mixture of clay and sandstone. A

1 Kaul, S. C; *Beautiful Valleys of Kashmir and Ladakh*, P. 202
 2 Drew; *op. cit.*, P. 223

fertile stretch of land of alluvial gravel is found in the form of terraced fields between the Pashkum stream and the Suru river. The Suru Valley has comparatively a lower altitude, as most of its villages are situated at about 3,706 metres above the sea level. The Valley is also comparatively warmer and, therefore, vegetation is more abundant here than in the Dras Valley. Irrigation by canals is provided through water courses to the terraced fields which helps in raising crops of wheat, barley and grims (millets). Fruits like apples, mulberry and apricots are grown in the area. The climate and pattern of cultivation in the valley are almost the same as in the Indus Valley. The Valley is inhabited by people of the Balti origin who profess Islam and subscribe to the views of the Shia sect.

The Indus Valley :

The Indus Valley is important partly because it is the biggest centre of the Buddhist culture in the whole country and partly because it falls on the old Central Asian Trade Route. The famous Buddhist monasteries of Hemis, Thiksey, Shay, Likir, Lamayuru, Saspol and Bazgo are situated in this Valley. The ancient capital of the region and its present district headquarters viz. Leh is situated in this Valley, at an altitude of 3,496 metres¹. At Leh, the Valley takes a triangular shape, each side measuring about 10 kms., with the surface gently sloping upwards of the river. The town of Leh lies about 300 metres above the bed of the Indus. Compared to Dras, the Indus Valley of Ladakh is more attractive and warm in climate. As in other parts of the region, cultivated land is found in the form of terraced fields². However, the land is irrigated by side-streams gushing down from the hills. Wheat, barley and grims (millets) are the main cereals grown in the Valley; among fruits, apricots, grapes and even apples have a luxuriant growth due to a warmer climate in summer. At Hemis, penicil cedars are found in abundance around the famous monastrey. At Pitak, the cultivated land is irrigated by canals fed by the Indus itself. The Indus Valley is inhabited by two major communities of the region, viz. the Buddhists and the Muslims. The north-western part of the Valley is inhabited by Dokpas who owe their ethnic origin to Dardistan. Their Aryan features distinguish them

¹ Drew; op. cit., PP. 261-70

² Ibid. P. 310-16

clearly from the Baltis and the Buddhists who belong to the Mongoloid stock¹.

The Zanskar Valley :

The Zanskar Valley is situated south-west of Leh amidst amaze of mountains which make it difficult of access. Massive mountains, ridges and ravines constitute a greater part of the Zanskar Valley.

The inhabited part of the Valley consists of a triangular space about 12 kms., wide. As the Zanskar river flows below the terraced fields over boulders, the cultivated land is irrigated by streams issuing from side-valleys. Massive mountains with a brown hue surround the Valley in its north and east. Down below these mountains are found the remnants of huge glaciers which give the valley an awesome look.

Zanskar gets a long spell of severe winter which lasts for seven months in a year. The advent of spring in May is generally accompanied by avalanches from the mountains causing great inconvenience to the people. Cultivation of land is sometimes adversely affected by untimely snowfalls during the spring season. Except poplars which look like slender poles, few other trees grow due to the intensely cold climate of the valley.

The people of Zanskar are simple and honest though old fashioned. They speak a dialect which is not very different from the main Ladakhi language. The land available for cultivation is limited and the climate unfavourable. The main occupation of the people is, therefore, sheep breeding. However, nature has compensated the Valley with rich deposits of some minerals as well as herbs found on the slopes of its huge mountains.

The Nubra-Shyok Valley :

The Nubra-Shyok Valley is a large Valley situated along the Nubra and Shyok rivers on the northern side of the Leh range. The Leh range consists of massive mountains which separate the Nubra Valley from the Indus Valley. This Valley is more open and wider than the other Valleys of the region.

¹ Kaul; op. cit., P. 202

The presence of huge pastures, bushes, flowering plants and the ever-flowing streams of fresh water give the Valley a pleasant look. However, as most of the land surface is strewn with rocks and stones because of denudation, the land available for cultivation is limited notwithstanding the extensive size of the Valley. Though generally situated at the mouth of ravines, most of the villages in this Valley bear a pleasant look because of the presence of poplars, willows and fruit trees around them. The climate of the Nubra and the Indus Valley is more or less the same except in respect of the snowfall. The Nubra Valley gets lesser snowfall which hardly accumulates on the ground, thereby enabling sheep and cattle to graze for a longer period in the pastures.

Beyond the Nubra or the Lower Shyok Valley lies the Upper Shyok Valley which possesses a charm of its own as many of the majestic mountains and highest peaks of the world fall in it.

River System and Water resources :

The annual rainfall in Ladakh being scanty, the region is almost entirely dependent on irrigation by canals. These canals are fed by the waters of the Indus and its tributaries which constitute the river system of the region. The nullahs, streams and the rivers are fed partly by the melting glaciers and partly by the snow in the upper reaches of the region. The Indus flows from north-east to south-west of the region, receiving during the course of its flow, principal tributaries, viz., the Shyok, the Zaskar, the Nubra, the Suru and the Dras.

The River Indus :

The Old Ladakhi name for Indus is Singge-chhu which means the lion river¹. Being 28,970 Kms. long it is the 18th longest river of the world. Annually, the Indus carries around one billion cubic yards of water before it crosses the boundaries of the Jammu and Kashmir State. The minimum discharge of water at Leh varies between 3,000 gallons per second during winter to 6,000 gallons per second during summer². The river rises in the south-western Tibet at an altitude of 4,876.8 metres. After

flowing for about 322 Kms. it enters the Jammu and Kashmir State.

The Indus drains the northern highlands of the region where the rainfall is scanty. The northern limit of the drainage area is formed by the great mountain ranges of the Karakoram with the altitude varying between 7,620 metres to 8,534.40 metres. The Zaskar Range separates the Indus, the Jehlum and the Chinab Valleys. Besides being a source of irrigation to the arid lands, the Indus is also capable of producing hydel power resources. Where rainfall is meagre and the temperature low, people depend largely on artificial irrigation.¹

In most of the inhabited areas, people have constructed a large number of irrigation canals which irrigate the terraced fields where cereals, vegetables, fodder, fuel and timber are produced. Among fruits, apricots and apples are grown in the upper reaches and grapes at lower altitudes of the region. Floods do not cause any serious calamity save minor inundation, bank erosion and meanders. However, some of the worst floods which caused a heavy loss of men and materials in the Shyok Valley were those of 1841, 1844, 1858 and 1865. The latest flood on record is that of the 16th of August, 1979, caused by the melting of the Khomdan Glacier.

The Shyok is the principal tributary of the Indus. From its source in the neighbourhood of the Saser Glacier, it makes a sweep of 96 Kms. to the west and to the south. Therefrom, for 80 Kms. to Mandalik, it takes a south eastern course and then for another 80 Kms. flows down to the village Shyok in the south. This large stream derives its name from this village. A short distance above the north-western bend, the Shyok receives the water of Chang-chenmo stream and below the bend, it is augmented by the waters of Longkongma from the south-east. From Shyok to Hundar, it takes a west-north course over a distance of about 129 Kms. where it is joined by the Nubra river which is 161 Kms. in length from the north-west. It flows down in the same direction to its confluence with the Indus near Skinrato (7,673 ft.).

The Dras river has its source in the north of the Himalayan Range near the Zojilla pass. It covers a distance of 160 Kms. as

¹ Cunningham; op. cit., P. 84-96

² Encyclopaedia Britannica, 1975-Ed. P. 492

it flows north-east. The Wakha, the Suru and the Kuksar are its main tributaries. The Wakha stream has its source near Vinggela to the north of Himalaya. The total length of the Wakha is about 160 Kms. and that of the Suru river 100 Kms. All these streams unite their waters near Kargil. At the narrow gorge called Wolf's Leap, the river cuts the Trans Himalayan Range to form the Indus.

Locally known as Chiling Chhu, the Zaskar river is formed of two principal branches, Zaskar proper and Sun-Gul. The headwaters of the Zaskar river are the Yanam, the Sarchu and the Charpu, all of which rise to the north of Himalayan Range. The stream below the junction of the Charpu is called Linthi which flows in the north-westerly direction till it reaches Padam, the tehsil headquarters of Zaskar. At Padam, Linthi is joined by a small stream from the west and then takes a northerly course for 129.03 Kms. to its junction with the Indus opposite Nimu. About 40.32 Kms. above Nimu, the Zaskar receives the waters of Sun-Gul. The total length of the Zaskar river is 338.70 Kms.

Lakes and Springs :

Many fresh water lakes and hot springs at High altitudes are found in the eastern part of Ladakh. A brief description of some important lakes and springs is given below :

Pangkong Lake :

It is a narrow sheet of water extending from east to west through the whole length of Ruthong. It is situated at an altitude of 4,249 metres. The lake is 64 Kms. in length and 3.2 to 6.4 Kms. in breadth¹.

Spanggur Lake :

The Spanggur Lake is situated 8 Kms. south of Pangkong. It is 26 Kms. in length and slightly less than 3.22 Kms. in breadth.

Tshomo-Riri Lake :

This lake is a fine mountain-bound expanse of water about 26 Kms. in length and 4.8 to 8 Kms. in width. It is situated at

1 Cunningham; op. cit., P. 136

a height of 5,431.50 metres above the sea level. It is located in the middle of the plateau of Rokchu and has no outlet. As its water is slightly brackish, it does not suit human consumption. It freezes during winter, enabling both men and animals to walk over it. Near its eastern bank, it is 70 metres deep¹.

Tshokar "Kar-tso" Lake :

The Tshokar or "White Lake" is situated about 48.30 Kms. to the north-west of Tshomo-Riri at an altitude of 4,812 metres. It is irregular in shape and size. Its maximum length from east to west is 8 Kms. While its breadth is 4 Kms. Its water is not only brackish but also bitter.

Hanlo-Tsho Lake :

Hanlo Tsho, a fresh water lake in Ladakh, is mainly fed by the rivulet called Kongra-chhu which drains the lofty mountain ranges to the west of Tshomo Riri Lake.

Hot Springs :

There are several hot springs in different parts of Ladakh. At Puga hot springs exist over a length of 3.22 Kms. in the bed of a rivulet called Rulangchhu. These vary in boiling strength from gentle bubbling to strong ebullition and in temperature from 26.69°C to 64.4°C. The hot springs at Chumathang are reported to have medicinal properties like those at Chushul².

1 Cunningham; op. cit., P. 138

2 Ibid. P. 144

Geological Age :

Here is a brief description of the geological antiquity of the region :

Geological Antiquity :

The geological antiquity of the region is as follows :

FORMATION	AGE
Alluvium of Indus, fans, etc.	Recent to sub-recent.
Terraces of Kargil basin.	Middle to Upper pleistocene.
Dras Volcanics and Indus.	Upper Cretaceous Wealden to Danian
Flysch series.	Cretaceous.
Cretaceous system of Ladakh.	Jurassic. ²
Jurassics of Ladakh.	Triassic.
Triassics of Ladakh and Karakoram.	Pre-Cambrian.
Silkhala Series.	

Geological Formation :

"Fundamental Gneiss" with intrusive granites :

Crystalline rocks, granites, gneisses and Schists, occupy large areas of north-west Himalayas forming the core of Zaskar and ranges beyond in Ladakh and Baltistan. These rocks were all regarded as igneous and were supposed to be Archaean in age. Later investigations have, however, proved that these gneisses are actually of an intrusive origin having invaded rocks of various ages at a number of different geological periods. Dr. D. N. Wadia is of the opinion that a considerable part of this crystalline complex is of precambrian metamorphic origin forming the basement on which all the subsequent geological formations rest. According to him the three chief constituents of the Himalayas basement complex are¹ :-

- The metamorphosed sedimentary Archaean.
- Intrusive granite and gneisses of later periods.
- Remnants of Archaean granites granulites, orthogneisses and schists.

Distribution :

With regard to the distribution of the gneissic rocks in the area, Dr. Wadia states that the main crystalline development is

1 Wadia, D. N. Geology of India, P. 260
2 Ibid. PP. 242-43
3 Ibid. P. 144

in the north and north-east portions in the Zaskar Range and the region beyond it, that is, in Gilgit, Baltistan and Ladakh. It is from the circumstances of the prominent development of the crystalline core in the Zaskar Range, in continuity with the Central Himalayan axis, that the range is regarded as the principal continuation of the Great Himalaya chain, after its bifurcation at Kangra. The other branches, the Pir Panjal, is regarded only as a minor off-shoot. North of the Zaskar, the outcrop of the crystalline series becomes very wide, encompassing almost the whole of the region up to the Karakoram, with the exception of a few sedimentary tracts in central and south-east of Ladakh. The largest occurrence of hornblende-granite is in the mountains between Astor and Deosai. Its post-Cretaceous age is definitely proved by its intrusive contact with orbitolina limestone at the Burzil pass (4,270 metres). Tourmaline-granite is of relatively subordinate occurrence in dykes and pegmatite veins. Rocks of the oldest sedimentary system occupy large tracts of Ladakh and Gilgit.

According to R. Lydekker who made a geological survey of Kashmir in 1883, grouped all the stratified formations of Kashmir into three broad divisions.....the Panjal, the Zaskar and the Tertiary groups. Middlemiss made a comprehensive geological survey of the State during 1908-1917. His researches have revealed a series of fossiliferous strata in different parts of the State including Ladakh belonging to various divisions of the Palaeozoic and the Mesozoic system of the later, the Jurassic and the Cretaceous out-crops dominate the mountains of Ladakh.

In the Zaskar area of the Kashmir basin, the following sequence of Jurassic deposits is known :—

Giumal sandstone.	-----	Cretaceous
Spiti Shales.	-----	-----
Kioto Limestone	Tagling State, including the Sulcacurus beds.	Jurassic.
	Para stage, including the Megalodon limestone.	
Monotis Shales.	-----	Triassic.

A sequence, roughly similar in many respects to this is traceable in some out-crops in the central and southern parts

of Ladakh, resting conformably upon the upper Triassic Limestone. These out-crops form part of a broad basin of marine Mesozoic rocks situated upon the inner flank of the Zaskar Range, and are connected with the Jurassic formation of Spiti by flying on the same strike.

South of Ladakh, running along the Indus Valley is a band of Cretaceous with ophiolites comprising the flysch facies as well as mafic and ultra-mafic volcanic rocks of the Dras volcanic type just described. The former include the characteristic Hippuritic limestone and beds containing *Cryphaea Vesiculosa*. The Cretaceous band runs all the way from Kargil and beyond to Rupshu. The Ladakh Cretaceous is compactly sandwiched in between the wide Jurassic-Triassic area to the south-west and the Indus Eocene belt running closely along the river valley to the north-east through Leh. The south border of the belt is one of tectonic contact with north directed thrusts¹.

Middle and Upper Cretaceous sediments containing orbitolina and Hippurites are met with in Chitral underlying the Tertiary Reshun conglomerate.

The thick pile of volcanic ejectments described above, with intercalated sedimentary layers and lenses of limestone containing orbitolina and other foraminifera corals and echinoids, runs from south-east of Astor to beyond Dras in Ladakh. The mineral chromite is associated with the gabbro and serpentine intrusive into the series. There is local concentration of chromite into workable ore-masses which would be of economic importance in a more accessible locality. This is the north-west extension of the basal part of the much more extensive zone of Eocene volcanic and marine sediments of the Upper Indus Valley from Kargil to Hanle in south-east Ladakh. The vertical extent of this elastic volcanic series reaches several thousand metres and in its width the belt is over 20 Kms. across the strike where it is traversed by the Burzil Valley. Dolerite, Gabbro and Pyroxenite masses and stocks, together with Bathyliths of Hornblende-granite are injected into these rocks and have given rise to a varied suite of alteration products.

The tertiaries of Ladakh rest unconformably over gneissic and metamorphic rocks. The base is of coarse felspathic grits

and conglomerates, followed by brown calcareous and green and purple shales. The shales are overlain by a thick band of blue shelly limestone, containing ill-preserved nummulites. This conglomerate limestone is succeeded by a coarse limestone-conglomerate. On either extremity of this sedimentary basin there is a large development of igneous rocks of acid as well as extremely basic composition. They include both contemporaneously erupted dark basalts with ash and tuff-beds, as well as dykes and sills of intrusive granite and quartz and augite-porphyrries together with peribotites and gabbros. In the north-west prolongation of the Kargil band of Eocene volcanics and in Dras, there is a close association of tuffs, volcanic ash-beds, lavas and augite-porphyrries with limestone, containing *Alveolina*, *Dictyoconoides*, Nummulites and Gastropods.

Peter Misch (1935, 1936 1949), while investigating the Nanga Parbat (8,125 metres) recognised the Salkhala in the form of black slates and phyllites with marble intercalations. Many granites and gneisses are also known from the area, some of which may be older than the Salkhala, metasediments forming the base for them while others are intrusive in the Salkhalas. The older granite and gneisses are Puga granite, Chushol granite, Ladakh granite, Leh granite etc.

A sequence roughly similar in many respects to Spiti Jurassics are traceable in out-crops in central and southern parts of Ladakh, resting comfortably upon the upper triassic limestone. The Jurassics of Ladakh have yielded many fossils. A meagre account of cretaceous system of the region is known from its south-east part in Rupshu. These are composed of an unfossiliferous white lime stones forming some of the highest peaks of the Ladakh Range. Discovery of the Cretaceous fossils *Grypnea-vesiculosa* from Sajna, indicates the presence of Cretaceous formation in Ladakh.

Dras Volcanics (Upper Cretaceous) :

Peter Misch investigated the Nanga Parbat thoroughly and recognised the two original formations within the metamorphics which are detailed as under :—

- | | |
|--------------------------------|---|
| 1. The Salkhalas | Black slates and phyllites with marble intercalations. |
| 2. The overlaying basic lavas. | A thick section of tuffs a norotic intrusion sharp but comfortable contact. |

¹ Wadia : op. cit., P. 143

From the Nanga Parbat region, Flysch-like deposits and their related ophiolites form a continuous belt passing through Dras and Kargil and into the Upper Indus Valley. In the north-western part from south Astore to Dras and including the Burzil pass the volcanics and pyroclastic sediments have been found and are called the Dras volcanics. On the basis of orbitolina bearing lenses and blocks of limestone associated with these volcanics an upper Cretaceous age has been assigned to the volcanics.

The Dras volcanics, in the widest sense, consist of over 2,000 metres of purple and green laminated siliceous ash beds and tuffs with red charts or Jasper alternating with slates, agglomeritic slate and agglomerites. More subordinate are flows of angite and esite to augite basalt. Chloritization and epidetization are common.

Pleistocene Terraces of Kargil Basin :

Above 120 Kms. north-east of Kashmir basin lies the small basin of Kargil which is famous for well developed pleistocene terraces and their relation to glacial history of high Himalayan region.

Mineral Resources :

The following are the known minerals of Ladakh :

1. Borax :

Borax deposits are found in the form of surface encrustations in the floor of the Puga Valley (33° - $13'$, 78° - $19'$). These deposits are spread over an area of about 76,200 sq. metres, in the central and eastern parts of the valley. The thickness of the encrustations varies from 3 mm to 64 mm, and at places it is 135 mm¹.

Borax is usually of white to dirty white colour, the white colour changes in proportion to the percentage of clay impurities in the mineral. At some places, borax with a pinkish or a greenish colour is also found. The reserves of the crude borax in the Puga valley are estimated at 5,423 tonnes which after allowing a 10% drying margin may be put at nearly 4,900 tonnes.

¹ Source : Directorate of Geology and Mining, J and K Government, Srinagar

Borax behaves like an agricultural crop, once the mineral is scrapped from the valley floor, it gets precipitated due to thermal spring activity. Experiments have revealed that there is an average replenishment of about 0.2 ton per 100 Sq. metres, per year thereby adding 1,250 tonnes of crude borax and 550 tonnes of refined borax to the total reserves of the valley annually¹.

2. Sulphur :

Sulphur in its native form is found both in crystalline and amorphous state as well as in association with the gypsiferous quartz-mica schist and quartz-mica schist in different areas of the Puga Valley. In its crystalline and amorphous form, associated with schist, it is found in the northern and southern hill slopes of the valley, the northern slopes being richer in deposits. The northern slopes of the valley also possess deposits of sulphur in amorphous form combined with borax encrustations. It is also found in the floor of the valley. The valley is well known for its hot-water springs which contain encrustations of sulphur.

The total reserves of crude sulphur in the valley tentatively calculated up to a dip down extension of 30 m, have been estimated at 2,10,000 tonnes.

3. Limestone :

Large deposits of good quality limestone have been found to occur as bands in Indus flysch formation and as cliffs in Triassic limestone formation. The Indus flysch bands are found at Nurla, Khaltsi and at Marichal while the reserves of Triassic limestone formation have been found at Budhkhharbu. The reserves are of good quality with 42% CaO (Calcium Oxide) with blue grey colour and is 120 m thick. The known reserves of limestone in the region are estimated at 5,25,000 tonnes up to a dip down extension of 15 m., which are likely to increase as more areas are covered by survey.

4. Copper :

Specks of native copper are reported from Tangza and Marling in Zaskar. Copper mineralisation in the form of malachite and azurite is reported from quartz, veins at Asbat-

Sporadic occurrences of this mineral are also reported from Habotlingla and Chummunla.

5. Chromite :

The mineral has been traced in a locality in the north-eastern direction from Dras up to Marpala over a distance of about 10 Kms. The other places where chromite has been found are Gason, Henle, Nioria, Tasgam, Khibar and Kamirup in Zaskar.

6. Gypsum :

Gypsum in pure white flakes or in compact rocks with crystals of sulphur attached to it is found in the sulphur mines of the Puga rivulets.

7. Gold :

In the past, the practice of alluvial gold washing obtained in parts of Ladakh but it was given up as the exercise was not economically viable.

8. Flourite :

Flourite mineralisation has been noticed at Chumthang in Conglomerate sandstones, grites and subordinate shales of Indus formation. These are in close contact with the intrusive Chumthang granite. The flourite reserves with a visual 50% grade are estimated to be of the order of 8000 tonnes.

9. Stenlite :

This mineral has been reported from Puga Valley and Kamirup as veins in the carboniferous sediments.

10. Sulphides :

Sulphides such as chalcopyrite, bornite, galena azurite, etc. have been reported from the Zaskar area.

F L O R A

The herbaceous elements of the Ladakh region represents mixture of the alpine and temperate elements of the neighbouring as well as of some distant regions like Tibet, Afghanistan, Siberia and Europe. The trees, on the other hand, are mostly introduced.

A list of plants indigenous to the region is given below :

Corydalis adiantifolia, *C. Tibetica*, *Atellamthera perpusilla*, *Braya aenea*, *B. Tibetica capsella thomosoni*, *Eramania*, *alliflora*, *Pyenoplinthus Uniflorus*, *Dianthus*, *Deltoids*, *Stellaria Tibetica*, *Astragalus ciloilatus*, *Agraciopipen*, *A. meloustachys*, *A. Oxyodon chrysanthemum tiketicum*, *T. nanum* etc¹.

R. R. Stewart has distinguished three main elements in the flora of Ladakh, namely alpine, desert and oasis. The alpine element is confined to narrow belts below the melting snow and along the upper courses of streams. Being a high altitude desert, its flora is mainly related to the Tibetan and Siberian floristic elements. The flora of oasis is scap cosmopolitan as it comprises a variety of exotic and indigenous plants. On the whole, the region is dominated by the Zerophytic vegetation². Except in the Nubra and other river valleys, the trees element is almost non-existent. *Aipponhac* scrub and *Caragana Pygmaea* together with *Acantholimon hycapodioides* constitute the principal source of timber for the construction of houses, bridges, beams and rafters as well as for furniture. The major families of flowering plants are *compositae*, *pagilionaceae*, *cruciferae*, *Labiatae-Astragalus*, *Artemisia* and *polygonum*.

Having a wide range of distribution, the flora of Ladakh possesses some characteristics which are at once arctic, temperate as well as subtropical in essence. However, the floristic elements which it shares with its neighbouring countries like Tibet, and Afghanistan or with the adjoining high altitudinal areas of the Kashmir Valley are predominant.

Among the species which it shares with Kashmir and other regions the following are noteworthy :

1. Species common with Kashmir :

Aguilegia moorcroftiana, *Delphinium cashmerianum*, *Oxygraphis polypetala*, *Ranunculus hirtellus*, *R. hyperboreus*, *R. laetus Trollius*, *Meconopsis A. Culeata*, *Corydalis diphylla*, *Arabidopsis himalaica*, *A. mollissima*, *Capsella bursa-pastoris*, *Drabacacherica*, *Sisymbrium Sophia*, *Lepidium latifolium*,

¹ Stewart; Ralph Randles, The Flora of Ladakh, Western Tibet, PP. 580-87

² Ibid. P. 579

Thalspi alpestre, *Arenaria foliso*, *A. kashmirica*, *Dianthus jacquemonti*, *Lychnis himalyensis*, *Silene moorcroftiana*, *Stellaria media*, *Geranium pratense*, *G. luberaria*, *Astragalus circerifolius*, *A. rhizanthus*, *A. subumbellatus*, *Lotus corniculatus*, *Medicago lupulina*, *oxytropis cachemerians*, *sophora*, *moorcroftiana*, *Cotoneaster nummularia*, *potentilla*, *ambigua*, *P. bifurca*, *P. desertorum*, *Pser icea*, *Rubus Saxatalis*, *Bergenia stracheyi*, *Saxifraga jacquenmountiana*, *R. Tibes orientalis*, *Sedum owersi*, *Epilobium latifolium*, *Bupleurum longicaule*, *Ferula jaeschkeana*, *Heracleum candicans*, *H. thomsoni*, *Valeriana dioica*, *V. Stracheyi*, *Achillea millefolium*, *Artemisia absinthiwn*, *Brachyactis Pubescens*, *Erigeron bellidioides*, *Lappula barbata* etc¹.

2. Species common with Afghanistan :

Clematis orientalis, *Isopyrum grandiflorum*, *Thallictrum alpinum*, *podophyllum emodi*, *Papaver nudicaule*, *Arabidopsis thalianum*, *Barbarea vulgaris*, *Brassica nigra*, *Draba alpina*, *D. Stenocarpa*, *Conringia planisiligua*, *Mathiola odoratissima*, *Parrya nudicaulis*, *Sisbrium columnnea*, *S. Loellii*, *Lepidium ruderales*, *Turritis glabra*, *A. renaria*, *griffithii*, *Dianthus crintus*, *Stilene vulgaris*, *Stellaria palustis*, *Geranium collinum*, *G. meeboldii*, *Astragalus coluteocarpus*, *A. rhizanthus*, *Indigofera hererantha*, *Malilotus officinalis*, *Sophora alopecuroides*, *Trigonella corniculata*, *Potentilla atosang-uninea*, *P. multifida*, *P. scaricca*, *Sibbaldia cuneata*, *Rosa eglanteria*, *R. webbiana*, *Bergenia Stracheyi*, *Saxifraga sibirica*, *Ribes alpestre*, *Sedum roseum*, *Bupleurum raleatum*, *Carum carvi*, *Ferula jaeschkeana*, *Ligusticum thomsoni*, *Prangos pabularia*, *Lonicera heterophylla*, *Galium aparine*, *G. tricornis*, *G. verum*, *Rubia tibetica*, *Dipsacus mitis*, *Anaphallis controrta*, *A. virgata*, *Asterflaccidus*, *Aretium*, *Lappa*, *Artemisia sacrorum*, *Brachyactis roylei*, *Centurea wallichii*, *Erigeron multiradiatus*, *Bhaphalium huetoalbum*, *Koep- aristata*, *Codonopsis avata*, *Trichometum Venetum*, *Swertia petiolata*, *Lappula barbata*, *Lycopsis arvensis*, *Rochelia stylaris*, *Pedicularis bicornauta*, *Scrophularia dentata*, *Veronica perpusi- la*, *Nepeta clarkei*, *N. Floccosa*, *N. glutinosa*, *N. Leucolaena*, *Atriplex rosea* etc².

1 Kachroo, P: Flora of Ladakh, P. 30-31
2 Ibid. P. 30-31

3. Plants common with Tibet :

Stachys tibetica, *Nepeta tibetica*, *N. botroyoides*, *Elsholzia densa*, *Onosoma hispidum*, *Matfiastrum tibetiana*, *Lomatogonium themosoni*, *Gentiana hugelii*, *Primula elloptica*, *Waldhem- iastoliczkai*, *Tanacetum*, *Fruiticulosum T. tibeticum*, *Saussurea subulata*, *S. thomosoni*, *Leontoppogium nanum*, *Olgaea thomos- onii*, *Inule falconeri*, *Crepis Stoliczkai*, *Chrysanthenum tibeti- cum*, *Rubia tibetica*, *Hippuris Vulgaris*, *Cotyledon thersirolia*, *Astragalus Zanskarensis*, *A. tribulirolius*, *A. oxyodon*, *A. gracili- pses*, *A. confertus* etc¹.

4. Plants common with Turkistan :

Arenaria serphyllifolia, *Dianthus anatolicus*, *D. Seguieri*, *Sagina sagionoides*, *Stellaria graminea*, *Vaccaria pyramidata*, *geranium collinum*, *G. Pratensis*, *Melilotus alba*, *M. officialis*, *Sophora alopecuroides*, *Trifolium pratense*, *Lomatogonium carinthiacum*, *Cuscutaapprixinate*, *Hyoscyamus Pussilus*, *Lycium rutheniruthenicum*, *Chenopodium albur*, *C. botrys*, *C. hybri- dum*, *Kochia prostrata*².

5. Plants common with neighbouring Chinese Districts :

Anemone rupicola, *Podophyllum emodi*, *Meconopsis acule- ata*, *Corydalis flabellata*, *C. meifolia*, *Arabis glandulosa*, *Car- domine*, *Macrophykla*, *Lepidium Capitatum*, *Ceranium Sibiri- cum*, *Potentilla ambegna*, *P. bifurca*, *P. salesoviana*, *Galium paucilorum*, *Artemisa*, *sieversia*, *Lactuaca tartarica* etc.³.

6. Plants common with Siberia :

Isopyrum grandiflorum, *Ranunculus cymbalariae*, *R. pul- chellus*, *Arabidopsis humile*, *Erysimum hieracifolium*, *Torularia hamilis*, *Erodium stephanianum*, *Geranium collinum*, *G. Sibericum*, *Astragalus densiflorus*, *A. nivalis*, *A. subulatus*, *Medicago Lupulina*, *Oxytropis Lapponica*, *Rosa eglan- taria*, *Rubus saxatilis*, *Sedum quadrifidum*, *Artemisia desertor- um*, *Lactuaca scariola*, *Tussilago forfora*, *Gentiana aquatica*, *G. Squarosa*, *Lomatogonium carinthiacum*, *Pracocephalum moldavicum*, *Chenopodium foliosum*⁴.

1 Kachroo; op. cit., P. 32
2 Ibid.
3 Ibid.
4 Ibid.

7. Plants common with North and Central Europe :

Chenopodium glaucum, *C. foliosum*, *Atriplex rosea*, *Lamium amplexicale*, *Montha longifolia*, *Orobancha cernua*, *Lycium ruthenicum*, *Cuscuta europea*, *Lycopsis arvensis*, *Aserugo Procumbens*, *Primula sibirica*, *Campanula latifolia*, *Heracium viridum*, *Cardus marianus*, *A. ramosa*, *Gagea tricornis*, *Bupleurum falcatum*, *Epilobium roseum*, *Ribes alpestre*, *Saxifraga oppositifolia*, *Trifolium pratense*, *Geranium pratense* etc.¹.

The floristic surveys conducted by the Kashmir University have revealed that out of 611 species collected from different areas of the region, 540 species are dicots, 65 monocots and the rest gymnosperms. The families having maximum generic distribution are² :

Composite (34) Cruciferae (26) Boraginaceae (16) Chimnodiaceae (13) Leguminosae, Raunculaceae Caryophyllaceae, Umbelliferae (each with 11) and Labiateae (9).

Across Zojila, on the northern side of Kashmir Valley, the Dras and the Suru Valleys represent a transition zone in the flora of the region. In general, the alpine flora of Kashmir Valley which grows above 3,300 metres is also found in this transition zone. This flora is represented by alpine mesophytes, such as the species of *D. elphenium*, *Potentilla Leontopodium*, *Taraxacum*, *Aster*, *Polygonum*, *Podophyllum emodi*, *Lobelia*, *Kashmiriana*, *Lotus corniculatus*, *Astragalus rhizanthus*, *Rosa Moschata*, etc. *Phragmites*, *Karka*, *Equisetum* sp. and *Sonchus oleraceus* have a rich growth along the sandy banks of Dras river and its side streams³. The snow covered mountain tops of Minemarg and Gumni are covered with *Polygonum affine*, *Potentilla bifurca*, *Plendicularis siphonantha*, *Parasia pahistria*, *Geranium pratense*, *Bupleurum longiceule*, *Stachys sericea*, *Brachyastrum pratense*, *Bupleurum longiceule*, *Stachys sericea*, *Anaphalis noliacea*, *Galium boreale* and some other plants of this family. These plants are also found in the Suru Valley, Rusila and Baralacha La areas. In Rupshu area the Tibet species are found up to an altitude of 7,500 metres. The plants of these species are represented by *Oxytropis lapponica*, *Potentilla multifida*, *Nepeta tibetica*, *Plantago minima*, *Delphinium brunonianum*, *Lichin macror-*

tiza, *Polygonum sibiricum*, *Sedum tibeticum*, *Arabis tibetica* etc. However, these plants are prostrate and have small leaves growing in rosettes¹.

At and around Leh and Nubra, trees like *Salix Alba*, *S. deppeoides*, *Populus deltoides*, *Juglans regia* grow along with the following plants :—

Acautholimon lycopodioides, *Myricaria elegans*, *Capsella burrapastoris*, *Lindelia anchusoides*, *Scopolia praecox*, *Echinops pectinatus*, *Redowskia tibetica*, *Potentilla nivea*, *Euphorbia tibetica*, *Laucea tibetica*, *Iris*, *Ensata carum carvi*, *Lepidium apetalum*, *Potentilla ausserina*, *Astragalus civiolatus*, *Strachys tibetica* etc.².

From Zojila in the south to Chushul in the north the entire area has been classified as Alpine scrub Forest Zone. Ladakh has no forests worth the name except poplars and willows which are mostly confined to river banks and nallah beds. The species of trees and scrubs which are found in the region are listed under³ :—

Salix elegans, *S. alba*, *S. sclerophylla*, *S. fragilis*, *Populus alba*, *P. euphratica*, *P. caudicans*, *P. nigra*, *P. ciliata*, *P. angustifolia*, *Juniperus macrocarpa*, *J. communis*, *Myricaria prostrata*, *Aippophaea rhamnoides*, *Rosa webbiana*, *Tamarix gallica*, *Elaeagnus hortensis*, *Caragana pygmaea*, *Ephedra*, *V. ulgaris* and *crassifolia*.

However, under the afforestation scheme of the State Government and the Desert Development Programme of the Central Government, steps are being taken in the direction of encouraging the growth of some fast-growing exotic species which are being procured from other hemo-climatic regions of the world.

F A U N A

Ladakh provides, a natural refuge and habitat to numerous wild and game animals some of whom belong to rare species which are found only in the most inaccessible terrains of this region. Its fauna is unique and precious as it comprises such animals as the Kiang, the Yak, the Ibex, the Markhor, numerous

¹ Kachroo; op. cit., P. 33

² Ibid. P. 26-27

³ Ibid.

¹ Kachroo; op. cit., PP. 26-27

² Ibid. PP. 21, 28

³ Ibid. P. 20

types of wild sheep, the Marmot, the Lynx, the Snow Leopard, etc. The table-lands of the Indus and the Rupshu abound with the Wild Horse, the Hare and the Marmot. The rugged valleys and the glens are the natural habitat of the Deer, the Antelope, Wild Sheep and Wild Goats of many Kinds. The following is a brief description of various kinds of game and wild animals found in the region.

Nyan (Ovis Ammon) Hodgsoni :

Ovis ammon is a large sheep, the male is called Nyan and the female Nyauma. It is also called Hodgsons sheep being the largest sheep both on account of its size and weight. Nyan is famous as the king of Ladakhi sheep. On an average, the Nyan measures over 152 cms. from head to tail and over 110 cms. at shoulders, the horns being nearly 150 cms. long. The sheep may weigh up to 127 Kgs. Its colour is greenish brown above and white under neath¹. The ammon wander all over the region between altitudes of 4,200 metres and 4,800 metres in search of safety and food. They are particularly found in Changchenmo, Rupshu, over the steep plains of Pangkong Lake, in Depsang and on the plateaus of Karakoram. Due to indiscriminate shooting, however, their number has considerable dwindled.

Shapo (Ovis Vignei) :

Shapo is also called Urial. It is a wild sheep with twisted horns which measure about 100 cms. It is mostly found at lower altitudes such as in the Indus and Shyok Valleys and at Spituk, Khalsi and Fatula.

Bharal (Ovis Nabura) :

Bharal is a beautiful and well built sheep resembling Shapo in size and weight. The rams carry large olive green horns over 89 cms. long while the ewes have shorter horns. Its mutton is rated very high in deliciousness. It inhabits steep ground during summer at altitudes ranging up to 5,500 metres, but during winter they descend to lower altitude². They are particularly found in Nubra, Zaskar, Rupshu and Khaltsi.

¹ Ganhar; J. N., The Wild Life of Ladakh, P. 15

² Ibid. P. 23

Marcopolo's Sheep (Ovis Pali) :

This is an excellent type of wild sheep found on the high plateau of Karakoram and Depsang. It compares well with ovis ammon in respect of its size and weight. It was first noticed by Marcopolo in Pamirs during his travel in the 13th century. It measures 100 to 120 cms. at shoulders. It has very long horns which generally measure up to 150 cms. or more¹. However its long horns could not save it from attacks by the beasts of prey.

Ibex (Capra Sibirica) :

Ibex belongs to the category of wild goats. It is a very handsome, stoutly built animal with long sweeping horns and a fine and soft fleece under its stiff hairy coat. In Ladakh, the animal is called **Satim** and in Kashmir **Kel**. In colour, an Ibex may be brown deep chocolate or shady cream. The soft and warm under fleece of the Ibex has made it an object of indiscriminate hunting and shooting with the result that its population has considerably declined in recent years.

Markhor (Capra Falconeri) :

Markhor is a magnificent animal of considerable size with long horns which measure up to 150 cms. and a bodily weight of about 100 Kgs. The horns are spiralled and form a V-shaped figure. The animal grows a fine black beared under its chin.

The Ladakhi name for the animal is Rapho-chhe or the great goat. It is also known as the king of wild goats. However, its well known Persian name, Markhor, which means snake-eater, is based on the belief of Dards, Baltis and even Kashmiris that capra falconeri does actually eat snakes and after eating them froths profusely on rocks. The pottery e. g. Zaharmohar made from such rocks is believed to have medicinal properties besides being sensitive to poisonous substances.

Goa (Gazzela Picticaudata) :

Goa is a wild deer with beautifully ringed horns, graceful features and a sandy grey colour. It weighs about 20 Kgs. This beautiful gazella has become very rare. Only 150 of them

¹ Ganhar; op. cit., P. 19

are believed to exist in the region at present. It is found in the undulating plains of Rupshu and Chang-Chenmo.

Chiru (Pantholops Hodgsoni) :

The Tibentan antelope known as Chiru in Ladakh is a highly prized deer because of its manifold qualities. Its under-fleece called "Shahtoos" is an extremely delicate, warm and soft woollen fibre which constitutes the raw material of the renowned Kashmiri shawl whereas its meat is very delicious, its skin is used for making ladies coats which fetch high prices. Unfortunately for these very qualities, this beautiful game animal has been most favourite target of attack by the hunters and consequently this species is facing near extinction.

Chiru measures 75 to 85 cms., at shoulders and weighs between 40 to 50 Kgs. The male has about 60 cms. long horns while the female has none. Its colour is usually brown and black. The Chiru is generally found in the Chang-Chenmo Valley, the area known as Aksai-Chin and along the grassy streams beds of Lingztang and in the higher reaches of the Shyok Valley.

Hare (Gonus Lepus) :

It is a beautiful game animal found all over Ladakh especially in Rupshu, Chang-Chenmo and above the Pangkong Lake. The Ladakhi hare, otherwise well known as Khargosh elsewhere, has soft thick woolly fur with a bluish colour. The Ladakhi name, **Ribong** corresponds in meaning to its Persian equivalent Khargosh, because of the ass-like ears the animal possesses.

Wild Yak (Bos Grunnilens) :

Another distinguishing feature of the fauna of Ladakh is the existence of a strange type of wild ox, called Yak. Locally, it is called **Dong** or **Donkh**. It is a beast of considerable size measuring over 150 cms. at shoulders and about 200 cms. in length. Its weight sometimes exceeds 225 Kgs. The Yak grows long black hair over its body which reaches down to its legs, giving it a clumsy appearance. The male has horns but the female has not. It is a firm footed animal used as a beast of burden in the region. The Yak mixes and even crosses with the cow, the off-spring of the union is called **Zho** (Male) and **Zhomo** (female).

The wild yak which is a very ferocious beast occupies the tablelands and plateaus of Chang-Chenmo and Aksai-Chin but at lower altitudes such as Leh it generally does not exist.

Kiang (Eguus Heminus Kiang) :

Kiang is a wild animal resembling a mule. It has brown and white colour and a black mane. Though handsome in shape, it is unfit for load carrying as well as for riding. As such, it is seldom tamed. It has an interesting habit of galloping at high speed and trotting in circles, when it smells danger, it brays loudly, sending signals to his fellow denizens all around¹. The Kiang is found in Rupshu, Changthang and Chang-Chenmo areas of the region.

Marmot (Arctomys Himalayauns) :

Marmot is a strange little animal resembling a squirrel or a big mouse. Its size varies between 60 cms. to 90cms. It has a golden or a reddish brown colour with a long bushy tail. In Ladakh it is called Drun or Drin. However, its fur is not suitable for use as it is wiry and coarse.

Marmot spends long winters in its burrow subsisting either on the grass and roots or on the accumulated fat of its own body. At the sight of a dog, the marmot utters shrill cries to startle him. And when the dog tries to jump at it, the marmot slips into its burrow for cover. He repeats it till the dog is compelled to give up the chase in dismay. It is mostly found in Baltistan, Zojilla, Dras, Rupshu and Khardong-la².

Snow-Leopard (Felixuncia) :

There being no lions or tigers in Ladakh, the snow-leopard is the only member of this family which has adapted itself to the peculiar geographical conditions of the region. It is generally found at high altitudes near the snow line in various parts of both Ladakh and Baltistan.

The snow leopard measures about 60 cms. at shoulders with a length of about 200 cms. from head to tail, the tail accounting for nearly half the total length of the body. As such

¹ Ganhar; op. cit., P. 7

² Ibid. P.9

it is smaller in size than a tiger or even Panther. It is covered with a soft woolly coat and thick fur of grey colour interspersed with black or dark grey spots. Its beautiful skin is used for making fur coats.

This wild beast of prey known as shun, schan, sah or safed cheetah in Ladakh and Kashmir is feared very much by the local population as it heavily preys both on the game and domestic animals of the region as well.

Lynx (Felixlyn Isabellinus) :

The Lynx locally known as **Ee** or **Ech** looks like a big cat measuring about 100 cms. It possesses almost the same nocturnal and preying habits as the snow leopard. Though now rare like the leopard, it is still found in Rupshu and Zaskar areas. It generally prefers to live under the cover of dense vegetation in order to easily prey upon game animals like ibex, goats, birds as well as domestic animals like sheep, hares and pigeons.

It is a keen sighted beast, covered with a soft fur of sandy grey colour which is highly prized by the furriers.

Shanko (Canis Lupus) :

It is a wolf found in Rupshu and some other parts of the region. In colour it is black or grey. Classed as Vermin, Shanko has also nocturnal habits. It takes a heavy toll of flock and game animals.

Fox (Vulpes Vilpes) :

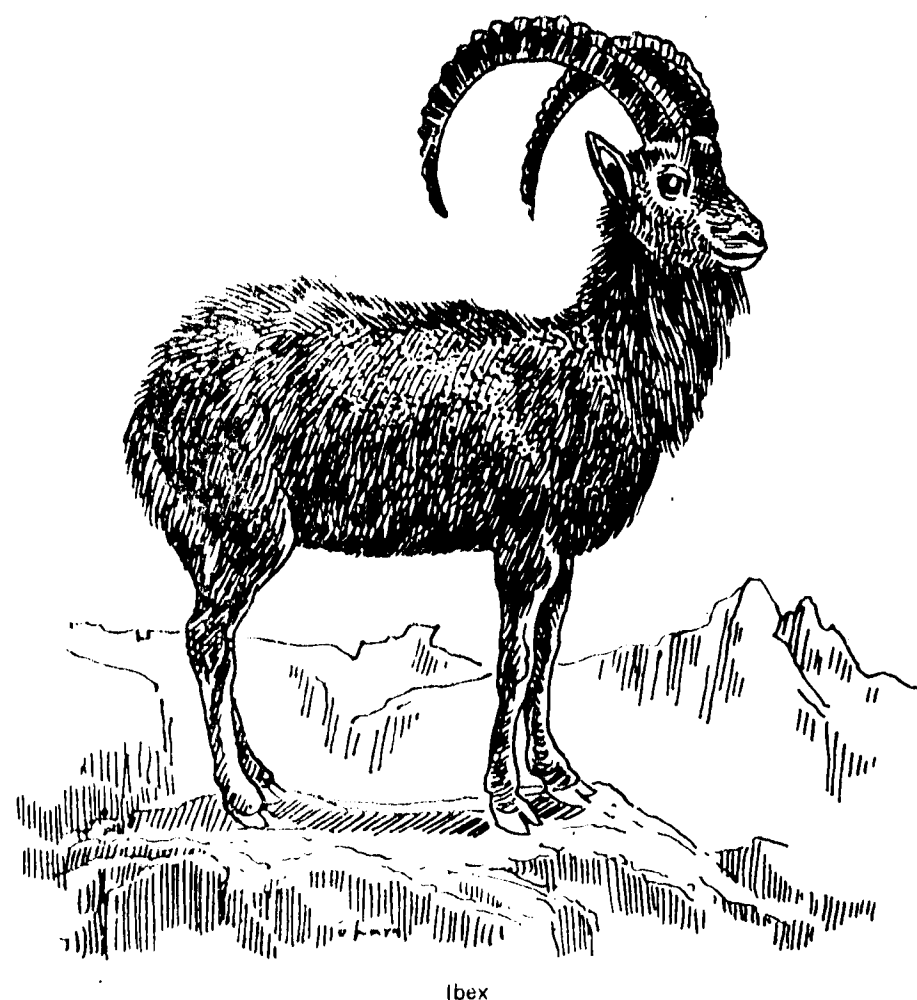
It is found all over the region. Its colour varies from yellow to dark grey.

Wild Dog :

It is also a vermin, an abnoxious beast preying heavily upon the nomad's flocks and game animals. It is a ferocious wild beast found at high altitudes of the region.

Avi-Fauna :

Ladakh is poor so far as avi-fauna is concerned. It is so because the region is barren. It has few trees and no forests and its lakes are also salty. However, occasionally one may find (Partridges) snow pheasants or eagles (locally called Gyap-lo).





Markhor



Goa head



Chiru head



A unique Ammon head



Snow Leopard



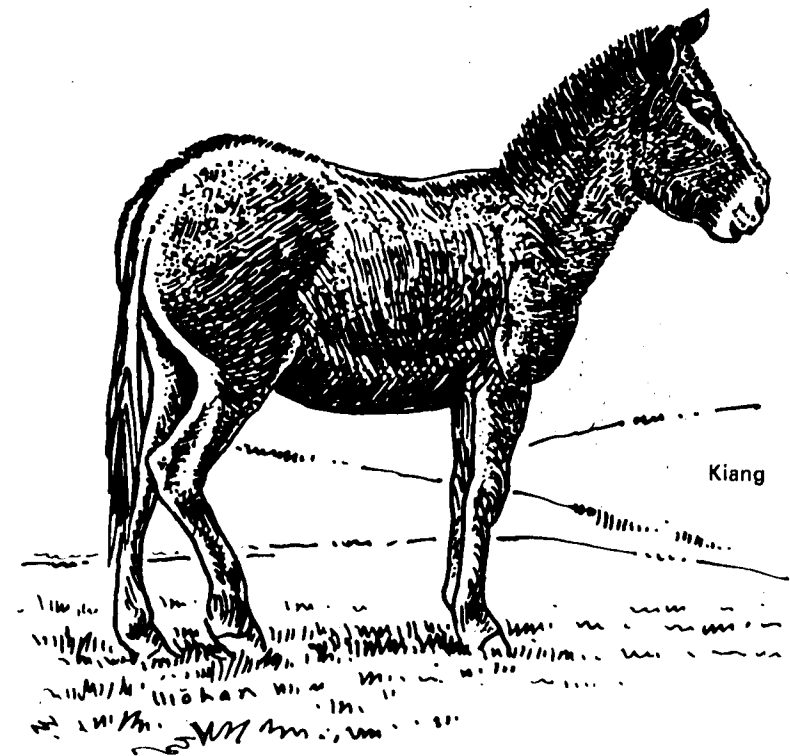
Wild Yak



Ammon head



Poli's head



armot



Shapo head



Bharal head

sparrows, robin red-breasts and linnets here and there. The water fowl, locally called Chhu-cha, like the geese called Nangpe and ducks are quite common in the region.

Reptiles :

Several species of non-poisonous snakes and lizards are found in the region.

Fish :

Four species of fish locally called Nya are commonly found in the rivers and streams of the region. The species are :

- (1) Sag-nya,
- (2) Dam-nya,
- (3) Ser-nya,
- (4) Nya-ga.

Wild Life Preservation :

It is true that some Game Laws were in force in the past but these were followed more in the breach than in observance. The Fauna of Ladakh comprises some unique and rare species of game and wild animals which unfortunately have been subjected to indiscriminate killing and hunting with the result that many such species are now on the verge of extinction. Game licences too were issued indiscriminately to Shikaries, furriers as well as to the cultivators to the detriment of wild life in the region.

Now, when the vital importance of wild life in maintaining the ecological balance has been realised all over the world, the Central Government as well as the State Government have taken some important steps in this direction. As a first step, the State Government enacted the Jammu and Kashmir (Wild Life) Protection Act 1978 on the lines of the Indian Wild Life Protection Act 1972. Besides listing the wild life of Ladakh in five different schedules, the Act also classifies them for protection as follows¹ :—

SCHEDULE I

Lynx (Pelis Lynx isabelinus).
Markhor (Capra faloneri).

¹ Ganhar; op. cit., P. 63

Ovis Ammon or Nyan (*Ovis ammon hodgsoni*).
 Snow Leopard (*Panthera unicia*).
 Tibetan Wild Ass (*Equus hemionus Kiang*).
 Urial or Shapu (*Ovis vignei*).
 Tibetan Gazelle (*Procapra picticaudata*).

SCHEDULE II (Special Game)

Himalayan Brown Bear (*Ursus arctos*).
 Tibetan Antelope or Chiru (*Panthelops hodgsoni*).
 Wild Dog or Dhole (*Canis alpinus*).
 Wild Yak (*Bos grunniens*).

SCHEDULE III (Big Game).

Bharal (*Ovis nahura*).
 Himalayan Black Bear (*Selenarctos Thibetanus*).
 Himalayan Ibex (*Capra Ibex*).
 Tibetan Wolf (*Canis Lupus*).

SCHEDULE IV (Small Game)

Hare.
 Marmot.
 Red Fox (*Vulpes Vulpes*).
 Tibetan Fox (*Vulpes ferrilatus*).

SCHEDULE V (Vermin)

Common Fox.
 Jackal.

Full protection has been accorded to animals specified in Schedule I. Those listed in Schedule II, III and IV are not to be hunted except under and in accordance with the conditions specified in a licence granted for the purpose.

The State Government established the Directorate of Wild Life Protection in 1978-79 as an affiliate body of the Forest Department. Subsequently, in 1982, the Directorate was upgraded as an independent body with a separate infrastructure in all the regions including Ladakh. The State Wild Life Advisory Board has also been set up with the task of selecting areas to be declared : as National Parks, sanctuaries and Reserves. It is

for this that the Board lays down the policy providing guidelines for granting of permits and licences for hunting¹.

As a measure designed to protect wild life in the region, a High Altitude National Park has been set up at Hemis. The National Park includes the catchments of the Markha and Rumbak Valleys which drain into the Indus river at Nimmu and Phiang respectively. The Park covers an area of 300 Sq. Kms., with camping site facilities being available within the park². The fauna of the park comprises Shapu, Amon, Bharal, Snow-leopard, Red Fox, Hare, Marmot and variety of European and upland birds. It is estimated that 700 sheep of Bharal and Shapu species are found in the park³.

Climate :

The climate of Ladakh is profoundly influenced by its aerography. The long chains of parallel mountains which flank the region in an east-west direction prevent the hot and moist air of the south from reaching the region during summer. But the cold continental air does cross into the area through numerous valleys and passes with the result that the atmosphere is deprived of humidity and becomes dry both during summer and winter. During the four months of summer, that is, from June to September, the climate is very hot and dry. The mercury sometimes touches 35° and even 38°C. On the other hand, the winter is extremely cold and dry and the temperature drops even upto -30°C at some places like Dras. Moreover, the region experiences considerable variation, between the day and night temperatures due to its higher altitude, cloudless sky, barrenness of land surface and consequently presence of a higher percentage of solar radiation in the atmosphere. Whereas the eastern part of the region like Zaskar and Rupshu as well as Dras in the south are arctic cold in winter, in the north, the Nubra and the Sindh Valleys have a comparatively mild climate.

Precipitation (Rain and Snow) :

Precipitation in the form of rainfall is almost negligible in the region except in its western parts where it accounts for

Flora and Fauna (Special Souvenir) J and K State Forest Corporation, P.57
 Ibid. P. 58
 Ibid. PP. 58-59

about 20 to 25 percent of the total. On the whole, snowfall accounts for over 75 percent of the total precipitation which occurs mainly between December and March. Sometimes the region, particularly, its higher reaches may receive snowfall even during the early months of summer. However, precipitation is highly variable as it differs widely from place to place.

From economic point of view, the snowfall is of great importance as it is the principal source of irrigation in the region. The rainfall is almost negligible. The monsoons also get exhausted well before they are able to penetrate the mid-Himalayan range across Zojila and Dras. The average rainfall is only 18 cms. however, the Kargil tehsil gets more rainfall than other parts of the region.

Temperature :

November to March is the main winter period when the mean daily temperature is below the freezing point. The months of January and February are the coldest months of the year, when even the maximum temperature may fall to -15°C in January, then it continues to be at subzero level even up to May. The minimum temperature sometimes drops below -30°C due to cold wave conditions.

The mean maximum temperature during July and August is 25°C at an elevation of 3 Kms. At lower elevation it is even higher being 30°C . Occasionally, the maximum temperature may go up to 35°C or even more.

Relative Humidity and Winds :

The relative humidity in the region decreases from west to east being over 70 percent during December to March in Kargil and 60 percent at Leh. It is lowest from April to July. It depends on the presence of clouds on the mountains, a clouded atmosphere may raise the relative humidity to 100 percent. However the sky is cloudless during most parts of the year.

The climatic conditions of the region are greatly affected by western disturbances, the cold winds from west and north-west cause surface winds to blow in a direction which is determined by the mountainous terrains of the region. The terrains also gives rise to various types of local winds.

High velocity winds blow from August to March, sometimes they sweep sand from place to place. However, between April to July, only light winds blow.

Thunderstorms are not common except during July and August, when they are accompanied by hail. During winter the valleys are often covered with fog, especially during night and in the morning.

CHAPTER II

HISTORY

Ladakh, the northern-most region of the Jammu and Kashmir State, is a land of great historical significance. Despite its massive mountains, lofty cliffs and difficult passes it has served in the past not only as a dry-port for traders but also as a corridor between South-East Asia and Central Asia, enabling peoples of different racial stocks, cultures and religions to come closer and influence each other.

Legend says that Ladakh was originally a land occupied by the "gold-digging ants", who, with a great fleetness of foot, looked wonderful species as large as foxes and were in the habit of throwing up gold while making holes in the earth¹. Besides Herodotus, the Greek historian in whose account the first reference of the region is found, these ants are mentioned by Francke, the modern historian, who while living in the region for several years, discovered a kind of ant which, according to the belief of the Khaltsi people, was the gold-digger. "It was a very tiny creature", writes Francke, "and far from the size of a dog or fox; but we must allow the story to have grown a little on its way from India to Greece²".

This fable is not without basis. It seems to have originated from the traces which the gold-diggers of Ladakh have left on the banks of rivers where from they obtained gold dust in the past³.

The earliest people to have traversed the snow-clad mountains and precipitous paths of Ladakh to settle down amidst its inhospitable surroundings were the Tibetan nomads⁴. With their

herds, they moved on from pasture to pasture and fought relentlessly against the forces of nature in order to create conditions favourable to the development of a culture the impact of which is still seen in the demon worship of the Lamaism, an offshoot of the primitive religion called Bon-Chos¹.

The next people who came to exploit, for economic purposes, the natural resources of the land were the Mons of northern India². They exercised tremendous influence on Ladakh's history and culture by raising castles, known as "Mon-castles³". Besides, they promoted music, crafts and arts and largely contributed to the building up of the Ladakhi ethos to which they subordinated their social complexes so completely as to retain their traditional caste only. These days it is very difficult to distinguish them from other people of Ladakh. If there are some differences, they are found in matters of social relations which they generally establish with the people of their caste only. Constituting a sizeable proportion of the population of the region, the Mons are conspicuously known for their skills such as carpentry, masonry, smithy, weaving etc.

The Dards form third line of early dwellers. They brought under cultivation some arable land of Ladakh and thereby made the beginning of the agrarian culture in the region⁴, combining in the process the nomad with the agriculturist. Writing about the unique combination Francke observes. "The products of the fields were as welcome to the Tibetan nomad as were the produce of the flocks to the Dard peasants, and the lively barter which took place between the two tribes apparently led to many matrimonial "bargains" as well and so a race grew up which combined the agriculturist and the nomads⁵".

Besides agriculture, the Dards took great interest in games and carvings on the rocks. They introduced the game of polo which survives till today and is popular in the region⁶. Similarly, their carvings on the rocks, speak not only of their creative

1 Heber, Reeve A; Himalayan Tibet and Ladakh, PP. 23-24
2 Francke; op. cit., P. 58
3 Ibid.
4 Heber; op. cit., P. 24

1 Heber; op. cit., P. 24
2 Census of India 1961, Ladakh District, P. 2
3 Francke; op. cit., P. 62
4 Ibid. PP. 67-68
5 Ibid. P. 78
6 Ibid. P. 72

faculties but also of their life style¹. Although they followed, like Tibetans and **Mons**, ancient Buddhism yet they seem to have cultivated strange customs and food habits over the years².

By living together for centuries, all these people the Tibetans, the **Mons** and the Dards, now collectively called the Ladakhis, gradually mingled together their varying shades of culture and evolved in the course of time, a composite social system which is specially known for its peculiarity and flexibility.

Ancient Period :

Regarding the ancient history of Ladakh precious little can be said definitely as no authentic data is available. There is no denying that some ancient inscriptions in Indian Brahmi and Kharoshthi characters of 200 B. C. have been found at Khaltsi³, but they do not enable us to form any definite idea about the socio-political conditions of the people of ancient Ladakh, nor do the rock-carvings help us to ascertain what actually contributed to the shaping of historical events of considerable significance in the region. Besides, these carvings do not contain dates which are essential to the writing of the history of the people in chronological order.

However, the conditions of the ancient Ladakh were not much different from those of other Asiatic regions, of the period under review, especially India with whom the land was closely linked both culturally and commercially, from time immemorial. This is testified by the travel accounts of Fa-Hian (400 A. D.) and Hieun Tsang (640 A. D.) who have mentioned Ladakh as having close relations with the northern kingdoms of India⁴.

That like ancient kingdoms of the northern India, Ladakh was surrounded by strife and warfare is sufficiently borne out by the Ladakhi folklore. "Call to arms," said to have been composed in bygone days when even women were a party to wars, contesting along with men. This is amply borne by the follow-

¹ Francke; op. cit., P. 71

² Ibid. P. 72

³ Ibid. P. 63, and also Snellgrove, David L; The Cultural Heritage of Ladakh, Vol. I. P. 6

⁴ See Watters, on Yuan Chang, J. W. Laidlay, P. 27

ing Ladakhi folklore¹ :

"Thou host of the heavens, come to the fight ;
And wangpo Gyabzhin be at thy head ;
Thou host of the earth, come to the fight ;
And Mother Skyabdun be at thy head ;
Thy host of the waters, come to the fight ;
And water-king Ljogpo be at thy head ;
At the head of the heroes, of Ling, Palle must stride ;
At the head of the women of Ling, Astag must ride ;
At the head of the Lamas of ling, Tsegumust ride ;
At the head of the Mons of Ling, Penag must stride ;
At the head of the smiths of Ling, Karog shall ride ;
At the head of the Bhedas of Ling, Kangrings shall stride ;
You boys who know how to use the sling, so thy to war ;
You girls who know how to use the spindle, go to thy war ;
Whoever can provide for himself, let him do so ;
Whoever cannot let him be provided for at the castle of ling;
Whoever has a horse of his own, let him bring it ;
Whoever has none, let him get one at the castle of ling ;
March of them towards the land of Hor ;
And the king shall march in front of you all ;"

Several reasons were responsible for the violation of peace and stability in the region. Foremost among these was the hostility that sprang-up occasionally between the Dards and the **Mons**. Being essentially agriculturists, both these tribes strove to occupy as much irrigated plains as possible². This striving for land resulted in confrontation, bickerings, violence and tribal wars which, in course of time, escalated, spilt over and engulfed the entire region, shaking it to its very foundations.

Secondly, the rivalry and bitterness that sprouted occasionally between the clergy and the king in consequence of blending of religion and politics, also made conditions uncertain in the region. Constituting the influential class of the society and holding an important position in the State, the clergy men often indulged in politics to play the role of the King-makers by supporting the rival claimants to the throne. Such a state of

¹ Francke; op. cit., P. 78

² Ibid. P. 67

affairs was bound to create ugly situations of violence and civil strife in the region¹.

There were many petty Rajas too who frequently strove to assert their independence². It required a stren hand to deal effectively with these unruly Rajas, but the highly centralised government of the kingdom of Ladakh failed to suppress them in time owing to the poor means of transport and communication.

Local tradition speaks eloquently of this phenomenon. It is said that warfare continued in the region for quite some time in those days, and consequently life became very difficult. During the harvest season, half of the villagers had to be on guard, while the other half reaped. "Suddenly the men of the village of **Togmaching** would turn up in full armour and try to carry off the whole harvest, if possible. A few days after, the young men of **Khaltsi** would start on a raid to **Tagmahig** to pay these people back in their own coin"³.

It is, however, interesting to note that in those troubled days trade and religion continued growing uninterruptedly. For ensuring successful and smooth flow of trade there was a fortified custom-house, called **Balutkar**, the ruins of which are still extant in Ladakh⁴. A custom Officer, called **mdo-gt-song**, was stationed there to collect taxes from traders who carried various articles of merchandise between India and Central Asia⁵.

Similarly, many Buddhist monks entered Ladakh during that period, without any fear and danger, to spread the gospel of Lord Buddha. They were mostly from the Vale of Kashmir⁶ and some of them settled in Ladakh and built numerous monasteries, the most notable being that of the Kanika⁷. The Kashmiri Buddhists exercised profound influence on the Ladakhis and taught them the advisability of systematising the **Bon-chos**, the primitive religion of the land, the unsystematised part of which is still preserved by some people. It is thus, genuinely

1 Cunningham; op. cit., PP. 316-17

2 Francke; op. cit., P.78

3 Ibid. P. 80

4 Ibid.

5 Ibid.

6 Snellgrove; op. cit., PP. 6-7

7 Francke; op. cit., P. 31

believed that the kind of culture which happened to be prevalent in India and especially in Kashmir affected Ladakh immensely.

Medieval Period :

Due to the paucity of historical literature, the early medieval period of the history of Ladakh, like its ancient period, is not sufficiently known. It is, however, believed that the traditional political structure of the region remained unchanged up-to the 8th century A. D. when its independence was temporarily destroyed by King Lalitaditya of Kashmir, a warrior King of extraordinary skill who went as far as Central Asia and conquered many small kingdoms of India¹. From this period onwards our difficulty in ascertaining the shape of events in the region is slightly eased as we come across written records either inscribed on parchment or engraved on stone, the chroniclers being the priests.

Although these records do not contain exact dates of the Ladakhi Kings, they help us a great deal in knowing what ultimately induced Nima-Gon, a fugitive who had taken refuge in Rula to establish his rule over Ladakh and make it a part of his kingdom comprising Western Tibet in the 10th century A.D.².

Nima-Gon (975-990 A. D.) :

The continual warfare, which had enabled many petty chiefs to carve out small kingdoms for themselves impelled Nima-gon to subdue the warring chiefs and thereby consolidate his hold on the region. Having firmly established himself as the king of Western Tibet, Nima-gon extended his sway over Ladakh, Zanskar, Spiti and Lahol in 975 A. D.³.

A descendant of Langdarma who is known as "Julian the Apostate" Nima-gon thoroughly consolidated his power by severely dealing with the miscreants and founding a vast kingdom. He built several towns and villages in Dam, Lag and Purang⁴. The foundation of the famous fort, called **Khar-mar** or the red-fort, is

1 Stein, M. A; Translation of Kalhan's Rajatarangini, Vol. I P. 91

2 Francke, A. H; Antiquities of India Tibet, Vol. II, PP. 93-94

3 Francke; op. cit., P. 48

4 Francke's; Antiquities, op. cit., P. 93

also ascribed to him¹. Besides, he ordered numerous sculptures the most notable being that of Shai, to be executed and introduced new fashions which greatly added to the culture and art of the region. The fashion of using napkin to cover royal dishes was also introduced by him in a peculiar manner. According to chronicles, he was, when on his way to Western Tibet, "once in such straitened circumstances that he had nothing to eat but eggs and fish. Now, his servants brought him this dish covered with a large napkin. From this it has come to be a custom with the kings of Tibet to use the so called gaints "Napkin, which custom is still observed by the kings of Ladakh". That Nima-gon was an astute politician goes without saying. He entered into matrimonial alliances with the neighbouring chiefs, in order to strengthen his position, and married the daughter of the Purang Chief. Moreover, he helped some chiefs with men and material to repulse incursions from the nomadic tribes of Central Asia².

For his sagacity and services he became popular and won so great approbation. The following passage from old epic also reflects the people's popular feelings towards the king thus³:

"Oh Father Nima gon,
Do not go a-hunting.
In my dream last night,
I saw something bad in my dream.
I, a boy, had to die.
I saw the colour of blood on my golden saddle.
I shall no more dance to the sound of trumpets and clarinets.
oh' king, do not go hunting,
Thy son Zlava gon has to die."

It was much earlier to his death that Nima-gon divided his vast kingdom among his three sons. This he did to avoid bickerings that were due to occur, amongst his successors, soon after he was no more on the scene. Accordingly, his eldest son, Spalgyl-gon, got the territory from Zoji Pass to Rutong, a portion which was not only the largest but also beautiful. Similarly, Tashi-gon, the second son, received a long but narrow strip of

¹ Francke; op. cit., P. 89

² Ibid P. 89

³ Ibid PP. 87-97

land including Purang and Guge. The third son, De-tsug-gon was given the smallest portion of territory comprising Zanskar, Spiti and Lahol¹.

Lha-Chen-palgyigon (990-1020 A. D.) :

He ascended the throne in 990 A. D. soon after the death of his father, Nimagon. Although of little historical importance, Lha-chen-palgyigen's reign is remembered for the foundation of forts, in the heart-land of Ladakh, especially at Shay². He ruled for about 30 years and was succeeded by his son, Chos-gon.

Chos-Gon (1020-1050 A. D.) :

He ascended the throne in 1020 A. D. and reigned for thirty years. This period witnessed further penetration of Buddhist cultic and artistic traditions from Kashmir. It was mainly due to Lotsovarin-chen-Zasgpo, a man of considerable religious importance, who took deep interest in promoting Buddhism at a time when it had disappeared from India. Having studied scriptures in Kashmir, the priest came back to Ladakh and devoted the rest of his life to translating holy books and the construction of monasteries. Among his important monastic foundations, the gumpas at Alchi, Tholung, Chgton and Bazgo are famous. They are considered the best specimens of Lotsava's architecture³.

Chos-gon was succeeded by his nephew Lhachen-dragspalde who ascended the throne in 1050 A. D. and ruled the region up to 1075 A. D. After him Lhachenjang-Chab-Samaspa came to the throne and remained on it till his death in 1100 A. D.⁴.

Lha-Chen-Rgyalpo (1100-1125 A. D.) :

In 1100 A. D. the kingship of Ladakh passed into the hands of Lha-Chen-Rgyalpo, who ruled the region for about 25 years and made immense changes in its administrative set-up in order to ensure betterment of the people. He made elaborate arrange-

¹ Francke's; Antiquities, op. cit., P. 94

² Khan, Hashmatullah; Tarikh-Jammu-wa-Riyasat Thai Mafatuhat Maharaja Gulab Singh, P. 234

³ Ibid.

⁴ Francke; op. cit., P. 91

ments for supplying regularly essential commodities to his people residing in remote areas of the region. Besides, he took measures to extend royal patronage to Buddhism by founding the first real Lamasary at Likir and by causing a community of Lamas to settle down there¹.

It may be noted that the dynasty founded by Nima-gon gradually paved the way for restoring to Buddhism, the royal protection and patronage which it had lost mainly owing to the collapse of old political order in the 8th century A. D. Thus the royal descendants who established themselves in Ladakh, in the 10th century A. D. extended patronage to Buddhism and promoted its cause and interest by sending scholars and priests to Kashmir and north-India and by collecting Buddhist literature which was repositied in the monastery build by Lha-chen-Rgyalpo at Likir. Beyond this they did not proceed and consequently they failed to establish any significant mark in the economic history of the region.

Lha-Chen-Utpala (1125-1150 A. D.) :

Utpala son of Lha-chen-Rgyalpo successfully tried to re-shape the political history of the region by subduing certain petty chiefs who had ceased to remain loyal to the kingdom. This is testified by the Ladakh chronicles in the following manner.

"He united the forces of upper and lower Ladakh, subjected all the vassal chiefs, and even conquered a new province, Lowo, east of Purang; so that his empire was perhaps even greater than that of Nima-gon²".

Thus, Utpala carved out for himself a vast kingdom for the maintenance of which the vassal chiefs regularly paid tribute and attended annual councils to promote its prosperity³.

Lha-Chen-Naglug (1150-1175 A. D.) :

King Naglug son of Lha-chen-Utpala is remembered for having taken steps to improve communications in the region.

¹ Francke; op. cit., P. 91

² Ibid.

³ Datta; op. cit., P. 49

For the purpose of promoting trade and securing taxes, he constructed the first bridge across the river Indus. He also built a palace at Wanla and a castle at Khalbtsi. Built on the rock, the Khalbtsi castle accommodated about sixteen families at a time.

The other kings who followed Lha-chen-Naglug were Lha-chen-gebhe, Lha-chen-Joldo and Trashi-gon, of whom the Ladakh chronicles mention nothing beyond their names.

Lhargyal (1250-1275 A. D.) :

Lhargyal the son of Trashi-gon was the first Ladakhi King to get two Lamaist works copied in gold and introduced Lamaist literature into Western Tibet.

La-Chen-Jopal (1275-1300 A. D.) :

He succeeded his father Lhargyal and took steps to improve the lot of his people. "Under this King," says the tradition, "people became so rich that they wore hats of gold and their mouths never became empty of tea and beer. Masters and servants alike spent their days in frolic and merriments."

Lha-chen-Jopal exercised control over both and spiritual matters, and for this he was greatly admired and loved by his people.

Lha-Chen-Ngorub (1300-1325 A. D.) :

Like his father Jopal, Lha-chen-Ngorub showed keen interest in religious activities. He renovated monastries and stupas built by his ancestors and made valuable offerings to various Gomras. Besides, he sent novices to other places to obtain knowledge of Buddhist scriptures.

He also enriched literature by getting the colossal Tibetan Encyclopaedia copied twice. Similarly he caused a book of secret spells to be copied many times¹.

Lha-Chen-Sherab (1350-1375 A. D.) :

Soon after ascending the throne in 1350 A. D. Lha-chen-Sherab, built a castle and hamlet called **Sengge-Sgan**, at Saboo

¹ Francke; op. cit., PP. 92-94

near Leh and made it a dependency of the Chang castle where the king's nominee and other people used to live in the absence of the king.

Conquest of Ladakh :

It was during this period, i. e. by the end of the 14th century, that the Sultanate of Kashmir established by Sultan Sadr-ud-din (Rinchon) thoroughly consolidated its position to embark on a programme of conquest in the north and east. Its ruler, Sultan Shihab-ud-din (1353-1374 A. D.) who had already conquered many places, decided to conquer Ladakh as well. The Sultan advanced into Ladakh and conquered it without much difficulty and having caused its ruler to agree to pay the wool as tribute, he returned Kashmir. Thus, Ladakh became a tributary of Kashmir¹.

Ladakh suffered another invasion from Kashmir, when Sultan Sikander sent an expedition under the command of Rai Magre to suppress Lde who had refused to pay the annual tribute of Pashm. The Kashmiri commander subdued Ladakhi king and returned home after extorting tribute from him².

Lha-Chen-Tri-Tsug-Lde (1375-1400 A. D.) :

Lha-chen-tri-tsug-Lde was the son of Sherab. He became ruler in 1375 A. D. and governed the land up to 1400 A. D., during which period the relations between Ladakh and Kashmir remained cordial. He took an interest in building numerous Chortens numbering 108 at Leh and about 216 at Saboo³.

Lha-chen-tri-tsug-Lde's kingdom did not remain unimpaired after his death. It was divided into two parts by his two sons, Lha-chen-dragspa-bum-Lde and Dragspa-bum⁴.

Lha-Chen-Dragspa-Bum-Lde (1400-1440 A. D.) :

Popularly known as Lde, Lha-chen-dragspa-Bum-Lde immediately after the division of his father's kingdom consolidated

¹ Dutt, J.C; Translation of Rajatarangani of Jonaraja, P. 38
² Ibid., (Tr. Singh), P. 328
³ Franke; op. cit., P. 97
⁴ Ibid. PP. 97-98

his position and began his rule over his portion of the territory, with mild and merciful disposition and greatly enhanced the prestige of his government by constructing numerous buildings, notable among them being the "Red College", Tripple Temple and the Monastery in the Leh Valley resembling an elephant, the ruins of which are still extant¹.

Besides, he earnestly endeavoured to protect Buddhism from the influence of Bon-chos and prohibited the sacrifice of living animals which adversely affected the popularity of the king. This is testified by the edict of Mulbe which says² :-

"Oh Lama (Tsong Kapa), take notice of this. The king of faith. Bum Lde, having seen the fruit of works in the future life, gives order to the men of Mulbe to abolish, above all, the living sacrifice, and greets the Lama. The living sacrifice are abolished."

For this prohibition, the king became unpopular and the resentment shown by the people against it is still extant in an inscription which runs thus :

"King Lde's order is too hard to be executed".

After acknowledging the suzerainty of Kashmir, Lde breathed his last and was succeeded by his son. His brother, Dragspa also made his position strong in the area, ruled by him by building new castles and improving the fortifications at the villages of Bazgo and Teya Timgmogang the Principal seats of his power³.

Lodros-Chog-Ldan (1440-1470 A. D.) :

He succeeded his father Lde and largely depended on the Sultan of Kashmir, Sultan Zain-ul-Abdin for retaining his power. This support came to him after he had acknowledged the suzerainty of Sultan Zain-ul-Abdin who had sent two expeditions to subdue Ladakh.

Having won the support of Sultan Zain-ul-Abidin, Ldan began to expand his dominions considerably by subduing all the vassal chiefs in the region, who besides acknowledging him

¹ Francke; op. cit., P. 99
² Ibid., P. 101
³ Ibid.

as their Lord, sent wide variety of presents comprising 50 ponies, 50 isabel, 20 yakcows, 15 turquoises, 20 saddles and invaluable weapons, the most striking among these weapons were: "The resplendent devil-coat of Mail" the white "gods" coat of Mail, the sword "Licking-blood off the sky", the sword "wild Yak, long point", the sword "killer of the red lighting flame", the "black-devil knife" etc¹.

However Ldan did not enjoy Kashmiri support indefinitely; it came to an end with the sudden death of Sultan Zain-ul-Abdin in 1470. As there prevailed anarchy in Kashmir, subsequent to the demise of Sultan Zain-ul-Abdin, conspiracies were hatched in Ladakh to disintegrate Ldan's kingdom. The king was deposed and imprisoned by his grandson, Bhagan, the principal intriguer who descended from a collateral branch of the ruling family. Thus with Ldan's deposition ended the first Ladakhi dynasty².

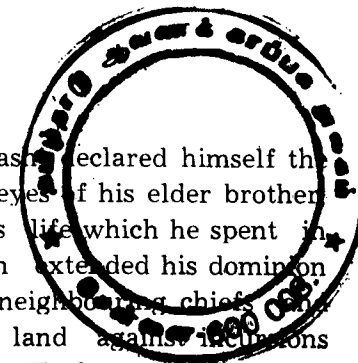
Lha-Chen-Bhagan (1470-1500 A. D.) :

Having taken advantage of internal disorder in Kashmir and discontentment of Kashmiri support subsequent to the death of Sultan Zain-ul-Abdin, Bhagan established himself as an independent king of Ladakh and adopted the name of Lha-chen-king-dgah-Namgyal and thus became the founder of the Namgyal dynasty.

He called his two sons Namgyal, the term signifying the "perfect victors" and is associated with the names of all his descendants³. The king ruled the land for about 30 years, during which period Sultan Hassan Shah (1472-84) of Kashmir attempted to bring the region again under the control of the valley but failed.

Trashi-Namgyal (1500-1532 A. D.) :

After Bhagan's death, Ladakh suffered badly because of the civil war which broke out between his two sons, Lhawang Namgyal and Trashi-Namgyal. In this devastating war, the younger



brother Trashi came out victorious. Trashi declared himself the king in 1500 A. D. Having gouged the eyes of his elder brother making him invalid for the rest of his life which he spent in jail on the borders of Zaskar, he then extended his dominion by bringing under his control all the neighbouring chiefs and took effective measures to protect his land against incursions and invasions, carried out mostly by the Turks.

Thus after containing both his internal and external foes, Trashi devoted his time to enriching the traditions and values established by his predecessors. He built the first royal palace at Leh, the greater part of which is now in ruins. He also constructed monasteries, the famous being that of the Red Sect which had a long prayer-flag hoisted on its top and caused a number of scriptures to be copied. Besides, he made new rules to regularise Lamaism. Among these the most effective was the rule which made it compulsory for every village house-hold, consisting of more than one or two male children, to send the younger child to become Lama. This resulted in an increase in the number of Lamas, but as soon as the rule ceased to be compulsory their number decreased immensely¹. After adorning the throne for about 33 years, Trashi finally became a victim of an invasion carried out by Mirza Haider, an able General of Sultan Abu Sayyid of Kashgar in 1530 A. D.². Although Trashi started a resistance movement against the invasion, and instigated his followers to revolt, he was out-manoeuvred by the invaders who executed him and subsequently installed his brother's eldest son Tshe-Wang-Namgyal on the throne.

Tshe-Wang-Namgyal (1532-1555 A. D.) :

He was installed on the throne in 1532 A. D. when Ladakh was passing through a critical period of its history, characterised by chaos and confusion, decline in the strength of the kingdom and revolt by the vassal chiefs, the new king had to strive hard to deal effectively with the situation and save the kingdom from crumbling. He mobilised his resources, re-organised his army and then made war against the vassal chiefs, who were not only subdued but in some cases replaced by king's own men.

¹ Francke; op. cit., PP. 104-105

² Doughlat, Mirza Haider; Tarikh-i-Rashidi (Translation Rose and Elias), PP. 403-17

¹ Francke's; Antiquities, op. cit., P. 101

² Datta; op. cit., P. 50

³ Francke; op. cit., P. 103

All this encouraged the king to penetrate into the territories adjacent to the borders of his kingdom. After making necessary arrangements, such as building of roads, and bridges, he carried out raids on neighbouring territories to extend his kingdom¹. He even decided to penetrate into the country of the Turks, but abandoned the move in the face of a petition by the people of Nubra to the effect that the proposed expedition would result in obstructing their commercial activities².

While Tshe-Wang-Namgyal was busy in expanding his kingdom, Mirza Haider's second invasion in 1548 from the Valley of Kashmir resulted in bringing the region once again under the suzerainty of Srinagar³.

After the passing away of Mirza Haider in 1551, Tshe-Wang-Namgyal reasserted his authority over Ladakh and began to administer it effectively. He made immense contribution to the Ladakhi culture and set up a college on the Namgyal-Tsemo hill to make it, for the first time a place of pilgrimage.

However, with his death, which occurred unexpectedly in 1555 A. D. came to an end the most significant era of Ladakh's history. As the king had no son, one of his younger brothers had to take up the reins of government⁴.

Jamyang-Namgyal (1555-1590 A. D.) :

Like his predecessor, Jamyang, had to perform the double task of suppressing his enemies and administering the kingdom. He ordered his people to celebrate New Year Festival two months before its actual date to save time to prepare for his campaign against the Baltis who had united their forces under the leadership of Ali Mir⁵. In spite of all this, his army could not make any progress in Purik where the Baltis had already consolidated their position. Although, the Ladakhis fought bravely, Ali Mir succeeded in holding them on, until all the passes were blocked by snow, and the king and his army were compelled to surrender for want of help and succour from their base of operation.

1 Francke; op. cit., PP. 105-106

2 Cunningham, op. cit., PP. 318-319

3 Mohibbul Hassan; Kashmir under the Sultans, P. 136

4 Francke; op. cit., PP. 106-110

5 Journal of the Asiatic Society of Bengal, New Series Vol. LX Pt. I (1891) P. 127

The king was imprisoned and set free subsequently only after he had agreed to¹ :

"recognise Ali Mir as his suzerain, to marry his daughter Gyal-khatun and to exclude from succession to the throne his two sons by the previous Buddhist Wife."

It was thus that he saved his kingdom which, though small in size covered the area from Purik to Brauste. He seriously involved himself in the task of administering the land and enriching its culture and religion. He got the Lamaist books copied in gold, silver and copper and did much to propagate the religion. He said, "I will employ any means that may serve towards the propagation of the religion of Buddha and make it spread. But, as the religion of Buddha for its propagation is entirely dependent on the people, I will, on my part, relieve them from taxation and treat them like my own children"². But unfortunately he died before he was able to accomplish his mission.

Senge-Namgyal (1590-1620 A. D.) :

Senge-Namgyal, Jamyang's son from the muslim wife Gyal-Khatun, ascended the throne in accordance with the terms of the treaty concluded between his father and grand-father Ali Mir, after the conquest of Ladakh by the Baltis. Being brave and adventurous, he greatly extended the boundaries of his kingdom by conquering all the smaller states surrounding Ladakh in pursuance of his ambitious policy of aggrandizement³. Having conquered Guge, Senge-Namgyal proceeded to conquer Purik. He could not however, establish his sway over it because Zaffar Khan, the Mughal Subedar of Kashmir had already subdued the Skardu chief Abdal, prevented him from doing so. Instead of occupying the district Senge-Namgyal was forced to pay tribute to the Mughals. However, he succeeded in conquering Rudokh. He then proceeded to attack Lhasa, the capital of Tibet. The people of Lhasa met the forces of Seng-Namgyal half-way with several presents of gold, silver and other articles at a peace offerings. After accepting these presents, he evacuated the territory and contended himself with the possession of

1 Cunningham; op. cit., P. 320

2 Ibid. PP. 107-108

3 Ibid.

the districts of Guge, Zaskar, Spiti, Purang, Mongyunla, Sedakh and Shakyanchu. While returning from Lhasa, he died at Hanle due to illness caused by exertion¹.

Thus came to an end the reign of a king who had not only established a vast kingdom but also provided his people with a benovolant system of administration and a wealth of cattle developed with great interest. His contribution in the field of religion, art, literature and architecture was also considerable. Apart from inviting Stag-shang-Raspa, the great rainbow-bodied Buddha, for spreading Buddhism and founding monasteries in his kingdom including the famous Hemis, he granted landed estates to religious establishments and completed the construction of a magnificent palace of nine storeys at Leh within a period of three years. He also sent, for securing the spiritual welfare of his parents, costly offerings of gold, silk, corals, pearls etc. to monasteries and caused **Kah-gyur** to be copied in gold, silver and copper. According to an estimate, the offerings made to one tiger-Lama consisted of 100 ponies, 100 yaks, 1000 sheep, 1000 rupees, 300 grammes of gold, 3000 loads of grain, 1 string of pearls, 25 pieces of silk and brocade and large weapons².

Deldan-Namgyal (1620-1660 A. D.) :

Deldan-Namgyal, a worthy son of his father contended himself with building a hall at Leh, the longest mani-wall in the country besides several monasteries where the images of Buddhist deities were kept. However, he led a virtuous life and generally stayed at Rodukh in summer and in Leh during winter³.

The king subdued the chiefs of Khapalu and Chorbar, incurring in the process, the displeasure of the King of Skardu who approached his suzerain the Mughal emperor, Aurangzeb for help which was subsequently granted to him⁴. Faced with a bleak prospect, Deldan did not proceed ahead, instead he acknowledged the Mughal suzerainty and promised to abide by

¹ Francke's; *Antiquities*, op. cit., P. 109

² Ibid. PP. 106-109

³ Ibid.

⁴ Bernier, F; *Travels in the Mughal Empire*, P. 422

the conditions contained in the following letter¹.

"His majesty (Aurangzeb), having learnt from Ibrahim Khan, Nazim of the Soobua of Cashmeer, that Raja Deldan Namgyal from attachment to the Moghul court had rendered his allegiance and submission in token of which he is ready to cause the Koothbah to be read and the imperial coin to be struck in this country (little) Tibet, and will also erect a Musjood (for the Muslims) and fulfill other engagements made with the Khan herewith, invests the Raja with the Khilats of the Tibet Raj, let the Raja in question considering this as a special mark of favour, continue to evince the utmost fidelity that he may thereby entitle himself to a continuance of a royal favour".

By becoming a faithful feudatory of the Mughals, Deldan Namgyal saved his kingdom from extinction at the hands of Sokpas who twice invaded Ladakh and took possession of the land as far as Nyoma. Having been informed about it the Mughal **Subedar** of Kashmir despatched a huge army to Ladakh which defeated the Sokpas and chased them as far as Pitak, thus leaving Deldan to exercise his control over a vast area including Nubra, Dras, Purik, the lower Shyok Valley Guge, Purang, Spiti, Upper Kinnaur, Lahol and Zaskar². The king successfully administered these areas and died when his attention was seriously distracted by a religious dispute, between Bhutan and Tibet, that seemed to engulf the entire area of northern belt.

Deleg-Namgyal (1660-1685 A. D.) :

Deleg succeeded his father Deldan, at a critical juncture when the religious dispute between Bhutan and Tibet had taken a serious turn, posing great threat to the kingdom of Ladakh³. The king was seized with panic when, in consequence of his religious affiliation with the Lama of Bhutan, the Tibetans invaded

¹ From Emperor Aurangzeb to Raja Deldan Namgyal in the 8th year of his Majesty's reign. English Translation of Persian letter received from Jan. 1822 to June, 1822, Vol. 70, Pt. I. No. 131(2) A. These documents which were discovered by Mr. Moorcroft during his travels, are repositied in the National Archives of India.

² See proceedings of the Indian Historical Records Commission XXXIII. Pt. 2, P. 1

³ Francke's; *Antiquities*, op. cit., PP. 115-110

ed Ladakh and caused large-scale devastation in the land¹. As the Ladakhis had already suffered immensely during the wars fought prior to 1660 A. D., the king could not mobilise them to repel the invasion. Thus the terror stricken king was left with no other alternative but to implore the aid of his suzerain, Aurangzeb, who, despite being busy in his Deccan campaigns, directed his **Subedar** in Kashmir, namely Ibrahim Khan, to actively support the former in combating the enemy². Apart from protecting their vassal from falling into the clutches of Tibet, the Mughals supported the Ladakhis in order to safeguard the interests of the shawl industry of Kashmir which depended on **Pashm** supplied by Ladakh. Thus perceiving that the possession of Ladakh by Tibet would adversely affect the flow of wool into Kashmir, the Mughals sent their troops to Ladakh under Fida Khan who, after fierce fighting, succeeded in routing the invaders and pushing them beyond the borders.

For saving the kingdom from Tibetan subjugation, the Mughals won great applause and acclamation of the Ladakhis and the king reaffirmed their suzerainty, struck coins and read **Khutba** in the name of Aurangzeb³. Besides, he agreed to pay tribute regularly, repair the mosque built in the time of Deldan and send his son as a hostage to Kashmir⁴. He also embraced Islam and adopted the name of Akibat Muhmood Khan⁵. In addition, the Mughal intervention resulted in a peace treaty between Ladakh and Tibet, which besides other things, made it clear that the entire wool export and transit trade of the region was a firm monopoly of Kashmir. It was also mutually agreed that all the **Pashm** of Changthang would go to Kashmir via Leh⁶.

Nima-Namgyal (1685-1720 A. D.) :

Nima-Namgyal, like his father Deleg, remained a faithful vassal of the Mughals. This is confirmed by what Aurangzeb wrote to him :—

“Having been apprised of the death of Raja Akibat Muh-

1 See Indian Historical Quarterly, XXIII (1947) PP. 172-73

2 Cunningham; op. cit., P. 327

3 Moorcroft, William: Travels in Hindustan-Ladakh and Kashmir, Vol. I, PP. 336-337

4 Cunningham; op. cit., PP. 328-330

5 Datta; op. cit., P. 64

6 Francke's; Antiquities, op. cit., PP. 116-117

mood Khan, grandfather of Raja Nurmiya Numful, his majesty is pleased to confer on the latter a Khilat, together with a Munsab Zatte of 1000 and 1500 horses, 500 of them double mounted. For this being duly gratified let the Raja exert himself in the management of the country under his administration in such a manner as effectively to prevent the turbulent Kalmaks (Mongols) from making incursions into those parts during the winter. Moreover, let him keep the inhabitants of his Raj happy and content with his governments¹”.

Nima-Namgyal received these imperial instructions with gladness and soon began abiding by them in order to re-organise the administrative structure of his kingdom on sound lines. He appointed efficient and able people from each village to assist him in ensuring the welfare of the villagers and instituted the system of Jury to administer justice on an equitable basis. To discourage fraud and partiality, he appointed honest, dedicated, learned and meritorious officers who eventually made attempts to free the region from “strife, robbery or theft” and saw to it that life was “passed in such happiness as that of a child with his fond mother”.

The king also evinced great interest in the religious affairs by not only erecting statues, monastries and a huge prayer wheel, consisting of gold, silver and copper, but also by removing distinctions that divided the Buddhists into various sects. However, among his important buildings, the royal palace at Nubra and Maniwalls at Chuglamsar are famous.

But the most important event of his reign was the establishment of the first printing press in Ladakh, which enabled the monastries to print books on the Buddhist literature and philosophy as quickly as possible.

When the king was old there occurred a quarrel, between his two sons, about the succession to the throne but Nima perceiving its evil consequences, did not allow it to grow acute by tightening his grip over the government once more which lasted till his death. It was during this period that the Jesuit missionaries, Desideri and Ferieri visited Leh².

1 Foreign Department, Political Proceedings, 20, September 1822, No. 64 National Archives of India

2 Francke; op. cit., PP. 127-129

Des-Kyong-Namgyal (1720-1739 A. D.) :

Des-Kyong-Namgyal, who succeeded his father, Nima in 1700 A. D. was feeble minded person who allowed himself to be dominated completely by her step-mother, Zizi-Khatun, in all matters pertaining to the kingdom. It was at her behest that the king agreed against the wishes of the State officials, to divide his kingdom and give all of Purik to his brother, Trashi. As a matter of fact, the king was utterly insignificant, the real ruler being the mother-queen, who was clever, quick-witted, secretive and without scruples as to the means she used in promoting her interest. She was an adept in hatching conspiracies and getting her rivals assassinated. She secretly managed the assassination of her son-in-law, the chief of Kishtwar¹.

Phon-Shog-Namgyal (1739-1752 A. D.) :

Though younger, Phon-Shog-Namgyal manipulated to usurp the throne of his father, Des-Kyong, by forcing his elder brother, Shes-Kyong-Namgyal to become a Lama at Hemis². However, his reign is of great historical significance. It witnessed new changes in the political structure of the kingdom and brought under deep consideration the issue of succession which had always resulted in fratricidal quarrels, large-scale violence and treachery. The credit for settling this burning issue and regulating the political state of the region goes to those wisemen, ministers and nobles who met at the Hanle monastery, to consider the critical situation created by Trashi's (the king's uncle and the ruler of Purik) anti-Kashmiri and anti-Ladakhi policies. After deliberations the council of elders and wisemen found a solution to the political question ; a settlement which proved to be a turning point in the history of Ladakh and very largely determined the course of its future history. The council resolved³ ;

1. that henceforth the throne would be held by the eldest son of the king ;
2. that the younger sons would become Lamas at various monasteries in the kingdom ; and

¹ Francke; op. cit., P. 127-29

² Ibid. P. 129

³ Francke's; Antiquities, op. cit., P. 121

3. that in no case the kingdom would be divided among the princes.

Owing to certain political considerations, these resolutions remained pending and consequently Purik continued to be ruled by Trashi till his death. These resolutions were however implemented in 1752 A. D., when Chewang-Namgyal became the king of both Ladakh and Purik¹.

Chewang-Namgyal (1752-1782 A. D.) :

Chewang-Namgyal, whose parentage is not clearly known, was installed on the throne in 1752 A. D. Although his installation marked the triumph of the decision of the great council of elders and resulted in public jubilation, he proved devoid of all that was necessary to maintain the equilibrium between political forces and administrative apparatus and consequently brought under heavy clouds the prestige of the government. Being given to pleasure, he wasted his time and energy in disporting with women and in the company of drunkards and bad characters. He did not care at all for the welfare of his subjects. Thus he impaired gradually the government treasury by spending lavishly on merry-making and when his resources became exhausted he took recourse to impose heavy taxes on his people².

Such a policy was bound to reduce people to abject poverty and create conditions largely detrimental to peace and order. The condition became worse when the king began the reign of terror, killing some of the hereditary councilors and refusing to hear petition from his subjects. At this, the people were infuriated to the extent that alongwith soliders they entered the palace and forced the king to abdicate in favour of his eldest son, Tshetan-Namgyal. Thus this way a popular upheaval brought to an end a most depressing period of Ladakh's history³.

Tshetan-Namgyal (1782-1808 A. D.) :

The accession of Tshetan-Namgyal to the throne aroused great public fervor. The event represented not only triumph

¹ Francke; op. cit., P. 130

² Ibid PP. 130-31

³ Ibid

of the people's will but also an endorsement of the decision of the great council of elders regarding the eldest succeeding the king. Tshetan-Namgyal's installation as king helped Ladakh to pass through the politico-financial crisis that had occurred during the troubled reign of his father. Although young, Tshetan behaved like a seasoned politician to win for himself the devotion and loyalty of both the people and the officials who had earlier been indolent and apathetic. Having restored peace in the region, he reversed his father's policy and endeavoured earnestly, through the good offices of his efficient, honest and dedicated ministers, to eradicate age-old ills. The most remarkable achievement of the king was the regulation he promulgated to rationalise taxation in his kingdom. The regulation laid down :

"As there had been no principle regulating the taxes and revenue, he made a rule that henceforth taxes should be raised only in accordance with the income, great or little proportionately¹".

It shows that the king's solicitude for the welfare and prosperity of his people emanated from his perception of the causes of their poverty and occasional protests.

Besides administration and politics, Tshetan took interest in art and literature and immensely contributed to the development of various languages. He spoke fluently Kashmiri, Tibetan and Persian languages. He also built the second largest mani-wall in the region with Chortens at either end. But before he could do something more for his kingdom, the king died leaving behind no children. He was succeeded by his younger brother Tshespal-Namgyal, a Lama at Hemis².

Tshespal-Namgyal (1808-1830 A. D.) :

Being imbecile and lazy, Tshespal was not well fitted to rule the region. His laziness and foolishness not only made him a contrast to his brother, Tshetan, but also aroused public resentment against his government. As a result, both neighbours and aliens were tempted to undertake raiding expeditions to

Ladakh¹. The popular model found expression in carrying the following :—

"If placard, affixed to the city gate, warning the king, did not mend his ways, the elders of Ladakh" would be compelled to dethrone him².

Unmindful of the popular mood, the king continued committing gross mistakes, the most glaring being that he made himself and his officials to remain awake frequently during the night and sleep during the day. Besides, he started travelling not in the morning but at night causing great inconvenience to himself as well as his men, who accompanied him during such travels. Among the king's other follies, mention may be made of his being always surrounded by men of no consequence and bad reputation instead of men of integrity and capability whom he did not trust³.

Such a peculiar phenomenon was fraught with the consequence of attracting the attention of invaders. One among them, namely Rattan Sher Khan, the Raja of Paddar invaded Zaskar, destroyed many villages and returned with yaks, horses etc. without meeting any resistance. And, when the people requested the king to resist the invasion, he disapproved of their proposal and rebuked them⁴.

Similarly the people of Kulu devastated the entire Spiti Valley and the king remained inactive. Then in 1821, a strong Balti force intruded into Ladakh and plundered the people and yet the king was least stirred.

All this resulted in disintegrating the kingdom to such an extent that it fell an easy prey to conquerors from outside. The news of this state of affairs must have reached northern India, through William Moorcroft, who visited Ladakh in 1820⁵. But none other than the Dogras were able to exploit this situation by conquering Ladakh in the 19th century.

1 Francke's Antiquities, op. cit., PP: 124-125

2 Datta; op. cit., P. 71

3 Francke's; Antiquities, op. cit., P. 125

4 Ibid.

5 Ibid.

1 Francke; op. cit., P. 133

2 Francke's; Antiquities, op. cit., P. 124

Dogra Invasion :

It was in the beginning of the 4th decade of the 19th century that Ladakh witnessed a series of raiding expeditions from Jammu, the principality of Raja Gulab Singh. These expeditions, which ultimately resulted in the conquest of the region, constitute the most important events in the history of Ladakh as they brought the Ladakhis into contact with new influences that, in course of time, enabled them to restructure their society as partners of a vast State called Jammu and Kashmir.

The man behind these invasions was Gulab Singh, Raja of Jammu, who had actively assisted Maharaja Ranjit Singh in conquering Dogra Desh and suppressing insurrections that had broken out occasionally in the Sikh kingdom¹. By serving his master faithfully, Gulab Singh rose to the highest position of **Deodiwala** or Minister-in-waiting at the Lahore Durbar. He was ultimately made the Raja of the principality of Jammu². Having become the Raja, Gulab Singh seriously involved himself in consolidating and extending his possessions and eventually, succeeded to subdue Riasi, Samba, Dalpatpur, and Akhnur⁴. He also conquered Kishtwar and Mankot and in the process won acclaim as a great warrior. Subsequently, the Raja made preparations to invade Ladakh a region he regarded as a source of income. By conquering Ladakh Gulab Singh wanted to bring under his control the most lucrative trade of **Pashm** on which the Kashmir Shawl Industry depended entirely, and which had attracted the notice of the British as early as 1774.

Raja Gulab Singh did not lead the Ladakh campaigns in person instead, he entrusted this job to his trusted general, Wazir Zorawar Singh who had already conquered some hilly areas for the Jammu chief⁴. The Wazir started in July, 1834 at the head of a large army numbering about 10,000 and entered Purik. In spite of the stiff resistance offered by the Ladakhis who had entrenched themselves on a hill to defend the province, Zorawar Singh succeeded in establishing his sway over the region besides compelling Ladakhis to pull back to Shergil⁵.

1 For details see Gulab Nama, P. 87 and also Drew; op. cit., P. 13

2 Datta; op. cit., P. 83

3 Panikar, K. M.; Founding of Kashmir State, P. 37

4 Francke's; Antiquities, op. cit., P. 251

5 Datta; op. cit., P. 107

Wazir Zorawar Singh then moved on to Suru where the people submitted without much resistance and agreed to pay a tax of four rupees per-head.

Encouraged by their victories at Purik and Suru, the Dogra troops further advanced to Pushkum where they inflicted a crushing defeat on the Ladakhis. Nearly 300 Ladakhis were killed, about 1200 taken prisoners and others became so panicky that they fled across the Wakha river to reach Sod, yielding the Pushkum fort to the invaders¹. The Dogra army hotly pursued them till it reached Sod, where the Quilladar, Salam Khan was forced to surrender².

In view of the fast approaching winter, Zorawar Singh decided to discontinue his campaign till the next year and retire to Kishtwar. He therefore, made an offer to the Ladakhi king that if he paid him a sum of 15,000 rupees the Dogra army would go back to Jammu. It was a tempting offer which the king would have gladly accepted to save his land from the Dogra invaders. Because of stiff opposition from Queen, Zizi the payment was not made, instead when Wazir Zorawar Singh sent his men to collect the money, the reinforced Ladakhi army put them to death and attacked the invaders in their rear with great vigour. Many Dogra solidiers were thrown with their hands and feet bound into river and the rest compelled to retreat, to Langkartse. However, the Ladakhis did not keep up the chase to expel their adversaries from Ladakh with the result that they got about four months to make preparations for the future engagements³.

After journeying through snow clad cliffs and passes the Ladakh's felt exhausted. They indulged in a lengthy discussion on evolving a strategy for attacking the Dogra army in the area. One evening the Ladakhis were preparing their meals when the Dogra army attacked them all too suddenly. For want of proper cohesion and organisation besides other factors, the Ladakhis failed to offer resistance to the Dogra army which forced them to retreat, helter-skelter to Mulbe, leaving behind a large quantity of provisions and war materials.

1 Datta; op. cit., P. 108

2 Francke's op. cit., P. 142

3 Datta; op. cit., PP. 109-110

Encouraged by his success at Langkartse, Zorawar Singh moved for the second time to Pushkum and then towards Lamayuru where he received some money, as a present from the inhabitants¹ Frightened by the power of the Dogra army, the people of numerous villages such as Saspol, Alchi, Nyoma, Likir etc. sent presents to Zorawar Singh who promised to protect them².

Fierce engagements with the Dogras resulting in heavy losses both in men and material compelled the Ladakhi King to make peace with them. When the Wazir received a letter from the Ladakhi king proposing peace, he agreed to a meeting of the two parties at Bazgo to discuss its terms and conditions. Later the two parties met at Leh in 1835 to conclude a peace treaty of which the most striking provision was that the Ladakhi king undertook to pay war indemnity of Rs. 50,000/- and an annual tribute of Rs. 20,000/- besides accepting the suzerainty of Raja Gulab Singh and through him of Maharaja Ranjit Singh³.

Following the conclusion of the aforementioned peace treaty, the Dogra army withdrew to Jammu. However, immediately thereafter an insurrection broke out in Ladakh. Instigated by his counsellors, the Ladakhi king suppressed the officials who had pro-Dogra leanings and confiscated their property. Besides, the king put behind the bars Munshi Daya Ram, Gulab Singh's representative at Leh. The Governor of Kashmir, Colonel Mehan Singh, who was deadly against Gulab Singh's expansionist policy, also instigated the king to close roads to the merchants, patronised by the Dogras to and from Ladakh.

As news of these developments reached Wazir Zorawar Singh he was so infuriated that he decided to rush to Leh via Zaskar in 1836 despite inclement weather. The Ladakhis and their king were immensely surprised to hear about his sudden arrival. Left with no option, the king also waited upon the Wazir at Chushol to express regret over what had happened in Ladakh during the Wazir's absence. Then the Wazir, accompanied by the king, moved to Leh where he accepted the property of the royal household and that of Leh officialdom in lieu of the balance of war indemnity amounting to Rs. 13,000/-.

¹ Francke's; *Antiquities*, op. cit., P. 251

² Cunningham; op. cit., PP. 338-339

³ Datta; op. cit., P. 113

The Wazir made elaborate arrangements to safeguard the Dogra rule in Ladakh against any possible local insurrection in future. He deposed the old king and offered the kingship to Nurab Stanzin, the brother-in-law of the deposed king who had served as his Prime Minister for a number of years. He also constructed a fort at Leh where three hundred Dogra soliders were stationed for maintaining peace and order in the area. Having made these arrangements, the Wazir directed his followers to subdue Zanaskar and Paddar which were subsequently reduced and annexed to the Jammu dominion in 1836.

Afterwards, Zorawar Singh reinstated the old king Tshespal on the condition that he would, besides paying annual tribute, bear the expenses of the Dogra troops stationed in Ladakh.

The Wazir had hardly spent a year in Jammu when the news of a fresh rebellion reached him in 1839. He cancelled his programme and started his fourth and last campaign into Ladakh. After entering Leh he gave a surprise to the rebels notably Sukamir, Rahim Khan of Chigtan and Hussain of Pushkum and created awe and terror throughout the region by giving them exemplary punishment. Having done this the Wazir took steps to consolidate his position and formed a huge Ladakhi force to invade Baltistan—an ancient kingdom situated in the Indus Valley to the west of Ladakh. Baltistan was subdued by combined Dogra-Ladakhi forces and consequently the dominions of Raja Gulab Singh were extended to the north-west of Ladakh. The conquest of Baltistan also brought to an end a long period of bickerings and hostility between the Baltis and the Ladakhis.

It was thus that the Dogras succeeded in establishing their firm sway over Ladakh by 1840 and rule over the region, up to 1947. During the Dogra rule, which lasted for about a century and a decade, the Ladakhis did not offer any mentionable resistance against it, except in 1842 when they revolted at the instigation of the Tibetans who had already speared to death Zorawar Singh during his endeavours to conquer Tibet.

Four Dogra rulers, namely Gulab Singh, Ranbir Singh, Partap Singh and Hari Singh ruled Ladakh from 1840 to 1947. They placed the region under the control of governors who were appointed by them and retained the office so long as they

enjoyed the confidence of the Maharajas. These Governors were known as Wazir-i-Wazarat. They governed the region in the manner as would please the Maharajas.

Magna Thanadar was the first Dogra governor of Ladakh. He was appointed in 1840 and remained in office up to 1847. Besides conducting the administration of the region efficiently, the Governor adorned Leh with spacious buildings.

In 1847, Mehta Basti Ram replaced Magna Thanadar and governed the region up to 1861. He carried out numerous works of public utility. In addition to introducing a rationing system for nuns living in the monasteries, he established a factory for the manufacture of Druggets to help improve the economic conditions of the people in the region.

In 1861, the Governor-ship of the region was entrusted to Mehta Mangal, an able administrator who reformed the revenue administration of the region and took measures to reorganise agriculture on a sound basis. He also established some colonies in Ladakh. It was he who popularised the plantation of poplars in the area besides constructing some rest houses.

Mehta Mangal was succeeded by Wazir Shive-Saran in 1866. He administered the region for less than a year. It was during his tenure in office that a charity hospital was established at Leh by the Christian Missionaries.

In 1866, Syed Akbar Ali an able administrator, was appointed as the Governor of Ladakh. He governed the region upto 1871.

In 1871, Ganga Singh became the Governor of Ladakh. He did not remain in office even for one year and therefore, could not attend to the affairs of the region as seriously as his predecessors had done.

He was replaced by A. E. Fredric Drew in 1871. Drew was the first European to have been appointed the Governor of Ladakh.

Drew was succeeded by yet another European, Johnson in 1871. He functioned as the Governor of the region for 12 years i.e. up to 1883. During his tenure in office he did his best to

streamline the administration of the region. He introduced some changes in the land revenue system, besides getting some canals dug for irrigation purposes. He also laid out some gardens to beautify the region.

In 1883, Radha Krishen Kaul was appointed the Governor of Ladakh. He administered the region for five years. He followed in the footsteps of his predecessors in matters of policy and day-to-day administration of the region. Radha Krishen Kaul was followed by Sardar Mohammad Akbar Khan in 1888.

In 1891, Dewan Urjan Nath was appointed the Wazir-i-Wazarat of Ladakh. He remained in office for two years and was followed by Pandit Parkash Joo in 1893. The Pandit administered Ladakh for two years. He was succeeded by Lala Bishan Das in 1895. Having administered the region for a period of five years, Lala Bishan Das was replaced by Pandit Lachman Das in 1900, who remained in office for one year only and was relieved by Pandit Vaskak Dhar in 1901. Pandit Vaskak Dhar was followed by Munshi Faqir Chand in 1903. He remained in office for three years.

Meanwhile in 1905, Maharaja Partap Singh took some measures which resulted in the efficiency of administration not only of Ladakh but of the entire State. He reorganised his Wazarats of Jammu, Kashmir, Gilgit and Ladakh on sound lines and showed considerable interest in their administration. Chowdhary Khushi Mohammad was appointed the Wazir-i-Wazarat in 1906. In 1908, Sham Lal became the Assistant Wazir-i-Wazarat.

Sultan Khan was appointed the Wazir-i-Wazarat in 1909. He was followed by Hashmat-Ullah Khan in 1910, who also held the charge of Skardu.

After having administered the region for two years, Hashmat-ullah Khan was replaced by Major Janak Singh in 1912. He was followed by Trilik Chand in 1913 who administered the region for six years. Trilik Chand was followed by Dewan Munshi Lal in 1919.

In 1921, Wazir Feroz Chand became the Wazir-i-Wazarat of Ladakh. He was followed by Pandit Shri Ram in 1926 who remained in office for three years.

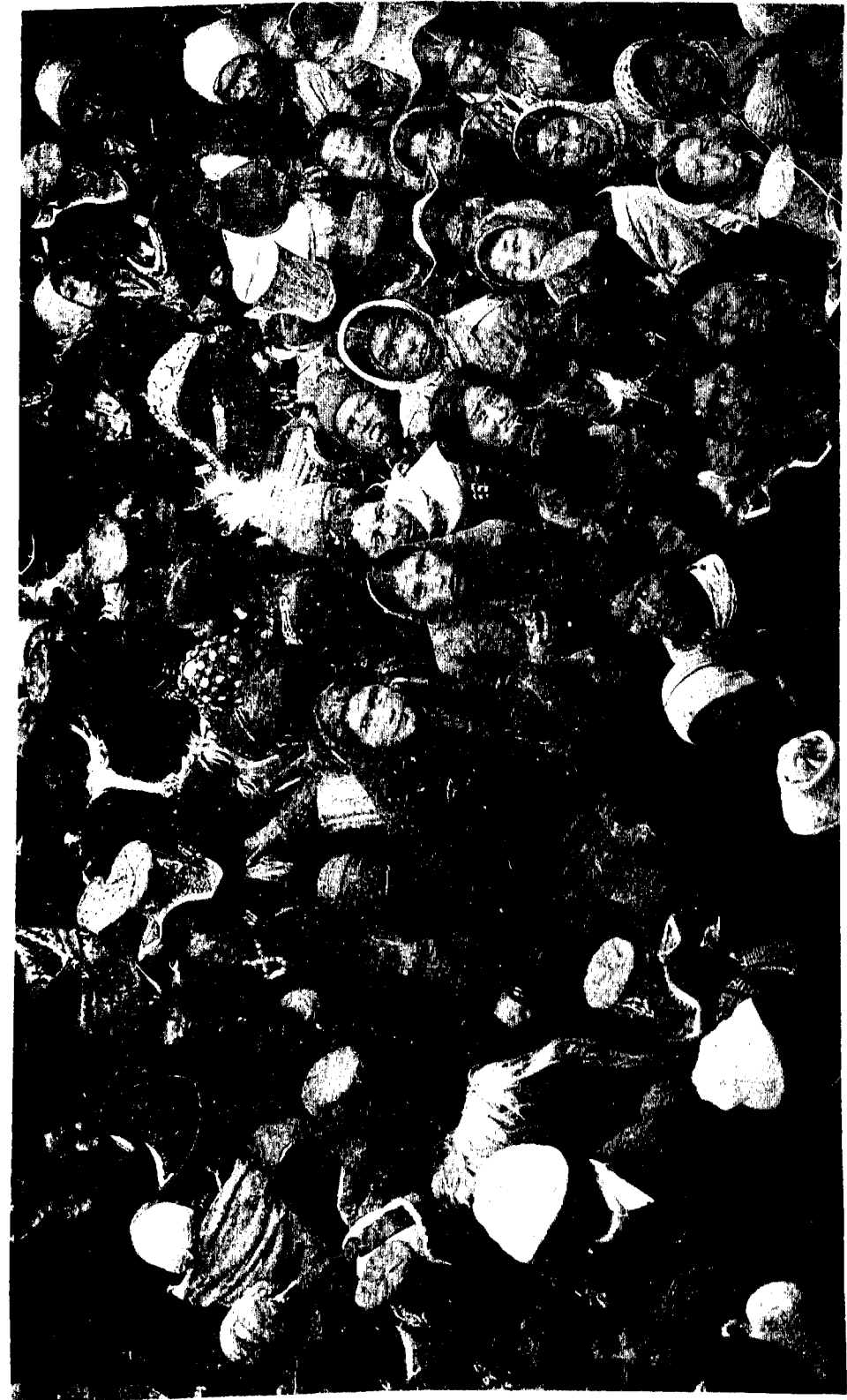
During his tenure in office Pandit Shri Ram implemented the measures taken by Maharaja Hari Singh to effect changes in the revenue administration of the region.

It may be noted that Maharaja Hari Singh granted proprietary rights to cultivators of the region. He also abolished the system of forced labour but continued the system of compulsory recruitment of labour for the entire State of Jammu and Kashmir. It goes to his credit, however, to have extended modern education to the region. Besides, he opened hospitals to provide medical relief to the needy.

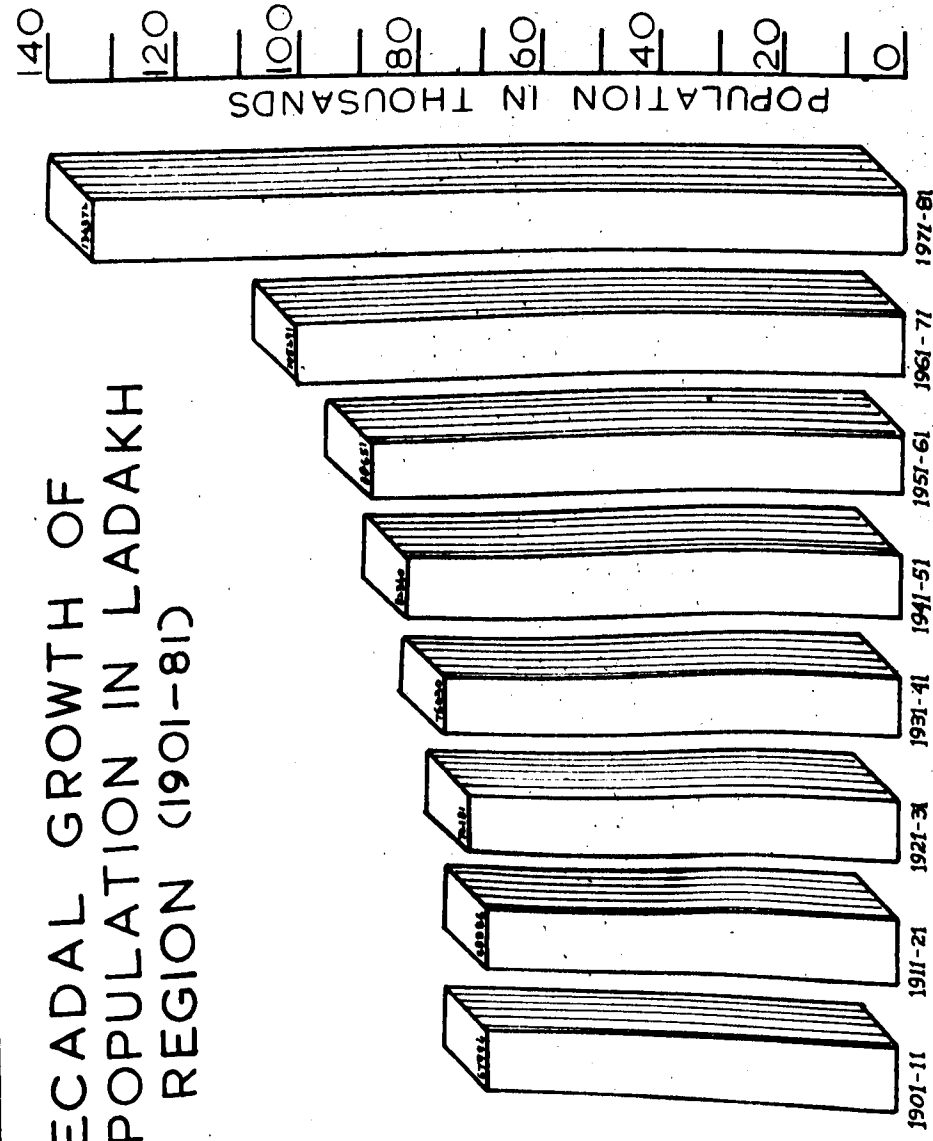
The Maharaja also gave representation to the Ladakhis in the Praja Sabha, the State Assembly which was constituted in 1939.

The Wazir-i-Wazarat who administered the region during Hari Singh's reign and implemented his policies were :-

Pandit Niranjana Lal 1929-33,
Rao Rattan Singh 1933-38,
Chowdhary Faiz-Ullah Khan 1938-40,
Dhruv Singh 1940-43,
Ramesh Chander 1943-46,
Bishmamber Nath Jutshi 1946.



DECADAL GROWTH OF
POPULATION IN LADAKH
REGION (1901-81)



Source - Census of India 1981

CHAPTER III

PEOPLE

Until 1947, Ladakh district comprised the tehsils of Skardu, Kargil and Ladakh. The earliest settlers in Skardu and Kargil tehsils belonged to a semi-Tibetan race called Baltis while tehsil Ladakh was inhabited by the Mongols of Central Asia. The remaining districts of the region namely Gilgit district and Frontier Illaqs were inhabited by Dards. The Baltis of Skardu and Kargil and the Dards of Gilgit and Frontier Illaqs trace their origin to the Aryan race while the people of Ladakh belong to the Mongol race¹.

In 1822, William Moorcroft, the famous British traveller roughly estimated the population of Ladakh at 1.65 lakhs in which females out-numbered males². Twenty five years later Cunningham put the population of Ladakh at approximately 1,68,000 persons.³

Census operations in the region excluding Frontier Illaqs, were carried out for the first time in 1891⁴ which recorded the population of Ladakh district as 1,38,599 persons.⁵ The census taken in 1901 showed that the population of Ladakh had risen to 1,65,992⁶ persons. However, the population figures recorded in the 1891 and 1901 census were not considered authentic because the operations had not been carried out in conformity with the prescribed census rules.⁷ The census figures of 1911, which recorded the population of the district including Mansar at 1,86,656 persons,⁸ can be taken as reliable as the figures were

1 Pandit, Anant Ram; Census of India, 1931, vol. XXIV, Jammu and Kashmir State, Part I-Report, P. 4

2 Cunningham; op. Cit., P. 285

3 Ibid. P. 286

4 Pandit, Anant Ram; op. Cit., P. VII

5 Pandit, Bhag Ram; Census of India, 1891, Vol. XXXVIII, The Kashmir State, P. XXXIV

6 Khan, Munshi Ghulam Ahmad; Census of India, 1901, Vol. XXIII, Kashmir Part II, table, P. II

7 Pandit, Anant Ram; op. Cit., P. VII

8 Chaudhri Khushi Mohammand, Census of India 1921, Vol. XXII Kashmir part II, tables, P. 4

collected on the spot and compiled after proper scrutiny¹. In the following decades i.e., 1911-21 and 1921-31, the population of Ladakh district has been recorded as 1,83,476² and 1,92,138³ persons respectively. According to 1941 census, the population of Ladakh was 1,95,481 persons⁴. In 1951, no census was taken due to disturbed political conditions in the State following the partition of the country and illegal occupation by Pakistan, a portion of the region. In 1961, the population of Ladakh, comprising tehsils Leh, Kargil and Zaskar was recorded as 88,651 persons⁵. The census taken in 1971 in the territory excluding the areas illegally occupied by China showed the population of Ladakh at 1,05,291 persons⁶. For administrative convenience, Ladakh was bifurcated into Leh and Kargil districts during the census decade 1971-81. The Population of the region, according to 1981 census is 1,34,372 persons (Leh district 63,360 and Kargil district 65,992)⁷. The following table shows the sex-wise population of the Ladakh and its break-up into districts and tehsils⁸ :

1 Pandit, Anant Ram; op. Cit., P. VII
 2 Chaudhri, Khushi Mohammad; Census Report 1921, op. Cit., P.4
 3 Pandit, Anant Ram; op. Cit., P. 57
 4 Census of India 1961, Ladakh district, P. 6
 5 Ibid.
 6 Census of India 1971, Ladakh district, P. 58
 7 Census of India 1981, Series-8 of Jammu and Kashmir, Paper-1 of 1985, PP. 26, 30
 8 Ibid.

Sex-wise population of the Ladakh Region and its break-up into districts and tehsils

District Tehsil/City/ Town	Total Rural Urban	Persons	Male	Female
Leh District	Total Rural Urban	68380 59662 8718	35248 31216 5032	32132 28446 3686
Leh Tehsil	Total Rural Urban	68380 59662 8718	35248 31216 5032	32132 28446 3686
Leh Notified Area	Urban	8718	5032	3686
Kargil District	Total Rural Urban	65992 62465 3527	35609 33603 2006	30383 28862 1521
Kargil Tehsil	Total Rural Urban	57675 54148 3527	31370 29364 2006	26305 24784 1521
Kargil Notified Area	Urban	3527	2006	1521
Zaskar Tehsil	Total Rural Urban	8317 8317 ..	4239 4239 ..	4078 4078 ..

Density of Population :

Inspite of its very large area, Ladakh is a sparsely populated region. As per the census of 1941, the density of population in Ladakh worked out to 1.59 persons per sq. km., while it stood at 1.80 persons per sq. km., as per the census of 1971. However, as per the census of 1981, the density of population has risen to 2.12 persons per sq. km. . The following table shows the density

of population in Ladakh and in the other districts of Jammu and Kashmir.¹

Statement showing Area, Density and Population of Jammu and Kashmir State and its Districts

S. No.	State/District	Area in Sq. Kms.	Population	Density in sq. Kms.
1.	Jammu and Kashmir State*	2,22,236	59,87,389	59
2.	Anantnag District	3,984	6,56,351	165
3.	Pulwama District	1,398	4,04,078	289
4.	Srinagar District	2,228	7,08,328	318
5.	Badgam District	1,371	3,67,262	268
6.	Baramulla District	4,588	6,70,142	146
7.	Kupwara District	2,379	3,28,713	138
8.	Jammu District	3,097	9,43,395	305
9.	Udhampur District	4,550	4,53,636	100
10.	Doda District	11,691	4,25,262	36
11.	Kathua District	2,651	3,69,123	137
12.	Rajouri District	2,630	3,02,500	115
13.	Poonch District	1,674	2,24,197	134
14.	Leh District**	82,665	68,380	2
15.	Kargil District	14,036	65,992	5
16.	Ladakh Region*** (Leh and Kargil)	96,701	1,34,372	2.12

1 Digest of Statistics (14) 84, 1983-84, PP. 2, 7

* Represents provisional geographical area figures supplied by Surveyor General of India and include 78,114 Sq. Kms., under illegal occupation of Pakistan and 5,180 Sq. Kms., illegally handed over by Pakistan to China. Also includes 37,555 Sq. Kms., under illegal occupation of China in Leh District.

** Includes 37,555 Sq. Kms., under illegal occupation of China

*** Includes 37,555 Sq. Kms. under illegal occupation of China

Growth of Population :

The following table gives the decennial population growth in rural and urban sectors of the region from 1901 to 1981 including the projected figures of population for the decade 1941-51 for which no enumeration was conducted¹.

Decade	Total	Rural	Urban	Percentage Variation		
				Rural	Urban	Total
1901-11	67,994	63,784	4,210	..	..	12.5
1911-21	68,886	66,485	2,401	+4.2	-43.0	+1.3
1921-31	72,181	69,088	3,093	+3.9	+29.8	+4.8
1931-41	76,030	72,658	3,372	+5.2	+9.0	+5.3
1941-51	82,340	78,794	3,546	+8.4	+5.2	+8.3
1951-61	88,651	84,931	3,720	+7.8	+4.9	+7.7
1961-71	1,05,291	97,382	7,909	+14.6	+112.6	+18.8
1971-81	1,34,372	1,22,127	12,245	+25.4	+54.9	27.7

The figures shown above relate to those areas only as constituted the jurisdiction of the region in 1961. It is clear from the above given table that the population of Ladakh has been increasing steadily since 1921 notwithstanding the slight fall in the percentage of population registered in the year 1961. While the decline in the population of the region during the census decade 1911-21 in comparison to the not-too-reliable growth rate of 12.5% in 1901-11 is attributable to factors like widespread epidemics, recruitment for the British Army and scarcity of the necessities of life, the phenomenal increase in the percentage of population in the region during the decade 1961-71 compared to the figures for the decade 1951-61 has been attributed to migration as well as immigration. The rate of increase in the percentage of population in the decade 1971-81

1 Census of India, 1981 Series-8 Jammu and Kashmir, part II-A, General Population Tables, PP. 70, 72

corresponds to similar increase in the growth rate in the rest of the State.

It is also noteworthy that since 1961 there has been a sharp increase in the urban population which has gone up by as much as 112.6% during 1961-71 and 54.9% during 1971-81. decades. The phenomenal urban growth rate is attributed to the emergence of Kargil as a town in 1971 and the impact of development programme in the region.

Migration :

The following statement shows the proportions of population in Ladakh by the place of birth as per the 1961 census¹ :

		Percentage of Popula- tion
Total Population	88,651	
1. Persons born in the District	85,890	96.9%
2. Persons born in other districts of the State including the areas on the other side of the Line of Actual Control	759	0.9%
3. Persons born in other States of India	124	0.1%
4. Persons born in countries outside India	1676	1.9%
5. Unclassified	202	0.2%

From the above table, it can be seen that out of a total population of 88,651 persons, 85,890 or 96.9% were enumerated at the places of their birth. Only a small percentage of population was reported born in other parts of India or outside India.

High mountains surrounding Ladakh appear to have operated as a barrier against large scale migrations within and outside the region, with the result that the percentage of population born outside Ladakh has been pretty low. Inadequacy of the modern means of transport and communications, illiteracy among the masses, poverty and adherence to old customs also appear to

¹ Kamili; op. cit., P. 7

have hampered the movement of people outside the region. In recent years, however, the percentage of population born outside Ladakh has shown an upward trend.

Sex Ratio :

Out of a total population of 1,34,372 enumerated at the 1981 census, 71,867 were males and 62,515 were females¹. The sex-ratio in the region works out to 870 females per thousand males which is less than the sex ratio of the State as a whole 892 females per 1000 males. The following table gives the proportion of females per 1000 males in Ladakh as well as in its rural and urban areas for the last nine decades².

Year	Sex-Ratio females per 1000 males		
	Rural	Urban	Region as a whole
1901	986	..	986
1911	1003	899	997
1921	1029	1031	1029
1931	1024	969	1022
1941	1019	859	1011
1951	992	936	990
1961	970	1012	971
1971	985	856	975
1981	884	740	870

It will be observed from the table that the female population between 1921-41 census decades has been larger than that of the males. The ratio in rural areas was even higher than in urban areas of the region. Reasons for higher proportion of females per 1000 males are as follows :

- (1) Ladakhi women, besides preparing meals for their families, labour with their men-folk in the fields and

¹ Khan, A. H; Census of India 1981, Series-8, Jammu and Kashmir, part III A. General Population Tables, P. 103

² Kamili; op. Cit., P. 7

bazars which makes them hardy and reduces the mortality rate among them.

- (2) Limited avenues of employment during winter months compel Ladakhis to migrate to the neighbouring States in search of employment leaving behind their families to look after the household. This phenomenon swells in proportion of females during winter months when census is generally taken.
- (3) The practice of late marriage among the Ladakhis prevents in a large measure, female deaths due to premature child births.
- (4) In matters of health, Ladakhi generally pay equal attention to the children of both the sexes which results in lower rate of mortality among female children as compared to the other areas of the State.
- (5) In order to offer a Chemo (Female monk) to the local monastery, Ladakhis bring up their female children more carefully with the result that the mortality rate among female children is reduced.
- (6) The prevalence of polyandry among the Buddhist population of the region has been described as one of the reasons against the growth of male population.

Since 1941, there has been an overall decrease in the female population leading to a decline in sex-ratio from 1011 in 1941 to 870 in 1981. The following table gives the sex-ratio in the two districts of Ladakh as well as for their rural and urban areas according to 1981 census¹ :—

Sex-ratio in the two Districts of Ladakh including Rural and Urban areas according to 1981 census.

Region/District	Total	Persons	Males	Females	Females per 1000 males
Ladakh Region	Total	1,34,372	71,857	62,515	870
	Rural	1,22,127	64,819	57,308	884
	Urban	12,245	7,038	5,207	740
Kargil District	Total	65,992	35,609	30,383	853
	Rural	62,465	33,603	28,862	859
	Urban	3,527	2,006	1,521	758
Leh District	Total	68,380	36,248	32,132	887
	Rural	59,662	31,216	28,446	911
	Urban	8,718	5,032	3,686	733

The above figures reveal that the sex-ratio in the areas constituting the Kargil district is slightly lower than in the Leh district. In urban areas of both the districts the proportion of female population is much higher than in the urban areas of the region.

Age Structure :

As per the census of 1981, the population of Ladakh comprises 14 age groups. The proportion of each group as also the ratio in rural and urban areas is given in the following table¹.

¹ Khan, A. H.; Census of India 1981, Series-8 Jammu and Kashmir, part IV-A, Social and Cultural Tables, PP. 23, 24, 25, 26

¹ Khan, A. H.; Census of India 1981 Series-8, Jammu and Kashmir, Part II-B, Primary Census Abstract P. 18

Age Group	Percentage of total population			Percentage of rural population			Percentage of urban population		
	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-male
0-9	23.99	22.43	25.79	24.11	22.75	25.66	22.73	20.80	25.29
10-14	10.76	10.30	11.30	10.86	10.48	11.27	9.80	8.54	11.50
15-19	9.08	9.00	9.18	9.10	9.05	9.15	8.92	8.54	9.44
20-24	8.88	8.63	9.15	8.88	8.64	9.16	8.80	8.57	9.12
25-29	8.08	8.04	8.12	7.87	7.86	7.86	10.20	9.60	11.04
30-34	7.13	7.68	6.51	6.96	7.42	6.41	8.90	9.88	7.59
35-39	7.54	8.25	6.71	7.36	7.98	6.66	9.34	10.81	7.35
40-44	5.64	6.29	4.89	5.57	6.15	4.92	6.30	7.60	4.55
45-49	5.18	5.35	4.99	5.19	5.30	5.06	5.08	5.66	4.34
50-54	3.97	4.06	3.86	4.03	4.12	3.93	3.38	3.50	3.18
55-59	2.55	2.58	2.53	2.59	2.55	2.61	2.11	2.48	1.59
60-64	3.31	3.39	3.27	3.44	3.56	3.39	1.93	1.76	2.19
65-69	1.58	1.61	1.54	1.60	1.65	1.56	1.12	1.00	1.29
70 Above	2.31	2.39	2.30	2.44	2.50	2.36	1.39	1.26	1.53

The above data reveals that the children in the age group of 0-9 constitute about one fourth of the total population followed by 10.76 percent in the age group of 10-14. Each succeeding group i.e., 70 and above is reached where the inclusion of all the persons above the age of 70 has resulted in a slight increase in the percentage compared to the preceding age group. The high proportion of population in the age group 0-9 and 10-14 is due to better health and medical facilities which has reduced the infant mortality rate. It can also be observed from the table that the percentage of female population in certain age groups is slightly higher than that of the males.

Rural Urban Ratio :

According to 1981 census, the rural population constituted 90.89 percent of the total population of the region as compared to 92.49 percent of the 1971 census. It is clear that there has been a decline in the Rural-Urban Ratio which indicates a shift towards urbanization in the region during the 1971-81 decade. Natural and economic factors, however, restrict urbanization of the region on a large scale. The following table gives the rural-urban ratio of population during the last eight decades i.e., 1911 to 1981 :

Rural—Urban-wise distribution of population from 1911-1981

Year	Total	Rural	Percentage	Urban	Percentage	Rural-Urban Ratio
1911	67,994	63,784	93.81	4,210	6.19	15 : 1
1921	68,886	66,485	96.51	2,402	3.49	28 : 1
1931	72,181	69,088	95.72	3,093	4.28	22 : 1
1941	76,030	72,658	95.57	3,372	4.43	22 : 1
1951	82,340	78,794	95.70	3,546	4.30	22 : 1
1961	88,651	84,931	95.80	3,720	4.20	23 : 1
1971	1,05,291	97,382	92.49	7,909	7.51	12 : 1
1981	1,34,372	1,22,127	90.89	12,245	9.11	10 : 1

The above table shows a drift in population from rural areas to urban areas from 1961 onwards which is obviously due to the impact of economic development of the region after independence.

Language :

Ladakhi and Balti are the principal languages of the region. Ladakhi is the mother tongue of 56% of the total population of Ladakh. One comes across certain intra-regional variations in the language which are directly attributable to the prevalence of three distinct dialects namely Sham dialect, Leh dialect and

Rong dialect in the region. The Sham dialect is spoken from Hanu in the west to a line midway between Saspol and Bazgo in the east. The Leh dialect is used in the areas to the east of Sham and stretching almost so far as Shay. The Rong dialect is spoken in the areas to the east of Leh tehsil.

Balti is the mother tongue of 37 percent of the population of the region. It is the dominant language of the Kargil district. Among other languages Buddhi and Tibetan are spoken by 4 percent of the population while Brokpa and Kashmiri are spoken by 1 percent of the population in either case. In addition to these, 11 other languages are also spoken in the region covering in aggregate 10 percent of the population of Ladakh. These are (1) Darwi, (2) Dardi, (3) Dogri, (4) English (5) Hindi, (6) Kalwi, (7) Malayalam (8) Nepali, (9) Punjabi, (10) Urdu and (11) Yarkandi. Over 6 percent of the population speak an additional language besides their mother tongue. Among these, the highest proportion of 43% is claimed by those who have Ladakhi as their mother tongue while Baltis rank next with a corresponding proportion of 35%. The corresponding proportion of the remaining mother tongues is as under:—

S. No.	Mother tongue	Percentage of Speakers
1.	Kashmiri	9
2.	Brokpa	4
3.	Buddhi	3
4.	Dogri	3
5.	Punjabi	2
6.	Others	1
Total :		22

The following statement gives the mean of the subsidiary languages of the speakers of different mother tongues :—

S. No.	Mother Tongue	Subsidiary Languages
1.	Balti	1. Urdu 2. Persian 3. Kashmiri 4. Arabic/Arbi 5. Ladakhi 6. Tibetan 7. English 8. Hindi 9. Punjabi
2.	Brokpa	1. Ladakhi 2. Urdu 3. Balti
3.	Buddhi	1. Urdu 2. Tibetan 3. Wadu 4. Persian 5. Hindi
4.	Dardi	1. Urdu 2. English
5.	Darwi	1. Urdu
6.	Dogri	1. Urdu 2. English 3. Hindi
7.	Hindi	1. Urdu 2. English 3. Persian 4. Kashmiri 5. Punjabi
8.	Kalwi	1. Urdu

S. No.	Mother Tongue	Subsidiary Language
9.	Kashmiri	1. Urdu 2. Ladakhi 3. Balti 4. English 5. Hindi 6. Gurmukhi
10.	Ladakhi	1. Urdu 2. Kashmiri 3. Buddhi 4. Balti 5. Persian 6. Arabic/Arbi 7. Tibetan 8. Yarkandi 9. English 10. Hindi 11. Turkish/Turkistani 12. Gurmukhi 13. Roman
11.	Malyalam	1. Hindi 2. Urdu
12.	Nepali	1. Roman
13.	Punjabi	1. Urdu 2. Hindi 3. English 4. Gurmukhi 5. Persian
14.	Tibetan	1. Buddhi
	Yarkandi	1. Urdu

Religion :

Buddhism and Islam are the two dominant religions of Ladakh covering as much as 96.94% of the total population. According to the 1981 census, the Buddhists constitute 50.89% (68,376) and the Muslims 46.05% (61,882) of the total population. Leh district is predominantly Buddhist while the Kargil district is

predominantly Muslim. Hindus, Sikhs and Christians are the other religious communities inhabiting some parts of the region. The following table shows the changes in the population of these communities between 1971-81¹ :—

S. No.	Religion	Number of persons and Percentage to total Population.			
		1971	Percentage to total population.	1981	Percentage to total population.
1.	Buddhists	54,565	51.82	68,376	50.89
2.	Muslims	49,131	46.66	61,882	46.05
3.	Hindus	1,152	1.09	3,538	2.63
4.	Sikhs	362	0.35	334	0.24
5.	Christians	81	0.08	237	0.18
6.	Other religions and persuasions	Nil	Nil	5	0.01

The figures given above reveal that except for Sikhs whose population has gone down from 362 persons in 1971 to 334 in 1981 the population of all other communities has increased. While there has been an increase in the absolute numbers, the proportion to total population of two major communities viz, Buddhists and Muslims, has gone down from 51.82% in 1971 to 50.89% in 1981 and 46.66% in 1971 to 46.05% in 1981 respectively. The increase in absolute number as well as its proportion to total population is noticeable among the Hindus and Christians whose proportion has gone up from 1.09% in 1971 to 2.63% in 1981 and 0.08% in 1971 to 0.18% in 1981 respectively. The increase in percentage is particularly noticeable among the Hindus which is attributable to the fact that migratory Hindus visiting Ladakh for various purposes or working there have been enumerated in the region in 1981 census. The following table gives the break-up of population claimed by different communities in 1981 in various tehsils of Leh and Kargil districts :—

¹ Census 1971, Series-8 Jammu and Kashmir, Digest of Population Statistics, P. 14

TEHSIL-WISE POPULATION BY

District/Tehsil/ Town	Total Rural Urban	Buddhists		Muslims	
		Male	Female	Male	Female
		3	4	5	6
Leh District	Total	28484	27030	5711	4764
	Rural	26185	24841	4018	3472
	Urban	2299	2189	1693	1292
Leh Tehsil	Total	28484	27030	5711	4764
	Rural	26185	24841	4018	3472
	Urban	2299	2189	1693	1292
Leh Notified Area	Urban	2299	2189	1693	1292
Kargil District	Total	7007	5855	27069	24338
	Rural	6951	5829	25255	22953
	Urban	56	26	1814	1385
Kargil Tehsil	Total	2985	1960	26856	24155
	Rural	2929	1934	25042	22770
	Urban	56	26	1814	1385
Kargil Notified Area	Urban	56	26	1814	1385
Zaskar Tehsil	Total	4022	3895	213	183
	Rural	4022	3895	213	183
	Urban	..	..	..	..

RELIGION, 1981

Hindus		Sikhs		Christians		Other Religions	
Male	Female	Male	Female	Male	Female	Male	Female
7	8	9	10	11	12	13	14
1812	234	150	34	86	70	5	..
899	89	74	10	35	34	5	..
913	145	76	24	51	36	..	..
1812	234	150	34	86	70	5	..
899	89	74	10	35	34	5	..
913	145	76	24	51	36	..	..
913	145	76	24	51	36	..	..
1332	160	121	29	80	1	..	..
1215	70	102	9	80	1	..	..
117	90	19	20	..	..	..	..
1329	160	120	29	80	1	..	..
1212	70	101	9	80	1	..	..
117	90	19	20	..	..	..	..
117	90	19	20	..	..	..	..
3	..	1	..	..	..	..	..
3	..	1	..	..	..	..	..
..	..	..	..	..	..	..	..

It will be seen from the above table that Leh tehsil in Leh district and Zaskar tehsil in Kargil district are mostly inhabited by Buddhists while Muslim population is concentrated in the Kargil tehsil.

Buddhism :

Buddhism was first introduced in Ladakh during the reign of Ashoka when the great follower of Buddha was propagating his new religion with all the zealous ardour of a proselyte. Before the advent of Buddhism, the Ladakhis professed the Bon religion consisting of a set of beliefs characterised by devil worship through priests. With the passage of time, however, it got absorbed in Buddhism. In its pure form Buddhism vanished more or less entirely and what is prevalent in Ladakh today is Lamaism. Lamaism as a form of Buddhism as prevalent in Ladakh today is, considered to be a combination of the Mahayana faith and Tantrism. In fact Buddhist religious beliefs and practices in Ladakh appear to be a mixture of metaphysics, mysticism, morality fortune telling and idolatry. As a religion, Buddhism has played a vital role in the socio-institutional life of Buddhists in the region. The Lamas are held in high esteem and the reincarnating Kushks, heads of monasteries are regarded almost as divinities. The order of the Lamas is supposed to be the third Jewel of the Buddhist hierarchy and a Gumpa or monastery is regarded as a casket which contains and preserves this jewel. This among other things accounts for the importance of the Lamas and the Gumpas. Every family in which there is more than one son furnishes a Lama or Gelum, who is at once a cenobite and a family priest. Attached to a monastic institution under a Lama or abbot, he lives among the people, and conducts the rites of their daily worship in their own houses in which chamber is usually appropriated to an image and the attendant priest.

Broadly speaking, the Buddhists consist of four sects namely Nyingma-pa, Saskya-pa, Kagya-pa and Geluga-pa. The first three are known as the Red Sect and the fourth one or the reformists are called the Yellow Sect. The Lamas of the Red Sect wear red caps while the Geluga-pa wear yellow caps. In modern times they are commonly known as Red Hat Sect and Yellow Hat Sect. The Red Hat Sect has a strong hold over the monas-

teries of Hemis, Chemray, Stakna, Anle and Fiang. The monasteries of Spituk, Thiksey, Rigzong-Karsha and Likir are claimed by the Yellow Hat Sect. The monks belonging to the Yellow Hat Sect are regarded as orthodox adherents of the religious tenets while the monks of the Red Hat Sect are not that rigid.

There are sixteen main Gumpas in Ladakh in addition to the smaller monasteries in every village. Monasteries of Hemis, Spituk, Thiksey, Fiang, Stakna, Lingshet, Saspol, Chemre, Matho, Saktie and Likir are of greater importance. While the monasteries are the centres of all religious festivals, the way of life in them varies vastly depending upon the sect and size of each monastery. The routine religious service is performed by the Lamas three times during the day, i.e. at sunrise, noon and sunset. However, on the occasion of religious festivals, a part of the ceremony consists of dramatic representations of the Lamas and animals as super-natural beings in masks. The following religious festivals are celebrated in the region.

S. No.	Name of Fair	Place where held	Month when held	No. of days it continues
1.	Tshe-shu	Hemis	June	2
2.	Angchok	Chemray	November	2
3.	Gustor	Thiksey	January	2
4.	Nakrang	Matho	February	2
5.	Nakrang	Gia	February	1
6.	Dosmachay	Leh	February	2
7.	Angchok	Toktak	February	2
8.	Kangish	Lamayuru	December	2
9.	Shubla	Mulbik Chamba	July	1
10.	Tserook	Fiang	February	2
11.	Guru Chheshu	Stock	February	2
12.	Shay Shubla	Shay	July	2
13.	Shay Rullo	Shay	March	2
14.	Gustor	Spituk	December	2

S. No.	Name of Fair	Place where held	Month when held	No. of days it continues
15.	Likir Dosmachray	Likir	February	2
16.	Dosmachray	Diskit (Nubra)	February	2
17.	Dumchhot	Shackukul	June	2
18.	Gustor	Karsha	January	2
19.	Sani-Gompa	Sani	July	2
20.	Bardan-Gumpa	Bardan	May	2
21.	Stongee Gumpa	Stongee	January	2
22.	Padm Skurim	Padm-Gumpa	November	2

Islam :

Islam is the second most important religion in Ladakh. It is not precisely known when Islam was introduced in Ladakh but it is quite reasonable to believe that the traders from Central Asia who were mostly muslims brought the new faith to the region. It was, however, the missionaries like Mir Syed Ali Hamdani and Syed Mohammad Noor Baksh who spread the message of Islam in Ladakh on a massive scale with encouraging results. Most of the population in Baltistan including the ruler of Shigar and Khaplu embraced Islam during the time of Syed Mohammad Noor Baksh. Subsequently they came to be known as the Noor-Bakshyas. Mir Shamas-ud-din Iraqi, who came from Central Asia towards the close of the fifteenth century, travelled widely in Baltistan to carry the message of Islam to the people.

Further, impetus to conversion to Islam came from Muslim merchants of Yarkand and Kashmir. The social inter-course and inter-marriages between these merchants and Ladakhis gave rise to a mixed race known as Argoons. They are mostly muslims living in Leh proper and in the adjoining villages. A Kashmiri merchant namely Razak Joo popularised Islam in Zaskar during the reign of Sangay Namgyal (1610-45 A. D.).

The social life of Ladakhis is unique in many respect. By nature, Ladakhis are very sociable, courteous, animal and straightforward. They live in a peculiar natural environment

which makes their society cohesive, integrated and interdependent so far as various sections of it are concerned. Thus in religious affairs they are liberal but superstition had a firm hold on them in the past. In matters of diet and drink also they do not follow hard and fast rules or customs. There are vegetarians as well as non-vegetarians. The Buddhists in general are very fond of drinks and they prepare their most favourite local variety known as **Chhang**. The Muslims substitute drinks by their most favourite type of tea locally known as **Gurgur-Chai**. These people living as they do far from the madding crowd have no formalities and are very hospitable to all out-siders, and strangers. By nature they are very peaceful, cooperative, patriotic and have a great sense of self esteem. In matters of matrimonial relationship also, the Buddhists of Ladakh are liberal, as the system of polyandry forced upon them by natural compulsions has made them to be so. However, with the modernization of the region, Ladakhis have ceased to adhere to this system of marriage and monogamy is becoming popular day by day.

Marital Status .

The following statement gives the distribution of population in Ladakh and its districts by marital status as per the 1981 census¹ :—

	Ladakh Region			Leh District		
	Male	Female	Total	Male	Female	Total
Never Married	37143 51.70	31472 50.35	68615 51.10	19661 54.26	16841 52.40	36502 53.38
Married	31252 43.49	26814 42.89	58066 43.20	15011 41.40	12993 40.40	28004 40.95
Widowed	3162 4.40	3637 5.81	6799 5.05	1456 4.0	1951 6.0	3407 4.98
Divorced or Separated	295 0.41	584 0.95	879 0.65	119 0.34	341 1.2	460 0.69

¹ Census of India 1981, Series-8, Jammu and Kashmir, Part-IV A, Social and Cultural tables, PP. 23, 25

	Kargil District		
	Male	Female	Total
Never Married	17582	14631	32113
	49.09	48.16	48.66
Married	16242	13821	30063
	45.63	45.49	45.56
Widowed	1706	1686	3392
	4.79	5.55	5.15
Divorced or Separated	176	242	418
	0.49	0.80	0.63

It will be seen from the above table that the persons who never married constitute 51.10 percent of the total population of the region, males 51.70 percent and females 50.35 percent. The proportion of married persons is 43.20 percent, males 43.49 percent and females 42.89 percent. The widowed account for 5.05 percent, males 4.40 percent and females 5.81 percent. The divorced or the separated constitute only 0.65 percent, males 0.41 percent and females 0.95 percent of the total population.

A comparison between the two districts of the region reveals that compared to the Kargil district, there is a high proportion of never-married persons (53.38% in Leh against 48.66% in Kargil) in the Leh district. The high proportion is partly due to the prevalence of polyandry in the area as a result of which many males remain unmarried and partly because of the practice prevalent among the Buddhist families to send a child to the monastery to live a life of celibacy. The following table gives the distribution of the population of Ladakh as well as of its two districts by age-groups and marital status¹ :—

LADAKH

Age group		Total Population		Never Married	
		Male	Female	Male	Female
1		2	3	4	5
0-9	Total	16113	16021	16113	16021
	Rural	14647	14704	14647	14704
	Urban	1466	1317	1466	1317
10-14	Total	7395	7060	7349	6998
	Rural	6794	6461	6748	6406
	Urban	601	599	601	592
15-19	Total	6469	5738	5804	4550
	Rural	5868	5247	5234	4147
	Urban	601	491	570	403
20-24	Total	6198	5724	3243	1785
	Rural	5596	5249	2862	1636
	Urban	602	475	381	149
25-29	Total	5782	5078	1579	741
	Rural	5107	4503	1361	688
	Urban	675	575	218	53
30-34	Total	5520	4068	686	318
	Rural	4825	3673	624	301
	Urban	695	395	62	17
35-39	Total	5931	4200	562	272
	Rural	5170	3818	528	257
	Urban	761	382	34	15
40-44	Total	4519	3058	439	191
	Rural	3984	2822	422	183
	Urban	535	236	17	8
45-49	Total	3844	3122	394	175
	Rural	3446	2896	384	166
	Urban	398	226	10	9
50-54	Total	2922	2413	308	137
	Rural	2674	2248	292	126
	Urban	248	165	16	11

¹ Census of India 1981, Series 8, Jammu and Kashmir, Part IV A, Social and Cultural tables, PP. 23, 25

REGION

Married		Widow		Divorced or Separated	
Male	Female	Male	Female	Male	Female
6	7	8	9	10	11
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	..
45	59	1	2	..	..
45	52	1	2	..	..
..	7	..	..	..	..
651	1155	3	5	11	28
620	1067	3	5	11	28
31	88	..	..	..	..
2873	3812	37	39	45	88
2653	3494	37	36	44	83
220	318	..	3	1	5
4094	4204	62	45	47	88
3643	3700	59	40	44	75
451	504	3	5	3	13
4688	3589	106	84	40	77
4068	3233	97	76	36	63
620	356	9	8	4	14
5146	3724	192	138	31	66
4425	3378	188	126	29	57
721	346	4	12	2	9
3818	2593	233	206	29	68
3315	2402	221	190	26	47
503	191	12	16	3	21
3083	2562	336	325	31	60
2711	2373	322	310	29	47
372	189	14	15	2	13
2257	1822	339	420	18	34
2047	1703	321	392	14	27
210	119	18	28	4	7

LADAKH

Age group		Total Population		Never Married	
		Male	Female	Male	Female
1		2	3	4	5
55-59	Total	1838	1580	217	87
	Rural	1663	1497	208	84
	Urban	175	83	9	3
60-64	Total	2436	2044	217	91
	Rural	2311	1931	206	88
	Urban	125	113	11	3
65-69	Total	1154	963	92	47
	Rural	1085	896	91	44
	Urban	69	67	1	3
70 above	Total	1719	1432	129	56
	Rural	1630	1353	128	50
	Urban	89	79	1	6
Total All Ages	Total	71853	62504	37143	31471
	Rural	64815	57300	33746	28881
	Urban	7038	5204	3397	2590

REGION

Married		Widow		Divorced or Separated	
Male	Female	Male	Female	Male	Female
6	7	8	9	10	11
1385	1130	223	339	13	24
1238	1070	207	324	10	19
147	60	16	15	3	5
1645	1133	561	793	13	27
1552	1084	541	735	12	24
93	49	20	58	1	3
728	509	328	397	6	10
675	477	315	367	4	8
53	32	13	30	2	2
841	522	739	844	10	10
796	503	696	792	10	8
45	19	43	52	..	2
31253	26813	3162	3637	295	583
27789	24536	3010	3395	270	488
3464	2277	152	242	25	95

DISTRIBUTION OF POPULATION BY AGE, SEX AND MARITAL

Age group		Total Population		Never Married	
		Male	Female	Male	Female
	1	2	3	4	5
0-9	Total	8253	8118	8253	8118
	Rural	7237	7234	7237	7234
	Urban	1016	884	1016	884
10-14	Total	3674	3488	3659	3472
	Rural	3264	3074	3249	3062
	Urban	410	414	410	410
15-19	Total	2977	2785	2782	2434
	Rural	2595	2442	3414	2138
	Urban	382	343	368	296
20-24	Total	2771	2703	1699	1188
	Rural	2369	2370	1438	1069
	Urban	402	333	261	119
25-29	Total	3047	2752	1029	544
	Rural	2567	2316	851	495
	Urban	480	436	178	49
30-34	Total	2697	2149	466	255
	Rural	2195	1868	394	238
	Urban	502	281	52	17
35-39	Total	2836	1983	404	206
	Rural	2243	1724	371	119
	Urban	593	259	33	15
40-44	Total	2306	1636	326	148
	Rural	1878	1452	310	140
	Urban	428	184	16	8
45-49	Total	1890	1583	204	141
	Rural	1622	1422	284	132
	Urban	268	161	10	9
50-54	Total	1601	1416	237	115
	Rural	1413	1287	221	104
	Urban	188	120	16	11

STATUS IN RURAL AND URBAN AREA OF LEH DISTRICT

Married		Widow		Divorced or Separated	
Male	Female	Male	Female	Male	Female
6	7	8	9	10	11
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	..
15	15	..	..	..	..
15	11	..	..	..	..
..	4	..	..	..	..
194	341	..	2	1	7
180	295	..	2	1	6
14	46	..	..	..	1
1049	1467	8	16	14	31
909	1258	8	15	13	27
140	209	..	1	1	4
1980	2137	17	30	21	41
1681	1764	17	26	18	31
299	373	..	4	3	10
2213	1788	25	57	14	49
1770	1544	21	49	11	37
443	244	4	8	3	12
2372	1675	51	57	9	44
1817	1444	48	52	7	36
555	231	3	5	2	8
1804	1310	75	130	11	47
1401	1168	69	116	8	28
403	142	6	14	3	19
1469	1232	111	162	17	47
1222	1103	102	152	15	34
247	129	9	10	2	13
1200	1038	147	237	11	25
1050	949	134	216	7	18
150	89	13	21	4	7

55-59	Total	1200	1000	170	69
	Rural	1061	935	161	66
	Urban	139	65	9	3
60-64	Total	1222	1065	178	64
	Rural	1128	980	167	61
	Urban	94	85	11	3
65-69	Total	716	608	75	35
	Rural	659	558	74	32
	Urban	57	50	1	3
70 and above	Total	1048	844	100	49
	Rural	974	783	99	43
	Urban	74	61	1	6
Total All Ages	Total	36248	32132	19661	16841
	Rural	31216	28446	17279	15007
	Urban	5032	3686	2382	1834

875	684	147	227	8	19
760	638	135	216	5	14
115	46	12	11	3	5
785	641	254	342	4	18
719	598	238	306	3	15
66	43	16	36	1	3
464	334	174	232	3	7
420	308	164	213	1	5
44	26	10	19	2	2
496	331	446	457	6	6
461	315	408	421	6	4
35	16	38	36	..	2
15011	12993	1456	1951	119	141
12496	11395	1345	1785	95	255
2515	1598	111	166	24	86

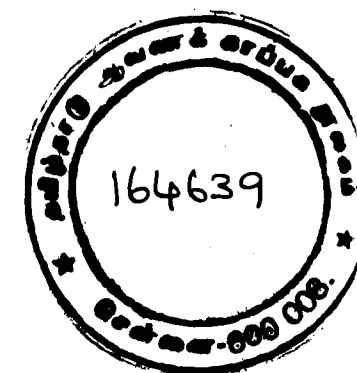
DISTRIBUTION OF POPULATION BY AGE, SEX AND MARITAL

		Total Population		Never Married	
		Male	Female	Male	Female
1		2	3	4	5
0-9	Total	7860	7903	7860	7903
	Rural	7410	7470	7410	7470
	Urban	450	433	450	433
10-14	Total	3721	3574	3690	3526
	Rural	3530	3389	3499	3344
	Urban	191	185	191	182
15-19	Total	3493	2956	3022	2116
	Rural	3274	2807	2820	2009
	Urban	219	149	202	107
20-24	Total	3430	3023	1544	597
	Rural	3229	2881	1424	567
	Urban	201	142	120	30
25-29	Total	2736	2326	550	197
	Rural	2541	2187	510	193
	Urban	195	139	40	4
30-34	Total	2822	1919	240	63
	Rural	2629	1805	230	63
	Urban	193	114	10	..
35-39	Total	3095	2218	158	66
	Rural	2927	2095	157	66
	Urban	168	123	1	..
40-44	Total	2213	1423	113	43
	Rural	2106	1370	112	43
	Urban	107	53	1	..
45-49	Total	1953	1539	100	34
	Rural	1823	1475	100	34
	Urban	130	64	..	..

STATUS IN RURAL AND URBAN AREA OF KARGIL DISTRICT

Married		Widow		Divorced or separated	
Male	Female	Male	Female	Male	Female
6	7	8	9	10	11
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	..
30	44	1	2	..	1
30	41	1	2	..	1
..	3	..	..	..	..
457	814	3	3	10	22
440	772	3	3	10	22
17	42	..	..	..	..
1824	2345	29	23	31	57
1744	2236	29	21	31	56
80	109	..	2	..	1
2114	2067	45	15	26	47
1962	1936	42	14	26	44
152	131	3	1	..	3
2475	1801	81	27	26	28
2298	1689	76	27	25	26
177	112	5	..	1	2
2774	2049	141	81	22	22
2608	1934	140	74	22	21
166	115	1	7	..	1
1924	1283	158	76	18	21
1824	1234	152	74	18	19
100	49	6	2	..	2
1614	1330	225	163	14	13
1489	1270	220	158	14	13
125	60	5	5	..	..

50-54	Total	1322	998	71	22
	Rural	1262	961	71	22
	Urban	60	37	..	..
55-59	Total	639	581	47	18
	Rural	603	563	47	18
	Urban	36	18	..	..
60-64	Total	1214	979	39	27
	Rural	1184	951	39	27
	Urban	30	28	..	..
65-69	Total	439	354	17	12
	Rural	427	337	17	12
	Urban	12	17	..	..
70 and above	Total	672	591	2	7
	Rural	657	572	2	7
	Urban	15	19	..	..
Total All Ages	Total	35609	30383	17482	14630
	Rural	33603	28862	16467	13874
	Urban	2006	1521	1015	756



		102			
1052	784	192	183	7	9
997	754	187	176	7	9
55	30	5	7	..	..
510	446	76	112	5	5
478	432	72	108	5	5
32	14	4	4	..	..
860	492	307	451	9	9
833	486	303	429	9	9
27	6	4	22	..	..
264	175	154	165	3	3
255	169	151	154	3	3
9	6	3	11	..	..
345	191	293	387	4	4
335	188	288	371	4	4
10	3	5	16	..	..
16242	13820	1706	1686	176	242
15293	13141	1665	1610	175	233
949	679	41	76	1	9

It is clear from the above statement that the practice of infant marriage has disappeared from the region as there is no married male or female in the age group 0-9. The data relating to the age-group 10-14 shows that the practice of child marriage persists as 104 such cases have been reported from the region. So far as the districts are concerned, the proportion of married persons in the age-group 10-14 is slightly higher in Kargil district where 74 cases have been reported against only 30 cases in Leh district. In the age group 15-19, only a small percentage (14.80 percent), is reportedly married. A striking feature of this age-group and of the age-groups 20-24 and 25-29 is that the number of married females exceeds the number of married males. This is due to variations in the marriageable age of the two sexes and to the urge among the parents to marry their daughters as early as possible. The highest proportion of 87.55 percent among married persons obtains in the age-group 35-39 followed by 86.33 percent in the age-group 30-34 and 84.61 percent in the age-group 40-44. The high percentage of married persons both male and female in the aforesaid three age-groups shows that the age of marriage both among males and female has increased. The never married category in all the age-groups succeeding 15-19 mostly consists of Lamas, beggars, vagrants, eunuchs, lunatics and such other persons as cannot enter into matrimonial alliances due to physical disabilities.

Position of Women in Ladakh :

The womenfolk of Ladakh are sturdy, healthy and well built and, in manners, cheerful and gentle. They participate in all economic activities including manual work in fields and farms, in workshops, in knitting and embroidery centres. They perform salesmanship par excellence. Naturally they enjoy better social status and liberty in home life and in marital status. However, the womenfolk belonging to the Muslim community of Kargil district are generally confined to their homes and observe **Purdah**. The womenfolk of the Shia-sect are allowed by customs to contract marriages of a short duration known as "**Muta**" system.

Home Life

The findings of the economic survey conducted in 1969 regarding the proprietorship of the residential structure, reveal that about 97% of the families in the region were residing in the houses owned by them while the remaining 3% were tenants. In Kargil and Zaskar tehsils, no local family has been reported as rent payer. As far as the structure of the houses is concerned it may be noted that intensely cold climate with temperature dropping even below -20°C during winter does not permit the construction of **pacca** dwellings in the region. As such, the people prefer to live in **Kachha** dwellings made of local wood, mud and unbaked bricks as these materials are bad conductors of heat. Moreover, the scarcity of cement and timber due to the heavy costs of transportation is another factor responsible for the preponderance of **Kachha** houses. However, in recent years, a distinct change is discernible in the construction work, in designing, in structure and in the building materials used both in public building as also in private house. Modernization is under way especially in hotels and restaurants etc, as these have to cater to the needs of tourists.

As far as the structure of the houses is concerned, it was observed that 97% families resided in "**Kachha** houses", 0.25% in **Pacca** houses and 2.5% in semi-pacca houses. This is evident from the following table which gives the percentage distribution of families according to the type of housing structure :—

Type of Structure	Leh	Kargil & Zaskar	Ladakh Region
Kachha	94.4	100.00	97.00
Semi-Pacca	4.3	..	2.50
Pacca	1.3	..	0.50
Total :	100.00	100.00	100.00

Construction Work :

The construction of houses also indicates the living conditions of the people. The data collected during the survey is con-

tained in the following table¹ :

Percentage distribution of the families according to the period since the house was built.

Period	Leh	Kargil & Zaskar	Ladakh Region
0-5 years	56.00	47.50	52.00
6-10 years	33.00	34.00	33.00
11-20 years	3.00	..	1.50
21-30 years	..	1.50	0.50
31 and above	8.00	17.00	13.00

It will be observed from the above table that about 85% of the sample houses in the region were constructed near about the time when the survey was made. The pace of development seems to be greater in Leh where about 89% of the sample houses are reported to have been constructed during the last decade as compared to 81% in Kargil and Zaskar. This is a clear indication of the fact that economic progress in the region has resulted in large scale construction of houses for residential and rental purposes. The proportion of rented residential accommodation also shows that with the tempo of developmental activities more and more technical and administrative man power is drawn to this area in sizeable numbers from other parts of the State. The number of hotels, restaurants and other eating places has increased in the urban areas. The construction of the Srinagar-Leh road has exposed the region to modern influence.

Accommodation :

The following table gives the percentage of sample houses having different number of rooms :—

Percentage of the total families

S. No.	Number of Rooms	Leh	Kargil & Zaskar	Ladakh Region
1.	One	1.45	..	0.76
2.	Two	14.49	9.52	12.12
3.	Three	17.39	12.70	15.15
4.	Four	28.98	11.11	20.15
5.	Five	4.35	19.05	11.36
6.	Six & above	33.34	47.62	40.16

¹ Source : Development Commissioner, Ladakh

The above table indicates that about half of the sample families were having residential accommodation of 5 rooms. About 28% had less than 3 rooms, 40.16% of the families in the region are having houses with accommodation of 6 rooms and above. Out of this Leh claims only a percentage of 33.34% as against 47.62% in respect of Kargil and Zaskar. With respect to residential accommodation, Kargil and Zaskar are better placed than Leh. Thus the house-holds are neither over populated nor congested due to scanty accommodation. On average, there are nearly 5 rooms per family in the region. However, there are minor under district variations, as the average works out at 4.77 and 4.82 for Leh and Kargil districts respectively. The fact that the average size of the house-hold is not large when compared to the available accommodation will be further borne out by the proportions given in the following statement :

Average number of persons per family and per room in the dwellings of various sizes.¹

Rooms	Leh		Kargil & Zaskar		Total	
	Per family (Average No. of persons)	Per room (Average No. of persons)	Per family (Average No. of persons)	Per room (Average No. of persons)	Per family (Average No. of persons)	Per room (Average No. of persons)
1.	1.00	1.00	..	..	1.00	1.00
2.	2.40	1.20	5.67	2.88	3.63	1.81
3.	3.33	1.11	5.75	1.92	4.30	1.43
4.	5.10	1.28	5.16	1.29	5.11	1.28
5.	7.33	1.47	5.67	1.13	6.00	1.20
6 & Above	8.43	1.27	5.83	0.88	6.71	1.01
7. Overall	5.38	1.13	5.70	1.18	5.53	1.15

It is evident from the table that except for the households living in 4 and more rooms, the average number of persons per

¹ Source : Development Commissioner, Ladakh

family in all other dwellings is less than 5. The number of persons per room in other families however, varies from 1.00 to 1.80 which is below the normal average of 2 persons per room.

General Conditions :

The houses in Ladakh are generally one to three storeyed with the walls made of either stones or unbaked bricks. In many instances the exterior of houses is white washed. The houses have usually light wooden balconies, the roofs are flat and are made of small trunks of poplar trees overlaid with a layer of willow shoots. (The roof is covered with straw and then coated with clay. The height of a room usually varies from two to three metres. The ceiling of rooms is made of poplar beams, supporting willow sticks, sometimes peeled off, laid quite close together and covered with clay). During the post-Independence period, the housing conditions of Ladakh have considerably improved. The old **Kachha** houses are now being replaced by **Pacca** Houses, in some cases these are constructed on modern lines with better sanitary conditions. Such constructions are particularly noticeable in the urban areas of Leh and Kargil. However, the construction work in this region has not developed at the same pace as in other parts of the State owing to the high cost of building materials and scarcity of timber as well as higher transport charges.

Electricity :

The rural areas in Ladakh have no adequate modern lighting arrangements. Till recent times light was provided by burning of fat, butter or edible oil. This was gradually replaced by kerosine lamps and candles. Electricity obtained from diesel is being mainly supplied to the urban areas. However, the State Government is making vigorous efforts to generate hydel power and provide electricity to the whole region. There were 5149 lighting installations in 1980-81. By the end of 1983-84, 77 villages have been electrified.

Water Supply :

For the supply of drinking water, the people of Ladakh depend on natural sources such as springs, streams and rivers

which flow in the region. However, the towns of Leh and Kargil are provided with tap water. The total number of public stand points stood at 179 during the year 1980-81 as against 62 during the year 1976-77. By 1980-81, 30 villages with a population of nearly 7000 had been covered under drinking water supply.

Sanitary Arrangements :

Due to the lack of water supply in the region flush type lavatories are not very common. In fact, there are not many hygienic laterines in Ladakh. However, the people use generally pit type laterines, which serve as a dumping place for refuse. The compost is used as a manure in the agricultural land.

Recreation :

The favourite amusement of Ladakhis is "Chogan" or Polo. It is a game played on horseback between two teams, the object being to score points by driving a wooden ball into the opponents goal using a long handled mallet. The game is a very spirited one and demonstrates calculated horsemanship. The polo matches are played on the auspicious occasions and the polo grounds exist in every important village known as "Shagaran". Professional drum players known as "Bedas" are invited to arouse enthusiasm among the players and the spectators.

Kabbadi in conventional form is also played through-out the region. Games such as football and volley-ball have also become popular. The favourite pastime during winter is the narration of and listening to the folk tales by professional bards. Fairs and festivals are usually held during winter. The district has one cinema hall, located in Leh with a seating capacity of 352.

Dress :

The climatic conditions have made it absolutely essential for Ladakhis to dress themselves in thick and warm clothes. They wear La-pa-sha or cloak of wool. It is usually white or maroon. However, in Kargil white chogas are popular among men while women generally wear black gowns. The poor put on mantles or

sheep skin with woollen lining. Both rich and the poor tie round their waists a girdle made of cloth in which are stuck knives.

Chakmak and leather case ornamented with brass containing flint, steel and tinder are used. The coarse woollen leggings are wrapped round the legs and secured by a garter which is generally black, but sometimes red. These leggings are either felted or knit from wool. They wear felted boots with leather soles, which are turned up all round and sewn to the felt. Most of the Lamas wear red sleeveless coats and most of them go bare-headed. They wear long skirts secured by a red girdle. The Lamas of upper class cover their heads either with quilted skull caps or sheep skin lined with wool from inside.

The women wear woollen jackets with a large multi-coloured stripped woollen peticoats which cover their body up to knee. They wear mantles of sheep skin with woollen lining inside and the same is covered externally with coloured cotton, silk or brocade depending on the status of the wearer. Women, like men, wear leggings and boots, their heads are generally bare, their hair arranged, in a border of narrow plaits which hang round the head like a long fringe. However, during cold season women also wear felted caps ornamented with precious stones. Women of all classes wear ornaments consisting of necklaces made of cornelia, turquoise, amber, gold, silver and brass with precious stones. The Muslim women of Kargil and Dras use woollen caps which cover them from forehead to the neck to which is tagged a silken scarf hanging at the back.

While the Ladakhi women still hold to their old customs and conventions, the urban educated young generation has adopted modern style of dress.

Food :

The diet of the common people usually consists of thick barley cakes or barley flour moistened with water and butter, with a broth of turnips either fresh or dried to which are added a few peas and a seasoning of a salt and pepper. Meat is seldom tasted by the poor save on occasions of rare rejoicing. Tea is now very common and taken many times during the day. It is made

of a strong preparation with soda, seasoned with salt and churned with butter until it acquires chocolate colour. **Mokmog**, **Gyatuk**, **Zan** and **Thukpa** are the favourite dishes in the region. Mokmog are small balls of minced meat and is very delicious. People are fond of Zan which is flour of grim or a kind of barley. Its balls are boiled in hot water before being served. The grim powder is mixed with tea or Chhang before use. Generally people take meals thrice a day. Tea and **Satoo** is taken early in the morning, locally called **Thasama**. Zera is the mid-day meal and the last meal in the evening with some special preparation known as **Ghonzan** and **Thukpanzana**. Except Muslims, all others are fond of indigenous liquor known as **Chhang**. This is made from fermented grim and has a sour smell like that of beer. This is the usual beverage, but it is sometimes distilled and a clear whiskey like spirit is obtained.

CHAPTER IV

AGRICULTURE AND IRRIGATION

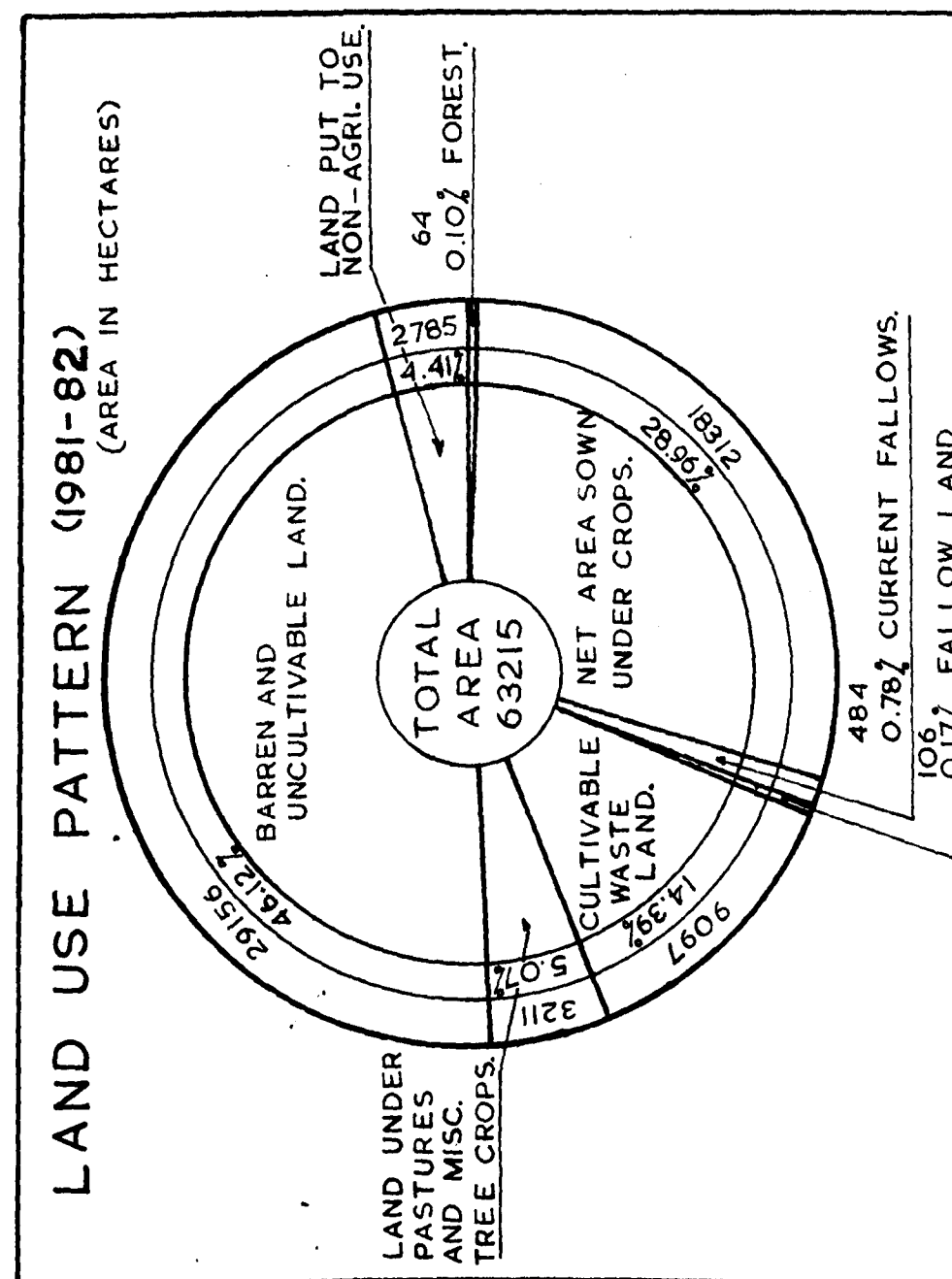
Agriculture is of paramount importance to the economy of Ladakh. It is a major source of income and the principal occupation of the people of the region. However, unfavourable geo-climatic conditions and limited factor endowment position impose some serious constraints to the agricultural development of this area. All the agricultural operations have to be restricted to five or six months in a year due to prolonged and severe winter. Rainfall being negligible, cultivation has to be limited to such fields only which get an assured supply of water either by artificial canals or from hill torrents. In the absence of a level surface in the region, this is invariably done by terracing the fields in a vertical manner. The scope for extensive cultivation being limited, efforts have, therefore, to be concentrated on the judicious application of modern technology and appropriate use of inputs with special regard to the local conditions.

Land Use Pattern :

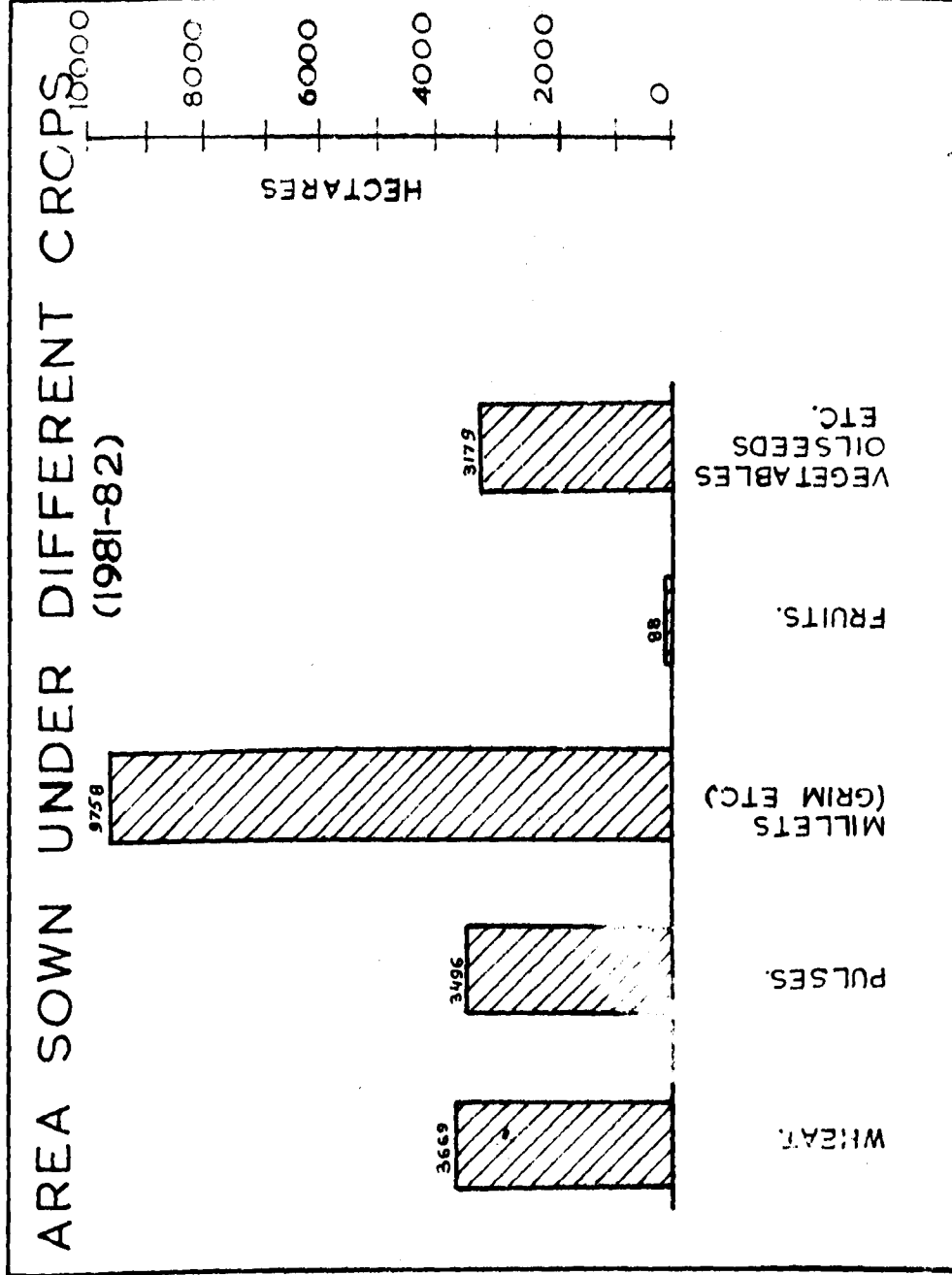
Details about the land-use-pattern in Ladakh region are given in the table below¹ :—

(Land in hectares)						
S. No.	Year	Total area according to village papers	Forests	Land put to non-Agri. use	Barren & uncultivable land	Permanent pastures and grazing land
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	1957-68	58804	67	2118	28831	895
2.	1968-69	59838	67	2280	27939	979
3.	1969-70	59922	67	2354	27889	979
4.	1975-76	61242	64	2709	29288	..
5.	1976-77	61338	64	3011	28954	..
6.	1977-78	61988	64	3466	28954	..
7.	1979-80	62578	64	2685	28988	..
8.	1980-81	62921	63	2690	29076	..
9.	1981-82	63215	64	2785	29156	..

Land under pastures & Misc. tree crops	Cultivable waste land	Fallow land	Current fallows	Net area sown under crops	Total cropped area	Area sown more than once
(8)	(9)	(10)	(11)	(12)	(13)	(14)
1154	9345	176	790	17108	18293	1184
1215	9172	189	679	17320	18516	1196
1225	9149	199	520	17539	18657	1118
2330	8764	204	549	17334	18512	1178
2330	8826	334	219	17600	19172	1572
2321	8971	128	348	17636	19014	1378
3160	9079	100	456	18037	20343	2306
3195	9073	102	519	18203	19386	1183
3211	9097	106	484	18312	19924	1612



¹ Source : Financial Commissioner, J and K Government.





The beautiful lower Suru Basin near Kargil



Farmer ploughing on Yaks

The figures regarding classification of the total area under different categories of land utilization show the development of agricultural activities in Ladakh. Total area referred to above is based on returns of area prepared by village staff for revenue purposes and does not indicate the total geographical area of the region. It will be seen from the above table that the total area according to village papers has increased from 58804 hectares in 1967-68 to 63215 hectares in 1981-82 which means that during a period of seventeen years there has been an increase of 7.5%. The slow growth rate is due to the soil condition of the area which on the whole is sandy and alkaline in reaction, besides being relatively inert both physically and chemically with low water holding capacity.

Area under forests include only those forests of which record is maintained by the Revenue Department. According to village papers, the percentage of forest area to total area was 0.10 in 1981-82. This low percentage of forests is due to the fact that a huge area over which Leh and Kargil districts extend consists of high altitudinal table lands and plateaus which are bare and naked and completely devoid of forests.

Land put to non-agricultural uses include all land occupied by buildings, roads, rivers, canals etc. The area under this category has increased from 2448 hectares in 1967-68 to 2785 hectares in 1981-82. The increase of 337 hectares is due to the developmental activities in recent years. A wide network of roads has been laid, linking even remote corners of the region with vehicular roads. Many private and government buildings have been constructed mainly in the towns of Leh and Kargil.

Area, which can not be brought under cultivation except at an exorbitant cost, is classed as barren and uncultivable. All mountains and deserts fall under this category. Percentage of such land in 1981-82 was 46.12 as against 45.62 in 1967-68. There is an increase of 0.50% which is negligible when compared to the percentage increase of 7.50% from 1967-68 to 1981-82 in the total area, according to village papers.

Land under pastures includes all grazing lands, whether they are permanent pastures and meadows or not. Cultivable lands which are not included in net area sown but are put to some agricultural use is included in land under "miscellaneous

tree crops." Land under thatching grasses, bamboo bushes and other groves for fuel etc. is included in this column. To make the region self sufficient in fuel and fodder, a campaign was launched by the Forest Department to plant willow and poplars on the river beds which resulted in an increase in the percentage of land (under this category) from 1.96 in 1967-68 to 5.07 in 1981-82. Fodder seeds like Yarkandi type of Alfa Alfa are made available to the farmers on subsidized rates every year and fodder villages are established for which fertilizers are issued free of cost to the farmers.

Cultivable waste land include lands available for cultivation, whether actually cultivated or not, but not cultivated during the current year and the last five years or more in succession for one reason or the other. Such land may be either fallow or covered with shrubs and jungles which are not put to any use. Lands which have remained out of cultivation for a period not less than one year but not more than four years is called "Fallow Land" and the areas which are left fallow up to one year only are called "Current Fallow". The percentage of fallow land including current fallows to total cropped land has decreased from 5.20 in 1967-68 to 2.90 in 1981-82. Year-wise fallow land (including fallows) as percentage of total cropped area is detailed hereunder :

S. No.	Year	Fallow land as percentage of total cropped area
1.	1967 68	5.20
2.	1968 69	4.60
3.	1969 70	3.80
4.	1975 76	4.00
5.	1976 77	2.80
6.	1977 78	2.50
7.	1979 80	2.70
8.	1980 81	3.20
9.	1981 82	2.90

In persistent decline in cultivable waste land, fallow land including current fallows is due to extension of irrigation facilities reclamation and better management of land.

Net area sown is the area on which sowing is actually done during the course of a year. Total cropped area represent the total area covered with crops. During the year 1967-68, net area sown constituted 29.09 percent of the total area and 93.52 percent of total cropped area. Year-wise net area sown under crops as percentage of total cropped area and total area according to village papers is given below :

S. No.	year	Net area sown as percentage of total area cropped	Net area sown as percentage of total area according to village papers.
1.	1967 68	93.52	29.09
2.	1968 69	93.54	28.94
3.	1969 70	94.00	29.26
4.	1975 76	93.63	28.30
5.	1976 77	91.80	28.69
6.	1977 78	92.75	28.45
7.	1979 80	88.66	28.82
8.	1980 81	93.89	28.92
9.	1981 82	91.90	28.96

It will be seen from the above table that the percentage of net area sown to total area according to village papers is low. Again, percentage with regard to total cropped area has decreased from 93.52 in 1967-68 to 91.90 in 1981-82. The scope for extensive cultivation being limited, the government has, therefore, to think of long term measures for increasing agricultural production by resorting to intensive methods of cultivation on a large scale.

Area sown more than once is that area on which crops are cultivated more than once during the agricultural year. This

is obtained by deducting "Net Area Sown" from "Total cropped Area". The area sown more than once during 1967-68 was 1184 hectares which forms 6.92 percent of the net area sown whereas during 1981-82, it was 1612 hectares which forms 8.80 percent of net area sown. This shows that there is limited scope for raising two crops on account of cold climate. Modern bio-chemical inputs and mechanical inputs have to be used on a large scale in order to raise the productivity of land. Some long term measures, like irrigation and power facilities and package of practices are indispensable for increasing the productivity as well as for widening the scope for double cropping in the region.

Cropping Pattern

The important crops cultivated in Ladakh are wheat, pulses, and grim (i.e. inferior millet) and barley. Cash crops such as oil seeds are grown on a small scale. Agricultural year consists of **Rabi** and **Kharif** of the same year. Being an arid zone with low temperature agricultural operations are restricted to 5-6 months a year. Sowing for wheat commences in March/April and harvesting is done during August. Grim is sown in early May and harvested in October. Crop calendar of the region is given below:—

S. No.	Agricultural (activity)	Name of the crop			
		Small Millet	Wheat	Barley &	Grim
1.	Leh District				
	(i) Sowing	April to May	March to April	April to May	
	(ii) Harvesting	August and September	September and October	August and September	
	(iii) Peak Marketting	October and November	October and November	October and November	
2.	Kargil District				
	(i) Sowing	April-August	March-April	March-April (Only Barley)	
	(ii) Harvesting	August to October	August to October	August to October	
	(iii) Peak Marketting	October to November	October to November	November	

Table given below shows area under different crops in Ladakh during 1967-68 to 1981-82¹ :—

Area sown under different crops (in hectares).

S. No.	Year	Rice	Maize	Wheat	Barley	Pulses	Millets
1	2	3	4	5	6	7	8
1.	1967-68	..	..	3450	..	..	..
2.	1968-69	..	..	3391	..	..	..
3.	1969-70	..	..	3402	..	..	..
4.	1975-76	..	..	3775	..	701	..
5.	1976-77	..	..	4056	..	1851	..
6.	1977-78	..	..	3113	..	731	..
7.	1979-80	..	..	4212	..	1001	..
8.	1980-81	..	..	3973	..	1065	..
9.	1981-82	..	..	3669	..	3496	..

Other Food Crops	Total Food grown	Fruits	Vegetables	Oil seeds	Drugs	Other crops	Total area under all crops
9	10	11	12	13	14	15	16
9758 (including pulses & Millets)	..	533 (including vegetables)	..	99	5	..	18293
10028 (including pulses and Millets)	..	504 (including vegetables)	..	73	18	..	18516
10299 (including Pulses and Millets)	..	409 (including vegetables)	..	61	2	..	18657
10007 (including Millets)	14483	..	..	..	..	4029	18512
9130 (including Millets)	15037	..	..	..	..	4135	19172
11082 (including Millets)	14926	..	..	..	..	4088	19014
10541 (including Millets)	15754	67	..	..	..	4589	20343
9755 (including Millets)	14793	80	..	..	..	4593	19386
9580 (including Millets)	16745	88	..	..	..	3179	19924

1. Source :—Financial Commissioner, J & K Government.

The table reveals that the area under all crops except wheat, millets and pulses was negligible. Out of 18293 hectares of total area under all crops in 1967-68, the area under wheat was 3450 hectares or 18.86 percent. The other cereal crops including millets and pulses, were cultivated on an area of 9758 hectares or 53.34 percent of the total cropped area. Fruits and vegetables grown on an area of 533 hectares constituted 2.91 percent of the total cropped area. A negligible area of 99 hectares and 5 hectares of land were under oil seeds and drugs respectively.

The data given in the last column of the table shows that the area under all crops has generally been increasing from year to year and has reached the figure of 19924 hectares in 1981-82 as against 18293 hectares in 1967-68 which shows an increase of 8.91 percent. Despite the fluctuation, the proportion of the area under wheat witnessed an overall increase of 6.35 percent but relative to its proportions to total area during 1981-82 has gone down from 18.86 percent in 1967-68 to 18.69 percent in 1981-82. In order to provide a balanced diet to the people, a large area was brought under pulse cultivation, and during 1981-82, 3496 hectares were under this crop. This is clear from the fact that relative importance of pulses has increased from 3.83 percent in 1975-76 to 17.55 percent of the total cropped area in 1981-82.

The agricultural produce of the region does not meet the requirements of its people. The State Government has every year to arrange adequate supplies of essential goods and commodities well in advance for the winter months.

Agriculture Land Holding Structure

The table given below indicates the concentration of cultivable land in the region. According to census 1961 all the 20 percent sample households in rural areas of the district for which the data was collected, are engaged in cultivation. The classification, by the size of land cultivation shows that 34 percent cultivated holdings are below 0.40 hectares each. The holdings between 0.40 to 0.97 hectares account for 40 percent of the total number of holdings. In other word, 74 percent of the total number of holdings are below one hectare each and 93 percent are less than two hectares each in size. This underlines the fact that subdivision and fragmentation of holdings has already reached its extreme limits in this region. The subjoined statement gives the number and percentage of all households classified by size of cultivated land¹.

¹ Report of the Agricultural Census, 1970-71.

Size of land	No. of cultivating Households	Percentage
Less than 0.40 hectares	1076	34.07
0.40 to 0.97 ..	1267	40.13
1.00 to 1.98 ..	597	18.90
2.00 to 2.99 ..	151	4.78
3.00 to 4.00 ..	32	1.01
4.04 to 5.01 ..	17	0.54
5.05 to 6.03 ..	12	0.38
6.07 to 12.10 ..	6	0.19

The above data when compared with the data furnished by the Agricultural Census Department, reveals that 52.10 percent holdings account for 13.53 percent of area in the size class of below 1.00 hectares, whereas 3.56 percent of holdings account for 23.61 percent of area in the size class of 5.05 hectares and above, 87.85 percent of holdings account for 55.59 percent of area of the holdings which are below 3.00 hectares while 12.15 percent of holdings account for 44.21 percent of holdings which are above 3.00 hectares. The comparison between the two results, shows that concentration of holdings has increased in lower sized holdings and 35.92 percent joint holdings. All the land holdings are irrigated. Out of the total number of holdings, 50.71 percent holdings are wholly owned and self operated and 49.29 percent of holdings are partly owned and partly rented. Out of the latter 62 percent of holdings are partly rented. Out of the total irrigated area 15.42 percent of area falls in lower farm size 1.00 to 1.98 hectares.

Cropping Intensity

The following statement shows the cropping intensity of holdings in different classes of operational holdings in Ladakh region.

Size Class (Hectarees)	Cropping Intensity
Below 1.00	110.11
1.00 to 2.00	104.22
2.00 to 3.00	111.29
3.00 to 4.04	103.41
4.04 to 5.05	105.01
5.05 and above	103.24

Cropping intensity is very high in case of operational holdings of 1-2 and 2-3 hectares. This may be due to better management and proper use of irrigation facilities.

Wheat is the main crop grown in this area. Its production has increased from 23 thousand qtls. in 1964-65 to 32 thousand qtls. in 1977-78. Barring seasonal fluctuations due to bad weather, the trend in the food-grains production, on the whole is not quite impressive. The government has given top priority to the production of food grains with a view to make the State self sufficient in this respect. The Department of Agriculture has launched a campaign in order to organise agriculture on scientific lines. High yielding varieties of seeds are evolved in the Seed Multiplication Centres to suit local conditions. The department is providing assistance to the cultivators in the form of fertilizers and pesticides at subsidized rates. The quantity and quality of vegetables has also improved as a result of various scientific experiments made by the Department of Agriculture¹.

Crop	Yield per hectare
Wheat	0.740 Qtls.
Barley	0.705 Qtls.
Pulses	0.748 Qtls.
Other Cereals and Millets	0.684 Qtls.

Kind of Soil

In Ladakhi language, cultivable land is called "Zhing"².

¹ Source : Directorate of Agriculture.
² Cunningham, op. cit., P. 221

and this term is generally suffixed to denote various kinds of lands and soils. Thus land of a good quality is called "**Zhing**" **Zung**" and land strewn with stones is known as "**Thang Zhing**". In general, land is classified into various types whose brief description with local names is given below¹ :—

1. Mazhing

Mazhing is the name given to a field where manure is first stored and sowing is attended with certain religious ceremonies.

2. Bazhing

A piece of land situated at a convenient distance from the village and being well manured and looked after is called **Bazhing**.

3. Thazhing

Thazhing is the name given to land which is situated at an inconvenient distance from the village and is insufficiently manured.

4. Chhas

Chhas is the name given to a piece of land in which vegetables are grown.

5. Sasik

This class of soil is poor and is left fallow in certain years to recoup its strength.

6. Olthang

A piece of land which grows oal (a kind of laucerne) is called **Olthang**.

7. Bagh

A piece of land which is under fruit trees is called **Bagh**.

Alluvial types of soils ranging from sandy to clay and loam are found in the region. The surface soil is frequently renovated by top dressings of earth brought from the hill sides. These soils are suitable for cultivation of gram, wheat, barley, pulses, and

¹ Report of the Agriculture Census (1970-71), PP. 45-46

potatoes and some other leafy vegetables. Fodder crops of lucern and temperate fruits like apple, apricots, plum and grapes are also grown. The tehsil-wise classification of various kinds of soils is as under :—

Name of the Tehsil	Type of Soil
Leh	Sandy to sandy loam
Kargil †	Loam to clay loam
Zaskar	Sandy to sandy loam slightly alkaline.

Irrigation

Due to scanty rainfall, irrigation facilities are not adequate and, as such, agriculture depends entirely on artificial irrigation. The water of streams and hill torrents is harnessed by means of dams and conducted with considerable skill and care from terrace to terrace and from field to field. The total irrigated area in 1950-51 was 17006 hectares which increased to 19924 hectares in 1981-82 thereby showing an increase of 17% over a period of 30 years. During the same period the percentage of gross area irrigated to gross area sown went up from 92.46% in 1950-51 to 99% in 1980-81. The table given below shows the trend in irrigation facilities in Ladakh region¹:

S. No.	Year	Gross area sown (Hectares)	Gross area Irrigated (Hectares)	% of gross area irrigated to gross area sown.
1.	1950-51	17006	15750	92.46
2.	1979-80	20343	20343	100.00
3.	1980-81	19386	19188	99.00
4.	1981-82	19924	19924	100.00

Irrigation is a big constraint on the extension of margin of

1 Digest of Statistics (1983-84).

cultivation. In view of its importance, the government has made extensive survey in order to tap the available water resources of the region. Preference is, however, being given to projects with a short gestation period such as the minor and medium works. The construction of the following projects has already been taken up by the State Government :

1. Construction of Abcchanmathang-Canal.
2. Construction of Upshi Canal.
3. Construction of Khumbathang Canal.
4. Construction of Gargathang Canal.

In addition to the above, five more schemes have been taken in hand. A brief description of these is given below :

(1) Kurbathang Irrigation Project : The project is likely to irrigate 810 hectares of land.

(2) Stakna Hydly Project : Besides the generation of power the project is expected to irrigate 1484 hectares of land.

(3) Nemo Lower Plateau Irrigation Project : This project is likely to irrigate 49 hectares.

(4) Sasoma Irrigation Project : It is estimated to irrigate 445 hectares of land.

(5) Igo-Phey Irrigation Canal : It will irrigate 3642 hectares on its completion.

With the execution of the above project, the irrigation potential of the region is expected to be adequately exploited. The lift irrigation system has not been introduced so far. However, Indus, Shyok and the Suru Rivers provide abundant potential for this type of irrigation. At present some experiments are being made in this direction. With the success of these experiments huge tracts of waste lands can be reclaimed. In 1973-74, the programme of Command Area Development with the objective of ensuring optimum utilization of irrigation potential created under various irrigation schemes was taken up. This objective is to be achieved through the following measures :—

- (1) Laying a net work of equitable distribution system for efficient and economic utilization of water, of feeder canal.

- (2) Leveling of uneven lands.
- (3) Contour/graded bunding/terracing.
- (4) Removal of water logging and draining of excessive water.
- (5) Ensuring proper agricultural system covering cropping patterns, use of proper inputs, regulated markets, credit system, communication net work.
- (6) Farm-forestry and cultivation of fodder, fuel timber etc.
- (7) Co-ordination of the efforts of the various development agencies.

Agricultural Inputs

Implements

The old agricultural implements are almost exclusively used for ploughing of land, harvesting of crops and in other processes relating to the cultivation of land. Ploughing is done by a hybrid of yak-bull and the common cow. The male of this hybrid is called **Zo** and the female **Zomo**. Among the old implements which are popular with the cultivators mention may be made of the following :

- (1) Local plough with share
- (2) Wooden ridger.
- (3) Local wooden leveler.
- (4) Wooden rake.
- (5) Local wooden winnower.
- (6) Local pick (arc type).

These implements are popular due to the convenience with which they are handled, their low price and especially their suitability for the topography of cultivated land. Among the modern implements the **Shalimar** plough, trending hoes, iron rakes and garden trowel are gradually becoming popular with the cultivators. This is due to their easy operation in terraced hilly fields. By the end of Fifth Five Year Plan, over 3015 new implements had been distributed among the farmers. Anyhow, there is a slow but steady trend towards mechanisation of agriculture as the De-

partment of Agriculture and Horticulture are encouraging the farmers to make use of power sprayers, power tillers, diesel engines and power pumps. The low lying lands are being reclaimed with the help of tractors¹.

There has also been some improvements in spraying and dusting of crops against diseases and pests with the help of power sprayers and dusters, resulting thereby in more coverage of land under plant protection scheme. Secondly, ploughing with power tillers has been taken up, which may also help in increasing the area as well as enable efficient cultivation. Due to the introduction of high yielding varieties of wheat there has been an increase in its production. Similarly on account of the introduction of the promising varieties of potato e.g. Kufri, Chander-Muckhi, there has been some increase in the area of potato cultivation and vegetable development programme. The people are being encouraged to undertake the cultivation of vegetables as kitchen gardening. The distribution of improved varieties of seeds has resulted in the increase of the area under different vegetable viz. cauliflower, knol-khol-purple viona, tomato etc.

There are no private or co-operative nurseries and farms in this region, wherefrom fruit plants, seeds, vegetables, flowers this region, wherefrom fruit plants, seeds, vegetables, flowers and commercial crops could be supplied. There are however, two Government Nurseries which supply fruit plants, vegetable seeds and seedlings. Besides, there are five Government Farms which distribute cereal, seeds, vegetable seeds and seedlings. There is also a farm for the production of potato seed at Dras. A detailed account in respect of agricultural extension works for the years 1967-68 to 1977-78 is given below² :—

S. No.	Particulars	Unit	1967 - 68	1968 - 69	1969 - 70	1970 - 71	1977 - 78
1.	General seeds distributed.	Qtls.	49.26	29.62	39.00	47.86	60.50
2.	Fruit plants distributed.	No.	3524	1325	551	234	..
3.	Potato seeds distributed.	Qtls.	89.94	26.00	38.00	47.66	..
4.	Vegetable seeds distributed.	Qtls.	1.68	2.00	2.09	8.52	6.87

¹ Source : District Agriculture Officer, Leh/Kargil.
² Source : Directorate of Agriculture.

Use of Fertilizers

The soil of the region is highly deficient in nitrogen. This deficiency is being overcome through the application of chemical fertilizers. Manures are being applied at the rate of about 250 qtls., per hectare on average. Farmers also try to increase soil fertility by adopting proper crop rotation as also by the utilization of local manurial resources and the chemical fertilizers.

Crop rotation in respect of wheat, gram, trumka and barley is two years.

In order to improve fertility of land Alfa variety of grass is grown for three to five years along with food crops. In some blocks like Nubra, and in some parts of Kargil tehsil where firewood is available at low cost cowdung is also used besides the chemical fertilizers. Common nutrients of soil of this region are nightsoil and chemical fertilizers. The year-wise distributed quantities of chemical fertilizers is given below¹ :—

S. No.	Variety	Unit	1967 68	1968 69	1969 70	1970 71
1.	Ammonia	Qtls.	860.62	711.39	296.66	575.00
2.	Urea	"	350.77	439.49	408.39	229.00
3.	D. A. P.	"	383.94	529.26	360.66	189.00
4.	Potash	"	161.94	175.23	86.58	52.58
5.	Super Phosphate	"	99.52	56.59		

During 1982-83, 3824 Qtls. of various fertilizers were distributed in the Leh district. The target for fertilizer distribution for 1983-84 for Leh and Kargil districts was 4000 Qtls., and 2600 Qtls. respectively. However, the consumption of chemical fertilizers is still very low partly due to the high prices and partly due to the lack of full response on the part of farmers. The Agricultural Department has started a campaign to push up the consumption of fertilizers through demonstration and training programmes for the farmers. The Agricultural production Programme has been implemented in Kargil tehsil. Under

¹ Source : Directorate of Agriculture.

this scheme some high yielding varieties of wheat, have been introduced. Fertilizers are also being applied to the local varieties. Besides, demonstration plots are also laid in the fields by the various Agricultural Production Agencies.

Research for finding out successful varieties of cereal crops, fruits, vegetables and fodder crops is being undertaken at the Research Farms of Agriculture Department. Successful varieties are released and recommended. Similarly, the appropriate doses of fertilizers and seed rates are recommended after experiments. Machines, chemical and improved implements are being supplied through N. E. S. Fertilizers and seeds are supplied through Cooperative Societies. Moreover, fruit plants produced at the following farms of Agriculture Department are distributed to farmers¹ :

S. No.	Name of the farm	Location
1.	Seed Multiplication Experimental Farm	Kargil
2.	Fruit Plant Nursery	Saspool, Leh tehsil
3.	Agriculture Research Farm	Thiksey, Leh tehsil
4.	Trial-cum-Demonstration Farm	Nubra, Leh tehsil
5.	—do—	Niddat Chungthang
6.	Agriculture Farm	Zaskar
7.	Potato Multiplication Farm	Dras (Kargil tehsil)

Improved Seeds

Under the package of practices programme, the high yielding varieties of seeds are used in the district. More than 63.00 qtls. of improved seeds were distributed in 1970-71, 54 qtls. in 1975-76, and 60.50 qtls. in 1977-78. Besides, 6.87 qtls. of improved type of vegetable seed was also distributed among the farmers during 1977-78.

The targets of various inputs during 1982-83 and 1983-84

¹ Source : Directorate of Agriculture.

in Leh is given in the table below¹ :—

S. No.	Particular	Units	Target 1982-83	Target 1983-84
1.	Distribution of Fertilizers	Qtls.	4250	4000
2.	Seed Village	Kanals	500	350
3.	Distribution of improved seeds	Qtls.	100	120
4.	Seed treatment	Qtls.	2000	2000
5.	Soil treatment	Acres	50	60
6.	Prophylatic spraying	Nos.	15000	20000
7.	Distribution of vegetable seeds	Qtls.	26	631
8.	Distribution of vegetable seedling	Nos.	700000	1000000
9.	Procurement of Alfa-Alfa seed	Qtls.	6	10
10.	Laying of fodder village	Kgs.	150	280
11.	Distribution of Fruit Plants	Nos.	8000	6000
12.	Distribution of Alfa-Alfa Seeds.	Qtls.	5	6

A detailed account of various development schemes in the Kargil district is as follows .

Coverage under high yielding varieties of seeds

The key to greater productivity of food grains and other crops is the use of H.Y.V. of seeds. The availability of seeds has been a constraint in achieving this objective. A concerted and organised effort will be made for increase in the quality seed production and making the inputs available to farmers at reasonable prices by making provision for subsidies. The target

¹ Source : District Agricultural Officer, Leh/Kargil.

under high yielding variety crops for 1983-84 are indicated as under¹ :

Crop	Hectares
Wheat	40
Grim	22
Fodder	25

Distribution of high yielding varieties of seeds

Multiplication and distribution of High Yielding Varieties of seeds is an important component of Agriculture Development Programme as supplying of quality seeds forms the very basis for increasing productivity of food grains. Main seed production programme is taken up at the S. M. Farms in the district but the production is low because of the smaller area of those farms and acute water shortage envisaged to be met by from the Farm Production as well as by the purchase of seeds from the growers selected under package programme. In the near future the difficulty with regard to the availability of seeds is likely to be over come with the two large sized farms being established under Desert Development Programme becoming operational. The targets for distribution of seeds for 1983-84 are as under² :—

Crop	Unit	Target
Wheat	Qtls.	100
Grim	Qtls.	66
Fodder	Qtls.	5
Vegetable	Qtls.	3
Potato	Qtls.	3

Fertilizer and Manure

In the modern system of crop production with its stress on High yielding Varieties, chemical fertilizers constitute the most important input. The present level of consumption in the district is very low primarily because the prices are high and

¹ Source : District Agriculture Officer, Leh/Kargil.

² Ibid.

secondly the farmers are yet very reluctant to adopt the practice in order to give a thrust to the programme. Education of the farmers will be undertaken through the demonstration programmes, training programmes adopting demonstration and package programmes for 1983-84. The targets of consumption of chemical fertilizers proposed are as under¹ :—

Kind of fertilizer	Unit	Target
Urea	Qtls.	2000
D. A. P.	Qtls.	500
M. O. P.	Qtls.	100

Plant Protection

The region is comparatively free from any major pests and diseases as compared to other districts in the State. However, some insects like cutworm and podborrer have been observed to cause damage to vegetables. The consumption of the pesticides is very low and in order to give boost to the consumption, it is proposed to provide subsidy at 50% for control of cutworm, and podborrer. In addition, a stress would be laid on rat control and seed treatment. The targets for coverage of area and distribution of pesticides for the year 1983-84 is given as under² :—

S. No.	Item	Unit	Target
1.	Seed Treatment	Qtls.	1200
2.	Rat Control	Acres	600
3.	Cutworm	-do-	20
4.	Podborrer Control	-do-	20

Distribution of Pesticide

S. No.	Item	Unit	Target
1.	Agrosan	Kg.	250
2.	Zinc Phosphide	Kg.	10
3.	Chlorodane	Kg.	300
4.	Dimecron Nuavan	Litres	10

¹ Source : District Agricultural Officer, Leh/Kargil.

² Ibid.

V. Vegetable Development

This item forms an important aspect of the Agriculture Development Programme in the district. There is no well defined belt of vegetable growing area, but mostly the cultivation is undertaken as kitchen gardening and the produce is used for self-consumption, though a fraction of the produce goes to the market. The possibility of extending the area at present is less unless new areas are brought under cultivation. At present efforts will be made to popularise the improved varieties of seeds and the use of fertilizers/pesticides. In order to give impetus to the programme, it is essential that the farmers are given some incentives. Accordingly, it is proposed to provide 50% subsidy on sale of seeds/ seedlings. The target for sale of seeds/seedlings at 50% subsidy for 1983-84 are as under :

S. No.	Type of vegetable seeds/seedling,	Unit	Target
1.	Peas	Qtls.	2.00
2.	Potato	Qtls.	3.00
3.	Other vegetable seeds	Qtls.	0.09
4.	Vegetable seedlings	Nos.	7500
5.	Analysis of soil samples	Nos.	400

* In addition to the above programme, training for lifting of soil samples would be imparted to the field staff and also to the farmers.

Agriculture Sector (Kargil)

S. No.	Name of the Scheme	Unit	Target
A. Area coverage under H.V.V. Programme			
1.	Wheat	Meter	40
2.	Grim	-do-	17
3.	Fodder	-do-	75
4.	Vegetables	-do-	30

¹ Source : District Agricultural Officer, Kargil.

S.No.	Name of the scheme	Unit	Target
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B. Distribution of H. Y. V. Seeds

1. Wheat	Qtls.	100
2. Grim	-do-	50
3. Fodder	-do-	5

C. Distribution of Fertilizers

1. Urea	Qtls	1700
2. D.A P	-do-	900
3. M.O.P	-do-	176

D. Vegetable Development :

1. Potato	Kgs.	..
2. Vegetable/Seed	-do-	120
3. Vegetable seedlings	Nos.	..

E. Plant Protection :

1. Seed Treatment	Qtls.	200
2. Pest/Disease Control	Acres	50
3. Rat Control	-do-	600

F. Demonstration Plots :

1. Cereals	Nos.	5
2. Fodder	-do-	5

G. Soil Conservation :

1. Land Reclamation	Acres Hect.	..
2. Investigation and Planning	-do-	25

H. Soil Testing :

1. No. of Soil Samples	Acres Hect.	1000
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Horticulture

Although the severe cold climate does not permit the extension of horticulture to large areas, there are, however, some areas of the region which are quite suitable for the growth of fruits like apricots, apples, grapes, peaches and pears. In fact, the apricots of Kargil like the apples of Kashmir are famous all over the country. The dried apricots being very sweet, are exported in large quantities to Kashmir and other parts of the country.

In 1971, there were 300 orchards covering an area of 88 hectares while vegetables covered an area of 323 hectares. The average annual produce of some fruits and vegetables is given below¹ :—

S. No.	Fruit/Vegetable	Average Annual Produce
1.	Apples	12000 Qtls.
2.	Apricots (dried)	20000 „
3.	Grapes	700 „
4.	Walnuts	4000 „
5.	Other fruits	300 „
6.	Vegetables	12000 „

As per the Agriculture census report of 1970-71, there are 528 land holdings whose area is partly under orchards, the total area of such orchards being 85.12 hectares. There are 287 holdings which are below 2 hectares each as against 241 holdings above this size. They account for 48% of the total number of holdings. Another 40% of holdings fall between 3 hectares each. Only 12% holdings exceed 4 hectares each². The detailed infor-

¹ Source : Directorate of Horticulture.

² Source : Report of the Agricultural Census (1970-71).

mation regarding the structure of those holdings is given as under :

Area under orchards by the size of Holdings

S. No.	Size Class	Holdings where area is partly under orchards	
		No.	Area (in hec)
1.	Below 0.25	62	6.47
2.	0.25 to 0.50	21	2.43
3.	0.50 to 0.80	39	2.43
4.	0.80 to 1.00	25	1.62
5.	1.00 to 2.00	140	28.33
6.	2.00 to 3.00	117	22.26
7.	3.00 to 4.00	57	11.47
8.	4.00 to 5.00	31	4.45
9.	5.00 to 10.00	30	2.43
10.	10.00 to 20.00	3	0.40
11.	20.00 to 30.00	..	..
12.	30.00 to 40.00	..	..
13.	40.00 to 50.00	..	..
14.	50.00 to 60.00	3	2.83

Diseases and Plant Protection Measures

Among the cereals both wheat and barley are attacked by diseases like brown rust, yellow rust, stripe rust and loose smut. The extent of damages done to these crops varies between 25-30 percent, 10-15 percent, 10-12 percent and 20-25 percent respectively. Hill-bunt is of no less importance as the extent of damage can go up to 30-40 percent for which reasons Agrosan treatment of the seeds has been achieved to a great extent. During the year 1967-68, 1968-69, 1969-70, 273.56 qtls., 273.20 qtls. and 465.00 qtls. respectively of cereal seeds were got treated against fungal diseases. The insect-pests prevalent in the region are as under¹.

¹ Source : Directorate of Horticulture.

(a) Army worm, (b) Aphis plant lice on both vegetables and local wheat, (c) wheat thrips, (d) potato tuber borer, (e) cut-worm, (f) calings moth of apple, (g) wheat stem burrower.

Of these the most serious pests are the cut-worm, caling moth of apple, wheat thrips and army worms. So far 95 acres attacked by cut-worms, 105 acres by wheat thrip, 110 acres by army worms, have been treated with the help of insecticides both through dusting and spraying.

Plant Protection Work

Details of plant protection work are as under :

S.No.	Item	Unit	1967-68	1968-69	1969-70	1970-71
	Quantity of seed treated against fungal diseases	Qtls.	273.56	273.20	456.00	N.A.
	No. of fruit trees sprayed	Nos.	3154	7501	7127	3368
	Fruit trees budded in farmers orchards	Nos.	10249	2672	3558	N.A.

At present the consumption of pesticides is very low. However, the department of Agriculture proposes to provide 50% subsidy for control of cut-worm and podborrer. Further, measures for rat control and seed treatment are also being undertaken. During 1982-83, 3200 qtls. of seeds were chemically treated and the target for 1983-84 was also about the same. Targets and achievements in the Leh district for 1982-83 are indicated below¹:

S. No.	Particulars	Unit	Targets 1982-83	Likely Achievement 1982-83	Target 1983-84
	Seed Treatment	Qtls.	2000	800	2000
	Soil Treatment	Acres	50	511	60
	Prophylactic spraying	Nos.	15000	2289	22000

¹ Source : District Agricultural Officer, Leh/Kargil.

The various plant protection measures undertaken in the Kargil district during the 6th Plan are shown in the following table:—

S. No.	Item	Unit	Basic year level (1979 80)	Terminal year level (1983 84)	Achievement (1980 81)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Seed treatment	Qtls.	75	260	100
2.	Rat control	Acres	350	700	500
3.	Disease/pests	-do-	50	50	50

S. No.	Item	Achievement (1981 82)	(1982 83)		1983 84 (Target)
			Target	Achievement	
		7	8	9	10
1.	Seed treatment	180	215	60	1200
2.	Rat control	600	600	450	600
3.	Disease/pests	25	50	15	40

Animal Husbandry

Ladakh enjoys a prestigious place so far as the quality and variety of its cattle wealth is concerned. Besides being the main source of income to the nomads of Changthang, the cattle of Ladakh provide subsidiary occupation to the cultivators. There are some rare animals like **Pasham-goat** which yields a precious fibre called **Pasham** or shawl wool. The fabulous shawl industry of Kashmir has, since ancient times, thrived on this very rare woollen fibre. A large scale programme for rearing and development of selected type of goats has been started to augment the supply of pashmina. The improvement in breed would not only yield large income to the people of Ladakh but will also strengthen the local woollen and pashmina industry, the products whereof are in great demand both within and outside the State. The Yak and **Zomo** are the other rare species which are found only in Ladakh. They are very useful both as milch and drought animals.

The live stock census were held in the region in 1951, 1956, 1961, 1966, 1972 and 1977. The figures for 1951 show that the livestock population in the region stood at 152324. By 1956 there was an increase of about 13 percent in the livestock population which numbered 172475 according to the census conducted during that year. In 1961, the livestock population reached the figure of 329673 giving an increase of 91 percent over the population of 1956. The increase was brought about by Tibetan refugees who fled from Tibet alongwith their herds on account of the Chinese occupation of their country. In 1966, the livestock population in the region was 243080. The decrease of 26.39 percent over the population of 1961 was due to unprecedented snowfall in late spring resulting in wholesale death of cattle. The livestock census conducted in 1972 and 1977 reveals that there has been a significant increase in the livestock population of the region. The specie-wise break-up according to 1972 and 1977 census is given in the following table¹ :—

Species	1972			1977		
	Kargil	Leh	Total	Kargil	Leh	Total
Cattle						
1. Male	695	2295	2990	365	1246	1611
2. Female	5956	8968	14924	10102	10041	20143
3. Young stock	2381	3700	6081	4389	4745	9134
Total :	9032	14963	23995	14856	16032	30888
Zoo-Zomoo						
1. Male	2453	3668	6121	2494	3190	5684
2. Female	1552	2405	3957	3538	1668	5206
3. Young stock	464	1147	1611	2161	456	2617
Total :	4469	7220	11689	8193	5314	13507
Sheep	37985	35801	73786	46254	66558	112812
Goats	21783	69290	91073	42675	103905	146580
Horses and Ponies	2101	3192	5293	2248	4333	6581
Others	2945	11075	14020	3704	16521	20225
Total :	64814	119358	184172	94881	191317	286198
Grand Total :	78315	141541	219856	117930	212663	330593

¹ Source : Department of Animal Husbandry.

Due to under-nourishment, the quality of cattle is, on the whole, poor. However, the Government is paying special attention towards the development of cattle wealth. Some new schemes have been undertaken and various research-cum-development centres have been set up in the region. District-wise list of centres engaged in the improvement of cattle wealth is given below:—

S. No.	Category	District	
		Leh (1981-82)	Kargil (1980-81)
1.	Live stock Development Centres	23	22
2.	Intensive Cattle Development Centres	7	3
3.	Sheep and Wool Extension Centre	15	11
4.	Sheep Breeding Farms	1	2
5.	Goat and Sheep Centres	2	12
6.	Intensive Sheep Development Centres	3	11
7.	Cattle Breeding and Research Farms	1	Nil
8.	Pashmina Goat Farms	2	Nil
9.	Yak Breeding Farm	1	Nil
10.	Zanskari Horse Breeding Farm	1	Nil
Total:		56	61

With the efforts of above mentioned Research-cum-Development Centres, the livestock population of Ladakh has increased by 50% during the period 1972-77. Production of milk, pashmina and wool has also been started at various central breeding and research farms. The quantity of milk produced at these farms is given below¹:

S. No.	Name of Farm	(Production of Milk in Litres)	
		1980-81	1981-82
1.	Cattle Breeding Farm Chanspa	58418	60000
2.	Yak Breeding Farm Nubra	7277	7976
3.	Cattle-cum Karakul—Sheep Farm Khumbathang	34700	N.A.
4.	Veterinary Hospital Dras	4404	N.A.

¹ Source : Department of Animal Husbandry.

The quantity of wool/pashmina produced at various farms is given below:—

S. No.	Name of the Farm	Pashmina / Wool Production in Kgs.	
		1980-81	1981-82
1.	Intensive Sheep Development Project Kargil	609 (Wool)	N.A.
2.	Livestock Development Organisation Kargil	173 (Wool)	N.A.
3.	Cattle-cum-Sheep Farm, Khumbathang	954 (Wool)	N.A.
4.	Pashmina Farm, Nyoma	143 (Pashmina)	89 (Pashmina)
5.	Russian Merino Farm, Mathoo	1388 (Wool)	1302 (Wool)
6.	Livestock Development Organisation	342 (Wool)	806 (Wool)
7.	Intensive Cattle Development Project Chushot, Leh	74	294

The major obstacle in the development of Animal Husbandry and Sheep Breeding is the shortage of pasture lands and non-availability of fodder. The big products of agriculture crops are also hardly sufficient to meet the fodder requirement of the animals. However, steps have been taken to increase the production of lucern (locally called **Oal**) which from earlier times was the main fodder crop in Ladakh. Cultivators are persuaded to bring more land under fodder crops and seeds of **alfa-alfa** variety of grass are distributed among them on subsidized rates. Fertilizers are given to them free of cost. New varieties of fodder cultivators are continuously being tried at various departmental farms. Large quantities of **Oal**, **bhoosa** and **krisham** are imported from other parts of the State.

Steps have been taken to improve the quality breeds of animal by (a) upgrading, (b) cross-breeding and (c) creation of better environmental conditions. Livestock shows are held at different places to encourage the people in raising good breeds of live stock and infuse a spirit of competition amongst breeders to raise better-cross-breed animals.

Recently cattle fairs were held regularly at the following Places :

Kargil, Sankoo, Dras, Trespone, Silmo, Mulbik, Leh, Chushat, Saspool, Thinsey, Sakti.

The Veterinary Disease Investigation Section was started in November, 1969 with a view to investigate different diseases and thereby help the maintenance of the health of the Livestock. The common diseases of animals in the region are detailed below¹ :—

S. No.	Disease	Symptoms	Measures
1.	Tuberculosis	Chronic wasting	Culling of positive cases to be confirmed on tuberculin testing.
2.	Johne's Disease	Chronic wasting disease with persistent diarrhoea	Culling of positive case after Johonin testing.
3.	Anthrex	Acute Septicemia diarrhoea	Prophylatic vaccination and use of antibiotics.
4.	Black quarter	Acute infectious disease mostly with muscle involvement	do
5.	Haemorrhagic	Acute Septicemic disease mostly with pulmonary involvement	do
6.	Contagious caprine pleuropneumonia	Acute disease with pleuropneumonia	Prophylatic vaccination and use of antibiotics.
7.	Actinobacillosis	Chronic disease with involvement of softer structures usually	Antibiotic therapy.
8.	Brucellosis	Abortions in later half of pregnancy	Culling of affected cases.
9.	Chronic respiratory disease	Chronic disease of poultry	Culling and sale for table purpose.

¹ Source : Department of Animal Husbandry.

S. No.	Disease	Symptoms	Measures
10.	Vibriosis	Abortions during middle third of pregnancy	Culling of affected cases.
11.	Necrobacillosis	Foot rot	Antiseptic precaution and use of antibiotics.
12.	Bacillary white diarrhoea	Acute infection in adult carriers	Culling of affected cases and sale for table purposes.
13.	Fowl Spirochaetosis	Acute fever paralysis, diarrhoea (green)	Prophylatic vaccination and antibiotics.
14.	Infections Coryza	Respiratory infections of fowls with edema of wattles	Antibiotic therapy and preventive measures.
15.	Foot and Mouth disease (Bovines Ovines)	Involvement of feet and mouth including some vital organs	Prophylactic vaccination and antiseptic washes.
16.	Sheep and goat pox	Acute infections with skin eruption	Prophylactic vaccination.
17.	Pastular dermatitis	Postules in skin surface	Antiseptic washes & use of antibiotics.
18.	Canine distemper (dogs)	Mostly affecting young with high feavour	Prophylactic vaccination.
19.	Rabies (All animal species except poultry)	Animals turn rabid	Prophylactic curative vaccination.
20.	Ranikhef Disease (Poultry).	Acute contagious	Prophylactic vaccination.
21.	Pneumo enteritis	Acute disease among young calves	Prophylactic precautions.
22.	Infections bronchitis	Chronic disease with involvement of bronchi	Use of antibiotics.
23.	Ephemeral fever (three days sickness in Bovines)	Infectious disease of cattle with three days usually after transit	Symptomatic treatment.

24. Fascioliasis Bovines/Ovines	Debilitation, diarrhoea inflicts great economic loss in caprines, bovines, and ovines.	Prophylactic dosing.
25. Parasitic gastroenteritis	Debilitation diarrhoea (disease of economic importance)	Prophylactic dosing.
26. Myiasis	Disease of great econo- mic importance in eqvines and ovines	Prophylactic precautions.
27. Pedicalosis (Lousiness) All species	-do	do
28. Tick infections (all species)	-do	do
29. Scabies (skin disease).	-do	do

Considerable achievements have been made in the field of Animal Husbandry under the Five Year Plans. Branches of Animal Husbandry Department have been set up at various places. There are 50 Veterinary Institutions of different categories. The number of Veterinary Institutions in the region are detailed below¹ :—

Veterinary Hospitals	4
Sub Units	5
Mobile Units	1
Laboratories	2
Livestock Development Centres	22
Transit Camps	2
Intensive Cattle Development Centres	3
Sheep and Wool Extension Centres	11
Total :	50

¹ Source : Department of Animal Husbandry.

Intensive Health cover and upgrading facilities are provided in above mentioned Veterinary Units. During 1981-82, 14676 cases of contagious diseases and 26804 cases of non-contagious diseases were treated in various Veterinary Hospitals in Leh district. Doses against liver fluke and intestinal worms were given to 5335 and 8323 animals respectively. Vaccination was done to 12135 animals and 1316 animals were castrated. In Kargil district, 6840 animals were given doses against liver fluke during 1980-81. On the whole, the number of animal doses against liver fluke increased from 15520 in 1965-66 to 29672 in 1975-76 and to 30157 in 1979-80. These doses had a positive effects as in the subsequent year the number of these doses had declined to 15416.

Poultry Development

There are two poultry farms in the region. One at Leh known as Field Research Laboratory with 800 birds and the other at Igoo with 250 birds which have been brought from Chandigarh. During 1972-77, 3500 birds were distributed to the people. Introduction of scientific methods has reduced the rate of mortality and the implementation of new improved methods have shown encouraging results in poultry development.

As per the Livestock census the number of poultry birds had gone up from 9821 in 1966 to 15184 in 1977.

Fisheries

Fish is found in all the rivers and streams of the region. There are four main kinds of fish found in these streams and almost all of them are carps. Their local names and characteristics are as follows :

1. Sangniah	Scaled body, maximum weight 7 kgs.
2. Damniah	No. scales, maximum weight 2 kgs.
3. Sirniah	Small Scale on the body having yellowish colour.
4. Niagralde	No. scale Blackish in colour with flat mouth, maximum weight 1 kg.

The Fisheries Department started functioning in Ladakh during the fourth year of the Third Five Year Plan when an

amount of Rs. 15,000/- was provided for the establishment of Inspectorate of Fisheries. The main expenditure was on the staff for watch and ward of natural waters. The Indus at Choglamsar and Wakha streams near Mulbik were stocked with 400 to 500 fingerlings of trout each. A pond at Sankoo was found suitable for the introduction of Mirror Carp fingerlings. During 1966-67, Mirror Carp ponds at Shey and a small trout hatchery at Shargool were started. The streams at Wakha and Dras were stocked with 500 trout fingerlings. During 1967-68, Mirror Carp ponds at Shey were completed and a hatchery hut was constructed nearby. Construction of the trout hatchery and the hatchery hut at Shargool were completed during 1968-69 and 273 Mirror Carp were stocked and reared in Shey ponds and 3500 fingerlings of trout were stocked at random in different streams and in the river Indus. There is no co-operative society for rearing or marketing of fish in the region.

The following statement shows the growth of license holders between 1970-71 and 1977-78¹:

S. No.	Year	No. of license holders
1.	1970-71	..
2.	1971-72	40
3.	1972-73	73
4.	1973-74	82
5i	1974-75	85
6.	1975-76	120
7.	1976-77	132
8.	1977-78	91

It is obvious that there has been a gradual increase in the number of license holders which is indicative of the growing popularity of fishery industry in the region.

Forest and Soil Conservation :

Ladakh falls under arid zone. Its soil, on the whole, is sandy and alkaline in reaction. Naturally, it is relatively inert both

¹ Source : Directorate of Fisheries.

chemically and physically, moreover, its water holding capacity is very low. Besides, wind erosion is a problem. All these factors account for the very low forest wealth in this region.

Out of the total reporting area of 63215 hectares as per land utilization statistics only 64 hectares were under forests in the region. In order to intensify the development of plantation, a forest division headed by a Forest Officer was created in 1955 under the administrative control of the District Development Commissioner, Leh. After its creation, all the gardens fetching revenue were transferred to this division. The division comprises six forest ranges. These ranges are detailed below :—

1. Forest Range Leh.
2. Forest Range Kargil.
3. Forest Range Dras.
4. Forest Range Zaskar.
5. Forest Range Nubra.
6. Forest Range Changthang.

The forest area falls under broad leaved forests.

Minor Forest Produce

Medicinal herbs and plants are among the minor forest produce of the region. There is a large variety of such plants but they have not been surveyed or exploited so far. Some of the common drug plants are listed below :

1. Heracleum candicans.
2. Physochlaina prealps.
3. Epnecha Valgaris.
4. Artemisia Kopp.

During the year 1978-79, 27 qtls. of Haricuban was extracted departmentally and sent to the D. F. O. Utilization Division, Baramulla, Kashmir¹.

Aforestation and Soil Conservation

Most of the new plantation areas are along the river beds irrigated by khuls and cannals. The Forest Department has been

¹ Source : Forest Department, J and K Government.

planting willow, poplar and hipphae in the region. The data pertaining to plantation during 1978-79 in the various ranges of this division is given as under¹ :—

S. No.	Range	Area (Hects.)	Willow	Poplar	Hippo-chae	Survival %
1.	Leh	9.30	29352	15845	59550	50 70 %
2.	Changthang	10.92	40300	..	20000	40 95 %
3.	Nubra Range	6.87	28030	2620	12700	75 90 %
4.	Kargil Sector	6.07	30600	12400	38000	50 60 %
5.	Dras Range	4.47	23100	4000	14500	..
6.	Zaskar	..	22140	6100	18000	..

Maintenance of Nurseries

There are four forest nurseries in the region. These are Gupak Nursery Leh comprising an area of 1.21 hectares, Gargarthang Nursery at Kargil having an area of 0.4 hectares, Khazrathang Nursery at Kargil with an area of 0.81 hectares and Daikit Nursery. The following developmental works were undertaken in these nurseries² :—

Details of Works

1. Gupak Nursery

1. Plantation .. 12060 small size cuttings.
2. Planting and seed sowing Apricot 110 kgs. of seed sown.
3. Robinia allenthus .. 76 kgs. of seed sown.

2. Gargarthang Nursery

1. Sowing and Planting .. 6000 small size poplar.
2. Apricot .. 16 kgs. of seed sown.
3. Robinia and Allanthus .. 15 kgs. of seed sown.
4. Oal seed .. 8 kgs. sown in one acre.
5. Junipers .. 3 kgs. of seed sown.

¹ Source : Forest Department, J and K Government.
² Ibid.

3. Khazrathang Nursery

1. Sowing and Planting .. Planting : 1400 small poplar Robinia and Allanthus 25 Kgs. of seed sown.

4. Daikit Nursery .. Planting 1900 small poplar cuttings.

Fodder Development Scheme

Under the scheme, grasses and seeds of various forest products are preserved and then distributed among the farmers. During 1978-79, 25 Kgs. and 33 Kgs. of Oal Grass were collected from Nubra and Leh ranges respectively. Table given below will show the quantity of various types of grasses preserved from the plantation areas of various ranges¹ :

S. No.	Range	Green Oal grass	Green Local grass	Green Mixed grass	Total
1.	Kargil	12.00 Qtls.	69.03 Qtls.	6.20 Qtls.	87.23 Qtls.
2.	Zaskar	31.15 Qtls.	..	..	31.15 Qtls.
3.	Dras	35.00 Qtls.	..	..	35.00 Qtls.
4.	Leh	123.83 Qtls. 20.58 Qtls.	11.32 Qtls. ..	..	155.73 Qtls.
5.	Nubra	4.00 Qtls.	..	..	4.00 Qtls.
6.	Changthang	2.34 Qtls.	5.85 Qtls.	..	8.19 Qtls.

Anti-Erosion Works

The plantation areas of region are mostly situated along the river beds. To protect the areas from getting eroded the Flood Control Department has constructed the crate bunds in various plantation areas. During 1978-79, 14 crate bunds were constructed in Leh range.

Supply of Firewood :

Firewood is imported from Kashmir and supplied to the government offices as well as to the people of Ladakh. Table

¹ Source : J and K Forest Department.

given below shows the quantity of firewood imported during 1978-79¹:

S. No.	Range	Total receipts	Total supplies
1.	Kargil	1964.11 Qtls.	1662.44 Qtls.
2.	Leh	1722.50 Qtls.	1615.44 Qtls.
3.	Nubra	235.18 Qtls.	235.14 Qtls.
4.	Dras	915.35 Qtls.	..
5.	Zaskar	12.52 Qtls.	12.31 Qtls.
6.	Changthang	28.17 Qtls.	24.10 Qtls.

Dry Cutting Disposal :

Changthang	1119.72 Qtls.
Kargil Range	7872.00 Qtls.
Dras Range	7489.06 Qtls.
Zaskar	821.12 Qtls.

Supply of Hippophae	Qty. supplied	Amount of revenue Received (Rs.)
Leh Range	71.66 Qtls.	1920
Kargil Range	83.97 Qtls.	1575

Supply of trees	No. supplied	Revenue released (Rs.)
Changthang Range	15	2490
Leh Range	6	524
Zaskar Range	40	..

¹ Source : Department of Forest.

Details of the revenue received during 1978-79, by the Forest Department is given below¹ :—

S. No	Item	Amount Received(Rs.)
1.	From the sale of hard coke	6957.00
2.	From the sale of firewood	170417.00
3.	From the sale of timber	3820.00
4.	From the sale of Hippophae	3291.00
5.	From the sale of grass	17816.70
6.	From the sale of dry cuttings	5225.70
7.	From the sale of apricot plants	756.00
8.	From the sale of misc. items	968.00
9.	Grazing Fee	1222.50
Total:		210474.78

State Assistance to Agriculture

The cultivators are granted **Taccavi** loans by the Government mainly as relief funds in the case of draught conditions or floods. For examples, during 1969-70, tehsil Leh suffered from draught and 500 qtls. of wheat valuing Rs. 45000/- were issued to agriculturists as **Taccavi** loans.

The Jammu and Kashmir State Co-operative Bank finances the co-operative societies in the region. The societies advance short term loans only whereas the medium and long term loans are advanced by the Central Co-operative Banks and the Land Mortgaged Banks. The total deposits and cash credit advanced to the co-operative societies, as on January 28, 1983 amounted to Rs. 32.84 lakhs and 17.45 lakhs respectively. **Category-wise**

¹ Source : Department of Forest.

number of co-operative societies is given in the table below¹ :—

S. No.	Category	1978-79			1979-80			1980-81		
		Leh	Kargil	Total	Leh	Kargil	Total	Leh	Kargil	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Primary Agricultural credit Societies	58	50	108	60	56	116	60	60	120
2.	Marketing Societies	2	2	4	2	2	4	2	7	9
3.	Whole sale Stores	1	1	2	1	1	2	1	1	2
4.	Primary Stores	6	8	14	6	8	14	6	9	15

An amount of Rs. 1.59 lakhs was advanced to 2669 borrowers by the Agricultural Credit Societies in 1969-70. However, total advances of primary agricultural societies were Rs. 3.32 lakhs in 1974-75, Rs. 3.83 lakhs in 1975-76 and Rs. 6.01 lakhs in 1976-77. Credit structure of Primary Agriculture Credit Societies in Leh district of the region is given in the table below² :—

S. No.	Year/Block	Number of Societies	Loan advanced (Rs. 000)	Loan Outstanding (Rs. 000)	Amount over due (Rs. 000)
1.	1978-79	58	449	729	278
2.	1979-80	60	535	840	311
3.	1980-81	60	709	1029	312
4.	1981-82				
(a)	Leh Block	21	314	442	128
(b)	Khaltsi Block	14	77	114	38
(c)	Nyoma Block	6	32	54	26
(d)	Nubra Block	16	94	100	6
(e)	Durbuk Block	3	9	10	—
Total : a+b+c+d+e		60	526	720	198

¹ Source : Department of Co-operative (J and K Govt.)

² Ibid.

Natural Calamities

Ladakh is a cold desert with very little rainfall, but cloud bursts are common which cause considerable damage to life and property. During summer months heavy rainfall in the upper catchment area of river Indus and its tributaries bring with itself enormous quantity of melted snow which floods the rivers and thereby cause erosion of fertile cultivated land.

During 1955, untimely snowfall caused famine which adversely affected the people of Zaskar. The famine sufferers were granted a cash relief of Rs. 25,000/-. In 1956, food crops grown on an area of 244 hectares were completely swamped. An amount of Rs. 20,000/- was doled out among the sufferers. In 1957, the entire region was affected by floods resulting in loss of food crops grown on 592 hectares. Besides, the produce of another 127 hectares was also destroyed due to erosion. Relief was granted by government both in cash and kind. In addition to 259 qtls. of grain, the famine sufferers were granted a cash relief of Rs. 25,000/-. Thirty Qtls. of grain were given by way of loan to most deserving cases. Heavy and untimely snowfall in 1958 damaged the crops mainly in Kargil district and government had to grant remission of land revenue to the extent of Rs. 1570.57¹. Again in the month of August, 1978, the river Indus was in unprecedented spate which created havoc to roads, bridges, canals as well as to the agricultural land. The latest flood that hit Ladakh was that of 16th of August, 1979, as a result of Khurdam glacier. This flood caused considerable loss of life and property in the region.

People of Kargil and Zaskar experience natural calamities in the shape of avalanches and landslides. In the month of March, 1983, atleast 40 persons were killed by an avalanche which wiped out many houses and cattle sheds in these areas.

In accordance with the magnitude of the calamity, the government grants relief in cash and in kind to the people of the affected areas.

¹ Source : Development Commissioner, Leh.

CHAPTER V

INDUSTRIES

Although the State as a whole, has to go a long way in order to make a mark on the industrial map of the country, there are, however, within the State itself, certain pockets where the industrial activity is almost insignificant. The twin districts of Leh and Kargil fall in this category. The reasons for the industrial backwardness of Ladakh are too obvious to need any explanation. The whole region is segregated by enormous mountains with a solitary road link with Kashmir which owing to its precarious nature and heavy snowfall remains blocked for about six months every year. As such, the region is inaccessible. The climate of the region is very unfavourable for industrial activity as the temperature goes down to -40°C during winter. The entire region is situated at a high altitude which nowhere falls below 2400 metres above the sea level. Apart from these natural constraints, the indigenous factors such as the size and density of population constituting the demand and the resource endowments on the supply side are not favourable for the establishment of large or medium scale industries in the region.

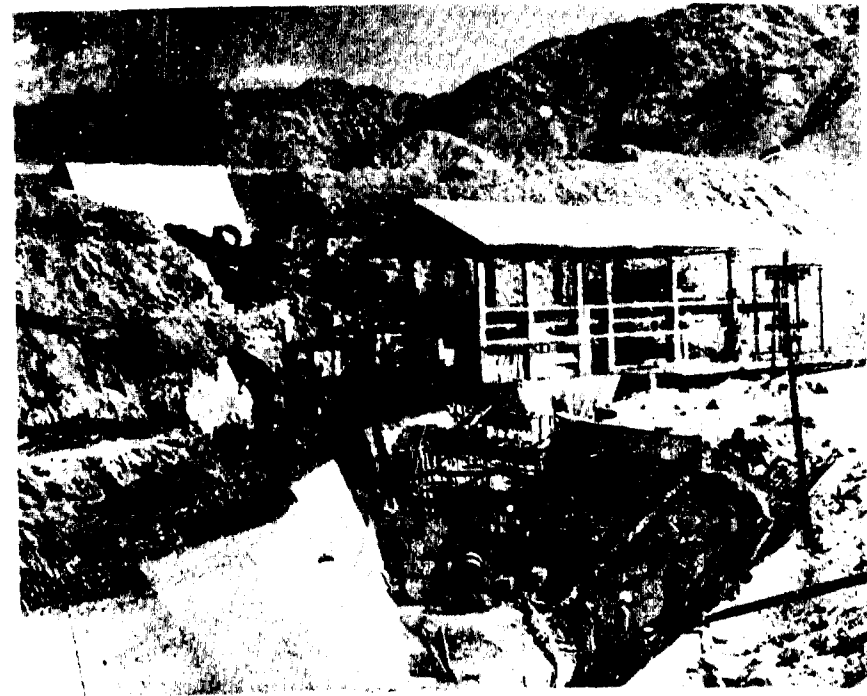
However, one need not be pessimistic about the prospects of small scale and cottage industries. In fact, these have better and brighter prospects to develop in the absence of big industries. A realistic approach has been adopted by the Government in recent years and, accordingly under the Integrated Rural Development Programme, the various Government and Credit Agencies have already made a meaningful start to develop small scale industries and handicrafts in this region.

Power

Electric power was not generated in Ladakh until 1964. It was the State Department of Geology and Mining which in that year took the initiative by installing a diesel generating set at



A trainee progressing her Handicraft



Stakna Hydel Project

Leh and setting up an Electric Sub-Division which was subsequently transferred to the Electric Department in 1968. Kargil was also electrified in 1966-67 by diesel power. Since then a number of diesel generating sets have been set up at various places in both the districts. Some micro-hydel power plants have also been set up and the work on some major multi-purpose hydro-electric power development projects such as the Stakna Project in Leh District is in progress.

Since 1968-69, there has been considerable progress in lighting installations which have increased from 586 in 1968-69 to 5549 in 1981-82. This is clear from the table given below¹.

Year	No. of Lighting Installations	Year	No. of Lighting Installations
1968-69	586	1977-78	3033
1970-71	812	1978-79	4809
1972-73	1031	1979-80	4758
1974-75	1802	1980-81	5189
1976-77	2089	1981-82	5549

Similarly, the power consumption has also registered a ten-fold increase between 1970-71 and 1981-82. The consumption of electric power increased from 1000 Kws. in 1970-71 to 10700 Kws. in 1981-82. The progress is indicated by the following table².

Consumption of electric power from 1970-71 to 1981-82.

Year	Electricity consumed in 000Kws.	Year	Electricity consumed in 000 Kws.
1970-71	1.03	1978-79	3.70
1972-73	1.38	1979-80	4.38
1974-75	2.28	1980-81	6.83
1977-78	3.50	1981-82	10.70

¹ Digest of Statistics (1983-84)

² Ibid.

In a sparsely populated region like Ladakh, where on average, the villages are situated ten Kilometres apart, the rural electrification is a difficult task both in technical sense as well as in financial involvement. Hence the progress in this direction has been somewhat slow. By 1983-84 only 77 villages besides 8 towns had been electrified in the two districts of Leh and Kargil. This is shown in the table below¹.

Year	No. of villages towns electrified			
	Leh		Kargil	
	Villages	Towns	Villages	Towns
1978 79	24	1	16	1
1979 80	24	1	23	2
1980 81	31	4	25	2
1981 82	32	6	26	2
1982 83	36	..	28	..
1983 84	43	..	34	..

Most of the power consumed is used for domestic purposes, power used for industrial purposes is negligible and for commercial purposes not so significant.

However, power development was accorded top most priority in the Sixth Plan (1980-85). In Kargil district alone, an amount of Rs. 11.22 crores has been allocated during the Sixth Plan for Power Development. In the Annual Plan 1981-82, of this district, an amount of Rs. 3.26 crores was spent under this head. At a cost of Rs. 28.6 lakhs, 11 diesel generating sets were installed in the Kargil district of which 3 sets were installed in Zaskar. As a result of these steps, 6.80 Kws. were generated in the district in 1982-83. The existing installed capacity has gone up to 2.92 M. Ws. in 1983-84²

¹ Digest of Statistics (1983-84)

² Digest of Statistics (1983-84)

Mineral Wealth

The mineral wealth of this region may be described as moderate, but the existence of some important minerals has been proved both by evidence and investigations. Moorcroft, the famous traveller while travelling in Ladakh during the early 19th century observed a number of mines of sulphur particularly in Changthang area where it was found in abundance. According to him, gold was found in the rivers of Changthang and in the sands of Shayok. However, he stated that the unenterprising character of the people, their superstitions as well as the scantiness of fuel stood in the way of these mines, being worked out at that time¹.

The Jammu and Kashmir Settlement Commissioner observed in 1908, that gold washing was done on the Indus and its tributaries, e. g., the Zaskar and the Dras rivers. He had also pointed out the existence of nitrates in the plateaus of Chushool². There is also evidence to the occurrence of iron ore in Nubra valley now closed by the collapsing of a huge rock. It was used for coinage purposes by the kings of Ladakh in the past. There are indications of sulphur deposits in the Puga Valley. Soda in Panimik, copper in Kharboo, Khaltsi and Saspool. Borax and soda were actually exported to Kashmir in the past. According to a report of the National Council of Applied Economic Research, chromite and arsenic ores also exist in the region. The report reveals the existence of copper ore in Kharboo, Khaltsi and Saspool whereas the Puga valley contains substantial deposits of borax and native sulphur. The annual accretions of borax from the thermal springs are estimated between 800 to 1000 tonnes. At present, the extraction of sulphur is not considered economically feasible³. The Geological Survey of India has started extraction of pure borax by using the thermal energy obtained from the thermal springs of Poga. It has also started the extraction of magnesium and some kinds of salts from the lakes of Khaltsi.

Old Time Industries

Among the old time industries which still exist in the re-

¹ Khan, Chowdhri Hashmatullah, op. cit., P. 16

² Ibid.

³ Techno Economic Survey Report (Jammu and Kashmir) 1969, PP. 72-73.

gion mention may be made of the following :

1. The manufacture of local tweed on handlooms known as **Spurug**. Changthang and Zaskar are famous for the manufacture of this tweed.
2. **Shawls and Blankets** : Leh is an important centre for the manufacture of shawls and blankets of a fine variety.
3. Rugs locally called **Tsuklul** are produced in Changthang.
3. **Shoes** : In Ladakh, special type of shoes are made which are locally called Paboo. The shoes of Nubra are famous for their warmth and comfort.

Besides these principal industries, caps, tables, oil lamps, utensils, silver cups and cup stands etc. are made at various places in the region.

However, as a result of Partition of the country, in 1947, the old time industries suffered a set back as most of the areas wherefrom raw material was obtained for these industries were occupied by Pakistan. For reasons stated above, there is little scope for the development of large or even medium scale industries. However, the small scale and household industries have good prospects to develop. The Government has already adopted various measures to revive the old time industries as well as to promote the growth of resource-based industries.

Industrial Development After Independence (1961-71)

In 1961, there were 2448 small factories and workshops in the region. Of these 85 existed in Leh town while the rest existed in rural areas¹. A closer examination of the nature of these industries shows that as many as 2436 factories and workshops were engaged in milling, dehusking and processing of crops and foodgrains. The remaining ones were engaged in the production of sundry-hardwares, cotton weaving, furniture etc. Water-mills for processing of food-grains accounted for nearly 90% of the total number of industrial units in the rural areas in 1961. Similarly, in the urban areas, nearly 90% workshop and factories were engaged in milling and dehusking of food-

¹ District Census Hand Book, Ladakh 1961

stuffs etc. The proportion of workshops manufacturing sundry hardwares stood at 4%¹.

The following statement gives the number of factories and workshops by the size of employment in the rural and urban areas of the region as per 1961, census² :

Size of Employment	No. of factories & Workshops	
	Rural	Urban
1 Person	2356	72
2-5 Persons	..	12
6-9 Persons	..	..
10-19 Persons	..	..
20-49 Persons	..	..
50-99 Persons	..	1
100 and above persons	..	..

The above table that there were only two factories which employed more than 20 workers each.

According to 1961 census, 715 households out of the total number of 18374 households were engaged in the household industries. The census of 1971 did not indicate noticeable improvement in this regard. According to the Indian Standard Industrial Classification, the number of percentage of households engaged in different household industries is given below³ :—

Classification of household industries (1971 census.)

Major Group Industries	Household	Percentage
.. All Industries	715	100
25 Textile wool	570	80
04 Livestock and Hunting	85	12
31 Leather & Leather products	25	3
27 Textile Misc.	20	3
20 Food Stuffs	10	1
38 Basic Metals and their products except machinery and transport equipments	5	1

¹ District Census Hand Book, Ladakh 1961.

² Ibid.

³ District Census Hand Book Ladakh 1971

The above table reveals that the majority of the households manufactured woollen fabrics on handlooms which they run as household industries. Households engaged in livestock and hunting rank next, but their proportion does not exceed 12 percent. Among other industries, leather and leather products and textile miscellaneous claim 3 percent each. The pattern of employment in these industries is given by the following statement¹ :—

Principal Household		% of workers engaged					
		1	2	3	5	6	10 & above
All Industries		64	31	5	..	..	..
Major Group	04 Livestock and Hunting	29	65	6	..	..	..
-do-	20 Food Stuffs	50	50	..	..	..	..
-do-	25 Textile Wool	71	24	5	..	..	..
-do-	27 Textile Misc.	25	75	..	..	..	..
-do-	31 Leather and Leather products	80	20	..	..	..	..
-do-	38 Basic Metals and their products, except machinery and transport equipments	100	..	..	..	..	..

The above data shows that there is no household in which the number of workers was more than 5 and even the proportion of those employing 3—5 persons is listed to 5 percent. Among others more than 6 percent units engage 1 worker only. The important among household industries were live-stock hunting and textile misc. 60% of households in these industries engaged 3—5 workers and 65%, 2 workers each.

Cottage and Small Scale Industries (1961-71)

As already mentioned, the scope for medium and large scale industries in the region is extremely limited. However, there

¹ District Census Hand Book, Ladakh 1971.

is ample scope for developing cottage and small scale industries. In order to meet the requirements of **Pashmina and Raffal** wool, the State Government undertook a large scale programme for rearing of special varieties of sheep and goats in Ladakh. A **Pashmina** Goat and Sheep Farm was set up at Nyoma which has now emerged as a major centre for the production of **Pashmina**. A Russian Merino Farm was set up at Matho to meet the requirements of raw-material for local cottage industries. The Government has set up three production centres in the region at Leh, Kargil and Nyoma. These centres have been acting as production-cum-training centres for **Pashmina** Shawls, carpets, namdas, blankets, socks and sweaters. During 1971-72 a total number of 643 **pashmina** shawls, 723 cft. of carpets, 67 namdas, 39 woollen blankets, 410 metres of tweed and 346 woollen pairs of socks were produced by these centres¹.

The Department of Industries earned a total revenue of Rs. 1,14,000/- from the sale of these products. The following table gives the comparative figures of production in these units during the period 1961-62 to 1967-68 and 1971-72 :

S. No.	Particulars of Production	Unit	1961-62	1962-63	1963-64
(1)	(2)	(3)	(4)	(5)	(6)
1.	Pashmina Shawls	Nos.	18	21	36
2.	Pashmina Yarn	Kgs.	150	225	210
3.	Woollen Yarn	Kgs.	292	415	379
4.	Patoo weaved	Mtrs.	145	166	470
5.	Weaving of Linen cloth	Mtrs.	..	142	136
6.	Noktuls	Nos.	24	14	12
7.	Namdhas	Nos.	22	34	50
8.	Yarn Knitted	Kgs.	25	36	128
9.	Wool and Pashmina Spin	Kgs.	442	640	589
10.	Pashmina sorted	Kgs.	96	112	273
11.	Carpet produced	Nos.	16	19	13
Sales value (Rs. in lakhs)			0.06	0.17	0.22

¹ Directorate of Industries and Commerce (J & K Government)

1964-65	1965-66	1966-67	1967-68	1971-72
(7)	(8)	(9)	(10)	(11)
60	121	129	229	643
295	320	418	370	..
447	537	558	138	..
189	98	146	98	39
48	52	123	136	410
18	16	18	8	..
62	78	85	40	67
32	47	14	35	..
876	957	742	..	..
316	548	614	150	..
18	21	23	13	723 (Cft.)
0.18	0.22	0.26	0.32	..

Khadi and Village Industries

Such industries as were assisted by the Jammu and Kashmir Khadi and Village Industries Board also registered some progress during this period. By 1976, 13 units had been set up under the supervision of the Board. Of these 7 units were organised on co-operative lines and 6 units were set up as individual enterprises. All the units were set up by village artisans as is indicated in the table below:—

S. No.	Name of Industry	No. of Units as on 31-3-1976	
		Co-operatives	Individuals
1.	Black-smithy and Carpentry	1	5
2.	Leather processing	2	1
3.	Oil processing	3	..
4.	Pottery	1	..
	Total	7	6

1 Source : Khadi and Village Industries Board, Srinagar

Small Scale Industries (1980 and after)

The decentralisation of planning at the district level accompanied by successful experiments with Single Line Administration have shown encouraging results in promoting the growth of small scale industries and handicrafts in the State including Ladakh. In 1974, there were only two industrial units registered with the Industries Department. In 1976, this number increased to 10, whereas in 1980, the number of such industries had gone up to 53. A radical change in banking and credit policy in recent years has given a boost to small industries. Under the 20-point Programme the State Government and the nationalised banks are providing liberal financial assistance and credit facilities to such industrial units as are employment-oriented. The results have been quite encouraging as is shown in the table below:—

Number of Registered Small Scale Units with Employment from 1980-81 to 1982-83.

Year	No. of Registered S. S. I. units			Employment		
	Leh	Kargil	Total	Leh	Kargil	Total
1980-81	71	7	78	151	20	171
1981-82	39	48	87	92	110	202
1982-83	57	43	100	65	131	196

The table reveals that there has been a great spurt in the field of small scale industries. This has enlarged the employment opportunities especially for the educated unemployed young men. The Government besides providing training facilities offers various incentives including subsidies in transport, acquisition of land and purchase of machinery.

Category-wise break-up of the small industrial units during 1981-82 shows that the processing of food products and making of hosiery goods and garments accounted for the largest

1 Source : Directorate of Industries and Commerce, J & K Government

number of the S. I. D. O. and Non S. I. D. O. units. This is indicated in the table given below¹ :—

S. No.	Name of product	Leh	Kargil	Total
1.	Food Products	8	20	28
2.	Beverages	..	..	..
3.	Hosiery and graments	20	12	32
4.	Wood products	7	3	10
5.	Leather	1	2	3
6.	Chemical and Chemical products	1	..	1
7.	Metal products	4	2	6
8.	Electrical	..	..	..
9.	Transport Machinery and paints	..	..	..
10.	Miscellaneous Manufacturing Industries	..	..	..
11.	Repairing and servicing	2	..	2
Total S. I. D. O. Units		43	39	82
Total Non-S. I. D. O. Units		14	4	18
Grand Total:		57	43	100

Production and Sales of Registered S. I. D. O. Units :

There were 16 registered S.I. D. O units located at Leh and Kargil in 1980-81. Of these 12 were at Leh and 4 at Kargil. These units were engaged in making ready made garments, knitting of wool, producing hosiery goods, **pashmina** shawls and in weaving of parperts and **patoos**. During the year i.e., 1980-81, 300 **pashmina** shawls worth Rs. 93,000/- were produced by one of these units in Leh town. **Chuktul** and **Goncha** making accounted for Rs. 1.24 lakhs. The sales value of hosiery goods etc. produced during the year 1980-81, was of the order of Rs. 1.35 lakhs in the Leh town alone. In the town of Kargil

¹ Source : Directorate of Industries and Commerce, J&K Government.

the 4 registered units produced garments worth Rs. 1.20 lakhs during the same year¹.

As the number of small scale industrial units has considerably increased since 1980-81, the production and sales value of goods has accordingly increased manifold during this period. Moreover, the recent boom in the tourist industry in Ladakh has greatly improved the marketing facilities for handicrafts and goods of artistic value in this region.

State Aid to Industries :

As stated above, the Government has adopted a radical approach in its policy towards employment-oriented small scale industries as well as village and cottage industries including handicrafts. The credit policy of the banks is also designed to promote the growth of such industries in the region. Under the D. I. C. programme the Department of Industries has considerably increased its assistance to such units as are set up under this programme. This is shown in the table given below :—

Loan advanced under District Industries Centre Programme.

S. No.	Year	No. of Parties	Amount Distributed (Rs. in lakhs)
1.	1980-81	40	1.40
2.	1981-82	123	4.00
3.	1982-83	133	4.85

Welfare of Industrial Labour

For reasons already stated above, there are no factories in Ladakh and hence there are no factory disputes nor any industrial unrest in the region. Nearly 90 percent of the total working force is engaged in agriculture and its related activities. According to 1981 census, only 949 workers (both male and female) were engaged in manufacturing, processing, servicing and repairs in both the districts put together. In all, 686 work-

¹ Source : Directorate of Industries and Commerce (J&K Government)

ers were engaged in various construction works. This is shown in the table given below :—

Number of workers by industrial category

S. No.	Category	Persons	Males	Females
1.	Mining and Quarrying	25	24	1
2.	Manufacturing, processing, Servicing & repairing	949	495	454
3.	Construction	686	558	128
Total :		1660	1077	583

In order to look after the welfare of the labourers, two Labour Welfare Officers have been posted at Leh and Kargil. They look into the disputes regarding wages, etc. and take necessary steps to ameliorate the lot of the labourers. They also arrange medical and recreation facilities to the workers at various construction sites. For speedy development of village and small industries, District Industries Programme was launched in the region from 1st. of May 1978. Training centres established under the scheme impart training in the trades of cutting-cum-tailoring, weaving of shawls, carpet weaving and knitting of all kinds of hosiery items to the people from weaker section of the society, destitute women and widows. The purpose of such training programme is to make available skilled personnel in order to develop industrial atmosphere for earning livelihood. Educated unemployed are given incentives to establish such cottage and small industrial units for which raw material is available in the region. The centres are equipped with adequate staff drawn from different departments for providing necessary help to the industrial entrepreneurs.

The centres have to up date the district potential surveys, identify industrial entrepreneurs and provide under one cover, all the assistance in terms of technical consultancy, institutional finance, extension of utility services and marketing facilities. The centres serve as co-ordinators between different departments in order to secure the necessary cover at one point for the industrial units. Up to 1980-81, 214 persons were employed in 96

small scale industrial units, registered with the District Industries Centre, Leh and Kargil. Training-cum-weaving centres opened at various place by the department are as follows :—

Weaving Centre Leh

This is production-cum-training centre and during 1980-81, 14 artisans were trained in carpet weaving and knitting, and, goods produced at the centre were sold for Rs. 2.7 lakhs.

Weaving Centre Nyoma

This centre is functioning for the benefit of backward and nomadic tribes of Ladakh. Besides giving them training in the trades of weaving of shawls, blankets, carpet and cutting and tailoring, the centre provides marketing facilities for the goods produced in their houses. During 1980-81, 10 trainees were trained in above mentioned trades and goods produced at the centre were sold for Rs. 0.48 lakhs.

Training-Cum-Demonstration Centre

People from the far flung areas who for one reason or the other cannot attend the training centres, are provided with the opportunity of receiving training at their very doors. A group of skilled persons deputed by the department, set up training camps at various places wherein they demonstrate the technical know how and educate the people about the new schemes. During 1980-81, 26 artisans received training in different trades at the training camps at Sankar and Phiyong villages.

Trained and skilled personnel are engaged on daily wage basis for sorting and spinning of pashmina and, during 1980-81, 200 workers were benefitted. The Handicraft Department provides them material and moral help to set up handicraft centres on cooperative basis wherein all the trained personnel are engaged with earning their livelihood.

The following table shows the number of persons trained in different trades between 1979-80 and 1981-82¹ :

¹ Source : Directorate of Industries and Commerce (J and K Government)

**Number of persons trained in different trades
(Leh and Kargil Districts)**

S. No.	Trade	1979-80	1980-81	1981-82
1.	Weaving	10	25	34
2.	Cutting and Tailoring	32	41	37
3.	Hosiery	17	21	33
4.	Carpet weaving	22	30	21
5.	Carpentry	8	1	7
6.	Wood carving	9	9	4
7.	Embroidery	16	10	11
Total :		114	137	147

Industrial Potential and Plans for Development

There is no doubt that the region does possess indigenous resources, as well as other possibilities for industrial development. Indigenous resources such as wool, pashmina, fruit, hides and skin and even some minerals can be tapped and utilised in order to encourage the resources-based industries. At present Ladakh does not attract private investment and as such, the industrial development of Ladakh has mainly to be the responsibility of the State Government. There are good prospects for establishing the following industries in Ladakh.

1. Resource Based Industries

(a) **Woollen Textiles** : Ladakh has the distinction of producing fine wool and pashmina. The Government has already set up three farms for the multiplication of Pashmina goat and Russian Merino. Two weaving centres at Leh and Kargil have also been set up in order to impart necessary training to the local people in modern scientific techniques of different crafts viz. spinning, and weaving of namdhas and carpet making. Two peripatetic-cum-demonstration centres have also been set up to impart training to local people at their very doors. During the First Five Year Plan, the Ladakh Pashmina Wool Syndicate was set up to encourage trade in Pashmina wool. An

interest free loan of Rs. 5.00 lakh was granted for this purpose. With greater encouragement, a net work of diverse cottage Industries based on pashmina and wool can ensure speedy progress towards industrialization.

(b) **Fruit Canning and Preservation** : Apples, apricots and grapes are produced in the region in fairly large quantities. Therefore, it would be profitable if a few fruit canning and preservation units were set up at Kargil and in the Nubra valley.

(c) **Leather and Tanning Industry** : The region possesses a fairly large cattle population. As such, there are good prospects for establishing a few small scale tanning and foot-wear units in Ladakh.

(d) **Furniture Industry** : Willow is widely grown in Ladakh. Industries utilising this raw-material, such as furniture and sports goods can easily be encouraged.

2. Miscellaneous Industries

(a) **Automobile Workshop** : Few automobile workshops have been set up in the region so far although, there has been considerable increase in the vehicular traffic. With greater transport facilities, the demand for establishing automobile and repair workshops will increase day by day. Hence there are good prospects for establishing such units.

(b) **Manufacture of fixtures and Agricultural Implements** : There are good prospects for setting up of industrial units for the manufacture of agricultural implements and tools on modern lines.

(c) **Mineral Based Industries** : The establishment of mineral based industries such as borax, sulphur, extraction of salt from salt lakes of Ladakh etc. cannot be ruled out.

CHAPTER VI

BANKING TRADE AND COMMERCE

As the famous Central Asian Trade Route passed through Ladakh, trade and commerce naturally played an important role in the economy of this region. The merchandise brought by the Central Asian Traders and the Kashmiri and Tibetan merchant was exchanged in Leh. In fact, Leh had become an important dry port for the Central Asian Trade with India. Trade requires credit and involves financial transactions on a large scale. This led to the growth of the traditional system of indigeneous banking in which the professional money lender came to play an important part in the economy. Moreover, the geographical seclusion of the region and the roads and passes blocked for nearly six months every year due to heavy snow fall on the surrounding mountains necessitates the stocking of goods especially the supplies of essential commodities well in advance of the onset of long winter. Under such conditions, money lending became a lucrative business, and the money lenders acquired considerable importance in the economy of the region.

Role of Money Lenders

However, in recent years the village trader has emerged as a substitute for professional money lenders. After being ousted from the age old profession, money lender took the form of shopkeeper in the village. The money lenders would advance credit against tangible securities such as gold, silver and ornaments. The credit advance was usually 50% of the market price of the ornaments pawned. The rate of interest ranged between 25 to 50% per annum. For want of tangible security the poor farmers were often compelled to borrow against the expected crops. The money lenders fixed the quantity of grain to be paid by the borrowers. The interest on loans was determined at a price much lower than the market price of the grains.

In other words, the real rate of interest was higher than the stipulated rate resulting in the exploitation of the poor farmers. The price charged for the goods supplied was much higher than the prevailing market price. Thus the shopkeeper was benefited in both ways, at the time of sale of goods and purchase of grains. The money lenders gained undue importance in the rural economy and conducted most of the trade transactions. With the J&K Debt Reconciliation Act of 1950, the activities of the money lenders have been curtailed to a great extent.

Co-operative Movement

Launched in the region when the Second Five Year Plan came into operation, the Co-operative movement has resulted in making available to people various credit facilities, besides eliminating the money lenders from the scene. This movement initially envisaged the establishment of a consumers store at Leh, the main objective being the procurement and marketing of wool. Thus a consumers store, called **Bami-Duniya Store**, was organised and registered in 1958. But in spite of its endeavours and intentions to open branches throughout the region, the movement failed to register its mark mainly due to lack of funds and consequently, could not undertake any business excepting the purchase of butter from Zaskar.

However, things did not remain static and an improvement was witnessed when Labour Co-operative Societies and Multi-purpose Co-operative Societies were opened in the region.

The following table shows the total number of Co-operative Societies, registered during 1978-79 and 1981-82 in the region¹ :

¹ Source : Department of Co-operative, J and K Government

S. Category No.	170			
	year wise Number of Societies			
	1978 79	1979 80	1980 81	1981 82
1. Primary Agricultural Credit Societies	108	116	120	128
2. Primary Non-Agricultural Credit Societies/other Non-Credit Societies	3	4	3	6
3. Primary marketing Societies	4	4	9	7
4. Primary consumer stores	14	14	15	15
5. Wholesale Consumer Stores	2	2	2	2
6. Transport Societies	2	2	2	2
7. Labour Contract and Construction Societies	4	4	4	5
Total :	137	146	155	165

The Agricultural Credit Societies had advanced Rs. 11.36 lakhs in 1981-82, as against Rs. 7.89 lakhs in 1980-81, throughout the region. Rs. 66,000/- had been advanced by Non-Agricultural Credit Societies in 1981-82.

Number, Membership and Share Capital of Co-operative Societies

The number of Agricultural Credit Stores increased by 90% (from 44 to 84) from 1967-68 to 1975-76, and membership registered an increase of nearly 100% (from 3871 to 7653). Likewise the share capital increased from Rs. 0.62 lakhs to Rs. 4.07 lakhs. The Non-Agricultural Co-operative Societies too made a phenomenal progress in respect of membership and share capital.

The following table shows membership and share capital of the stores in a chronological order :—

171

S. Category No.	1967-68			1971-72			
	No.	Mem-ber-ship (Nos)	Share Capi- tal	No.	Mem-ber-ship (Nos)	Share Capi- tal	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Agricultural Credit Stores	44	3871	0.62	55	6200	2.18	
2. Employees Co-operative Credit Societies	1	26	0.81	..	..	..	
3. Primary Consumer Store	7	3109	0.39	11	3535	1.16	
4. Marketing Societies	2	496	0.87	2	545	0.11	
5. Weavers Co-operative Societies	1	37	0.05	..	..	..	
6. Labourers Co-operative Societies	3	650	0.07	3	830	0.07	
7. Meat Societies	..	..	..	..	..	..	
8. Transport Societies	..	..	..	2	43	1.90	

1973-74			1974-75			1975-76		
No.	Mem-ber-ship (Nos)	Share Capital	No.	Mem-ber-ship (Nos)	Share Capital	No.	Mem-ber-ship (Nos)	Share Capital
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
61	6400	2.54	74	7160	3.01	84	7653	4.07
..	..	..	..	..	..	..	..	..
12	3600	1.42	13	3855	1.43	13	NA	1.42
3	673	0.15	4	710	0.16	4	710	0.15
..	..	..	..	..	..	..	..	..
3	830	0.87	3	830	0.07	3	830	0.07
..	..	..	..	..	..	..	..	..
2	43	1.89	2	43	1.89	2	43	1.89

1. Source : Department of Co-operatives, J&K Government.

The Co-operative Movement has made immense progress in recent years and the number of societies, which was 64 in 1969-70, had gone up to 165 in 1981-82. This had also influenced the membership which, being 10276 in 1969-70 had gone up to 17700 in 1981-82. Likewise the number of the Primary Agricultural Credit Societies increased from 48 in 1969-70 to 128 in 1981-82 and those of the Primary Marketing Societies from 2 in 1969-70 to 7 in 1981-82. The working capital of these societies which was Rs. 31.80 lakhs in 1976-77 had also gone up. The following table contains these details¹ :—

S. No.		1969 70	1981 82	Increase %
1.	(a) Total number of Co-operative Societies	64	165	157.8
	(b) Membership	10276	17700	72.2
2.	Number of Primary Agricultural Credit Societies	48	128	166.0
3.	Number of Primary Marketing Centres	2	7	250.0

J&K State Co-operative Bank,

The Jammu and Kashmir State Co-operative Bank has extended its activities to the region and achievements made by it up to 28th January 1983 are shown in the following table :—

Deposits/Loans as on 28-1-1983

S. No.	Name of the District	Deposits (Rs. in lakhs)	Loans and Advances (Rs. in lakhs)
1.	Leh	21.26	7.68
2.	Kargil	11.58	9.79
	Total :	32.84	17.47

Borrowings

Borrowings from various Co-operative agencies, especially the Primary Agricultural Societies and Marketing Societies,

¹ Statistical Hank Book District Leh/Kargil, 1982-83

have gone up from Rs. 5.74 lakhs in 1969-70 to Rs. 7.71 lakhs in 1973-75 in case of Primary Agricultural Societies. As regards the registered Marketing Societies the borrowings amounted to Rs. 15.24 lakhs in 1973-75 as is shown in the table¹ :—

S. No.	Borrowings (Rs. in 000)					
	1969- 70	1970- 71	1971- 72	1972- 73	1973- 74	1974- 75
1. Primary Agricultural Societies	574	444	314	738	771	382
2. Primary Marketing Societies	212	293	374	572	1252	1524
3. Primary Consumers Societies	145	53	675	261	264	731

Commercial Banks :

With the nationalisation of commercial banks in 1969, the credit facilities by modern banking were made operative in the region, enabling the people to strengthen their economy on scientific lines. In spite of being capital deficit area with little scope for developing large scale or even medium industries, the new credit policy played a constructive role in the economic development of the region. The Lead Bank Scheme, the Integrated Rural Development Programme, the J&K Bank and the State Bank of India are doing excellent job in meeting the credit requirements of various economic sectors in each district. The new credit policy with priorities and targets, is planned under the Lead Bank Scheme whereas a year-wise District Credit Plan is chalked under Integrated Rural Development Programme.

While fixing targets and assessing financial assistance of various entrepreneurs, the banks work in close collaboration with various Government agencies. Through this collaboration the credit requirements of farmers, artisans and others are also fulfilled.

Under the Integrated Rural Development Programme and

¹ Source : Department of Co-operatives, J and K Government

the Lead Bank Scheme, efforts are being made to improve the socio-economic condition of the people living below the poverty line. In Kargil district, for example, out of a total number of 8729 households, 5735 households (or 65% of the total) have been identified as living below the poverty line. The State Bank of India, The Jammu and Kashmir Bank and the nationalised banks work in close collaboration with various Government agencies while fixing targets and assessing financial assistance and credit requirements of small entrepreneurs, farmers, artisans and other similar classes. In Kargil district, under the Action Plan 1981, scheme such as laying of orchards and providing plant saplings, fertilizers and pesticides, zeera cultivation, financial assistance for purchase of tractors, fencing, etc. were taken in hand. In order to diversify the economy and create employment opportunities, financial assistance including subsidies and provision of credit were provided to entrepreneurs for setting up of dairy units, poultry and sheep breeding, carpet weaving, cotton processing units, trunk manufacture units, knitting, tailoring, carpentry, shoe making, agricultural implements, pattoo weaving and among services-retail trade, tea stalls, barbers shops etc. In order to expedite the implementation of these schemes and co-ordinate and consolidate various departmental programmes, two District Institutions Finance Officers have been appointed at Leh and Kargil. These officers work under the supervision of their respective Development Commissioners. The Jammu & Kashmir Bank which has at present 8 branches in the region has appointed an Area Manager at Leh in order to supervise the activities of J&K Bank in this region.

In order to educate the prospective borrowers about various matters pertaining to their trade and enterprise, seminars are organised at district and tehsil levels from time to time, pamphlets and brouchers in local language are also issued which give useful information about credit facilities, incentives etc., made available by the State Bank of India, the Jammu and Kashmir Bank and other Financial Institutions as well as by various Government agencies.

Since 1971, considerable progress has been made in exten-

ding commercial banking facilities in this area. In particular, the Jammu and Kashmir Bank has given a lead by opening its branches in remote areas of Ladakh. Commercial banking facilities have greatly improved which is evident from the fact that in 1971, there was one bank for a population of 52,125 persons whereas in 1981, on an average, one commercial bank served a population of 11,000 in this region. The bank advances and credit facilities also recorded significant progress during this period. In December 1980, the bank advances aggregated to Rs. 48 lakhs as against only Rs. 48000/- in 1970.

There are two District Institutional Officers, working under the supervision of Development Commissioners, at Leh and Kargil who are responsible for expediting and implementing various credit schemes. Similarly there is an Area Manager at Leh who supervises the working of various branches of J&K Bank. The number of these branches is 8.

In 1982, the total number of branches of commercial banks was 11, out of which 9 belonged to J&K Bank and 2 to the State Bank of India. The Jammu and Kashmir Bank had set up its branches at the following places :

District	Branches
1. Leh	Leh, Nyoma, Diskit, Kharboo, Toingse and Durbuk.
2. Kargil	Kargil, Padam, Sankoo.

Deposits and Advances

The following table shows the position of deposits and advances of scheduled commercial banks in 1980 :—

S. No.	District	Deposits (Rs. in lakhs)	Advances (Rs. in lakhs)	Credit/Deposit Ratio
1.	Leh	324	37	1 : 9
2.	Kargil	155	11	1 : 14
Total :		479	48	1 : 10

Deposits/Advances of J & K Bank
(ending December 1981)

(Rs. in lakhs)

S. District No.	Deposits	Advances	Credit/Deposit Ratio
1. Leh	315.33	89.26	1 : 3.5
2. Kargil			

The J&K Bank had advanced Rs. 1.20 crores under various core sectors of the economy since January, 1980 out of which an amount of Rs. 89.26 lakhs was outstanding on 31-12-1981 and the deposits amounted to Rs. 315.33 lakhs¹. The credit/deposit ratio worked out at 1: 3.5 thus, making the position of the J&K Bank better than other banks whose credit/deposit ratio is 1 : 10.

It may be remembered, however, that the bulk of deposits remain un-utilised in the region. The reasons for this are not far to seek. Commercial banking in this area being of recent origin, the people have not developed banking habits as yet. The responsibility also lies on the shoulders of those responsible for implementing credit plans at the district level. However, the basic cause for the non-utilisation of the bank deposits is the under developed character of the economy of the region.

However, things are improving fast as the Government and the banks have started providing incentives to the people.

State Assistance to Industrial Development

For intensive industrial development in the region, the Government has made elaborate arrangements. The small scale and cottage industries are being looked-after well by the District Industries Centres set at Leh and Kargil in 1978-79 and 1980 respectively. Apart from recommending newly established production units to various banks for loans, these centres provide training facilities in knitting, embroidery, weaving, tailoring etc. to the people. About 152 persons were trained in 1980-81.

¹ Source : District Manager, J and K Bank, Leh/Kargil

in various crafts under the auspices of the District Industries Centre Leh and two were deputed to Jammu.

About 71 industrial units giving employment to 148 persons, were registered by these centres during 1980-81.

Financial Assistance

The District Industries Centre, Leh recommended 197 cases for an advance of Rs. 12.53 lakhs. Out of this amount Rs. 5.3 lakhs were sanctioned in 1980-81.

Subsidy to Hotel Industry

Since the opening of Ladakh to tourists, a large number of foreigners visit the region every year, giving a big boost to hotel industry. The Government is, thus, giving special financial assistance to those interested in setting up hotels and restaurants in the region. In 1980-81, the District Industries Centre, Leh advanced Rs. 3.60 lakhs to various persons to set up hotels.

Currency and Coinage

Coins or **Dons** or **Dong Tao** have played a vital role in the economic life of the region, making people to indulge in buying and selling without difficulty. Coins of copper called **Zangi-Dons**, silver coins **Kul-ki-dons**, or **Nuk-dons** and gold coins or **Sar-Jao** or **Sar-ki-Dong** were in circulation for a long time. Out of these coins **Jao** or **Jud** a thick and irregular shaped piece of silver, was coined in Kashmir. Having Persian inscription on both sides of the coin with words like "**Butan**", the Kashmiri name for Ladakh, and **Zarb-i-Butan** or the currency of **Butan**, testified the fact close links that existed between Kashmir and Ladakh in the past.¹

The coins in circulation during the Dogra period were :

"The local rupee with "J. H. S.", or Jammu, Hari Singh, inscribed on one side of the coin. Then there was Chilki Rupee (10 British Annas) and Nanak Shahi Rupee (12 British Annas).

At present the Indian Rupee, smaller coins of various deno-

¹ Cunningham, op. cit., P. 253-55

minations and other currency notes issued by the Reserve Bank of India are in circulation throughout the region.

Trade and Commerce

As already mentioned, Ladakh was a dry port of trade since times immemorial and caravans from Central Asia and India met here to exchange their commodities. But at the beginning of the year 1917, when the boundries of the region were sealed off, this flourishing trade came to an end, affecting its economy adversely.

However, with the construction of Srinagar-Leh vehicular road, in 1960, the trade and commerce again began to play an important role in the economy of the region. Both import and export trade is now carried on regularly. The export trade comprises pashmina, raw wool, dry fruits, borax, sulphur, minor forest produce and woollen products whereas the imports consist of skins, fuels, cloth, building material, grocery etc. The import of essential commodities into the region since 1975-76 is given in the following table ¹ —

Import of Essential Commodities

S. No.	Item	Unit	1975 76	1976 77	1977 78	1978 79
1.	Rice	Qtls.	20309	25767	21615	22834
2.	Wheat	"	..	2098	948	..
3.	Atta	"	17958	26008	23082	19543
4.	Sugar	"	1988	3346	2357	1540
5.	Silt	"	2264	5668	3520	949
6.	K. oil	Litres	132000	—	170343	157882

The developmental activities have given a boost to trade and commerce in the region and as a result, more and more

¹ Source : Directorate of Food and Supplies, J&K Government.

business, centres are coming up. The number of traders was 326 in 1970, including 171 stationed at Leh and now it is increasing rapidly ; Besides, Co-operative Societies are opening new consumers stores, the number of which was 17 in 1981-82 including 2 whole sale stores.

The warehousing and storing facilities prevailing in the region need to be developed on modern lines.

Agricultural Marketing

The agricultural marketing is not well developed in Ladakh and consequently, the surplus agricultural produce is exchanged only at Leh and Kargil and food procurement is done through Primary Agricultural Marketing Societies, the number of which did not exceed 7 in 1981-82. In 1975-76, the membership of these societies was 756 and the working capital amounted to Rs. 31.80 lakhs.

The agricultural produce received from rural areas is stored in 3 godowns hired by these societies. These godowns have a total capacity of 2000 Quaintals. In 1969-70, agricultural produce worth Rs. 7,25000/- was sold at a net profit of Rs. 2070/- by these societies.

These societies are doing a good job by distributing various chemical fertilizers to the farmers. Between 1978-79 and 1981-82, the Agricultural Marketing Societies distributed 14523 Qtls. of chemical fertilizers in the Leh district and 5278 Qtls. in the Kargil district.

Weights and Measures

In the past, there were two types of weights in vogue in Ladakh. These were the **Bati** and the **man** or maund.

The **Bati** was (equal to two Indian seers) and the maund equal to forty Indian seers. The other local measures were **Khal**, **Dak-Khal** and the **Shor-Khal**. The weight **Khal** and the measure **Khal**, or **Shor-Khal**, were, however, most common. The common **Khal** whether by measure or weight, was the well known **Luk-Khal** which was equal to a sheeps' load or eight

Batis or sixteen Indian Seers. In the larger measure, **Ta-Khal**, or a horse-**Khal**, was adopted generally.

This indigeneous system of weights and measure, was marked by its multiplicity, resulting in confusion, and paving way for the exploitation of ignorant people especially peasants. Realising this, the Government introduced the Metric System which is a uniform system of weights and measures thereby relieving the the people from exploitation and fraud.

The basic unit of weight in the Metric System is the Kilogram, hundred kilograms being equal to one quintal. Similarly, the basic unit of the measure is a metre which is equal to 100 centimetres of international standard. The Metric System is adopted even in the measurement of land and maintenance of land records. The area is converted from the old units of kanals and acres into centiers, hectares etc. There are two officers at Leh and Kargil to see that new weights and measures are adopted.¹

CHAPTER VII

COMMUNICATION

In Ladakhi language a road is called **Lam** and the high-ways are called **Lam-Chhen**. The passable roads are called **Gaya-Lam**. The principal old road that linked Srinagar to Yarkand via Leh was the famous Central Asian Trade Route. The next in importance was the road to Lhasa via Gartok and the third was the road that linked Leh with Amritsar via Lahul and Kulu.

The modern means of transport were introduced in the region as late as 1960. Till then the primitive means of transport such as ponies, mules, yaks etc. were used. These means of conveyance, however, have not disappeared altogether as they are indispensable under the peculiar geographic conditions of the region. Ladakh is a mountainous area and has a difficult and rough terrain. Anyhow, it is no more inaccessible after the construction of Srinagar-Leh road in 1960. During the Five Year Plans, a net work of roads has been constructed in the interior of the region. Till recently it was connected by surface transport only but is served by Indian Airlines as well. Air service to Ladakh has given a boost to tourism in this area.

Road Transport

Prior to 1947, Ladakh was linked with Srinagar by a bridle path. The journey by ponies took more than three weeks to Leh. As a result of the construction of a metalled road the distance of 434 Kilometres can now be covered in two days only. The road remains closed during winter months due to excessive snowfall on Zojilla mountain. Considerable progress has been made in the field of transport and communication in this part of the State. In 1970-71, the total vehicular road mileage was

¹ Source : Deputy Controller, Weights and Measures J&K Government.

1659 Kms. as against 1438 Kms. in 1960-67. The length of surfaced roads maintained by the State Public Works Department has increased from 20 Kms. in 1975 to 205.65 Kms. in 1980-81. The proportion of the unsurfaced roads is much higher and increased from 380 Kms. in 1975 to 664.30 Kms. in 1980-81. Category-wise roads, with length in Kms. as maintained by State Public Works Department is given below :—

Category of Roads	Roads as on			
	31-3 1979	31-3 1980	31-3 1981	31-3 1982
Black topped	39.05	54.05	88.65	93.65
Metalled	37.58	35.10	35.00	53.00
Shingled	21.50	92.00	82.00	107.00
Fair weather	533.50	560.30	616.30	709.00
Jeepable	74.50	63.45	48.00	7.00
Total :	706.13	804.90	869.95	969.65

The Border Roads Organisation and the State Public Works Department are engaged in the construction and maintenance of roads in Ladakh. Some of the roads are the highest in the world. There is limited scope for the development of the motorable roads due to the geographical conditions stated above.

The latest position with regard to the vehicles plying within the region is indicated in the table below :²

Year	Type of Vehicle	District Leh	District Kargil	Total
1983	Jeep Taxis	109	20	129
	Private Jeeps	5	4	9
	Trucks	30	7	37
	Scooters/Motor Cycles	24	14	38
	Ambassador Car Taxis	12	..	12
	Tractors	15	..	15
	Private Buses	..	..	..

¹ Source : Superintending Engineer, Leh/Kargil.

² Source : Transport Commissioner, J&K Government, Srinagar.

Although the position of roads has improved, yet only 13% of the villages have **pacca** and 15% have **kachha** road links. The following table gives the distribution of villages with different types of communication links by reference to distance from the nearest town in 1971.

Distribution of villages with different communication links by distance from the nearest town in 1971.

Distance from the nearest town (Kms.)	Total Number of inhabited villages	No. of villages connected by			
		Pacca Road		Kachha Road	
		No.	Percentage	No.	Percentage
5 or less	4	1	25.00	..	..
6 to 10	13	2	15.38	2	15.38
11 to 15	8	..	..	5	62.50
16 to 25	22	4	18.18	8	36.36
26 to 50	63	19	30.16	11	17.46
51 to 100	71	5	7.04	5	7.04
101 to 200	25	..	..	1	4.00
210 and above	29	..	..	4	13.79
Total:	235	31	13.19	36	15.32

The table reveals that distance from the town does not have any impact on the dispersal of villages with **pacca** roads or with **kachha** roads. The maximum number of villages with **pacca** roads falls at a distance ranging between 26—50 Kms.

from the town. Villages with **kachha** roads steadily increase in number from the distance group 6—10 Kms. to 26—50 Kms. and start to dwindle beyond this distance. In all, only 28.50% of the village have a direct road link with the main towns.

Public Transport

Under the combined operation pattern, the State Road Transport Corporation does not operate on any route in the State on exclusive basis except the Srinagar-Leh route. How-

ever, within the region, the private operators are also permitted to ply their vehicles. The Road Transport Corporation of the State has established depots at district level at all important stations to cater to the transport needs in the areas. The routes operated from the Leh Depots are Kargil, Thiksey, Choglamsar, Phiang, Gia, Khaltsi, Nyoma and Shey. Statement showing the total number of buses used and passengers carried from Srinagar to Leh from 1978 to 1982 is given below :

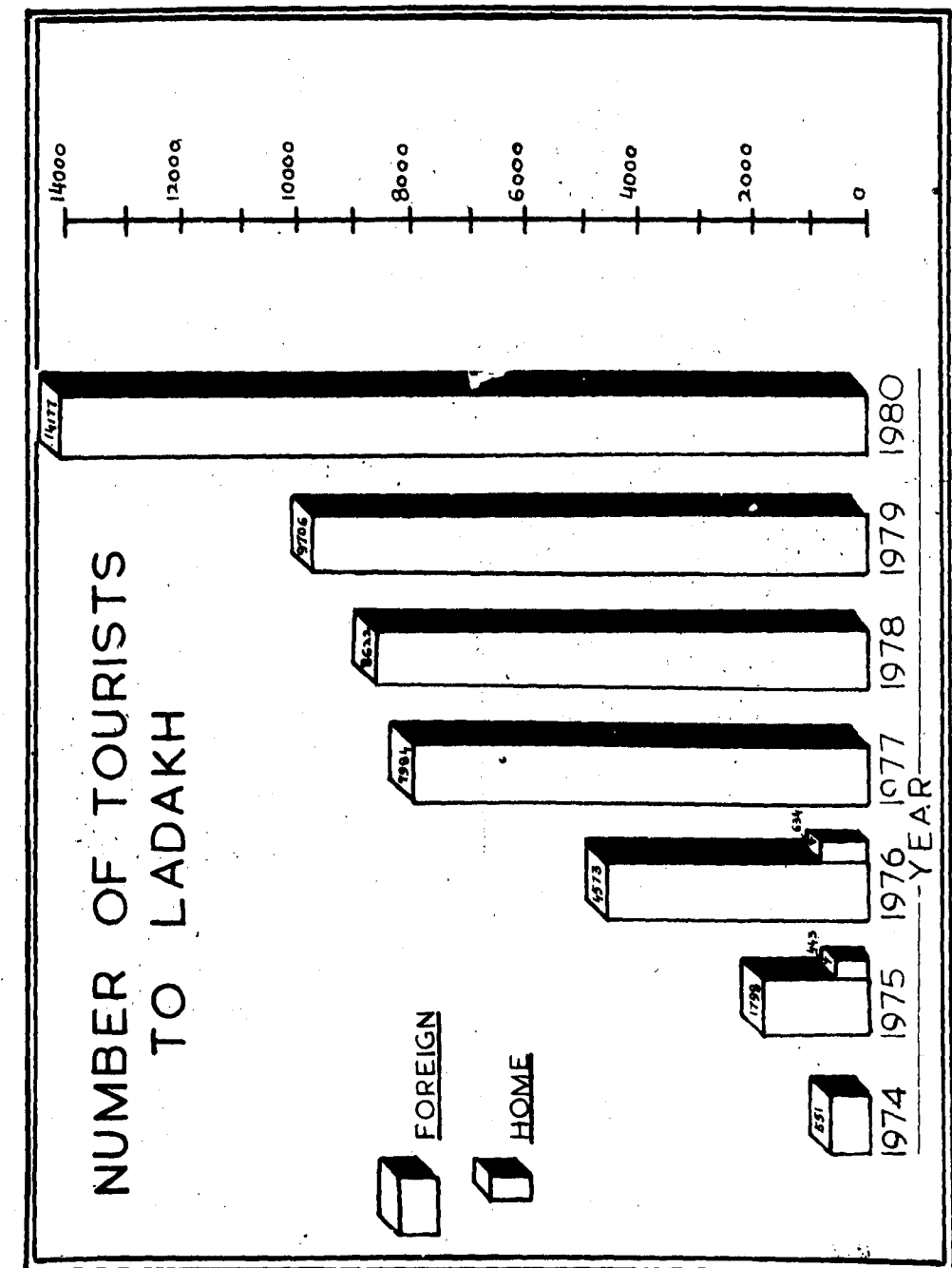
Statement showing the passengers in total carried in Buses, Super Delux/A. Class/B. Class from Srinagar-Kargil-Leh from 1978 to 1982.

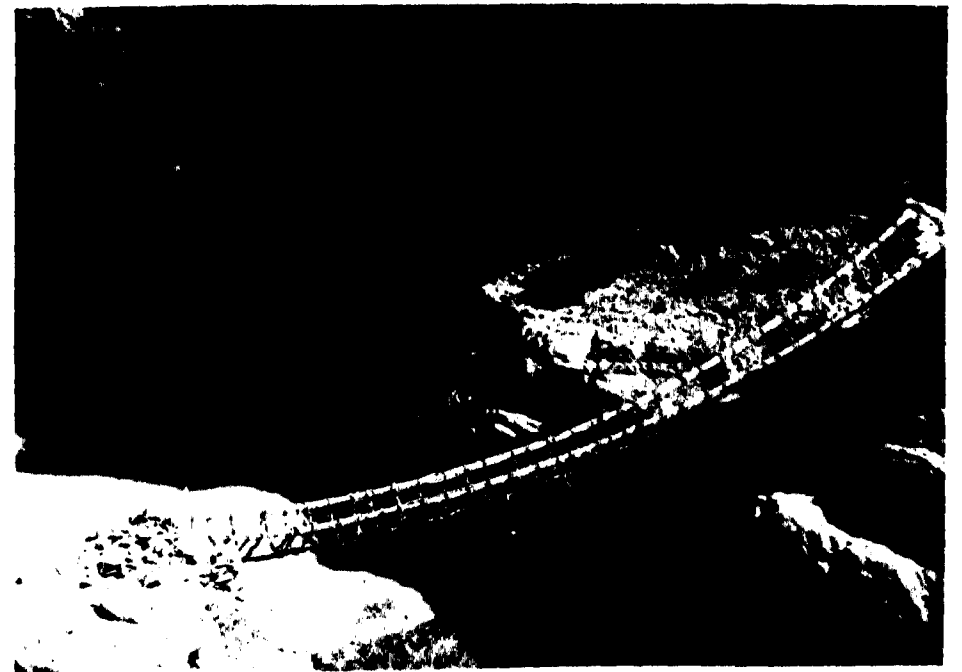
S. No.	Class of Buses	Year	No. of Total Buses	Passengers
1.	A. Class/S. Deluxe	1978	462	11122
2.	do	1979	457	12150
3.	do	1980	448	10949
4.	do	1981	580	13749
5.	do	1982	577	14248
6.	B. Class	1978	388	13723
7.	do	1979	289	10036
8.	do	1980	279	9441
9.	do	1981	358	12762
10.	do	1982	396	13623

Air Transport

There is one aerodrome at Leh and an airstrip at Kargil. The Civil Aviation Authorities were operating Air Services from Srinagar to Leh and Kargil before 1962. Thereafter, it was discontinued till 1978. At present Indian Airlines operates its service from Srinagar to Leh and back on three alternate days in a week i. e. Wednesday, Friday and Sunday. Air service

Source : Transport Commissioner, J&K Government





Rope bridge on the river Zanskar





Road to Lamayuru

between Delhi to Leh via Chandigarh and back is operated on every Monday.

Quarterly break-up of the passengers airlifted and the cargo carried between Delhi and Leh from November 1980 to September 1983 is summarised in the table below¹ :—

Period	No. of passengers	Cargo (in Kgs.)
November to December 1980	50	26
January to March 1981	582	699
April to June 1981	359	2557
July to September 1981	203	2477
October to December 1981	304	2157
January to March 1982	513	303
April to June 1982	920	2580
July to September 1982	289	3601
October to December 1982	569	8374
January to March 1983	894	9057
April to June 1983	654	4970
July to September 1983	235	3340

Ferries and Fords

Generally, the rivers in Ladakh, flow with great rapidity and force and as such are generally unfordable. They have a strong current especially during the summer months, when the snow abundantly melts. Moreover, these water courses are liable to sudden and extreme vicissitudes with the result that the streams that are scarcely knee-deep in the morning acquire a depth of several metres in the afternoon, when the rays of the sun act sufficiently upon the sides and summits of the neighbouring mountains.

However, these rivers are crossed at several places by ferries, fords and bridges. Fording is the most usual means of crossing both the Indus and Shayok in the upper parts of their courses, where their waters are widely spread and shallow.

¹ Source : Station incharge, Indian Airlines, Srinagar.

Where the Indus becomes deep and rapid, it is spanned by number of bridges, but where the current is less rapid, people are ferried across. The Zaskar river is not fordable and is bridged at a couple of places.

The ford is called **Raba** in the local language. In summer, the fording of many of the streams can only be accomplished in the morning. After ten O'clock, the water is so much increased by the melting snow that the rivers become unfordable.

A ferry is called a **Kishti** and the ferryman the **Chhu-pa**, that is when the ferry men use wooden boats. The common people are ferried over on inflated yak skin which is used to cross rivers. It is called a **Zak**.

The bridges of Ladakh have different names according to the materials of which they are constructed. The wooden bridges are called **Shing-zam** while the stone bridges as **Do-zam**. The suspension bridges, called **Ichug-zam** are common in Ladakh.

The major rivers of the region viz. the Indus, Shayok, Nubra, Suru, Dras and Waka are not navigable.

Travel and Tourist Facilities

Ladakh possess unique charm in its variegated natural scenery. Its towering peaks and majestic mountains are an everlasting challenge to all daring mountaineers and explorers of the world. Most of the world's highest mountain peaks including K-2 (8710.6 mts.) are found here. There are huge glaciers as well as sublime green valleys and pastures which have great appeal of their own. Besides, Ladakh possesses a unique cultural heritage. The dance and drama, the social habits and rituals of the people are very interesting and provide a great entertainment to the travellers and tourists who visit the region.

The State Government has planned to raise various complexes to promote tourism in this area. These schemes will ensure environmental importance of the region in order to meet the long felt need for such facilities. This would also help in achieving balanced growth of the entire economy. Economic

development has to be matched by appropriate increase in social, cultural and other facilities. The table given hereunder reveals year-wise increase in number of tourists who visited Ladakh from 1974 onwards. There has been a remarkable increase in the tourist traffic from 551 in 1974 to 14177 in 1980¹ :

Number of tourists who visited Ladakh.

S. No.	Year	No. of tourists		Total
		Foreign	Home	
1.	1974	551	..	551
2.	1975	1798	443	2241
3.	1976	4573	634	5207
4.	1977	7984	..	7984
5.	1978	8622	..	8622
6.	1979	9706	..	9706
7.	1980	14177	..	14177

At present there are no tourist huts in Ladakh. However, travellers are provided with lodging facilities in rest houses at Dras, Kargil, Mulbek, Bodh-Kharboo, Nubra, Nyoma, Khaltsi, Sankoo and Leh. Single room **Sarais** are being built up on other routes to provide shelter to the travellers. Proper facilities for board and lodge are available in the hotels at Kargil and Leh. Necessary information about local transport, board and lodge, recreation and places of interest in the region is provided by Tourist Officers at Leh and Kargil.

Radio Station

A Radio Station was set up at Leh, in 1973. The Community Listening Scheme has been in operation almost from the inception of the broadcasting system in the State. Under the scheme, a large number of community radio receivers have been

¹ Source : Directorate of Tourism, J&K Government

installed in the towns and villages of the region. The details of the radio licences issued from 1965 to 1983 are as under :—

Year	No. of Licences
1965	41
1966	581
1967	440
1968	645
1969	1561
1970	1651
1983	7840

Post, Telegraphs and Telephones

In the past, the postal arrangements were simple but the transmission was generally slow. The mail was carried by runners. The **Goba** of each village was bound to furnish a carrier to carry the post from his village to the next village on the road. Along the high-roads the carriers were all horsemen called **Tazampa**.

Before 1947, the entire region including Skardu was served by mail-runners right from Srinagar to Leh via Sonamarg-Matayan. Post offices were located at great distances and many difficulties were faced by the people. Telegrams were delivered late and there was considerable delay in the delivery of **dak**. After Independence, Sonamarg-Matayan mail-line was abolished. At present mail between Srinagar and Leh is exchanged through State Road Transport Corporation buses in summer and through Indian Airline Planes in winter. In the mufasils, **mail** is lifted and carried by departmental and extra-departmental runners. This system links Matayan to Kargil, Kargil to **Silmo**, Kargil to Panikhar, Kargil to Lamayuru, Leh **Nyoma** Leh to Khamtsi and other mail lines. To provide adequate **post**-ing facilities through out the region, a large number of additional sub-post offices and branch post offices have been opened. Letter boxes have been installed at important centres in the towns and villages which are cleared at fixed timings. Recently, (i. e. in 1983) post offices at the highest altitude in the world was set up in Ladakh by the Indian Post and Telegraphs Department.

Previously, the postal, telephones, and wireless unit of the region formed a part and parcel of the Srinagar division which was under the jurisdiction of the Superintendent of Post Offices of Kashmir, Division, Srinagar and Divisional Engineer, Telegraphs, Srinagar respectively. The overall control was exercised by Director, Posts and Telegraphs, Jammu and Kashmir Circle, Srinagar. In Ladakh the postal side was looked after by the Inspector of Post Offices while Telephone, Telegraph and the wireless Department were supervised by the Sub-Divisional Officer, Telegraphs with headquarters at Leh.

In June, 1979, the Postal Sub-division was upgraded as an independent postal division and put under the charge of Superintendent, Post Offices, Ladakh region. The overall control is with the Post Master General, Jammu and Kashmir Circle, Srinagar. In 1983, there was one Head Post Office, 11 Sub-Post Offices and 74 Branch Post Offices as against 3 Sub-Post Offices and 35 Branch Post Offices in 1950-51. A list of the Post Offices, with facilities available is given in the table below :—

Classified list of Post Offices in Ladakh Region¹ as on 1-8-1983

Head Post Office

Leh Town (T.P.) T&T, T.W.L.P.S.O., 191401

S. No.	Sub-Post Office	Branch Post Office
1.	Leh Town C. O.	Bazgo Chushul Chestnut-shama Durbok Fiang Mathoo Nimu Nyoma-Mud Stook Spituk Wanla

¹ Source : Post Master General and General Manager, Telecommunication, J&K Circle, Srinagar

S. No.	Sub-Post Office	Branch Post Office
2.	Baroo 194105	Batalik Chaskar Menji Silmo Tumail Yarbaltak Garkoon
3.	Chuglamsar 194104	Saboo
4.	Dras C. O., P.S.O. 194102	Matayan Pandras Mushkoo
5.	Kargil C. O., on P&T, W.L.P.S.O., 194103	Chhangund Haridas Karkitchoo Shamsh-Karboo Akehmah
6.	Khaltsi 194106	Alchi Henmis Shokpachan Lamayuru Laki Nurla Saspool Skarbuchan Temisgam Takmachik Hanu Tia Dumbkher
7.	Sankoo 194301	Barsoo Khasgam Thevana Lankerche Namsuroo Omba Panikhar Purtakche

S. No.	Sub-Post Office	Branch Post Office
		Padam (seasonal) Saliskot Sangra Tamsis Trinspon Yuljug Safi
8.	Thiktsi	Aigoo Chamrie Chumathang Gaya Miru Hemis-Changa Hemyan Kaiti Kingam Sakti Shara Shey
9.	Diskit	Tirchi Hundar Tiger Samore
10.	Padam (Zanskar)	Kars'ha
11.	Mulbek	Pushkum Lochan Bodh Kharboo Chikham Shakar

Abbreviation used in the list are explained below :

T. P.	Teleprinter
P&T, W. L.	Post and Telegraph Wireless
P. C. O.	Public Call Office
C. O.	Combined Office
Numbers given in the list are the pincode numbers.	

Post offices also serve as Saving Banks and sell National Saving Certificates. Details of the transaction in this behalf are given below :—

Saving fund Account as on July, 1983		National Saving Certificates as on 31-3-1983	
No. of Accounts	Amounts Deposited	No. issued	Value (in Rs.)
2696	Rs. 1,13,195.84	113	Rs. 2,69,300.00

The Telegraph Sub-Division of Ladakh was upgraded as an independent Division on February, 1983. It is looked after by Sub-Divisional Officer who functions under the control of General Manager, Telecommunication Jammu and Kashmir Circle. The Division looks after the operation, maintenance and development of telecommunication assets including local system and circuits in the region.

The towns of Leh and Kargil are connected by direct teleprinter with the Central Telegraph Office at Srinagar. Some of the post offices provided with telegraph facilities are shown in the list of post offices mentioned above.

Three Telephone Exchange Units are located at Kargil, Leh and Dras with a capacity of 290 lines. The total number of telephone connections and extensions provided by these exchanges as on August, 1983 was 247 and 57 respectively. The table given below shows the number of telephone connections and extensions from 1971-72 to 1982-83¹.

Year	Main	Extension
1970-71	78	21
1971-72	92	3
1972-73	102	5
1973-74	104	6
1974-75	104	6
1975-76	124	74
1976-77	134	28
1977-78	136	37
1982-83	247	57

The table shows that the telephone connections have increased significantly over the period. The main connections have gone up from 78 in 1970-71 to 247 in 1982-83, although the number of extensions has fluctuated during the same period. As a result of heavy snowfall on Zojilla, the telephone line between Srinagar and Ladakh remains disturbed during winter months. To overcome this difficulty, the region has recently been connected with Delhi through the Communication Satellite System.

¹ Source : General Manager, Tele-Communication, J&K Circle, Srinagar

CHAPTER VIII

ECONOMIC TRENDS

Before Independence

Not long ago, it was said that time stood still in Ladakh. What it meant was, that being a secluded region, the people of Ladakh were least influenced by the currents and cross-currents of modern civilization. The economy was based on primitive lines; agriculture, the mainstay of the people provided only a subsistence living to the bulk of the population engaged in it. About 95 percent of the people eked out their existence from land. The people lived from hand to mouth. Feudal chiefs dominated the scene, the actual cultivator did not enjoy any security of tenure. His suffering was aggravated by the money lenders, the peasantry groaned under the burden of heavy ancestral debt. There were only few cottage industries which catered to the needs of the local farmers and artisans. The means of transport and communication were conspicuous by their very absence. In an atmosphere of extreme poverty, servitude and stagnation, people seek the amelioration of their misery and difficulties in irrational beliefs and customs. They resort to superstition and magic-worship thereby creating another class of parasites and exploiters. Ladakh being no exception to this general rule.

Ladakh After Independence:

Alongwith the other parts of the State, Ladakh entered an era of progress and development after Independence. Numerous measures for alround economic progress and social justice were undertaken. As a first step in 1950, the Big Landed Estates Abolition Act was passed whereby the proprietary rights in land in excess of the ceiling limit of 9.21 hectares were expropriated. The land so acquired was transferred to the actual tiller. By another enactment debt relief was provided and, in order to scale down the old and ancestral debts., Debt Recon-

ciliation Boards were set up. It was followed by appropriate legislation which provided relief to the debtors, freeing them from the bondage of the money lenders. Debt Reconciliation Boards were set up in every tehsil and old debts were compulsorily scaled down. Simultaneously, Tenancy Reforms were introduced through a series of legislative measures. The tenants were given legal protection against ejectment and the rents payable by them to the landlords were fixed. Forced labour and illegal payments were prohibited. Community Development Programmes and National Extension Service Schemes were extended to Ladakh during the Second Five Year Plan. A base for the alround development of the region had been laid down in the fields of Irrigation, Agriculture, Community Development, Animal Husbandry, Sheep Breeding and Education during the Second and the Third Five Year Plans. The Department of Agriculture set up four Agriculture Farms, one each at Nubra, Changthang, Saspool and Kargil. In order to conduct research on cereals, pulses, grass, fruit etc. under the special agro-climatic conditions of the region, an agriculture farm has been set up at Padam, in Zaskar. The experiments on Potato cultivation have been successfully conducted at the Agricultural Farm, Dras.

A net work of roads has been laid by the State Public Works Department and Boarder Roads Organisation. Among these, the Leh-Nubra road, Khaltsi-Gurgurdoo road, Kargil-Suru-Rangdyn-Gumpa road and Mohar-Puga road are important. The district had 869.95 Kms. of road length of all the categories at the end of the year 1980-81. Some major and minor bridges have also been constructed in the region.

Education has been receiving the utmost attention of the government and notable progress has been achieved in this field. Primary Schools have been opened almost in all the villages of Ladakh. The number of schools, whose category and district-wise break-up is given in the following table, had gone up from 170 in 1961 to 432 in 1981-82¹ :

¹ Source : Director, School Education, Kashmir.

S. Category No.	Kargil District		Leh District		Total
	Boys	Girls	Boys	Girls	
1. Primary Schools	162	17	145	9	333
2. Middle Schools	36	..	28	2	66
3. High/Higher Secondary Schools	16	1	15	1	33
Total :	214	18	188	12	432

The enrolment of children has shown rapid growth and the total number of students on rolls has moved up from 4952 in 1961 to 17500 in 1980-81. Literacy percentage in Leh district has risen from 11% in 1961 and 16% in 1971 to 24.18% in 1981. In Kargil district, the percentage according to 1981 census is 17.06%. The schools are provided with adequate and qualified staff and the number of teachers has risen from 316 in 1961 to 1131 in 1981-82. The following table throws light on institution-teacher, institution-pupil and teacher-pupil ratio which has been well maintained in the region¹ :

S. Category No.	Primary Schools	Middle Schools	High Hr. Sec. Schools	All Schools
1. Kargil District				
(a) Institution Pupil ratio	22	72	131	37
(b) Institution Teacher ratio	1.6	5.0	10	2.4
(c) Teacher—Pupil ratio	19	15	13	16
2. Leh District				
(a) Institution Pupil ratio	21	114	118	44
(b) Institution Teacher ratio	1.27	5.77	12.10	2.74
(c) Teacher—Pupil ratio	17	20	9	14

¹ Source : Director, School Education.

At present there is no Degree College in Ladakh. The students who pursue their studies in various Colleges/Universities outside the region are given a stipend at the rate ranging between Rs. 75/- to Rs. 125/- per month.

Remarkable progress has been registered in the field of public health. Medical facilities have been provided to the people living in the far-flung areas of the region. Diseases like typhus, small pox, and cholera, which used to take heavy toll of life, have been eradicated. Tuberculosis and venereal diseases have been held under check.

In 1941, there were only two dispensaries in Ladakh with their headquarters at Leh and Kargil. People mostly depended on indigenous treatment which, however, did not conform to any recognised system. After 1947, allopathic treatment was made available to the people by opening dispensaries and health centres. Very few people now take resort to old method of treatment. Medical institutions whose number was two in 1941, had gone up to 16 in 1961 and 169 in 1981. In 1981, there were 419 medical personnel including 60 doctors as against 48 medical personnel including 7 doctors in 1961. Category and block-wise break-up of the medical institutions is given below¹ :

S. Category No.	Number of Institutions Kargil District					
	Kargil	Dras	Chiktan	Sankoo	Zaskar	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Hospitals		2	..	..	..	..
2. Primary Health Centres		..	1	1	1	1
3. Sub Centres		..	2	2	2	2
4. Allopathic Dispensaries		4	1	2	4	1
5. Medical Aid Centres		13	3	2	10	6
6. Family Welfare Centre		1	..	..	..	..
7. Leprosy Centres		1	..	..	..	..
8. Amchies		3	1	7	..	6
9. Mobile Dispensaries		1	..	..	..	..
10. T.B. Isolation Beds		..	..	..	..	..
11. T.B. Clinics		1	..	..	..	..
12. Ancillary School for (ANMS) Medical Asstt.		..	..	..	..	..
13. Post-mortem Units		..	..	..	..	..
Total :		26	8	14	17	16

¹ Source : Director of Medical Services, Srinagar.

S. Category No.	Number of Institutions Leh District						
		Leh	Khaltsi	Nyoma	Nubra	Durbuk	Total
(1)	(2)	(8)	(9)	(10)	(11)	(12)	(13)
1.	Hospitals	1	..	..	..	..	3
2.	Primary Health Centres	..	1	1	1	..	7
3.	Sub Centres	..	2	2	2	..	14
4.	Alopathic Dispensaries	3	3	..	2	1	21
5.	Medical Aid Centres	11	11	7	8	..	71
6.	Family Welfare Centre	1	..	..	1	..	3
7.	Leprosy Centre	5	..	..	..	..	2
8.	Amchies	1	7	9	4	..	42
9.	Mobile Dispensaries	1	..	..	..	..	2
10.	T.B. Isolation Beds	1	..	..	..	..	2
11.	T.B. Clinics	1	..	..	..	..	1
12.	Ancillary School for (ANMS) Medical Asstt.	1	..	..	..	..	1
13.	Post Mortum Units	1	..	..	..	..	1
Total :		27	24	19	18	1	170

Not only the health of its people but even the healthy development of the cattle population of the region has witnessed considerable progress during the Five Year Plans. This is indicated in the table given below :—

S. No.	Type of cattle development Centre/Hospitals	Total No. in 1980-81	No. of centres with medical facilities
1.	Livestock Development Centre	45	22
2.	Intensive Cattle Development Centre	10	3
3.	Sheep and Wool Centres	26	11
4.	Intensive Sheep Development Centre	14	..
5.	Sheep and Goat Centres	14	..
6.	Research and other Centres	8	..
7.	Veterinary Hospitals	4	..
8.	Veterinary Sub-Units	5	..
9.	Laboratories	2	..
10.	Mobile Units	1	..
11.	Transit Camps	2	..

Occupational Distribution of Population

A detailed account of the Occupational Distribution of population according to the 1961, 1971 and 1981 census is given in the table below :—

S. No.	Item	Years					
		1961	%age of workers to total population	1971	%age of workers to total population	1981	%age of workers to total population
1.	Total Population	88651	..	105291	..	134372	..
2.	Total workers	58574	66.07	46.77	43.76	70714	52.63
3.	Total Main workers	57471	64.83	46077	43.76	59691	44.42
Main Workers (I—IX)							
I	Cultivators	49969	56.37	35782	33.98	39619	29.49
II	Agricultural Labourers	283	0.32	1376	1.31	3164	2.35
Va	House Hold Industry						
	• Manufacturing, Repairs (V-a)	4477	5.05	817	0.78	329	0.24
IX	Other workers III, IV, V(b) and VI to IX	2742	3.09	8102	7.69	16579	12.34
4.	Marginal workers	1103	1.24	..	..	11023	8.20
5.	Non-workers	30077	33.93	59214	56.24	63658	47.37

Note :— Other workers are classified as under :—

III Livestock, forestry, fishing, hunting and plantation.

IV Mining and Quarring.

V (b) Other than household industry

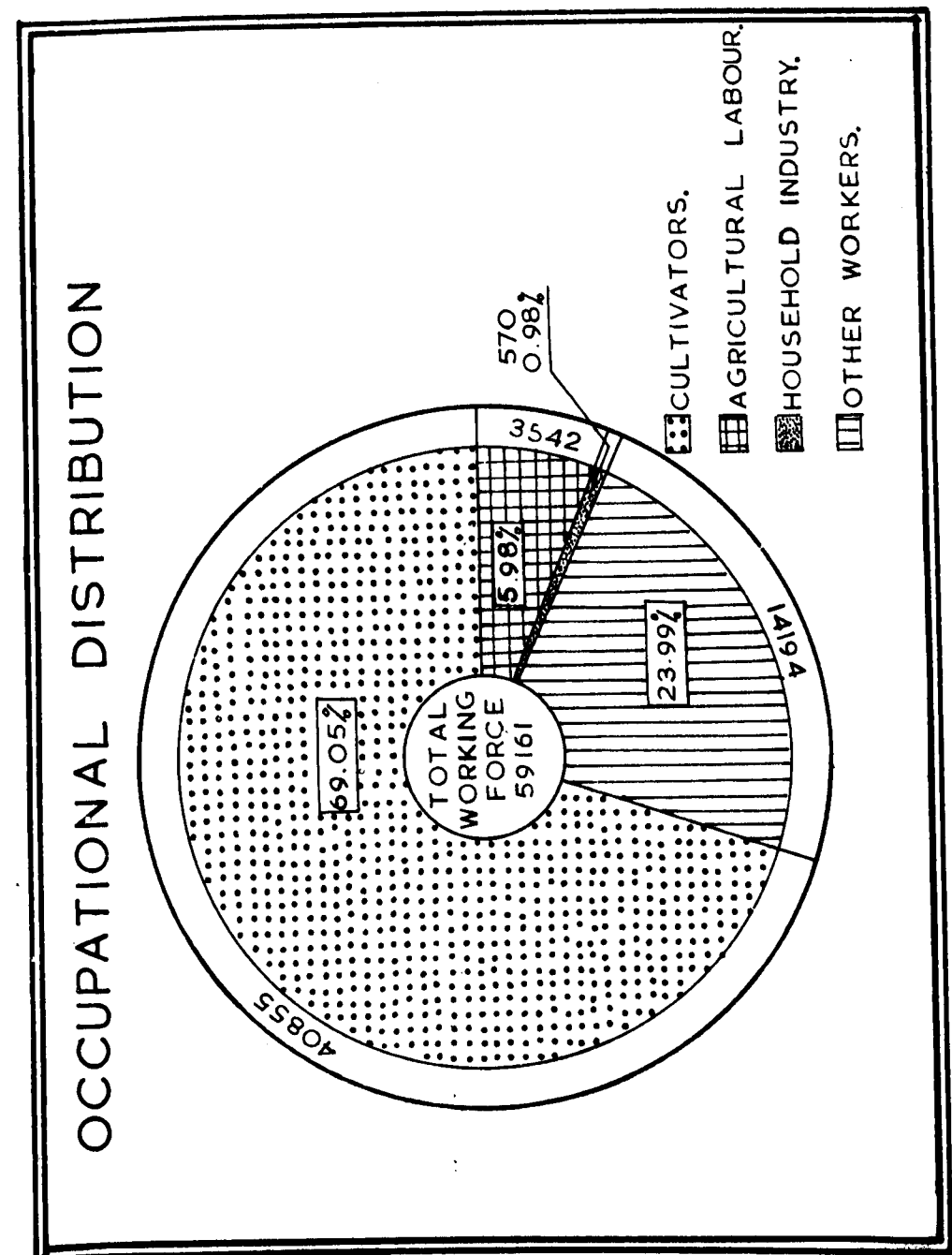
VI Construction

VII Trade and Commerce.

VIII Transport, storage and communication.

As is clear from the above table, the workers constituted 66.07% of the total population of the region in 1961 whereas they formed only 43.76% in 1971 and 52.63% in 1981. This big variation in the relative proportion of workers to total population is due to the different definitions of a worker as adopted by the Census Department at the time 1961, 1971 and 1981 Censuses. Similarly, the variation in the relative proportion of non-workers to total population is also due to the same reason. On the whole, there has been a perceptible shift of working population towards the non-agricultural sectors of the economy during 1961-81 census decades. In other words, the diversification of employment opportunities is taking place at a steady rate in the region as a whole.

A detailed statement regarding the occupational distribution of the population of Ladakh according to 1981 census is given below¹ :



¹ Source : Director Census, J&K State.



Leh Bazar

**OCCUPATIONAL DISTRIBUTION
OF THE
POPULATION**

OCCUPATIONAL DISTRIBUTION OF THE POPULATION

S. No.	District/Tehsil/ N. A.	Total Rural Urban	Total Population		
			Persons	Male	Female
1	2	3	4	5	6
1.	District	Total	65992	35609	303803
	Kargil	Rural	62465	33603	28862
		Urban	3527	2006	1521
(i)	Kargil	Total	57675	31370	26305
	Tehsil	Rural	54148	29364	24784
		Urban	3527	2006	1521
(a)	Kargil N. A.	Urban	3527	2006	1521
(ii)	Zaskar	Total	8317	4239	4078
	Tehsil	Rural	8317	4239	4078
2.	Leh (Ladakh)	Total	68380	36248	32132
	District	Rural	59662	31216	28446
		Urban	8718	5032	3686
(i)	Leh	Total	68380	36248	32132
	Tehsil	Rural	59662	31216	28446
		Urban	8718	5032	3686
(ii)	Leh (N. A.)	Urban	8718	5032	3686
3.	Ladakh	Total	134372	71857	62515
	Region	Rural	122127	64819	57308
		Urban	12245	7038	5207

OF LADAKH — 1981

M A I N W O R K E R S

Total Main Workers (I—IX)			Cultivators		
Persons	Male	Female	Persons	Male	Female
7	8	9	10	11	12
29914	19603	10311	22204	12257	9947
28474	18524	9950	21880	12152	9728
1440	1079	361	324	105	219
25160	17366	7794	17893	10444	7449
23720	16287	7433	17569	10339	7230
1440	1079	361	324	105	219
1440	1079	361	324	105	219
4754	2237	2517	4311	1813	2498
4754	2237	2517	4311	1813	2498
29777	20708	9069	17415	10755	6660
25817	17512	8305	16858	10401	6457
3960	3196	764	557	354	203
29777	20708	9069	17415	10755	6660
25817	17512	8305	16858	10401	6457
3960	3196	764	557	354	203
3960	3196	764	557	354	203
59691	40311	19380	39619	23012	16607
54291	36036	18255	38738	22553	16185
5400	4275	1125	881	459	422

Agricultural Labourers			Household Industry, Manufacturing, Processing, Servicing, and Repairs V(a)			Other Workers III, IV, V (b) and VI to IX		
Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
973	914	59	79	40	39	6658	6392	266
960	910	50	58	39	19	5576	5423	153
13	4	9	21		20	1082	969	113
968	911	57	76	37	39	6223	5974	249
955	907	48	55	36	10	5141	5005	136
13	4	9	21	1	20	1082	969	113
13	4	9	21	1	20	1082	969	113
5	3	2	3	3	..	435	418	17
5	3	2	3	3	..	435	418	17
2191	1191	1000	250	75	175	9921	8687	1234
1972	1062	910	195	59	136	6792	5990	802
219	129	90	55	16	39	3129	2697	432
2191	1191	1000	250	75	175	9921	8687	1234
1972	1062	910	195	59	136	6729	5990	802
219	129	90	55	16	39	3129	2697	432
219	129	90	55	16	39	3129	2697	432
3164	2105	1059	329	115	214	16597	15079	1500
2932	1972	960	253	98	155	12368	11413	955
232	133	99	76	17	59	4211	3666	545

Marginal Workers			Non-Workers		
Persons	Male	Female	Persons	Male	Female
(22)	(23)	(24)	(25)	(26)	(27)
6345	1596	4749	29733	14410	15323
5941	1503	4438	28050	13576	14474
404	93	311	1683	834	849
5688	1295	4393	26827	12709	14118
5284	1202	4082	25144	11875	13269
404	93	311	1683	834	849
404	93	311	1683	834	849
657	301	356	2906	1701	1205
657	301	356	2906	1701	1205
4678	845	3833	33925	14695	19230
4259	824	3435	29586	12880	16706
419	21	398	4339	1815	2524
4678	845	3833	33925	14695	19230
4259	824	3435	29586	12880	16706
419	21	398	4339	1815	2524
419	21	398	4339	1815	2524
11023	2441	8582	63658	29105	34533
10200	2327	7873	57636	26456	31180
823	114	709	6022	2649	3373

PERCENTAGE DISTRIBUTION OF POPULATION OF EACH SEX IN TO WORKERS
MARGINAL WORKERS AND NON WORKERS—1981

District	Sex	Total Popula- tion	Total workers	Total main workers	Main Workers				Margi- nal workers	Non- Workers
					Cultiva- tors	Agri. Labour- ers	House- hold In- dustry	Other workers III, IV, V(b) and VI to IX		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Kargil	Persons	100.00	54.94	45.33	33.65	1.47	0.12	10.09	9.61	45.06
	Males	100.00	59.53	55.05	34.42	2.57	0.11	17.95	4.48	40.47
	Females	100.00	49.57	33.94	32.74	0.19	0.13	0.88	15.63	50.43
Leh (Ladakh)	Persons	100.00	50.39	43.55	25.47	3.20	0.37	14.51	6.84	49.61
	Males	100.00	59.46	57.15	29.67	3.29	0.21	23.96	2.33	40.54
	Females	100.00	40.15	28.22	20.73	3.11	0.54	3.84	11.93	59.85
Ladakh Region	Persons	100.00	52.63	44.42	29.49	2.35	0.24	12.34	8.21	47.37
	Males	100.00	59.50	56.10	32.03	2.93	0.16	20.98	3.40	40.50
	Females	100.00	44.73	31.00	26.57	1.69	0.34	2.40	13.73	55.27

Persons who remained engaged with some work for the major part of the year i. e. six months or more are classified as main workers. It will be seen from the table that 59691 persons or 44.42% (40311 or 56.10% males and 19380 or 31.00% females) out of the total population 134372 (71857 males and 62515 females) are engaged in various economic pursuits and as such are classified as main workers. The percentage of 44.42 is the highest among all the regions of the State as also when compared with the percentage of the entire Jammu and Kashmir State which is 30.37. As far as the districts of the State are concerned, Kargil district claims the highest work participation rate of 45.33 followed closely by Leh District with a rate of 43.55%. Data given above also reveals that the work participation rate of 56.10 (males) and 33.66 (females) is higher than the State average of 52.20% and 5.91% respectively.

Main workers have further been classified into four broad industrial categories viz. (1) Cultivators, (2) Agricultural Labourers, (3) Household Industrial Workers and (4) Other Workers.

Cultivators and Agricultural Labourers

Ladakh is primarily a rural region as 91% of its population live in villages. Agriculture is the main occupation of its inhabitants and as such the economy of the region is predominantly agricultural. It is clear from the table that 71.67% of the total main working population of the region is engaged as cultivators and agricultural labourers. A striking feature about its working force as revealed by the census figures is that in the Kargil district female labour engaged in cultivation constitutes 96.47% of the total female main working force of the district.

It will be seen from the table that a small section of the working population is engaged in household industry, manufacturing, processing, servicing and repairs. There is large scope for such of the household industries for which raw-material is locally available. During winter months, a large proportion of non-workers can be attracted towards the manufacture of namdahs and papier machie.

Workers in forestry, hunting, fishing, mining and quarrying, manufacturing and repairs, electricity, gas and water construction, wholesale and retail trade, restaurants and hotels, trans-

port, storage and communications, financing, insurance, real estate and business services, community, social and personal services and all public sector and local-self government employees, represent 28.33% of the total main workers and constitute second large category with a population of 16908 (15194 males or 37.69% and 1714 females or 8.84%). The above statistics also show that Leh District claims the large percentage of 34.16 (42.31% males and 15.53% females) of its main workers in the above mentioned establishments than the Kargil District where the percentage of main workers in such establishments is 22.52 (32.81% males and 2.96% females).

House-wives and students who are primarily non-workers do sometimes participate in some economic activity in their spare time and are classified as marginal workers. The period of participation in work of a marginal worker is less than six months. The percentage of such workers in Ladakh is 8.20% of the total population.

Persons who do not participate in any economically productive work are classified as non-workers. Students, dependents, retired persons or rentiers, beggars, inmates of institutions etc. are included in the category of non-workers. The percentage of non-workers to total population in Ladakh is 47.37 which is below the State average of 55.74%.

Size and Family Structure

A family has been defined as a group of persons, who pool all their resources of income and have a common kitchen. The average family size in the region, according to the survey conducted by the Directorate of Economics and Statistics, Srinagar stands at 5.53% out of which 2.85 are males and 2.68 females. The large family size is mainly due to the existence of joint family system. The distribution of the 69 sample families ac-

cording to the number of persons in each family is given below¹.—

Family Size	Leh District		Kargil District		Total	
	No. of families	Percent- age to total	No. of families	Percent- age to total	No. of families	Percent- age to total
1-3	24	34.79	16	25.40	40	30.30
4-6	18	26.08	24	38.09	42	31.82
7-9	17	24.63	18	28.57	35	26.52
10 and more	10	14.50	5	7.94	15	11.36

From the table, it will be observed that 30.30 percent of the families have 1 to 3 members, 31.82 percent families have 4 to 6 members, 26.52 percent families have 7—9 members and 11.36 percent families have more than 10 members each. Further, from the table it also appears that joint family system is more prevalent in the Leh District than in the Kargil District.

Income and Expenditure

The study of income and expenditure of the people is a useful indicator of their standard of living. The statistical survey conducted by the Directorate of Economic and Statistics, Srinagar makes it clear that the majority of the people in the region, particularly in the Kargil District are dependent on land. The services sector constitutes the next important source of income. This is clear from the table given below, which shows district-wise average monthly income (per household) according to various sources² :

¹ Source : Directorate of Economics and Statistics, J&K Government.
² Source : Directorate of Economics and Statistics, J&K Government.

District-wise Average Monthly Income (Per Household) According to various sources in 1971.

Source	Leh		Kargil		Total Ladakh Region	
	Average income (Rs.)	Percent- age to (Rs.)	Average income (Rs.)	Percent- age to (Rs.)	Average income (Rs.)	Percent- age to (Rs.)
1. Agriculture	193.64	60.79	165.34	74.80	174.82	68.75
2. Industry	7.35	2.31	1.62	0.74	4.10	1.61
3. Livestock	16.57	5.20	19.04	8.61	22.93	9.02
4. Services :						
(a) Government	64.17	20.14	30.48	13.79	47.90	18.84
(b) Private	4.51	1.42	4.55	2.06	4.52	1.78
(c) Other Sources	32.32	10.14	..	..	..	..
Total :	318.56	100.00	221.03	100.00	254.27	100.00

It may be noted that the figures pertaining to income and expenditure have considerably changed since the survey mentioned above was conducted in 1971. Since then no such survey was conducted. However, the inter-sector distribution of income has not undergone any significant change. The primary sector of the economy as well as the secondary sector that is, the industries do not possess quite promising prospects for development for reasons discussed already, the tertiary sector (including services) is of course fast developing. As indicated in the table, agriculture is the principal source of income as it accounts for 69% of the total income. The industries contribute a nominal, share of about 1.6% whereas the services sector accounts for 19% of the total income. The cattle wealth has an important place in the economy of the region as nearly one-tenth (9%) of the income is derived from this source.

Income Distribution

The main objective of democratic planning in our country has been to accelerate economic growth with social justice. The

study of the latter necessiated the study of the income distribution. According to the survey referred to above, about 75% of the families with an average number of 5 persons per family earned a monthly income of Rs. 390/- or less. About 12% of the total number of families earned an income of Rs. 471/- or more per month. The following table illustrates the pattern of income distribution in the region¹ :—

S. No.	Size of income (Rs.)	Families as percent- age to total	Average number of persons per family
1.	Below 150	28.78	2.96
2.	150-190	6.82	4.26
3.	191-230	12.88	5.32
4.	231-270	9.09	5.77
5.	271-310	8.33	5.77
6.	311-350	6.06	5.00
7.	351-390	3.79	6.34
8.	391-430	9.09	7.65
9.	431-470	3.03	8.37
10.	471 and above	12.13	9.16

From the above table, it can be seen that there is a high degree of positive correlation between the monthly income and average strength of the families in the region.

Expenditure

The following table gives a clear picture of the income as spent on various items of consumption by an average family of the region².

S. No.	Items	Expenditure per family (Rs.)	Expenditure per capita (Rs.)	Percentage to total
1.	Food	301.70	54.56	72.96
2.	Intoxicants	16.33	2.95	3.95
3.	Light and Fuel	57.24	10.35	13.84
4.	Clothing } Bedding and } Footwear }	15.96	2.89	3.86
5.	Miscellaneous	22.28	4.03	5.39
Total:		413.51	74.78	100.00

¹ Source : Directorate of Economics and Statistics, J&K Government.

² Source : Directorate of Economics and Statistics J&K Government.

In 1971, the average expenditure of a family was Rs. 413.51 per month according to the Survey. The corresponding figures in the district Leh were Rs. 463.42 as against Rs. 360.53 in Kargil District. The per capita expenditure amounted to Rs. 74.78. However, Leh district showed a higher per capita expenditure at Rs. 96.13 as against Rs. 63.25 in Kargil district. The itemwise break-up of the total expenditure on food is detailed hereunder¹ :—

S. No.	Items	Leh		Kargil		Total Region	
		Expd. (Rs.)	Percent- age on Food	Expd. (Rs.)	Percent- age on food	Expd. (Rs.)	Percent- age on food
1.	Cereals	152.33	46.22	116.27	41.50	134.85	44.85
2.	Pulses and its products	1.11	0.33	2.10	0.75	1.58	0.52
3.	Milk and its products	92.95	28.25	75.17	26.83	84.33	28.05
4.	Vegetables and fruits	29.53	8.96	21.00	7.50	25.41	8.45
5.	Edible Oil	14.70	4.46	11.36	4.07	13.00	4.33
6.	Meat, Fish & Eggs	11.27	3.43	28.10	10.03	15.53	5.15
7.	Cardamon & Spices	6.68	2.02	5.31	1.89	6.01	1.99
8.	Other items	21.00	6.33	20.83	7.43	20.01	6.66
Total :		329.55	100.00	280.14	100.00	300.72	100.00

It is clear from the above table that about 45% of the expenditure on food is spent on cereals which includes wheat, gram, and rice. Wheat and gram are the main cereals consumed by the people. Expenditure on pulses and its products is higher in the Kargil and Zaskar areas than in the Leh. The expenditure on milk and its products comes next as the average expenditure

¹ Ibid.

per family per month on this item is Rs. 84.33. Butter is also consumed in large quantity. Expenditure on other items which includes tea, sugar, etc. is about 6.6% of the total expenditure. Tea is an important item of consumption in every family. A local tea called **Gurgur** is consumed many times during the day. Usually it is prepared in the morning from the tea leaves, and in the brew, butter, milk and salt are mixed. The percentage expenditure on meat, edible oils, cardamons, and spices comes to Rs. 5.15, Rs. 4.33 and Rs. 1.99 respectively¹.

Food

The expenditure incurred on the purchase of cereals, milk, tea, meat, spices etc. constitute the major part of the expenditure of a family. The average monthly expenditure per family on such items is Rs. 301.70 which is 72.96% of the total expenditure. On the whole, this pattern of expenditure conforms to Engel's Law Consumption.

Intoxicants

The average monthly expenditure on intoxicants per family is Rs. 16.33 being as much as Rs. 27.35 in Leh District but only Rs. 4.54 in the Kargil District². The expenditure on intoxicants is higher in Leh as compared to Kargil and Zaskar. This is so because the people of Leh, are addicted to drinking a local liquor known as "**Chang**" whereas the people of Kargil being mostly Muslim, take tea instead of liquor.

Light and Fuel :

On account of severe cold in winter, fuel constitutes an important item of expenditure. The fire wood and cow-dung are the main items of fuel. The average monthly expenditure per family on these items in Leh, Kargil Districts is Rs. 57.24 and Rs. 60.03 respectively.

Clothing and Footwear :

For the region as a whole and for Leh and Kargil Districts the overall average monthly expenditure on clothing, bedding and footwear amounts to Rs. 15.98, Rs. 16.82 and Rs. 15.11 respectively which constitutes about 3.66, 3.13 and 3.63 percent of the total expenditure.

¹ Source : Directorate of Economics and Statistics, J&K Government.

² Ibid.

Miscellaneous

Expenditure on education, travelling, rent etc. has been included under this head. As education is free in the State, expenditure incurred by a family on this item is quite low. In all Rs. 22.28 is the average expenditure under this head incurred by a family in the region as a whole and Rs. 29.59 and Rs. 14.97 in the two districts of Leh and Kargil respectively.

Prices

The prices of some of the essential commodities for the year 1980 are given below :—

Item	Unit	Average	Price in (Rs.)
Rice	Kg.	3.75	to 4.57
Wheat Atta	Kg.	2.00	to 3.50
Pulses	Kg.	5.50	to 7.50
Mustard Oil	Kg.	28.00	to 30.00
Kersine Oil	Litre	2.50	to 30.00
Soap	Cake	1.50	to 4.50
Milk	Bottle	2.50	to 2.75
Shoes	Pair	75.00	to 250.00
Meat	Kg.	22.00	to 24.00

Wages

The old practice of paying wages in kind has become outdated in all parts of the region. Every labourer, skilled or unskilled, is now paid in cash. The following table indicates average daily wages paid to the skilled and unskilled workers during the years 1951, 1961, 1971 and 1981 :

Year	Skilled	Agri- culture	Un- Skilled	Agri- culture	Other Labour	Skilled
	Adult Males	Adult Females	Adult Males	Adult Females	Mason	Carpenter
1951	2.00	2.00	1.00	1.00	5.00	5.10
1961	2.50	2.50	2.50	2.50	7.00	8.00
1971	8.00	7.00	10.00	7.00	14.00	6.00
1981	15.00	14.00	15.00	14.00	40.00	45.00

Wage rates for some selected urban occupations are given below :—

Occupation	Common Rate	Unit of Quotation
Tailor	15.00 100.00 150.00	Per Shirt Cotton Suit Woollen suit
Washerman	2.00 8.00	Per piece Dry cleaning
Barber	4.00 1.00	Hair Cutting Shave
Taxi Driver	600.00	Per month
Truck Driver	600.00	Per month

Public Servants Technical and Non-Technical

At the end of March, 1970, there were 3129 State Government employees working in the region. The number of such employees has nearly doubled since then. The following table shows the category-wise number of medical personnel working in the region during 1980-81¹ :—

S. No.	Category	1980 81
1.	Doctors	60
2.	Nurses	33
3.	A. N. M.	97
4.	Medical Assistant	116
5.	Laboratory Technicians	20
6.	Basic Health Workers	37
7.	Health Visitors	6
8.	Health Inspectors	6
9.	Para Medical Assistants	2
10.	Amchies	42
Total :		419

¹ Source : Directorate of Health Services, Srinagar.

Planning and Development

The economic development of the region was started in 1950-51 through the process of planning. The first two plans could not bring about any tangible change owing to geographical and other constraints. The infra-structure was yet to develop. The basic infra-structure was developed during the subsequent plans. During recent years the region has been brought under the perview of Integrated Rural Development Programme. However, the region lags behind in the development of some vital sectors like transport and communication as well as industry and trade. The Single Line Administration at the district level has given a boost to the balanced economic development of the entire region.

Progress under the Plans

During the Second Five Year Plan an amount of Rs. 86.65 lakhs was incurred on various schemes of development. The development expenditure during the Third Five Year Plan amounted to Rs. 996.72 lakhs. The progress achieved in the field of Agricultural and related sectors is briefly given blow :—

Agriculture

Total cropped area increased from 18512 hectares in 1975-76 to 19924 hectares in 1981-82 and net irrigated area increased from 17334 hectares in 1975-76 to 19924 hectares in 1981-82. The Zamindari System has been abolished and tenants enjoy ownership rights over their lands. Naturally they are taking great interest in cultivating their lands intensively to achieve maximum results. The Community Development Programme and National Extension Services have considerably improved the agricultural economy. Farmers are using high yielding varieties of seeds. A quantity of 60.5 Qtls. of wheat and 6.87 Qtls. of vegetables was distributed among the peasants during 1977-78 under the scheme "Distribution of Improved Seeds". Under the developmental schemes, agricultural farms have been set up to conduct research on cereals, fruits, fodder and pulses. The development of Animal and Sheep Husbandry has assumed a special significance in the economy of the region. In recent years a number of farms were set up for upgrading the local breeds. Veterinary Hospitals and dispensary facilities have been extended to many areas.

During 1980-81, 42 Livestock Development Centres, 10 Intensive Cattle Development Centres and 42 other development and treatment centres were looking after the cattle wealth of the region. The following table indicates the strength of pure breed/cross-breed sheep at different Live Stock Farms as also production of wool in various Government farms :—

S. No.	Year	Centre/Farm	Type of Sheep	Strength
1.	1977-78	Pashmina Farm Nyoma	..	178
2.	1981-82	Russian Merinoo Nyoma.	(a) Pure Breed	371
		Farm Mathoo	(b) Cross Breed	90
			(c) Changthangi	60
3.	1979-80	Cattle-cum-Sheep Farm Khumthang	Merino	963
4.	1979-80	I. S. D. P. Kargil	Merino	361
5.	1979-80	L. D. O. Kargil	Merino	118
6.	1981-82	Intensive Cattle Development Project Chushoot	(a) Pure Breed	22
			(b) Cross Breed	4

Wool and Pashmina production in various farms/organisations is detailed below :—

S. No.	Name of the Farm/ Organisation	Description	Year	Quantity produced (in Kgs.)
1.	Pashmina Farm Nyoma	Pashmina Wool	1981-82 1979-80	89 87
2.	Russian Merino Farm Mathoo	Wool	1981-82	1302
3.	Livestock Development Organisations, at Leh, Khaltsi and Nubra	Wool	1981-82	806
4.	Intensive Cattle Development Project Chushoot, Leh	Wool	1981-82	294
5.	Intensive Sheep Development Project Kargil	Wool	1980-81	609
6.	Livestock Development Organisation, Kargil	Wool	1980-81	173
7.	Cattle-cum-Sheep Farm, Khumbthang	Wool	1980-81	954

The Fourth Plan envisaged an outlay of Rs.32.28 lakhs for the development and expansion of the Animal Husbandry activities in the region.

Handicrafts are being re-organised on scientific lines. Industrial Training is imparted through Mobile Training-cum-Demonstration Centres in the towns of Leh and Kargil as also in remote villages. At present electric power, from diesel generating sets, is supplied to the towns of Leh, Kargil and to many villages. Some major hydro-electric projects are under construction. The completion of these projects will result in solving the problems of power shortage for domestic use besides accelerating the industrial development of the region.

Single Line Administration and Economic Development

The main objective of Single Line Administration is to decentralise economic planning to promote balanced regional growth and to remove disparities and achieve social justice. The allocation of resources is, therefore, made according to the local needs and by keeping in view the local resources of each district. Another important feature of this scheme is to involve the local population in the development of their districts. The following statements show the details of physical targets and achievements in different sectors of the economy of Leh and Kargil districts during the years 1982-83 and 1983-84. Statements showing outlays/expenditure for 1982-83 and 1983-84 is also given below :—

Physical Targets and Achievements 1982-83 and 1983-84

LEH DISTRICT

S. No.	Item	Unit	1982-83 Target	Achievement	1983-84 Target
I. AGRICULTURE :					
(a) Production of food grains					
	(i) Wheat	000 Tonnes	1.90	1.86	2.00
	(ii) Grains	do—	3.00	3.58	4.00

¹ Source : Development Commissioner, Leh/Kargil.

S. No.	Item	Unit	1982-83 Target	Achievement	1983-84 Target
(b) Production of Commercial Crops					
	(i) Rape-Seed/mustard	000 tonnes	0.02	0.02	0.03
	(ii) Others (Fodder)	do—	2.00	0.01	2.50
(c) Offtake of Chemical fertilizers					
	(i) N. P. K.	do—	0.26	0.23	0.21
(d) Area under H. Y. V. seeds					
	(i) Wheat/Grain	000 Hects.	0.04	0.04	0.06
	(ii) Fodder	do—	0.03	0.03	0.04

II. IRRIGATION AND FLOOD CONTROL

(a) Minor Irrigation					
	(i) Potential	do—	0.74	0.71	0.83
	(ii) Utilization	do—	0.61	0.57	0.74
	(iii) Stabilization	do—	0.03	0.03	0.03
(b) Flood Control					
	(i) Area covered with protection	do—	0.16	0.16	0.18
(c) Cropped Area					
	(i) Net	do—	10.00	9.89	10.25
	(ii) Gross	do—	10.75	10.19	10.75

III. ANIMAL HUSBANDRY

	(i) Veterinary Dispensaries	Nos.	4	4	4
	(ii) Veterinary Stock Centres	do—	22	22	24
	(iii) Establishment of Yak Breeding Farms	do—	1	1	1
	(iv) Establishment of Cattle Breeding Farms	do—	1	1	1

S. No.	Item	Unit	1982-83 Targets	Achievement	1983-84 Target
IV. SHEEP HUSBANDRY					
(i)	Establishment of Sheep Breeding Farms	do	1	1	1
(ii)	Sheep and Wool Extension Centres	do	25	23	23
(iii)	Fodder Seed production Farm	do	1	1	1
(iv)	Mobile Units	do	2	2	2
(v)	Veterinary Sub-Centres	do	3	3	3
(vi)	Goat Breeding Farm	do	3	3	3
(vii)	Veterinary Stockman Farms	do	7	7	7
V. FORESTRY					
(i)	Plantation of quick growing species	Hects.	0.03	0.03	0.03
VI. COOPERATION					
(i)	Short term loans	Rs. in crores	0.09	0.11	0.12
(ii)	Retail trade of fertilizer	do	0.03	0.01	0.01
(iii)	Retail sale of consumer goods	do	0.43	0.43	0.50
(iv)	Agriculture through co-operative Produce Marketed	do	0.25	0.26	0.30
VII. LAND REFORMS					
(i)	Area declared surplus	Hect.	16.1	16.1	16.5
(ii)	Area allotted	do	1.10	1.10	1.10
(iii)	Completion of Form 4	Nos.	69	69	75
(iv)	Attestation of Mutations	do	100	700	800

S. No.	Item	Unit	1982-83 Targets	Achievement	1983-84 Target
VIII. POWER					
(i)	Installed capacity as others including/MW. Stations	M. W.	1.94	1.65	2.00
(ii)	Electricity Generated	do	15.04	13.41	16.26
(iii)	Electricity Sold	do	9.00	7.47	9.06
(iv)	Transmission Lines (220 K.V. Above)				
(a)	State Plan (33 K.V. Line)	Kms.	13.50	4.75	15.00
(b)	Others	do	146.00	108.70	153.00
IX. RURAL ELECTRIFICATION					
(i)	Villages electrified	Nos.	46	38	46
(ii)	Population benefitted	000	6	5	6
(iii)	I. M. W. Stations	Nos.	6	5	6
X. VILLAGE AND SMALL SCALE INDUSTRIES :					
(i)	Units functioning	000 Nos.	0.21	0.21	0.30
(ii)	Production	Lakhs	105	105	135
(iii)	Persons employed	000 Nos.	0.90	0.84	1.14
XI. HANDICRAFTS					
(i)	Production	Rs. in Lakhs	1.40	1.40	1.50
(ii)	Employment	000 Nos.	0.300	0.300	0.350
XII. DISTRICT INDUSTRIES CENTRE					
(i)	Units Assisted	Nos.	139	139	201
(ii)	No. of Artisans	000 Nos.	0.07	0.07	0.10
(iii)	Financial Assistance released to Industrial Units	Lakhs	21.16	21.16	25.1

S. No.	Item	Unit	1982 83 Targets	Achievement	1983 84 Target
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XIII. TRANSPORT AND COMMUNICATION

(i) Roads

Surfaced	Kms.	31.50	31.50	31.50
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(ii) Other District Roads

(a) Surfaced	do	90.50	103.50	109.50
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(b) Un-surfaced	do	53.00	41.00	35.00
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(iii) Minimum Needs Programme

(a) Surfaced	do	42.80	35.80	44.00
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(b) Un-surfaced	do	306.10	293.85	329.00
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(iv) Other Roads

(a) Surfaced	do	150.65	154.65	172.65
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(b) Un-surfaced	do	79.00	65.75	57.25
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XIV. TOURISM

(i) Visitors (each year)	000 Nos.	14.00	14.28	16.00
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(ii) Accommodation

(a) No. of Hotels/Guest Houses	Nos.	67	67	75
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(b) Bed Strength	do	1.50	1.50	1.80
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XV. EDUCATION

(i) No. of Institutions

(a) Higher Sec. Schools	Nos.	1	1	1
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(b) High Schools	do	13	13	13
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(c) Lower High School	do	3	3	2
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(d) Middle Schools	do	29	27	29
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S. No.	Item	Unit	1982 83 Targets	Achievement	1983 84 Target
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(e) Central School	do	11	9	11
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(f) Primary Schools	do	158	154	158
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(g) Part time Centres	do	10	10	10
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(ii) Enrolment

(a) Elementary Education (Age-group 6-11), Boys/ girls class I-IV	000 Nos.	5.96	5.97	6.78
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(b) Classes VI-VIII (Boys/ girls)	do	1.66	1.95	1.99
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(c) Classes IX-X, Boys/ girls	do	0.75	0.72	0.82
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(d) Classes XI-XII, Boys/ Girls	do	0.11	0.08	0.16
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(iii) No. of Centres opened under Central Programme	Nos.	200	20	200
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(iv) Teachers

(a) Primary Classes	Nos.	256	252	263
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(b) Middle	Nos.	205	198	221
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(c) Secondary	Nos.	136	134	143
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XVI. HEALTH AND FAMILY WELFARE

(i) Hospital/Dispensaries

(a) Urban	Nos.	1	1	1
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(b) Rural	do	10	8	9
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(ii) Bed Strength

(a) Urban	do	10	90	100
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(b) Rural	do	50	45	100
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(iii) Public Health Centres

(a) Main Centres	do	4	4	4
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(b) Sub-Centres	do	8	8	8
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224					
S. No.	Item	Unit	1982-83 Target	Achievement	1983-84 Target
	(c) Medical Aid Centres	-do-	41	41	45
	(d) Amchi Centres	-do-	29	25	31

XVII. PUBLIC HEALTH ENGINEERING

(i) Piped Water Supply

(a) Villages covered	Nos.	13	11	13
(b) Population benefited	-do- (in lakh)	0.04	0.03	0.24

XVIII. HOUSING

(i) Urban Housing

(a) Land Acquisition and area developed	-do-	80	80	120
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KARGIL DISTRICT

Agriculture :

(i) Distribution of H. Y. V. E. I.

(a) Wheat H.D. 1553	Qtls.	100.00	82.00	100.00
(b) Grim H.D. I.	-do-	50.00	47.00	66.00
(c) Vegetable Seeds	-do-	1.20	1.20	2.90
(d) Fodder Alfa Alfa	-do-	3.00	3.00	3.00
(e) Potatos	-do-	..	9.00	3.00

(ii) Demonstration Plots Laid

(a) Wheat/Grim	Kanals	200.00	200.00	360.00
(b) Alfa/Alfa	-do-	100.00	375.00	128.00
(c) Vegetable	-do-	..	..	20.00

(iii) Stocking of Fertilizers

(a) Urea	Qtls.	1200.00	1994.50	N.A.
(b) D. A. P.	-do-	700.00	586.07	N.A.

225					
S. No.	Item	Unit	1982-83 Targets	Achievement	1983-84 Target
(iv) Distribution of Fertilizer					
	(a) Urea	Qtls.	2020.00	1204.00	1500.00
	(b) D.A.P.	-do-	1000.00	375.00	900.00
	(c) M.O.P.	-do-	100.00	68.00	100.00
II. PLANT PROTECTION					
	(i) Seed treatment	-do-	200.00	60.00	1200.00
	(ii) Direore Pest Control	Acres	50.00	15.00	40.00
	(iii) Rat Control	-do-	600.00	650.00	600.00
	(iv) Vegetable Seedlings	Nos.	77504	75000	..
III. SOIL CONSERVATION					
	(i) Investigation and Planning	Acres	100.00	95.00	200.00
	(ii) Land Reclamation	-do-	..	11.00	20.00
	(iii) Soil Testing Analysis	Nos.	4000	882	4000
IV. DEVELOPMENT OF APRICOT					
	(i) Budding of roots stocks in nurseries	-do-	20000	15737	25000
	(ii) Distribution of Fruit plants	-do-	4000	6462	3000
	(iii) Distribution of sulphur	Qtls.	3000	0.65	3.00
	(iv) New area covered under fruit plants	Acres	40.00	65.65	30.00
	(v) Maintenance / Estt. of Apricots	Nos.	78	83	70
	(vi) Demonstration of plots of furigation	-do-	60	60	60
V. ANIMAL HUSBANDRY					
	(i) Coverage by bulk, yaks and horse stations	-do-	1900	239	2350
	(ii) Births recorded (all types)	-do-	10180	955	8975

S. No.	Item	Unit	1928-83 Target	Achievement	1983-84 Target
(iii)	Cases treated against contagious/non-contagious	-do-	..	7859	N.A.
(iv)	Vaccination against 2/F and I.W.	-do-	6000	5173	7000
(v)	Egg production	-do-	50000	7298	70000
(vi)	Milk Production	Litres	5000	9216	75000
VI. SHEEP HUSBANDRY					
(i)	Registration of Sheep	Nos.	..	16461	N.A.
(ii)	Registration of goats	do	..	10599	N.A.
(iii)	Wool yield from Govt. farm	Kgs.	..	761	2500
(iv)	Fodder produced	Qtls.		500	600
(v)	Raw/Ewes produced	Nos.	100	180	200
(vi)	Cocks distributed	-do-	..	350	350
VII. FORESTS					
(i)	Plantation	Lakh Nos.	0.90	0.81	0.90
(ii)	Nurseries maintained	Acres	4.00	4.00	4.00
VIII. SOIL CONSERVATION (FOREST LAND)					
(i)	Construction of Kanals for	No.	20	23	22
(ii)	Check dams	Cft.	4000	14000	13000
IX. C.D. & N.E.S. DEPARTMENT					
(i) Minor Irrigation					
(a)	Const. Improvement of Khuls	Nos.	36	10	30
(b)	Const. of protection of Khuls	do	10	2	7
(c)	Const. improvement of tanks	-do-	37	15	10

S. No.	Item	Unit	1982-83 Target	Achievement	1983-84 Target
(ii) Communication					
(a)	Const. of Bridle paths	Nos.	17	2	12
(b)	Const. of foot bridges	-do-	14	7	5
(iii) Health and Sanitation					
(a)	Const. of bath rooms and latrines	-do-	6	4	3
(iv) Education					
(a)	Const./repairs of School buildings	-do-	7	2	3
(b)	Const. of passangers sheds	-do-	5	1	2
X. COOPERATION					
(i)	Purchase in lakhs	Lakhs	20.00	18.32	18.00
(ii)	Sale in lakhs	-do-	20.00	13.76	22.00
(iii)	Marketing of products	-do-	15.00	2.50	10.00
(iv)	Marketing of Apricot	-do-	2.00	0.95	2.00
XI. INDUSTRIES					
(i)	Production of Marino/Pashmina shawls	Nos.	1100	697	1100
(ii)	Woollen carpets	Cft.	2000	1126	20000
(iii)	Knitting of Yarn	Kgs.	350	447	350
(iv)	Knitting of paths	Mts.	700	613	700
XII. HANDICRAFTS					
(i)	Training centres	Nos.	10	2	3
(ii)	Trainees to be trained	-do-	20	20	50

S. No.	Item	Unit	1982-83 Target	Achievement	1983-84 Target
XIII. EDUCATION					
(i) Enrolment					
(a)	1-5 years	Nos.	8500	6148	8975
(b)	6-8 years	-do-	2450	1978	2400
(c)	9-10 years	-do-	1100	795	1100
(d)	11-12 years	-do-	100	32	120
(ii) No. of teachers					
(a)	Primary teachers	-do-	300	293	316
(b)	Middle teachers	-do-	186	172	168
(c)	Secondary teachers	-do-	77	72	82
(d)	Hr. Secondary teachers	-do-	13	13	13
(iii) Adult Education					
(a)	No. of Centres	-do-	200	100	N.A.
(b)	No. of participants	-do-	2200	1573	2000
XIV. HEALTH					
(i) Patient treated					
(a)	Out door	Nos.	..	54661	N.A.
(b)	Indoor	-do-	..	615	N.A.
(ii) Operation performed					
(a)	Major operations	Nos.	..	31	N.A.
(b)	Minor operations	-do-	..	162	N.A.
(iii) Family Welfare					
(a)	I.U.C.D.	-do-	34	34	185
(b)	Vasectomy	-do-	50	20	205
(c)	Tubectomy	-do-	25	5	205
XV. ROADS AND BRIDGES					
(i)	Black topped	Kms.	52	48	69
(ii)	Mettalled Roads	-do-	61	68	72
(iii)	Un-surfaced	-do-	340	330	330
XVI. PUBLIC HEALTH ENGINEERING					
(i)	Towns and villages covered	-do-	39	30	29

CHAPTER IX

GENERAL ADMINISTRATION

Historical Back Ground

The administrative system of Ladakh had a tribal character during early times. There were small tribal administrative units headed by a body of elected elders known as **Gan-Mi**. After some time, these tribal units, with whatever, independence they had, were consolidated into a kingdom by Nima-Gon. This consolidation into a kingdom did not cause any harm to their democratic system. In order to carry on administration more effectively, a palace was built at Leh by Jamyang Namgyal (1555-90 A. D.) and his son Senge Namgyal (1590-1620 A. D.). In this palace the council of Ministers held meetings and high officials of the kingdom sought personal guidance of the king in administrative matters.

For better understanding of the administrative structure, the system can be studied as under :—

The **Gyalpo** or the king was the supreme temporal as well as the spiritual head of his subjects. In theory, he was absolute, but in practice, he did not override the ancient democratic customs of the region. In administrative matters, the king was assisted by a council of ministers headed by **Kalon** or the Prime Minister. The office of the Prime Minister was generally hereditary, the selection being confined to the Governors of the districts. Royal favour, superior ability or sometimes even intrigue would determine the choice. The **Kalon** was responsible for the state affairs because of his position as the chief in the council of ministers. Next to **Kalon** was the **Ka-Dzad**, the Chamberlain who exercised control over all the household affairs. The **Nan-Lon** and **Tsi-Pon** headed the ministeries in waiting and finance respectively. The latter had to render his ac-

counts to **Ka-Dzad**. The ministry responsible for the execution of orders was headed by **Gun-Lon**¹. The ministers office was of hereditary character but some times the choice was determined by royal favour.

Also there were administrative officers who carried on administration in different parts of the region. Under the guidance and control of the king and his council, the administrators included the **Kor-Pon** or the Stewards ; **Nang-So**, or the Executive Officers ; the **Nyer-Pa** or the Store Keeper, the **Togo-Chhe**, or the Zaildar, the **Zhal-Ski** or the Lambardar. At the lowest level of administration there were the orderlies known as **Chhog Shi**².

In the administration of villages, the **Zhal-ski** and the **Chhog-Shi** exercised considerable power and authority. The **Togo-Chhe** who was responsible for collection of the State revenue headed several villages. The monastic establishments headed by Lamas also exercised their influence on the administration of the region.

So far as the judicial set-up was concerned, there was no written civil or criminal law. Village Panchayats settled minor disputes. If the parties concerned were not satisfied with the findings of the Panchayats, they could approach the ministers and finally to the king. The enquiry was conducted in the **Thag-Chhen** or the great Judgement Hall where the council of ministers presided over by the king and the queen administered justice.

The complainant was expected to present his/her fee with a **Khatag** or the ceremonial scarf before his or her case was heard. Then he or she presented the case verbally before the house. The defendant was allowed to defend the case in person before the house which was adjourned after hearing both the parties. After secret discussions, the house passed the judgement in front of both the parties.

During the Dogra rule, all the three tehsils of the region

¹ Cunningham, op. cit., 259-60

² Datta, op. cit., pp. 33-37.

e.g. Ladakh, Kargil and Skardu were kept under charge of **Wazir-i-Wazarat**. There was hardly any crime committed or litigation reported to in the region ; but there were minor disputes, pertaining to land, irrigation and possession of trees. Under these circumstances, the strength of the police force was kept to the minimum. But to meet any eventuality, the State Army was stationed in various forts of the region. The chief business of the **Wazir-i-Wazarat** was to settle the disputes of the Central Asian Traders who passed through Leh. With this aim in view he was appointed as Ex-officio State Joint Commissioner associated with the British Officer since 1870 A. D. The British Government appointed its own officer in the region in order to look after the interests of the British Government. The **Wazir-i-Wazarat** exercised the powers of a Collector on the revenue side and the powers of a Magistrate on the criminal side.

For administrative convenience, the region was divided into different tehsils and further sub-divided into Niabats. Each tehsil was placed under a Tehsildar, whose duty was to look after revenue and judicial administration. Within their jurisdiction, the Tehsildars and the Naib-Tehsildars exercised the same powers as were exercised by the Wazir-i-Wazarats at the District Level. Besides, they had also to keep in view that all reasonable assistance was rendered to the Central Asian Traders. A tehsil was further divided into **Girdwar** circles, each circle in turn comprised a number of **Patwar halqas**. These were placed under the charge of **Girdawars** and **Patwaris** respectively.

Administrative Units

Under the Dogra rule, the region was divided into three tehsils of Leh, Kargil and Skardu, but the present position is different. Some parts of the Kargil tehsil and almost the whole of Skardu is under the illegal occupation of Pakistan. In 1961, a tehsil headquarter was set up at Zanskar. At present the two districts of the region viz. Kargil and Ladakh are divided into three tehsils, viz. Leh, Kargil and Zanskar and among these the Leh tehsil is the largest tehsil both in respect of population and area. For the purposes of administration Leh tehsil has been

further divided into three sub-divisions with separate headquarters :—

Sub-Division	Head-quarters
Leh	Leh
Changthang	Nyoma
Nubra	Diskit

In order to speed up the economic development of the region, Ladakh district was bifurcated in May, 1979, into two districts namely Leh and Kargil. The Kargil district consists of two tehsils viz. Kargil and Zaskar. There are two towns, namely Leh and Kargil. There are six police stations, six police posts and ten community blocks with 72 Panchayat Halqas in the whole region.

Administrative Structure and Reconstruction of Administrative Units

Till April, 1969, there were two separate administration heads in Ladakh, the Deputy Commissioner Ladakh and the Development Commissioner of Ladakh. The former was to look after the maintenance of law and order and latter had the responsibility of developmental activities. But in 1969, this system was abolished and a post of Deputy-cum-Development Commissioner was created for smooth and efficient administration. The Deputy-cum-Development Commissioner has to look after the revenue and developmental functions. In his work of administration, he is assisted by Assistant Commissioner and Tehsildar at Sub-Divisional and Tehsil level respectively.

In 1979, in order to decentralise the administrative and developmental activities through Single Line Administration the Ladakh district was reorganised into two separate districts of Leh and Kargil and the two Deputy-cum-Development Commissioners were appointed in these districts. One of these was posted in the newly constituted district of Kargil with his headquarters in Kargil town and jurisdiction extending over Kargil and Zaskar tehsils. The jurisdiction of the Deputy-cum-Development Commissioner, Ladakh has, therefore, shrunk

to Leh tehsil with its three sub-divisions, viz. Leh, Changthang and Nubra. A list of offices which function at the district level in the Ladakh and Kargil districts is given below :—

S. No.	Name of Department	Designation of the officer incharge	Overall Administrative control
1.	Development Commissioners Office	Development Commissioner	Secretary for Ladakh Affairs
2.	Deputy Commissioner Office	Deputy Commissioner	Ladakh Affairs
3.	Superintending Engineers Office	Superintending Engineer	Development Commissioner
4.	Animal Husbandry Office	Deputy Director Animal Husbandry	Development Commissioner
5.	Education Department	District Education Officer	-do-
6.	Medical Department	Chief Medical Officer (CMO)	-do-
7.	Agriculture Department	Deputy Director Agriculture	-do-
8.	Forest Department	Divisional Forest Officer	-do-
9.	Police Department	Superintendent of Police	Deputy Inspector General of Police Kashmir Division
10.	Supply Department	Assistant Director Roads	Ladakh Affairs
11.	District Statistical Agency	District Statistical Officer	Development Commissioner
12.	District Industries Centre	General Manager	-do-
13.	Fisheries Department	Inspector Fisheries	-do-
14.	Weights and Measures Department	Inspector Weights and Measure	-do-
15.	Social Welfare Department	District Social Welfare Officer	Director Social Welfare
16.	Games	Forest Ranger Games	Divisional Forest Officer, Leh

The civil administration of the region was decentralized by setting up of sub-offices at tehsil level and even at block level. The officers at the tehsil level function under the administrative control of the officers at the district level. The following table shows the position of officers at tehsil level :

Name of the Department	Designation of officer under whom they work	Administrative control to the district level
Leh Tehsil		
Roads and Buildings	Executive Engineer	Superintending Engineer
Education	Tehsil Education Officer	District Education Officer
Cooperative	Dy. Registrar Co-operative	Development Commissioner Leh
Block Development	Block Development Officer	do
Information	Assistant Information Officer	do
Tehsil	Tehsildar	Dy. Commissioner Leh
Kargil Tehsil		
Sub-Divisional Office	Sub-Divisional, Officer, Kargil	Development Commissioner, Kargil
Tehsil	Tehsildar	Dy. Commissioner
Police	Deputy Superintendent of Police	Superintendent Police
Education	Tehsil Education Officer	District Education Officer
Agriculture	Agriculture Officer	Deputy Director, Agriculture
Medical	Medical Officer	District Medical Officer
Block Development	Block Development Officer	Development Commissioner
Cooperative	Deputy Registrar Cooperative	Development Commissioner

Name of the Department	Designation of officer under whom they work	Administrative control of the District level
Animal Husbandry	Veterinary Inspector	Deputy Director Animal Husbandry
Roads and Buildings	Executive Engineer	Superintending Engineer
Zaskar Tehsil		
Tehsil	Tehsildar (Sub-Divisional, Magistrate)	Deputy Commissioner
Block Development	Block Development Officer	Assistant Registrar Co-operative

Central Government Offices

In addition to the various State Government Offices, a number of Central Government Offices are located at Leh and Kargil. These are ; Posts and Telegraph Department, the Telephone Department and the Leh Station of All India Radio.

The Post and Telegraph establishment of Ladakh forms a part of Srinagar Division, which is under the control of Superintendent Telegraphs, Kashmir Division and the Divisional Engineer Telegraphs, Srinagar. At Leh and Kargil, the Post Offices are supervised by the Inspector of Post Offices, whereas the Telephone and Telegraph Department are supervised by the Sub-Divisional Officer.

All India Radio

A Station of All India Radio was set up at Leh in 1971. It is under the control of a Station Director who is assisted by a Station Engineer.

CHAPTER X

REVENUE ADMINISTRATION

Historical background

In the past, custom duties and house tax constituted the principal source of revenue of the region. The geographical position of Ladakh on the Grand Silk Road connecting north India with Central Asian countries made it possible to reap a rich harvest of custom duties levied on various goods transported across the Ladakh region. These duties levied on imports and exports were collected both in cash and kind. The collectors used to remit the taxes so collected to the **Chag-zot** and the Steward at Leh where the money was deposited in the Government treasury¹. Those who were unable to pay the taxes in cash or kind rendered services to the State. The tax collecting machinery consisted of the Customs Officers and toll Collectors who used to perform their duty at the custom houses. The taxes and cesses on the house buildings were regulated according to their size and value. The rate of house-tax ranged between Rs. 7.00 and 1.75.

At the beginning of the 19th century, the total gross revenue averaged around Rs. 72,000.00 a year. During the early Dogra rule, the revenue of Ladakh amounted to Rs. 80,500.00 per annum, of which the tax on houses accounted for over 50 per cent. Most of the revenue was spent on civil and military administration. The expenditure on civil and military administration accounted for more than half of the total revenue generally ranging between 50,000.00 and Rs. 60,000.00 annually.

A unique but oppressive method of revenue collection prevailed during the autocratic rule of some of the kings of Ladakh who owned vast tracts of land and obliged their subjects to cul-

tivate **Gyalpos** land at their expense. In addition to this, one ass load of fodder was taken from each **Assamidar**. Fire wood which is very scarce in the region was also collected from some villages. Free transport on Lhasa mission was in vogue.

The tenant-in-chief who held land under Gyalpo had, in return to render military and civil service to the State. But a right contingent on the performance of duty always seems to become an absolute and unconditional privileged person. The tenure being a feudal right turned into an indefeasible right of property which belonged to the holder as well as to the king. The **Gyalpo** could however, at any time transfer or confiscate the proprietary right on the advice of the members of his cabinet.

The people of Nubra, Thiktsi and Changthang had to pay grazing tax in kind and, in this regard, one sheep out of every hundred was collected as grazing fee. However, this system lasted only up to the 19th century. A tax was also levied on transport animals. The grazing fee was also realised in the form of skin, sheep, goats and, in the case of transport animals, in the shape of horses and yaks as well. These onerous levies were however, abolished in 1908.

Land Revenue Collection Machinery

During the Dogra rule (1846-1947) the machinery for land revenue collection consisted of **Kardars** and the village headman. The institution of **Lambardars** was set-up in 1902. The village headman locally called **Gopa**, changed every year. In return of his services to the State, he was exempted from the payment of land revenue. The entire village administration was entrusted to the **Kardars** who were paid handsome reward for their services. In 1903, some influential **Lambardars** were promoted to the rank of **Zaildars**. In 1908, their remuneration was enhanced from 2% to 5% of the total revenue. The **Patwaris** have always held an important position in the revenue administration of the State. Their primary duty was to maintain records of land holdings and to look after the annual assessment and other things relating to land revenue collection. During the Dogra rule, the **Patwaris** were generally untrained for their job. This resulted in the maintenance of faulty and de-

¹ Chohan, op. cit., pp. 24-26.

fective land records. Before the new Settlement, land revenue was arbitrarily fixed, it was heavy as well. Being regressive in nature, it resulted in the exploitation of the cultivators who, therefore, made complaints against the revenue collectors. The revenue collectors also hated this assessment, because the system did not give them enough chances of acquiring wealth by corrupt practices. Land revenue accounted for 50% of the total revenue collection of the region before the Settlement. But with the passage of time, the New Settlement became effective and the tenants got security of tenure. The revenue assessment was also made on a uniform basis.

Tenancy System

In the past land was held by **Zhindak** on the payment of fixed land revenue. The other classes of tenants were as follows¹ :

(a) Shaspa

He was more or less an occupancy tenant who held land on an agreement. He had to pay fixed rent and his tenancy rights were guaranteed. There is a proverb in Ladakh which says "that a tenant shall not be ejected till the lakes get dried and crows become white". In other words, the importance of the security of tenure was realised in Ladakh from the very beginning.

(b) Shastan

The **Shastan** was a tenant who held land on payment of some present or **nazrana**. His status was the same as that of a **Shaspa**.

(c) Phetma

The **Phetma** was not an occupancy tenant and as such did not enjoy protection against ejectment by the landlord. He held such land on half **batai**, i. e., equal sharing of crops.

(d) Lochat

The **Lochat** held land on payment of a lump sum for a year or for fixed number of years.

Source : Settlement Commissioner Report, 1921.

(e) Chunpa

The **Chunpa** was merely a wage labourer. He cultivated land on payment of cash or kind.

During the reign of first three Dogra rulers, proprietary rights were vested with the State, and the peasants had no ownership rights in land. It was only after the first Settlement that the tenants were given the occupancy rights. A **Jama-bandi** was prepared in 1902 and such terms as **Haqi-assami** and **Kashat-Mustaqaal** were used in **Misli-i-Haqiat**¹. Although no tenancy rules were framed the rights of occupancy tenants were however guaranteed or at least secured. Thus, broadly speaking, the tenants on the eve of Independence could be classified as (a) occupancy tenants (b) protected tenants and (c) tenants at will.

Land Reforms

In 1950, the Government passed the **Big Landed Estates Abolition Act** which is of great historical significance. It is a landmark in the history of land reforms in the State. The age-old Jagirdari System was not only oppressive but it had drained out the wealth of the villages and retarded the development of agriculture as well. As a result of this enactment, all vested interests in land in excess of 9.21 hectares (22.5 acres) were abolished and intermediary rights liquidated. Land in excess of the ceiling limit was transferred to the actual tillers of land. The Act did not permit any compensation to the absentee landlords, as they were not entitled to any such claim either on economic or on moral grounds. Security of tenure was granted to the tenants under the Act. The following statement shows the total area of cultivated land transferred to tillers in the Ladakh region² :—

¹ Source : Settlement Commissioner Report, 1921.

² Source : Financial Commissioner, J&K Government.

Year	Month	Area in hectares	No. of tillers	No. of beneficiaries
1953-54	June	7.18	33	201
	July	..	1	..
	August	97.00	215	1081
	September	76.00	116	573
	October	7.00	6	24
	November	0.71	5	22
	December	9.91	108	276
	January	1.26	12	48
	Total :	199.06	496	2225

It is clear that a good proportion of the population of the region was benefited as a result of this land reform measure. This has changed the socio-economic position of the entire tenant class in the area. During the First Five Year Plan the tenancy rights were fixed, certain classes of tenants were declared protected tenants and summary reinstatement of all those tenants who were in cultivation for two years was ordered. The ejectment of such tenants was stopped under these reforms. All illegal gratifications such as **Begar**, **Nazrana** etc. were prohibited. In case of land still under tenancy cultivation rent was fixed at 1/2 for holdings below 12.5 acres (i. e. 5.3 hectares) and at 1/4 for holdings above that limit. The Act of 1950, paved the way for future land reform legislation which culminated in the Agrarian Reforms Act of 1976. The Act lowered the ceiling to 12 standard acres (5.3 hectares) and abolished tenancy cultivation once for all.

Survey Assessment Units

The District Ladakh which was bifurcated into two districts namely Leh and Kargil in 1979, comprised till then three tehsils which were divided in six **Girdawar** circles, and

28 **Patwar Halqas** as is shown in the table below¹ :—

Tehsil	Girdawar circles	Patwar Halqas
Leh	3	16
Kargil	2	10
Zaskar	1	2

Revenue Cases

The revenue cases are generally decided by the revenue courts. Only cases involving points of law are referred to the judicial courts. The Tehsildars and the Naib-Tehsildars are competent to attest mutations within their competence. The disputed mutations are, however, attested by Tehsildars. The cultivations rights are attested by the Assistant Commissioners. Complaints with regard to the attestation of mutations passed by Naib-Tehsildars are settled by Assistant Commissioners and those passed by the Tehsildars are settled by the Deputy Commissioners.

Revenue Receipts

The following table shows the size of the revenue demanded and its realization (excluding arrears) for the year 1955-56 and 1960-61 :—

Year	Total Revenue demanded Rs.	Revenue Recovered Rs.
1955-56	98,876.58	75,148.76
1960-61	99,818.99	74,903.09

The table shows an increase of over 1% in revenue demand during 1955-56 and 1960-61. However, there was a short-fall in revenue recovered during this period.

Land revenue per head of population was Rs. 1.03 in 1967-68. In minimal terms, the burden of land revenue went up from Rs. 1.00 in 1953-54 to Rs. 2.00 in 1967-68. However, in

¹ Source : Financial Commissioner, J&K Government.

real terms, this increase is not significant. The data pertaining to the collection of stamp revenue and entertainment tax is given below¹ —

Year	Stamp Revenue (Rs.)	Entertainment Tax (Rs.)
1955-56	4,41,100	..
1960-61	4,164.00	475.05

The entertainment tax was not levied before 1959.

CHAPTER XI

LAW ORDER AND JUSTICE

Ladakhis were always patriotic and peace-loving people by nature. It was due to this reason that, generally speaking the local kings of Ladakh did not feel it necessary to maintain a regular army or even a police force. Tradition made it obligatory for every family to depute one armed soldier to join the royal contingent when the security of their country was threatened by external aggression. The royal army also consisted of those soldiers who were provided, at the call of the kings, by the nobility and the landed aristocrats. The nobles and chiefs were designated as **Kalons, Lonpas** and **Gobas**. The chief of the army was called **Mokpan** and the whole royal army was placed under his command. The army chiefs and the nobles were granted landed estates by the king as a reward for their services during the war.

The Dogra rulers, however, stationed their own regular armed forces in order to suppress possible uprising by the local chiefs and to meet external aggression from the north. A regular police force was also maintained in the region by the Dogras.

Since Independence, the Ladakhis have been recruited in the Indian Army and have proved their mettle as very good soldiers whenever the security of their country had been threatened. They have also joined the Jammu and Kashmir Police Force in large numbers which is now their own Police Force. In the Police Services to whatever cadre they have proved next to none in the discharge of their duties to the State.

Police

For maintenance of law and order and protection of life and property of the people, the two districts of Leh and Kargil have

¹ Source : Financial Commissioner, J&K Government.

been provided with six Police Stations located at Leh, Kargil, Dras, Padam (Zaskar), Nyoma and Nubra. In addition, six Police Posts have been set up at different places of the region. In each district, a Superintendent of Police with his office at the District Headquarters is posted in order to supervise the law and order machinery within his jurisdiction. The Superintendent of Police works in close co-operation with the Deputy Commissioner of the District and together they are responsible to maintain law and order in their district. The Superintendents of Police at Leh and Kargil function as sub-ordinate officers of the Dy. Inspector General of Police, Kashmir and receive orders and instructions from him directly¹. The Superintendents of Police at the district level are assisted by one or more Deputy Superintendents of Police in each district.

Every Police Station is placed under the charge of a Station House Officer (S.H.O.), who is assisted by one or more Sub-Inspector/Assistant Sub-Inspectors of Police within his jurisdiction. The Station House Officer (S.H.O.) is primarily responsible for the maintenance of law and order and preservation of peace within his jurisdiction. His duties include the prevention and detection of crime as well. He is the Chief Investigating Officer in his jurisdiction and has to conduct all the investigations in person. In the absence of S.H.O. the next senior officer acts as the officer in charge of a Police Station. Generally every Police Station is provided with the service of one or more Sub-Inspectors/Assistant Sub-Inspectors of Police who assist the Station House Officer in the discharge of his duties. The strength of Police Force has considerably increased since 1961. This is because of three reasons, first the people have come to realise and assert their democratic rights, second, as everywhere else in the country, the incidence of crime has increased due to socio-economic changes and third the bifurcation of Ladakh District into two districts of Leh and Kargil has naturally resulted in the creation of a large number of posts at all levels. The following table indicates the gradual increase in the strength of Police Force since 1961 in the Ladakh region² :-

¹ Source : Deputy Inspector General of Police, Kashmir Province.
² Source :: Deputy Inspector General of Police, Kashmir Province.

Rank	1961	1971	1981-83
Superintendent of Police	1	1	2
Dy. Superintendent of Police	1	2	4
Asst. Police Prosecutors	1	3	6
Inspector of Police	1	2	4
Sub-Inspectors of Police	3	9	13
Asstt. Sub-Inspectors of Police	3	5	16
Head Constables	11	45	110
Constables	96	197	476

The above table indicates that on average, the strength of Police Force has more than doubled during each decade of 1961-71 and 1971-83. District-wise number of Police Stations and Police Posts during the year 1981-82 is shown in the table below¹ :-

Category	Leh	Kargil	Total
Police Stations	3	3	6
Police Posts	2	4	6
Total :	5	7	12

Crime

In the past, crime was almost unknown in Ladakh. Even a decade ago, few crimes were committed and what is even more important, these were of a simple nature. Few cognizable offences were reported to the police. Due to the impact of outside influence, changes in the traditional values and, in fact, changes in the whole socio-economic life of the people and moral values, the incidence of crime in the region has increased in recent years.

¹ Ibid.

This is revealed by the following table¹:-

Nature of crime	1973	1975	1980	1981
Murder	..	2	1	3
Riot	9	5	15	17
Dacoity	..	1	..	..
Robbery	..	1	..	..
Burglary	13	21	13	16
Cheating	..	7	2	2
Theft	15	43	19	33
Kidnapping	2	..	3	3
Rape	1	3	..	1
Criminal Breach of Trust and other crimes	5	4	120	40
Total :	45	87	173	115

In the past, serious offences like murder, dacoity, burglary, rape and kidnaping were unknown in Ladakh. The table reveals that not only the total number of crimes has gone up but, in particular the offences of a serious nature are on the increase. In 1973, only 45 cognizable offences were committed but the number of such offences had increased to 173 in 1980. The table shows that burglary and theft are popular crimes in the region, but cheating is not so common. The table below shows the number of cognizable cases reported during 1981² :-

Description	Leh	Kargil	Total
Murder	1	..	1
Rape	..	2	2
Kidnapping	1	2	3
Burglary	11	4	15
Rioting	5	6	11
Theft	8	21	29
Cheating	1	..	1
Other crimes	55	..	55
Total :	82	35	117

¹ Source :: Deputy Inspector General of Police, Kashmir Province.
² Source : Deputy Inspector General of Police, Kashmir Province.

The Incidence of Crime is greater in the towns than in the rural areas. This of course is a universal fact as urbanisation and incidence of crime have a positive relationship. The following table makes it clear¹ :-

Incidence of crime at various Police Stations during 1969 and 1970

Police Station	Reported 1969	Reported 1970
Leh	80	84
Kargil	27	27
Nubra	8	4
Dras	5	9
Zaskar	4	4
Nyoma	1	7
Total :	125	135

The table reveals that on the whole, 87% of the total number of crimes was reported from the two towns of the region was reported from the four rural Police Stations. Leh being a bigger town and more urbanised, accounted for 64% of the total number of reported crimes.

Homeguards

There are 4 companies of the Home Guards working under the supervision of the Deputy Superintendent of Police, who looks after the Boarder Home Guards of Kargil also. The strength of the company is as follows :—

Company Commander.....	1
Platoon Commander.....	1
Section Commander.....	9

These units may, however, be posted at any place as their jurisdiction extends over the whole State.

¹ Ibid.

Anti Corruption Units

The State Government had constituted an Anti-Corruption Unit to decide cases in which the Gazetted Officers were involved. The Anti-Corruption Act was further made applicable to all the non-Gazetted Government servants as well. Another Commission was constituted under section 5 of the Act for enquiring into the cases of corruption against the non-Gazetted Government Servants and this Commission came to be known as the Anti-Corruption Commission (Non-Gazetted). Both the Commissions are assisted by Anti-Corruption Organisation in that work which is headed by the Deputy Inspector General of Police.

Civil Defence Organisation

The Civil Defence Organisation was started in 1962. In order to train the Civil Defence Volunteers and the Home Guards, a training school was established at Ganderbal for Kashmir province including the District of Ladakh. The Staff Officers, Training, is responsible for looking after the training of the Home Guards and the Civil Defence Services.

Police Training School

It was in 1930, that a Police Training School was established at Srinagar. It was shifted to Kathua in 1959 for winter months primarily in the interest of trainees¹.

The following courses are taught in the school for Recruits Training Course.

- (1) One month's Training course for Constables.
- (2) One month's promotion course for Head Constables.
- (3) Mob Control course.
- (4) Training course for special branch.
- (5) Preparatory course for Probation Officers.

The school is now located at Udhampur in Jammu Province. However, its jurisdiction extends over the entire State. As such the trainees from Ladakh and Kargil also receive training in various courses and in different sessions from the Police Training School Udhampur.

¹ Deputy Inspector General of Police, Kashmir Province.

Jail and Lock Ups

In 1983, there were two Central Jails one at Jammu and the other at Srinagar. The prisoners were not remanded from the Sub-jails to the Central Jails on grounds of unfavourable character but were kept in the District Jails.

The Punjab Jail Manual was generally followed in the administrations of Jails. Discipline and order was established in Jail Administration. Besides these Central Jails, there existed 3 District Jails in Jammu Province and 3 District Jails in Kashmir Province. District Jails were also established at Leh, Muzaffarabad and Gilgit. In all districts and tehsils, short term prisoners were detained in the Muffasil "Havalats". Here it is of interest to note that the jails were also a source of revenue to the State. No form of industry was introduced in any of the Muffasil Jails. However, in the Central Jails at Jammu and Srinagar darri making, mat making, oil pressing, printing and paper making industries were introduced. These industries brought revenue to the States¹.

In the frontier district, Jails were placed under the control of the Wazir-i-Wazarat. There were four jails in the Ladakh region one each at Leh, Gilgit, Skardu and Kargil. The general supervision of the Jails Department was exercised by the Superintending Surgeon of the State Hospitals and the Administrative Control was vested in the hands of the Home Minister. In the Muffasils, the jails were kept under the charge of the local Medical Officers.

At present there are two Sub-Jails at Leh and Kargil, besides a District Jail at Chuglamsar, Leh. In addition there are judicial lock-ups attached to various civil courts. The jails are well looked after as per the rules provided in the Jail Manual of the State Government. The prisoners are classified and provided with adequate facilities according to the revised rules.

The average daily population of convicts is 1 to 4 in respect of males only and the average daily population of undertrials is 1 to 6 of males². For management of the jails, there is Punjab

¹ Source : Inspector General of Prisons, J&K Government.

² Ibid

Jail Manual which has been adopted by Jammu and Kashmir Government for application in the State. Further, the convicts are being released on parole under the J&K Good Conduct (Temporary Release) Act, 1978 and prisoner's are being given wages under wage earning scheme.

Justice

Historical Background

In old times, the administration of justice in Ladakh was based on patriarchal system. When any one was injured or aggrieved, he proceeded straight to the **Gyalpo** or the **Kalon** of his area, or to the elders of his village for representation of his case. An assembly of five or seven elders of the community was then called to hear and to decide the case. In the capital of the kingdom, the proceedings were conducted with the observance of elaborate formalities. The complainant made his case to the **Tong-ston** or the village chief, who reported it to the **Togo-Chee** and finally, the complaint was brought to the notice of the **Kalon**. It was referred to the regular court, composed either of five or seven members according to the importance of the case. The members were selected as in the province from amongst the elders but they were joined by two or more experts of the law of the land. The court of justice was opened and closed by the sounding of the **Khrim-dung** or the trumpet of justice and the sentence of the court, excepting in the capital cases, was carried into execution without delay.

Punishments consisting of stripes, fines, imprisonment and in extreme cases banishment were awarded to culprits. The punishment of death was seldom awarded and still more rarely executed. For the redemption of sin and crime committed, such as murder, the convict, was required to build a **stupa** or a **Mani** wall of a prescribed size during the period of his imprisonment. During night, he was locked up in the prison. He was not provided with food by the Government, but had to beg or was fed by his relatives. In cases of sacrilege such as spoilation of sacred relics or in cases of murder, some times the criminals were either crucified or thrown into the Indus, bound with stones.

Dogra Period

It was during the Dogra period (1846-1947) that the ad-

ministration of justice was put on sound lines. Its organisation has undergone many changes before reaching its present stage of virtual independence from the executive. The Maharajas considered themselves the fountain heads of justice, as well as the source of all legislative, and executive authority. The administration of justice up to 1905 was, however, vested with the member of the State Council incharge of the Judicial Department who exercised the powers of **Adalat-i-Alia** in civil and criminal matters. On the abolition of the State Council in 1905, and its substitution by a Ministry, an officer with the designation of the Judge of the Jammu and Kashmir High Court, was appointed to decide all judicial cases. By this appointment, the first step was taken to separate the higher judicial functions from the Executive. In 1912, the draft of the Criminal Procedure Code was passed. The Law Member of the Council of Ministers was statuterily defined as the highest court of criminal appeal and revision, subject to the general powers of the Maharaja in matters of revision, reference and further appeal. In 1921, the State Council was again revived. All appeals and revisions, both in the Civil and Criminal cases, which lay to the Maharja were again dealt with, by the Law Member, who submitted his opinion to the Maharaja. In March, 1927, a new Constitution was sanctioned by the Maharaja and instead of the Law Member, the post of the Judicial Minister was created. As the work of the High Court had increased, and, as a measure of relief, the appointment of a temporary additional judge of the High Court was also sanctioned. The judicial work which went up to the Law Member had increased and had also accumulated in the office of the Judicial Minister, who could not afford time to attend to it. This state of affairs engaged the urgent attention of the State Government and the question of establishing a High Court was taken under active consideration.

Establishment of High Court

In 1928, the Maharaja under his command, established the High Court, consisting of a Chief Justice and two Puisne Judges, one of the Judges being called, Judge High Court and the other as Revenue Commissioner, the latter was empowered to hear revenue appeals. The Civil and Criminal jurisdiction of the High

Court was extended and it was empowered to confer civil and criminal powers on the Magistrates. The civil and the criminal cases against the order of the High Court pending in the Maharaja's office and the Judicial Ministers Office were transferred to the High Court for the final disposal but the Judicial Minister still continued to exercise executive control over the High Court in the Administrative matters.

In 1939, the Constitution Act was passed conferring upon the High Court a substantial measure of independence. Under this Act, every Judge of the High Court could hold office until he attained the age of 55 unless a judge resigned or was removed from office by order of the Maharaja on grounds of mis-behaviour or infirmity of mind or body. The High Court was invested with powers of superintendence and control over the courts, for the time being, subject to its appellate and revisional jurisdiction and was empowered to make rules to regulate its own practice of the subordinate courts. It was also authorised to prescribe forms and provide for the maintenance of statistics and accounts of the High Court and the subordinate courts, the supervision of their work and to regulate such other matters as it did consider necessary to promote efficiency and discipline of the judicial and the ministerial officers of the High Court and of the subordinate courts. It could also prescribe conditions for the removal or suspension from service on reasonable grounds. It was also authorised to advise the Maharaja in the disposal of civil and criminal appeals from the decisions of the High Court and such matters as he chose to refer to it for advice. The Maharaja appointed a Board of Judicial Advisors consisting of three members. However, the administrative control of the Judicial Minister over the High court, continued till 1943.

In order to administer civil and criminal justice, District and Session Courts were set up at Jammu, Srinagar, Poonch and Ladakh. The Wazir Wazarat of Ladakh exercised the powers of the District and Session Judge as well as that of the District Magistrate of the region. The District and Session Judges had under them, the necessary compliment of the subordinate judges, who were also ex-officio Registrars for the provinces of Jammu and Kashmir. They were also empowered to hear appeals against the orders of the second and the third class Magistrates.

From the above survey, it appears that during the Dogra rule, the fountain head of legislative, judicial and executive authority in the State was the Maharaja from whom the different legislative, judicial or executive authorities derived their powers and functions. On the legislative side, the powers were delegated to the Council of Ministers, the Prime Minister and the **Praja-Sabha**. On the Executive side, the powers were transferred to the Council of Ministers and the Prime Minister assisted by the Secretariate and from the latter to the Heads of the Department and subordinate officers. On the judicial side, the powers were delegated to the High Court of Judicature and the subordinate courts.

Present Position

After 1947, the judiciary has made considerable progress and is being brought at par with other States. In the year 1966, the Separation of Judicial and Executive Functions Act was passed. The establishment of the Munsiffs Courts in important towns and mufasils has brought justice within the reach of the common man. Marked improvements in the subordinate court have taken place. A District and Session Court has been set up in each District of the State. The strength of the High Court has been raised to five judges. The strength of the administrative staff has also been increased. One post of Deputy Registrar and two posts of Assistant Registrars have also been created in order to meet the increased volume of work. With the increase in the staff, it has become possible for a Division Bench of the High Court to sit throughout the year at Jammu and Srinagar. This has relieved the inconvenience and the distress to the litigant public while travelling from far-flung places to the winter and summer capitals of the State as a result of the Durbar Move¹.

Judicial Divisions and Courts

Since 1979, when the region was bifurcated into the two districts of Leh and Kargil, the number of Judicial divisions and courts has considerably increased. Both the districts have Session

¹ Source : Registrar, High Court of Judcature, J&K State

Courts. These are presided over by a Sessions Judge for six months each year at Leh and Kargil. In addition, there are four subordinate courts in each district as is shown in the table given below¹ :—

Category	1981-82		
	Leh	Kargil	Total
District and Session Judge	1	1	2
District Magistrate Courts	1	1	2
Addl. District Magistrate Courts	1	1	2
Chief Judicial Magistrate	1	1	2
Total :	4	4	8

Civil Suits and Appeals

During the year 1982-83, the various courts in the region disposed off 970 civil and criminal cases. The details of various cases instituted and disposed off during the year 1982-83 in both the districts of Leh and Kargil is given in the table below² :—

CIVIL COURTS

No. of cases pending	No. of suits instituted	No. of suits disposed off	No. of suits pending at the close of the year	No. of suits disposed off after full trial	Uncontested
(1)	(2)	(3)	(4)	(5)	(6)
13	33	24	20	3	21

CIVIL APPEALS

Appeals instituted	Misc. civil appeals	Civil Appeals disposed off	Reg. Civil Appeals	Misc. Civil Appeals
18	18	11	Nil	11

CRIMINAL CASES AND APPEALS

Opening Balance	Cases Instituted	Contested & disposed	Uncontested & disposed	Total disposed	Closing Balance
41	989	53	882	935	95

¹ Ibid.

² Source : Registrar, High Court of Judicature, J&K State.

Separation of Judiciary from Executive

The Act which separated the Judiciary from Executive was passed in 1966 and came into force from 20-7-1968. The provisions of the Criminal Procedure Code were largely amended, in order to create a class of Chief Judicial Magistrates, and the Judicial Magistrates, with the powers specified in the Act. Their powers are distinguishable from those of the District Magistrates and the Executive Magistrates of the first and second class, as given in the Act.

The aforesaid Act of 1966, provided for the necessary amendment in the Criminal Procedure Code and other Laws so as to provide for the establishment of the courts of Judicial Magistrates including the Chief Judicial Magistrates, the Magistrates of the first and second class and the Special Judicial Magistrates, Executive Magistrates including District Magistrates, Additional District Magistrates, Sub. Divisional Magistrates, 1st Class/Second class and Special Executive Magistrates. The ordinary powers of the Judicial Magistrates and the Executive Magistrates have been defined in Schedule III of the Act. The Schedule IV of the Act, furnishes a list of additional powers which each Magistrate may be invested with by the High Court or the Government. Part II of schedule IV also incorporates the various amendments, which have been made in the Excise Act, the Fisheries Act, the Cattle Trespass Act, the Public Gambling Act, the Prisoners Act, and other Acts. Section 12 and 14 of the Act, provides the mode for the appointment of the Executive and the Judicial Magistrates and the authorities competent to appoint them. The other sections of the Act deal with ancillary matters connected with the scheme of the separation of the judicial and the executive functions of the Magistrates.

Panchayats

There are Panchayat Adalats in the region, which came into existence with the passing of the Jammu and Kashmir Village Panchayat Act, 1958. The jurisdiction of each Panchayat Adalat is coterminous with that of the Panchayat itself. Under the Panchayat Act, each Panchayat functions as the Panchayat Adalat also. Every Panchayat Adalat has a panel of members. Out

of 7-11 members of a Panchayat, 5 members who have to be elected by the Panchayat itself, constitute the Panchayat-i-Adalat. The jurisdiction of the Panchayat Adalat is the same as that of the Panchayat. On this basis, the total number of Panchayat Adalat is the same as that of Panchayats in the region.

The number of Panchayats blockwise is given below :—

Number of Blocks	Number of Panchayats
Leh	38
Nubra	
Nyoma	
Zaskar	7
Kargil	25

Every Panchayat Adalat is to have a Chairman, who is elected by the Panchayat Adalat from the members of the Panchayat. The term of office of the Chairman of such an Adalat is one year, unless he does not resign or is removed earlier. But after the expiry of the term of one year, the same person can be re-elected as Chairman.

Every Panchayat elects one among its Panches as Sarpanch who is the Chairman of the Panchayat and every Panchayat consists of such number of Panches, not less than 7 and not more than 11 as the prescribed authority may, from time to time fix in this behalf. The term of office of every Panchayat is five years, from the date of the Constitution of the Panchayat and for the Sarpanch, one year.

The Panchayats have been empowered to try all or any of the following suits :—

1. Suits for money due on contracts not affecting any interest in immovable property.
2. Suits for the recovery of movable property or for value thereof.
3. Suits for compensation for wrongfull possession and damages to movable property.

4. Suits for damages caused by cattle trespass, where the amount or value of the claim does not exceed one hundred and fifty rupees.

The type of cases which cannot be brought before the Panchayat Adalat are the following :—

1. On a balance of partnership account.
2. For a share or part of a share under any intestacy or for a legacy or part of a legacy under will.
3. By or against minor or a person of unsound mind.
4. On account of any dispute or matter, in respect of which any suit or application should be cognizable by a revenue court.

An appeal lies to the District Court against the decree passed by a Panchayat Adalat, in any suit and to the Sessions Court against an order of the Panchayat Adalat.

CHAPTER XII

OTHER DEPARTMENTS

As we have seen, all developmental activity in the region is carried under the supervision and control of the Government Departments working there. Among these, mention may be made of the departments like Information, Economics and Statistics, Public Health Engineering, Forestry, Social Welfare, Libraries, Archives, Archaeology and Food and Supplies, which are endeavouring to transform the economy of the region by restructuring it on sound lines.

Information

The Department of Information is playing an important role providing to the people up-to-date information, regarding local, national and international affairs, through press release, feature articles, news letters and cultural shows and documentary films. For carrying on its activities effectively, the Department has opened Information Centres at various places in the region, particularly at Leh, Kargil, Nubra, Zaskar, Dras, Nyoma and Khaltsi. Uptil 1966, the number of these centres did not exceed two, but gradually this number has risen to seven. The officers incharge of these centres are¹ :

1. Assistant Director, Information, Leh.
2. District Information Officer, Kargil ; and
3. Assistant Information Officers.

Economics and Statistics Department

For indicating a level of achievements in the field of Planning and Development, statistical data is vitally needed. Without it no effective Planning and Developmental strategy

is possible. So the Government has established the Department of Economics and Statistics which has its agencies at Leh and Kargil who responsible for collecting statistical data at the district level. This data is presented in the form of brochure, called "Statistical Handbook", which serves as a guide in the preparation of longterm perspective plans for the development of the region.

Thus the department is playing a significant role in building up of modern Ladakh by rendering great assistance to the Government to evolve departmental strategies and to scholars, journalists and writers to assess correctly the achievements of the region¹.

Public Health Engineering Department

The department of Public Health Engineering is rendering a great service to the people of far flung areas of the State by making available to them the facilities of drinking water and sanitation, the facilities which did not reach to them previously. About 19,000 people, inhabiting 30 villages of Ladakh, are being benefited presently by the Department.

The total number of villages and people, who have been provided with the facilities of drinking water since 1976-77 and public stand point connections installed so far are given in the following table²:-

(a) No. of villages covered under drinking water supply and population benefitted.

S. No	Year	Village covered (commulative)	Population benefitted (in lakhs)
1.	1976-77	6	0.04
2.	1977-78	10	0.07
3.	1978-79	N. A.	N. A.
4.	1979-80	N. A.	N. A.
5.	1980-81	23	0.16
6.	1981-82	30	0.19

¹ Source : Directorate of Economics and Statistics, Srinagar.

² Source : Chief Engineer, Public Health Department, Srinagar.

¹ Source : Directorate of Information, Srinagar.

(b) Number of Water tap Installation

S.No.	Year	Public Stand Points	Private pipe connections	Total
1.	1976-77	31	..	31
2.	1977-78	43	..	43
3.	1978-79	67	..	67
4.	1979-80	152	5	157
5.	1980-81	174	5	179

Data with regard to number of water tap installations of Leh district is not available w. e. f. 1976-77 to 1978-1979.

Forest Department

Among the greatest benefactors of mankind are forests which, besides changing the climatic complexion of a place, provide fuel and fodder and thus enable both men and animals to live comfortably. But in spite of these advantages, man has not been favourably disposed towards preserving forests or "Green Gold", and instead he has ruthlessly damaged them by felling the trees, causing great harm to environment and nation's wealth!

The forest wealth of the region is very poor as only 158 acres, out of the total area of 1,41,326 acres, were covered by the forests. Consequently there is a great shortage of fuel which make it imperative for the Government, to take measures to increase the area under forests.

In 1955, the office of the Divisional Forest Officer was established in the region which brought about 931 acres of land under forests and extended facilities and guidance to enable people to grow trees in their private lands. Nurseries were also established and fodder development work was undertaken.

Numerous schemes are in operation since 1979-80, among which the following are worth mentioning :—

1 Source : Forest Department, Srinagar.

(a) Raising and Maintaining of Plantation

Under this scheme 1.28 lakh plants of willow, poplar and hippophae were planted in the region in 1979-80. This number increased to 1.61 lakhs in 1980-81 when an additional area of 80 acres was brought under forests.

(b) Fodder Development

Under this scheme a considerable quantity of fodder is grown in the region, which is supplied to the Animal Husbandry Department, Leh. During 1979-80, 120 quintals of grass worth Rs. 6,000/- was supplied to this Department.

(c) Collection of Drug Plants

Ladakh being rich in medicinal plants, attempts are made to collect these and in 1980-81, about 25 quintals of such plants were acquired under this scheme.

(d) Anti-Erosion Works

To safeguard the plantation areas from water erosion, bunds have been erected on river banks and in 1980-81, 25 such bunds were constructed in the region.

Social Welfare Department

The department of Social Welfare, is playing a vital role in transforming the life style of the economically weaker sections of the society. Through its various welfare schemes and social security measures, the department has been able to extend help and assistance to the scheduled castes, the social castes, the physically handicapped, the orphans and the deserted people, besides wiping out the pernicious influence of traditional exploitation that had sapped the vitality of the society and rendered the plight of unprivileged people miserable and pitiable.

For providing financial assistance to the people of backward areas, as defined in the SRO-394, the department has opened its offices at various places in the State and in Ladakh such offices, with its headquarter at Leh and branch office at Kargil, was established in 1966. For the scrutiny of the claims of hitherto neglected individuals, there are District Level Com-

mittees comprising District Education Officers and District Social Welfare Officers with the concerned Deputy Commissioner as the Chairman. Thus on the recommendations of these committees, the department sanctions scholarships in favour of both pre-matric and post-matric students.

For ensuring welfare of the children, the department started ICDS Project in 1979-80 at Kargil and in 1980-81 at Leh. The operational jurisdiction of this project, in case of Kargil consists of 4 Community Development Blocks viz. Dras, Kargil, Shergol and Chikten and 3 blocks in case of Leh viz. Leh, Khaltsi and Nubra.

Out of 50 sanctioned Anganwadi Centres for each district, 49 centres are functioning at Kargil and 34 at Leh. These centres render the following services :—

- (1) Non formal pre-school education for the children from 3 to 6 years.
- (2) Supplementary Nutrition for children and pregnant women.
- (3) Immunization.
- (4) Health and Nutrition Education to women in the age group of 18 to 45 years.
- (5) Functional Literacy Programme for women in the age group of 15 to 45 years.

Besides, the Department has the unique responsibility of organising the following :—

- (1) Books/Stationery/Uniforms are provided to students belonging to backward and schedule caste classes.
- (2) Educational facilities are provided to sweeper/scavengers/Mochies/Watals etc.
- (3) All kinds of facilities are provided to ex-trainees of cottage industries to enable them to practise the trade.
- (4) Stipend is given to Industrial Training Institute trainees.

- (5) Bal Ashrams/Markazi Falah Itifals have been established with a view to arresting the trend of destitution and negligence of children coming from below poverty line stratum of society¹.

Libraries, Archives and Archaeology

The Department of Libraries, Archives and Archaeology is rendering great service in the region. Besides providing libraries and reading rooms in the region, the department is looking after the old monuments which are of great historical importance.

Food and Supplies

The department has opened its storage-cum-Sale Centres throughout the region to provide to the people not only food grains but also other essential commodities like Kerosin Oil, Salt, Sugar, Hard Coke etc. ².

The department also renders assistance to other Government Departments, such as Education, Health, Animal Husbandry etc., in transporting their stores from Srinagar to Leh. Besides, the Department makes necessary arrangements for dumping sufficient quantity of essential commodities well in advance of the change of season so that no inconvenience is caused to people during winter when the Zojila pass is closed and when no transportation of stocks from Srinagar is possible. These arrangements involve engagement of a large fleet of trucks to transport essential supplies to Ladakh during summer. Following is the statement of stocks despatched to Ladakh during 1982-83 and 1983-84 :—

S. No.	Commodities unit	Leh District		Kargil District	
		1982-83	1983-84	1982-83	1983-84
1.	Rice. Qtls.	15745	15525	14003	20729
2.	Atta. „	17422	19500	24625	16370
3.	Maida. „	1889	1895	1416	561
4.	Salt. „	..	2171	3070	3571
5.	Sugar. „	1610	1535	4060	1045
6.	Hard Coke. „	6680	9010	6765	5952
7.	K. Oil. Lit.	217000	202000	517000	471000
8.	Cattle Feed. Qtls.	5034	5955	3405	4341.40

¹ Source : Social Welfare Department, Srinagar.

² Source : Food and Supplies Department, Srinagar.

The department carries its work under the supervision and control of the District Development Commissioners of Leh and Kargil. They are assisted by two Assistant Directors (one for each district who look after the stocks and supervise the work of the subordinate staff comprising supervisors, storekeepers etc.

CHAPTER XIII

LOCAL SELF GOVERNMENT

Ladakh can genuinely claim to have been from ancient times, an abode of what may be described as Local Self Government. This claim is supported by the historical facts pointing to the existence of certain institutions or councils which the ancient Ladakhis had created for ensuring happiness and cordial relations among various tribes. These councils, known as **Gan-Mi** and **Jirga** comprised elected elders of the tribes, who had sufficient understanding of tribal problems arising mainly from uneven distribution of water brought by the streams from the glaciers of the great heights.

These councils were, in fact, micro-institutions of great historical and socio-political significance, possessing a definite territory, a population, an organisation and authority to perform public activities at the grass roots level. Deriving their authority from local traditions, **Gan-Mi** and **Jirga** were democratic institutions in essence, always seeking to give opportunities to people for the expression of their opinions regarding the matters of their tribes. Besides, they made such arrangements as would result in promoting the tribal morality and harmony and in freeing the region from strife, and warfare.

Likewise, in each Ladakhi village there was a self-governing body of great consequence, which was entrusted with the work of not only maintaining peace and order but also ensuring the welfare of the villagers. It was, like the ancient Indian Panchayat, a body of elected elders, a body in whose deliberations the villagers participated to discuss freely all problems concerning the village. It was headed by the village headman, called **Goba**, who was elected by the villagers and could be removed also if people desired so.

A man of considerable importance, playing vital role in the village affairs, **Goba** enjoyed certain privileges such as exemption from paying dues for the fuel and grass.

For districts also there were councils headed by the **Gyalpo** or **Kalon**, a person of tremendous experience and standing, who with the help of five or seven elders decided cases brought to his notice. These cases were generally, of serious nature, whereas petty cases were decided at the village level.

Then there were **Gumpas**, the religious institutions, which apart from being responsible for the maintenance of the monasteries, spread throughout the region, interested themselves in routine matters and thereby immensely influenced the working of the micro-institutions.

At the top of these institutions was the king who was considered, by his people, an incarnation of God, the fountain of justice and an embodiment of virtue and truth¹. But in spite of this, the king used to consult experienced people while dispensing justice. The number of these wise men, representing the villages of the entire kingdom, was nearly sixty. They helped the king not only in dispensing justice effectively and impartially but also in resolving political questions such as the issue of succession which always resulted in fratricidal quarrels, violence and disorders².

The preceeding account clearly shows what prevailed, for centuries together, in Ladakh and what ultimately led to the introduction of the modern Local Self Governing Units in the region. Besides Notified Area Committees and Community Development Blocks, these modern Self-Governing Units consist of Panchayats.

Notified Area Committees

With the expansion of urban culture the need for the re-organisation of Local Self Governing Institutions and for democratic decentralisation, both at the village and regional levels, has increased considerably, and consequently, the Government

of Jammu and Kashmir has taken some radical measures to re-vitalise Ladakh by setting up Notified Area Committees at Leh and Kargil, in September, 1963 and 1971 respectively¹.

These committees conduct multifarious activities necessary for the development of urban culture. Besides civic administration these activities include removing of obstructions in public streets, abetting offensive and dangerous trades and cleansing and lighting of streets. Drainage, sanitation, inoculation, vaccination, public health and all other affairs pertaining to the towns of Leh and Kargil are also looked after by these committees.

Each of these committees consists of both official and non-official members, representing various classes, communities and professions, whose number does not exceed six excluding the Chairman. The responsibilities of Chairman, for each committee are, at present shared by Tehsildars of concerned towns. While discharging their duties, these Chairmen are assisted by their own subordinate staff. Similarly the Medical Officers and Engineers of both the towns are ex-officio members of these committees, whereas M. L. A's, M. L. C's, President of the shopkeepers Association and some prominent men of Leh and Kargil are included among the non-official members.

The following table shows the civic Administration status and category of towns in Ladakh region²:—

Name of Town	Population (1981)	Name of Tehsil	Civil Administration Status (1981)	Category (1981)
Leh	8718	Leh	Notified Area	Class V as per Census classification.
Kargil	3527	Kargil	do	Class VI, as census classification.

¹ Gergan, S. S; Ladakh the Land of Mystery, Kashmir To-day, Sept. 1961. P. 49

² Francue's ; Antiquities, op. cit., p. 121.

¹ District Census Handbook, Ladakh District 1971, P. 2.

² Census of India 1981, Services-8, Jammu and Kashmir, P. 9.

Sources of Revenue

The sources of Income of the Notified Area Committees of Leh and Kargil include municipal properties, octroi tax, building application tax, licence fee on articles of food, slaughter house tax, etc. But the following table reveals that up to 1971 the receipts through these sources were almost lacking¹.

Name of Town	Receipts through taxes	Revenue derived from municipal properties & taxation	Govt. Grants (Rs.)	Loan (Rs.)	Total Receipts (Rs.)	Total Expenditure (Rs.)
Leh	..	..	206/-	..	206/-	206/-
Kargil	(Information not available as the town came into being after 1968-69).					

Thus, it is clear that these committees were exclusively dependent for their resources on government grants. They still continue to be so and consequently, no improvement is seen in the circumstances surrounding these committees.

Achievements

As regards the achievements, the Notified Area Committees of Leh and Kargil have not been able to register their mark so far. As a result, the region has yet to catch up the position obtained in other parts of the State in matters pertaining to organisation and sanitation. The hand-carts continue to be used for removing the night soil which is dumped in trenches. Sanitation facilities available in the region are inadequate. Public latrines are rare and public health facilities are scanty and poor.

The following table provides an insight into the civic amenities and other facilities which were available in the region up to 1969-79¹ .—

¹ Town Directory, 1971, Part VI-A, PP. 34-35.
² Town Directory, 1971, Part VI-A, PP. 34-35.

Name of Town	System of sewerage/drainage	No. of Latrines	Method used to dispose off night-soil	Road lightning points
Leh	Kachha drains and Cesspools underground sewers not available	—	Hand carts	72
Kargil	-do-	—	-do-	28

Community Development Blocks

For ensuring economic prosperity and social welfare of the people a net work of Community Development Blocks has been spread throughout the region. There are five such blocks, executing the following functions¹ :—

- Construction of village roads, bridges, tanks, khuls, and canals.
- Maintenance and repairs of old roads, bridges, tanks, khuls and canals.
- Production of agricultural seeds of different varieties.
- Preventive vaccination, treatment and castration of animals ; and
- Execution of developmental schemes and minor irrigation works in rural areas.

Besides, these blocks supervise and control the working of Panchayats of the villages of the region.

For making community blocks work efficiently, the government has appointed officers, called Block Development Officers, who perform their duties under the able guidance and supervision of the Development Commissioner, a senior officer of rank and status.

For implementing various development programmes, the Community Development Blocks receive huge funds and annual grants from the government.

¹ District Census Hand Book, Ladakh District 1961, PP. 22-23, 51.

These Development Blocks have been very effective in eradicating poverty and backwardness from the region. They have been providing innumerable facilities to the people, besides applying science to agriculture and animal husbandry.

Panchayati Raj

The Panchayati Raj, signifying rural local-self Government organised by elected persons who, with adequate power and resources, deal with rural matters and problems is duly recognised not only by the constitution of India, but also by the Jammu and Kashmir Village Panchayat Act of 1958¹. According to this Act, the Panchayat implies the creation of Local Self Government Institutions at the grass roots level, such institutions plays a vital role in rural administration and conducts welfare activities.

Thus carrying the banner of welfare state at the grass roots level, the panchayats make efforts for planning and development in their jurisdictions.

Every panchayat established in accordance with the provisions of the Act of 1958, consists of not less than seven and not more than eleven members, called **Panches**, the majority of whom are elected for a period of five years from the date of constituting the panchayat². The term of office of Panches can be extended by the Government for a period not exceeding 6 months³. These **Panches** are elected by the residents of the panchayat area, who possess sound mind and have not been convicted of and sentenced for an offence other than an offence of political nature⁴.

Every panchayat elects one of its **panches** as **Sarpanch** for a period of one year unless he dies, resigns or is removed earlier. But at the expiry of the term of one year the same person can be elected as **Sarpanch**. Apart from conducting the proceedings of the panchayat, the **Sarpanch** performs such func-

tions as may be imposed on him from time to time¹.

There is also a **Naib-Sarpanch**, who is duly elected by the **panches** from amongst themselves, to conduct the proceedings and functions of the panchayat during the absence of **Sarpanch**. The procedure of election and the term of office of the **Naib-Sarpanch** are similar to those of **Sarpanch**. Like the latter, he remains in office for a period of one year unless he dies, resigns or is removed earlier. His term of office can be extended also up to a period of six months, if it is deemed necessary. Besides, he can be re-elected after the expiry of his term of one year².

Both the **Sarpanch** and **Naib-Sarpanch** are by law, liable to removal from the panchayat on the grounds of misconduct, neglect of duty, continued absence from the area of their jurisdiction and their failure to attend six successive meetings of the panchayat. They can be removed from their office if in the opinion of the prescribed authority their conduct becomes undesirable in the interest of the public³. As a matter of fact, the entire panchayat can be suspended or abolished if in the opinion of the government, it makes default in the performance of its duties imposed on it under the law of the State.

Every meeting of the panchayat is presided by **Sarpanch**, if present. In his absence or during the vacancy of his office, the **Naib-Sarpanch** presides the meetings. But when both the **Sarpanch** and **Naib-Sarpanch** are absent, the meeting are presided by such Panch as the members present may elect⁴.

Functions and Powers

Panchayats make necessary arrangements for satisfying the requirements of their respective areas in numerous ways. Apart from the construction and repairs of the village roads, these arrangements include⁵ :—

- (1) Protection of all agricultural land, **pastures** and village **abadi** from floods and erosion ;

1 Ibid.

2 Ibid., P. 827.

3 Ibid.

4 Jammu and Kashmir Laws, Vol. IV (1973), P-828.

5 Ibid., PP. 834-839.

1 Jammu and Kashmir Laws Vol. IV, 1973, PP. 815-886.

2 Ibid

3 Ibid.,

4 Jammu and Kashmir Laws, Vol. IV (1973), PP. 825-826.

- (2) Construction of new irrigation **khuls**, water ways, silt clearance, embankments, drains, bridges and thoroughfares ;
- (3) Disposal of unclaimed corpses, carcases and **night-soil** ;
- (4) Registration of birth and deaths ;
- (5) The excavation, maintenance, improvement and disinfection of wells, tube-wells, springs and tanks ;
- (6) Cleaning and lightning of streets and improvements of the sanitary conditions of the villages ;
- (7) Promotion and encouragement of cottage industries, child-welfare, co-operative farming, plantation of trees, reading rooms etc. ;
- (8) Organisation of welfare activities among women and children and among illiterate sections of the community;
- (9) Organising voluntary labour for community works and works for the uplift of the village ;
- (10) Improvement and development of agriculture and horticulture
- (11) Development of agriculture by bringing under cultivation all the cultivable land situated within the panchayat area ;
- (12) Providing places for use as public slaughter houses, latrines, urinals, drains, cesspools etc. ;
- (13) Prevention of offences relating to encroachments, nuisances, adulteration and weights and measures ; and
- (14) Providing of assistance to government officers in the performance of their duties within the panchayat areas.

Financial Resources

The Village Panchayat Act of 1958, provides for a fund, called the Panchayat Fund which enables the panchayats to discharge their functions smoothly. It lays down that the following shall be credited to and form part of the panchayat fund¹.

¹ Jammu and Kashmir Laws, Vol. IV (1973), PP. 846-849.

- (1) The proceeds of any tax, fees, tolls, and license fees levied under this Act ;
- (2) Fees levied for the institution of suits and cases under section 92 ;
- (3) Sums contributed by the government, grants-in-aid or donation and gifts of money by private persons for public utility works ;
- (4) The sale proceeds of all dust, dirt, dung or refuse collected by the panchayat ;
- (5) Fines and compensation paid to the panchayat ;
- (6) Commission on collection of land revenue, if so ordered by the government ;
- (7) Such portion of the rent or other proceeds of **Nazool** property as the government may direct to be placed to the credit of the panchayat fund ;
- (8) All sums received by way of loan, subvention etc. ; and
- (9) Income derived from village fisheries, nurseries, **cattle ponds**, **bus-stands** fees, sand, **bajri** and stones.

In case of financial emergencies the panchayats can borrow money from the government, co-operative societies and scheduled bank¹.

Panchayati Adalats

The Village Panchayat Act of 1958, provides for the establishment of the Panchayati **Adalats** in each panchayat area. Comprising 5 members elected by panches amongst themselves, these **adalats** are conferred with judicial powers to deal with cases which include² :

- (1) Suits for money due on contracts, not affecting an interest in immovable property ;
- (2) Suits for the recovery of movable property, and for value thereof ;

¹ Jammu and Kashmir Laws, Vol. IV (1973), PP. 847-848.

² Ibid., PP. 852-857.

- (3) Suits for compensation for wrongfully taking or damaging movable property ; and
- (4) Suits for damage caused by cattle trespass where the amount of value of the claim does not exceed Rs. 150/-.

But there are certain categories of cases which can not be brought before the Panchayati Adalats. These cases include¹ :—

- (1) A balance of partnership account ;
- (2) Share or part of a share under intestacy or for part of legacy or legacy under will ;
- (3) A case by or against the government on a co-operative society, servants of the government and member of local authority in the official capacity ;
- (4) A case involving a person of unsound mind ;
- (5) Any dispute or matter in respect of which any suit or application should be cognizable by a revenue court ; and
- (6) A case in which any member of the Panchayati Adalats is party or is directly or indirectly interested in such suit or case.

But the Panchayati Adalats are empowered to take cognizance of and try all or any of the following cases² ;

- (1) Negligently doing any act known to be likely to spread the infection of any disease dangerous to life ;
- (2) Fouling water of public spring or reservoir ;
- (3) Causing danger, obstruction or injury to any public way ;
- (4) Negligent conduct with respect to fire or combustible matter ;
- (5) Obscene acts and songs ;
- (6) Voluntarily causing hurt ;

¹ Ibid. PP. 858-861.

² Jammu and Kashmir Laws, Vol. IV (1973), PP. 855-856.

- (7) Assault or use of criminal force otherwise than on grave provocation ;
- (8) Assault or use of criminal force on grave and sudden provocation ;
- (9) Theft, where the value of property stolen does not exceed Rs. 100/- ;
- (10) Mischief where loss or damage caused does not exceed Rs. 75/- in value ;
- (11) Mischief by damage to work of irrigation or wrongfully diverting public water ;
- (12) Criminal trespass ; and
- (13) Intentional insult with intent to provoke breach of the peace.

The Act of 1958 also provides for an appeal that can be made not only to the District Court against the decree passed by the **Panchayati Adalat** but also to the Sessions Court.

The functions of the Panchayati Adalat are conducted under the supervision of a Chairman who is elected by the **Adalat** from amongst its members for a period of one year unless he dies, resigns or is removed earlier².

The blockwise No. of Panchayats & Villages is given as under ;—

District	Name of block	No. of Panchayat	No. of villages
Leh	Leh	14	38
	Khaltsi	8	24
	Nyoma	8	17
	Nubra	6	28
	Durbuck	2	5
	Total	38	112

¹ Ibid., PP. 853-867.

District	Name of block	No. of Panchayat	No. of villages
Kargil	Kargil	8	37
	Shaker Chiktan	5	11
	Diass	4	20
	Sanska	10	36
	Zinsk	7	25
	Total	34	129
Total Region		72	241

CHAPTER XIV

EDUCATION AND CULTURE

Historical Background :

In the past, a traditional system of education was in vogue in Ladakh, shaping the character of pupil in religious and traditional order. Each monastery or **Gumpas** had its own school where boys and girls were taught, besides memorising the ritual texts, to read and write their mother tongue.¹ At some villages the students were also taught traditional mathematics so that they might be able to maintain accounts of the receipt of fees paid by their parents.

Institutions of higher learning, where religious philosophy, astrology, indigenous medicine, mathematics etc. were taught to students, are also said to have existed in the region particularly at Leh. Affiliated to the monasteries, these institutions imparted instructions in logic and official correspondence too.

Likewise the Muslims of Kargil had their traditional schools, called **Maktabas**, which were generally affiliated to the mosques. In these **Maktabas** the students were taught, besides Persian, the Arabic to enable them to read the **Quran**.² Though the basic aim of the **Maktabas** was to impart religious education, they did not fail in enabling their students to read and write, especially the Persian language. Even today there is one Islamic School, with adequate facilities of boarding and lodging, where the Arabic and the Persian continues to be taught by the **Moulvis** and **Scholars**.³

It is, thus, obvious that the system of education prevalent

¹ Inquiry : Vol. I No. 2, Published by Teacher's College Srinagar (August, 1971), P. 10

² Ganhar, J. N; Buddhism in Kashmir and Ladakh. P. 203

³ Source : Development Commissioner, Leh

throughout the region was traditional which, through Gumpas and **Muktabs**, taught the students not only the fundamental rituals and principals of their religion but also worldly and routine affairs.

Western Education :

Modern education did not exist in the region before 1886, when Moravian Mission established a school at Leh which in course of time, became an important centre of learning, transforming the out-look of the people.¹ Further impetus was given to Western Education when such schools were opened at other places. In these schools the scholars were provided facilities not only to conduct researches on history, culture and art of the region, but also to translate the Bible and compile dictionaries.² Arrangements were also made for sending students, having aptitudes for higher learning to the Mission School at Srinagar where from they returned as the foremost Ladakhi Literates to serve their people and stimulate interest in education throughout the region.

In 1892, however, an Anglo-Vernacular Lower Primary School was opened in Leh under the administrative control of **Wazir-i-Wazarat**, which had 42 students on its rolls. By 1898, this number came down to 24.³

In 1898-99, the Education was re-organised and reforms were introduced, resulting in the abolition of English classes and the introduction of Vernacular, Urdu and Tibetan, at Leh School. The number of students, classified on the basis of religion and subjects taught, is shown in the following table⁴ :—

Place	Standard No. of students on Rolls		Subjects taught	
	Muslims	Non-Muslims	Vernacular	Math-English
Ladakh	20	14	34	34

¹ Neve, Earnest F; Beyond the Pir Panjal, P. 153

² Neve, Arthur ; Picturesque Kashmir. P. 121

³ Inquiry ; op. cit, P. 10

⁴ Bhag Ram ; Report on the Administration of the Jammu and Kashmir State (1895-96), P. 226

In 1900, a school was opened at Kargil where 48 students were admitted initially.¹ In 1930, the Christian Missionaries opened a Modern School where students were taught on Western lines. Students were also admitted in the Middle School opened in 1938, when the number of the Primary Schools had already risen to 15 at Kargil alone.

According to 1941 census, 90% of the Buddhist population of the region over five years of age were literate in their mother tongue and 5% in english language.²

Standard of Literacy :

Up to 1947, the standard of literacy was generally low in the region, the number of graduates and matriculates being extremely poor.³ The main reasons responsible for this state of affairs were inaccessibility, remoteness and forbidding climate of the region.⁴ The gates of the region were, however, thrown open to the currents and cross-currents of modern civilization after 1947 when a metalled road was constructed from Srinagar to Leh. Consequently, the number of middle and primary schools, which was 3 and 45 respectively before 1947, rose considerably.⁵

According to 1961 census, the proportion of literate persons was 8.3 percent (15.4 males and 1.0 females) which was higher than those of Poonch, Rajouri and Baramulla where the percentage did not exceed 7.9.⁶ But compared to the State and country as a whole, where figures were 11.0 and 24 respectively, the percentage was low.⁷

In 1961, the following was the percentage of literacy in the region.⁸

¹ Inquiry ; op. cit, P. 11

² Ibid

³ Stobdan, S ; Ladakh and its problems, PP. 18-19

⁴ Defencing Kashmir : The Publication Division, Ministry of Information & Broadcastng, Govt. of India (Delhi 1949), P. 76

⁵ Report of Educational Organisation Committee, P. 11

⁶ Ladakh Today, Published by Directorate of Information, Jammu and Kashmir Government Srinagar (1962-63). P. 8

⁷ Lead Bank Scheme Survey Report on Ladkah District, 1971, P. 2

⁸ District Census Hand Book Ladakh District 1961, P. P. 13, 38, 48

Region/ Tehsil	Total			Rural			Urban		
	Per- sons	Male	Fe- male	Per- sons	Male	Fe- male	Per- sons	Male	Fe- male
Ladakh Region	8.3	15.4	1.0	7.7	14.4	0.8	22.1	37.7	6.7
Leh Tehsi	10.8	20.1	1.7	9.8	18.4	1.2	22.1	37.7	6.7
Kargil Tehsil	5.9	11.0	0.4	..	..	..	..	..	..

With the opening of new Primary, Middle, High and Higher Secondary Schools during last two decades (1961-71, and (1971-81) the region has registered considerable progress in the field of education and consequently, the literacy percentage has gone up from 8.3 in 1961 to 20.70 in 1981. This is amply borne by the following table¹ :—

Year	Leh District			Kargil District			Ladakh Region		
	Total	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male
1981	24.18	35.37	11.77	17.06	29.49	3.21	20.70	32.50	7.59
Rural	21.71	33.02	9.28	15.75	27.72	2.54	18.69	30.34	5.87
Urban	42.68	52.35	31.18	40.47	58.07	16.58	42.01	54.15	27.00

The literacy percentage of the entire State is as under :—

Kashmr Region			Jammu Region		
Total	Male	Female	Total	Male	Female
22.79	32.04	12.25	30.37	39.72	20.25
17.23	26.77	6.38	24.98	34.63	14.60
38.28	46.66	28.66	60.02	67.20	52.27

From these tables it is obvious that the percentage of literacy in Ladakh is slightly less than that of Kashmir which also

falls behind the Jammu region where the percentage is 30.37. The percentage of literacy in all the fourteen districts of State was as under as per the census of 1981¹ :—

Kashmir Province		Jammu Province		Ladakh Prov	
District	Literacy percent- age	District	Literacy percent- age	District	Litcent- percent age
Anantnag	22.61	Doda	18.20	Leh	24.18
Pulwama	19.98	Udhampur	23.50	Kargil	17.06
Badgam	16.48	Rajouri	23.65	..	..
Baramulla	19.53	Poonch	22.18	..	..
Kupwara	16.03	Kathua	31.44	..	..
Srinagar	33.71	Jammu	43.00	..	..

From this data it is clear that the Kargil District is educationally backward compared to Leh, the literacy percentage of which is even higher than those of other districts of the State excepting Srinagar, Kathua and Jammu.

As already stated the State Government opened more schools in the region to remove its backwardness. The number of Primary and Basic Activity Schools in 1961 was 137. This shows that during two decades, 1941-61, 57.8% of the total number of 237 inhabited villages had been provided with Primary or Basic Activity Schools. Compared to other districts of the State, this percentage is the highest as per the table given below² :—

Name of the District	Percentage of village provided with Primary/Basic Education School
Anantnag	34.6
Srinagar	36.0
Baramulla	47.2
Doda	34.6
Udhampur	27.4

¹ Census of India 1981, Series 8, Jammu & Kashmir, Paper-I, 1981, P. 55
² District Census Hand Book, Ladakh District, 1981 P. 11

Name of the District	Percentage of village provided with Primary/Basic Education Schools
Jammu	27.4
Kathua	32.7
Poonch	38.0
Ladakh	57.8

Education for Women :

Separate educational institutions for women were for the first time established at Leh and Kargil in 1964, and 1969 respectively. Before that women were educated at **Gumpas** and **Maktabas** where men too received education in traditional manner. Illiteracy is gradually being eradicated and women, who were averse to education as they regarded it a waste of time are now attending the educational institutions with great enthusiasm. Parents are too eager about the learning of their daughters. This favourable disposition of Ladakhi women towards education is mainly due to numerous facilities provided to them by the Government. For the promotion of talent, the Government has recruited expert teachers. Even the male teachers are engaged to teach girls though this was not the case in the past.

Categorywise break-up of the educational institutions for female students in the two districts of Ladakh is as under¹ :—

Year	Level of Institutions	No. of Institutions		
		Leh	Kargil	Total
1981-82	Secondary/High/Lower High School/D. I. E	1	1	2
1981-82	Middle Schools	2	..	2
1981-82	Primary Schools	9	17	26

By the end of 1981-82, the number of girls studying in

¹ Statistical Hand Book (1981-82), Leh District, P. 52, Kargil District P. 50

Ladakh was 4640. Following is their district-wise break-up¹ :

Level of Institutions	Number of Students (Girls)		
	Leh	Kargil	Total
Secondary/High Schools	882	324	1206
Middle Schools	1155	403	1558
Primary Schools	1321	555	1876

Generally qualified female teachers are recruited to teach girls. Their number, according to the level of institutions is given here² :—

Level of Institutions	Number of teachers (Female)		
	Leh	Kargil	Total
Secondary/High/Lower High Schools	41	16	57
Middle Schools	57	36	93
Primary Schools	53	35	88

Education of Backward Classes :

For the educational uplift of socio-economically backward classes of the State, the Government of Jammu and Kashmir has made elaborate arrangements and the people of Ladakh region have been immensely benefited by them. To the Ladakhi students seeking admission in degree and professional colleges, outside their region, the Government provides Rs. 125/- every month under Frontier Scholarship Scheme. During 1983-84, 27 students were benefited under this scheme. Besides scholarships the students get educational loans for pursuing their training in professional institutions.

There are other schemes also which enable the Ladakhi students to pursue their education. Among these the following

¹ Statistical Hand Books (1981-82), Leh District, P. 53 Kargil District, P. 51

² Ibid, Leh District, P. 54, Kargil District, P. 52

deserve mention :—

1. Prematric Scholarship (6th to 10th Class).
2. Reimbursement of examination fees (only for 10th class students).

These are given through the Department of Social Welfare.

There are other schemes which provide adequate financial aid to the children, belonging to the families of sweepers and other backward classes. Free of cost, books and uniform too are given to these children from 1st to 4th Primary Classes. Besides, subsidy and loans are provided to the youngmen and women trained at the Social Welfare or any other Government recognised training centres so that they are able to open their own workshops.¹

General Education :

The development of socio-economic infrastructure of modernisation necessitates a well organised educational system and keeping this in view the Government has, since the dawn of Independence, taken various steps to equip the schools with modern facilities and expertise. All schools in the region are under the direct administrative control, supervision and guidance of the Director of Education Kashmir Province who for discharging his duties efficiently, is assisted by various officers and officials stationed at Leh and Kargil.

Information regarding the total number of schools of different categories functioning in Leh and Kargil, total number of students (boys and girls) reading in these schools and the total number of teachers, both male and female, is given in the following table :—

S. No.	Level of Institutions	Number of Educational institutions 1981-82				
		Leh		Kargil		Total
		Male	Female	Male	Female	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Secondary/High/Lower High Schools/DIE	15	1	16	1	33
2.	Middle Schools	28	2	36	..	66
3.	Primary Schools	145	9	162	17	333
Total :		188	12	214	18	432

¹ Source : Directorate of School Education, Srinagar

S. No.	Level of Institutions	Number of Students in Educational Institutions (1981-82)				
		Leh		Kargil		Total
		Male	Female	Male	Female	
		(8)	(9)	(10)	(11)	(12)
1.	Secondary/High/Lower High Schools/DIE	1217	882	1905	324	4328
2.	Middle Schools	2280	1155	2189	403	6027
3.	Primary Schools	1863	1321	3385	555	7124
Total		5360	3358	7479	1282	17479

S. No.	Level of Institutions	Number of teachers in Educational Institutions (1981-82)				
		Leh		Kargil		Total
		Male	Female	Male	Female	
		(13)	(14)	(15)	(16)	(17)
1.	Secondary/High/Lower High Schools/DIE	154	41	159	16	370
2.	Middle Schools	114	57	143	36	350
3.	Primary School	151	53	172	35	411
Total :		419	151	474	87	1131

It is obvious, thus, that there prevails co-education at some High Schools in the region, the reason being the non-availability of adequate facilities to teach science at some High Schools meant for girls.

Primary Education :

For eradicating ignorance, developing human resources and creating a general awareness of the ethos of the society, the Government has earnestly endeavoured to develop the Primary education on scientific lines. Various Commissions/Committees were appointed from time to time to suggest improvements in the existing system and their recommendations were imple-

mented to make available to every child the facilities of Primary Schooling. Attention was also paid towards reducing the number of drop outs in classes from I to V and for attracting more and more children towards Primary Schools the Government started giving incentives, comprising free text books, uniforms and scholarships to the children. The Government continues to spend huge amount of money on this scheme.

There were 45 Primary Schools in Ladakh in 1939 and in 1961 the number rose to 162 out of which 15 were meant for girls. By the end of 1981-82, the number of these schools reached up to 333 (307 for boys and 26 for girls) out of which 154 are functioning in Leh and 179 in Kargil.

The total number of students on the rolls of these schools as on December 31, 1982, was 7124, including 1876 girls. The number of male and female teachers of these schools was 411. This indicates that on average there is one teacher for every 17 students in these schools.

Middle Schools .

The number of Middle Schools, in the region before 1960 is not known for the Census Report of 1941 is silent about this. In 1960, however, the number of these schools was 4 (3 for boys and 1 for girls) in Leh alone, whereas at Kargil there were only two such schools for boys.¹ In 1970, the total number of Middle Schools throughout the region did not exceed 10, whereas in 1981-82, this rose to 66 (64 for boys and 2 for girls), giving education to students numbering 6027 (4469 boys and 1558 girls), in total. For this number of students there were 350 teachers, 257 males and 93 females.

High Schools

No High School existed in the region before 1951 when one for the boys was opened at Leh. Kargil also came to have one, such school in 1952. By the end of the third Five Year Plan, the number of High Schools in the region rose up to 10 (8 for boys and 2 for girls) and in 1970-71, two Senior Basic Schools were upgraded in High Schools.

¹ Ladakh Today : Published by the Information Department, Jammu & Kashmir Government (Srinagar, 1960), P. 6

Likewise, the Higher Secondary Schools are making rapid progress, their number being two, one for each district, in 1979, whereas that of High Schools was 22 excluding the 8 Lower High Schools.

By the end of 1981-82, there were 33 institutions for Secondary Education, including one District Institute of Education, where 370 teachers taught 4328 students (3122 boys and 1206 girls). Among these teachers 277 have received basic training in teaching.

Over All Look at General Education :

For appreciating what Government has done to eradicate ignorance and illiteracy in the region, it is important to have an overall look at the educational facilities made available to the people from time to time.

In the past two decades i. e. 1961-81, an impressive advance has been made in the field of education. This is indicated by the number of schools, in the region which has risen from 172 in 1961 to 432 in 1981-82. Accordingly, the number of students in these schools has gone up from 4952 (1961) to 17479 (1981-82), thus raising the literacy percentage from 8.3 to 20.7 and the number of teachers from 316 to 1131.

The following table shows the institutions-teachers, teachers-pupil and Institution-Pupil ratio for 1981-82¹ :—

S. No.	Category	Institution-teacher ratio		
		Leh	Kargil	Total
(1)	(2)	(3)	(4)	(5)
1.	All Schools	2.0	2.4	2.6
2.	Secondary/High Schools	12.1	10.0	11.2
3.	Middle Schools	5.7	5.0	5.3
4.	Primary Schools	1.3	1.6	1.2

¹ Source : Directorate of School Education, Srinagar

S. No.	Category	Teacher-Pupil ratio			Institution-Pupil ratio		
		Leh	Kargil	Total	Leh	Kargil	Total
		(6)	(7)	(8)	(9)	(10)	(11)
1.	All Schools	14	16	15.4	44	37	40.4
2.	Secondary High Schools	9	13	11.6	118	131	131.1
3.	Middle Schools	20	15	17.2	114	72	91.3
4.	Primary Schools	17	19	17.3	21	22	21.3

Control and Finance :

All schools including those functioning in the region are financed, administered and controlled by the Government. The Directorate of School Education Kashmir Province is responsible for providing expertise, libraries, laboratory equipment and other facilities necessary for smooth running of these schools in the State

It was in 1936-37, that the first Assistant Inspector was sent to Ladakh to supervise the working of its schools. In 1956, when the number of these schools had gone up, the Government established an office of the District Education Officer there.¹ At present the District Education Officers are stationed at Leh and Kargil. They are assisted by Tehsil Education Officers who supervise the working of schools in their respective Tehsils. There are headmasters heading the High Schools. The overall control of the Department of School Education is with the Director whose office is stationed at Srinagar.

The Department of Education had spent 52.66 lakhs of rupees on various schemes during 1982-83.

Improvement of Educational Standards :

Since the dawn of Independence, considerable improvement has been witnessed in the standard of education. This is due to the fact that Government is favourably disposed towards the development of education in the State. Besides, increasing the number of schools and teachers, it has taken some positive steps

¹ Inquiry ; op. cit, P. 13



A Statue of Buddha carved out of stone at Mulbek



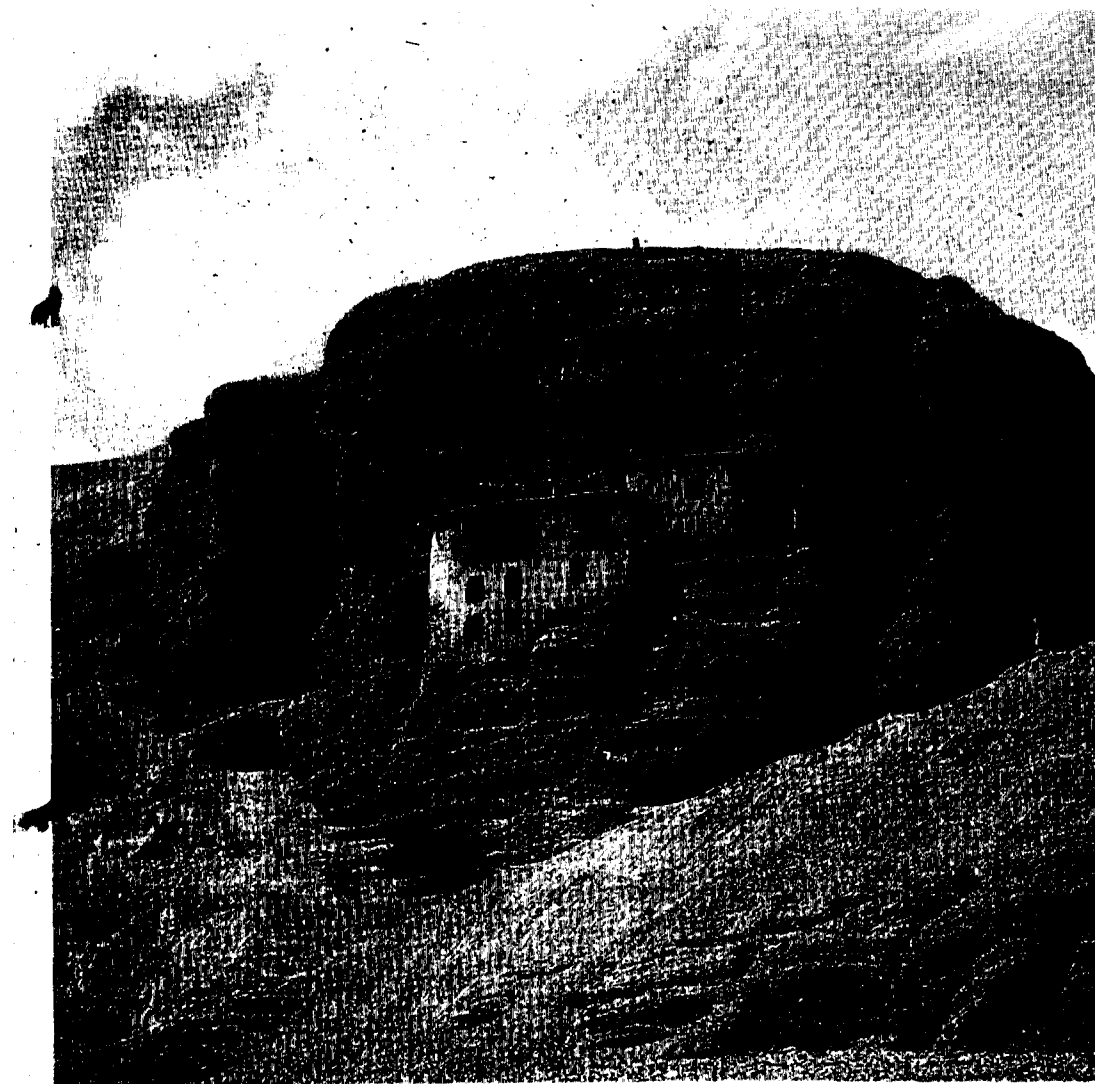
A Ladakhi women paying respects in the traditional way



Archery ; (The traditional game of Kargil)



Horse Polo. (Traditional Sport of Kargil)



The Cave Monastery of Shergole

to improve the quality of education, the arrangement of reorientation courses for teachers being the foremost. These courses are being regularly conducted and opportunities are provided to teachers to improve upon their qualifications. Moreover, courses of study at the secondary level have been revised and changes have been effected to raise the standard of education at the Primary and Middle levels.

In order to bring about uniformity in the courses taught throughout the country, the Government has introduced N. C. E. R. T. books and for improving the professional competency of in-service teachers to teach these books short training courses are regularly conducted, under the supervision of the District Institute of Education, Kargil.

Professional and Technical Education :

At present there are no professional and technical institutions in the region. Consequently, a definite number of students from the region are admitted in the professional and Training Colleges of Srinagar and Jammu every year. Students are also sent outside the State. Adequate financial assistance, loans and scholarships, are given to these students.

Physical and Cultural Education :

Like class room teaching, physical and cultural activities play a vital role in shaping the character of the students. It is natural, therefore, that each school is provided with adequate facilities and finances necessary for promoting such activities among the students. Thus dance, music, sports and inter-school tournaments are regularly being held to enable students to take part in them. Youth camps, scout camps and educational tours are also conducted not only to develop a sense of discipline, comradeship and competition among students but also to widen their outlook.

Both boys and girls are encouraged to participate in these activities so that they are able to develop their personalities.

Oriental Education :

In spite of deep dents made by western system of education

into the traditional structure, the oriental education continues, through Gumpas and **Maktabas**, to hold its ground in the region, enabling people to have knowledge of their religions and scriptures.

Social Education :

Aiming at creating an awareness of social problems among the rural illitrates, the scheme of social education is operating in the region through Adult Education Centres which are being regularly held in villages. The number of these centres is 100. They conduct their work under the administrative control of the Directorate of School Education, Kashmir.

Public Library :

For promoting education and knowledge among the people, there are public libraries and reading rooms in the region, numbering 5 in total.

The following table contains the details of these public libraries-cum-reading rooms¹ :—

S. No.	Location	Year of Establishment	No. of Books	No. of visitors
1.	Leh	1962	15714	60
2.	Khaltsi	1981	N.A.	70
3.	Kargil	1962	6000	90
4.	Zankar	1982	483	30
5.	Dras	1980	365	20

Publicity Centres :

There are seven information centres in the region. Besides, organising Cultural Programmes, debates and **Mushairas**, these centres stage shows for the entertainment of the people and for publicising the developmental activities of the State. Such shows are also being arranged in the interior of the region where people evince great interest in them.

¹ Source : Directorate of Libraries, Srinagar

The Buddhist Culture :

The influence exercised by Buddhism on the people of Ladakh is clearly seen in their customs, manners, attitudes and culture. Most of the cultural activities of the Ladakhis thus revolve round the Buddhist monasteries and Gumpas, the centres of religion where monks, nuns and priests are seen shaping the character of the people in a religious order. An important feature of the life of these monks and nuns is that they strictly adhere to the discipline prescribed by Buddhism and follow a path different from those of the ordinary Buddhists. They live apart and nuns are not allowed to enter the premises of certain monasteries. But in spite of this, they mix freely in daily life and in certain monasteries nuns undertake the responsibility of cooking, washing etc.

There are two categories of monks, one meant for spiritual matters and other for wordly affairs. The spiritual monks devote most of their time to studies, teaching, **puja** and prayer and also organise festivals, dances and plays, whereas the wordly monks cultivate land, look after cattle, indulge in trade and collect rent and alms.

Contrary to this the nuns, called **Chomo** devote their time exclusively to studies, worship and other religious matters. Nunship is not restricted. Any girl can be admitted to a monastery for nunship provided she goes through certain rites. After having been blessed by the head of the monastery, the girl is given a new name. She wears a uniform and shaves her head and stays at home or at monastery quarters meant for females. Besides meditation and prayers, nuns attend to monastic chorus.

The most influential people in the society are Lamas, without whom the socio-religious life of Ladakh seems barren. Serving as priests, teachers, physicians and astrologers, these Lamas are held in esteem and the most important among them, called **Tulkies** or **Kushoks** command greater respect. The visit of a **Tulk**, the spiritual preceptor to a village is a great event. There are only a few **Tulkies** for the Gumpas of Hemis, Spituk, Phiang, Likir, Stagna and Rizong. The total number of Lamas is about 1500 and out of these 1100 live at Leh and about 400

at Zanskar. About 500 Lamas are attached to Hemis and Chemre Gumpas.

Being well maintained and decorated, Gumpas present a delightful sight. Built on the hill tops, these have pathways lined with mani-walls, stupas, kaghan and mani-laaskar and their interior always fumigated with incense. The prayer wheel, inside the Gumpas, is often surrounded by the devotees who set it in rotation to send their prayers to heaven. With each Gumpa is attached a Library where books on religion and also on other subjects are available. Among the Gumpas, conspicuously known are those of Hemis, Alchi, Nyoma, Spituk, Thilksey, Shay, Stagna, Lingeshet, Saspool, Rizong, Chemre, Mathu, Saktie, Lamayuru, Taktak, Likir, Sankar and Phiang.

For the maintenance of Gumpas, there are big endowments mostly comprising fertile tracts of land. Management is entirely in the hands of priests who discharge both spiritual and temporal duties efficiently. For spiritual matters, Chos-Thimspa and Chhamspen are responsible. Former looks after matters pertaining to maintaining discipline whereas the latter conducts religious dances. Likewise, Chhagzed, the Manager Nyerpar, the Steward and Phinyor, the form Steward look after temporal affairs.

The Buddhists of Ladakh are known for their religious devotion. They keep in their houses the chapel and images of Lord Buddha and other deities and often carry religious texts with them when on a long journey. Besides Chanting mantras, revolving prayer wheel and burning incense to lend religious colour to the atmosphere are routine matters hardly missed by any Buddhist.

These Buddhist, mostly concentrated in Leh and Zanskar, constitute two Sects, Nigmapa and Gelugspa or the Red Sect and the Yellow Sect; the former having its strong holds in the Hemis, Chemre, Phiang, Taktak and Stagna and the later in the Spituk, Thiksey and Likir monasteries.

In spite of their devotion to Buddhism the people are by and large tolerant, non-violent, social and friendly, offences like murder and dacoity being almost unknown to them. Thus,

conversion, to other religions does not cause a stir or tremor in the region. Most of the families have members professing different religions, all of them having access to Gumpas, Mosques, Churches and other places of worship.

Stone Inscriptions and Buildings :

Stone inscriptions, bearing Buddhist mantras, "Om mani padme hun." are generally found in every village. Below Khaltsi there is a stone depicting a tiger chasing a small animal.

At Bazgo are seen the ruins of an extensive fort on a rocky ridge which have huge **Chortans** and **Mani-Walls**.

Pillars, on the road leading to Kargil, bearing figures of goddesses and their female attendants are of great historical value. They are generally 2 metres high and 36 centimetres thick. The palace, comprising nine storeys, built by Gyalpo Singhe Nyamgyal in the 16th century give a conspicuous look to Leh. There is also a fort, with a spring inside, which was built by Wazir Zorawar Singh in 1836.

Gumpas are also of monumental importance lending immense grandeur to the architectural beauty of the region. Built conspicuously on slopes of hills and summits of rocks, these Gumpas are enduring examples of various forms of art and architecture. The material used in these construction consists mostly of timber and unbaked bricks and the wooden doors and lintels which are richly carved, provide a fascinating look.

The Alchi Gumpa is a notable example of the wooden architecture, having wooden pillars surmounted by beautifully carved capitals with ornamented cornice. The Gumpas at Manika, Sumdo and Mauggu represent similar characteristics. The Vihars near Thiksey, Wanla, Lingshet, Chiktan and Bazgo are however in ruin.

The Tsemo Gumpa, which once served as the residential palace of Gyampo Jamyang Namgyal, is situated on the highest summit in Leh. The most interesting thing to see in it is the high statue of the god of love, called **Bhamba**.

Shankar Gumpa, belonging to the Yellow Sect of the Bud-

dhists, is the only example of construction of religious nature built on plain ground.

At Lamayuru Gumpa, the wooden pillars are hung with tapestry and ancient silk banners and inside there are paintings of Buddha and other dieties.

Hemis Gumpa is the most important and richest monastery in Ladakh, having the capacity to accommodate about 300 Lamas of Red Sect.

Frescoes :

The walls and rooms of the monasteries in Ladakh are decorated with beautiful and brightly coloured Frescoes, marvellous paintings testifying to the artistic skill of the people of Ladakh. Representing various aspects of Buddha and other dieties these paintings are found not only in monasteries but also in certain caves. They are a great source of information, depicting local dress, customs, life and thought.

Scrolls of Thankhas .

Marvellous parchments or scrolls of paintings on cloth, containing figures of dieties and bearing impressions of nature, clouds, fire, water, vegetables and animals life, are found in almost all monasteries called Thankhas. These scrolls adorn walls of monasteries.

Sculpture :

The art of sculpture has also been popular in the region. This is testified by images found at Mulbek and Shay. The colossal image, called Chamba, at Mulbek is carved on the face of perpendicular rock, having ear-rings, necklaces and bracelets. Similarly, image at Shay is another notable example of art sculpture at the orders of King Nyima in about 975 A. D.

Images :

Gold, silver and copper images are housed by all monasteries, the biggest being of Buddha at Shay Palace which is wrought in copper. Statues at Hemis are mostly gold plated and studded with precious stones.

Clay and Metal Work :

Pots and utensils made of clay as well as metal are found in monasteries. Besides, many clay modules stamped with the image of Buddha and other dieties are found deposited in the stupas. These are said to have been made from the mixed ashes of cremated people.

Dances and Songs :

Music, dance and songs, generally accompanying religious fairs and festivals, make the life in Ladakh quite colourful. Dramas performed by dancers wearing masks and songs sung generally show that all work and no play is not the motive of the life of Ladakhis. Their humdrum life is thus punctuated by mask-dances and group dances performed by dancers who are not professionals but the sons and daughters of the people, the gentry and aristocrats. The mystical dances are performed, on the eve of religious festivals, by Lamas to the accompaniment of band maintained by every monastery.

Even in times of adversity Ladakhis do not give up customary merry-makings and do it through mystical dances.

Mask-dances take place at Spituk every year on 25th day of the 11th Month of the Ladakhi calendar, which generally falls in January.

Then there are devil dances performed at Phiang, Matho and Chemre Hemis. however, is a great centre, of this dance which takes place on 15th June and 15th July every year and is performed in accordance with the Tantra text.

Group dances too are performed every year on the eve of Losar, the New Year which is celebrated between 19th and 22nd of December. On the occasions of marriages and births also dance shows take place.

School of Buddhist Philosophy :

There is a school of Buddhist Philosophy at Choglamsar which is financed by the Central Government. About 60 Lamas are receiving education in Tibetan, English, Hindi and other subjects. Each of them is given a scholarship of Rs. 65/- per month. The school is residential one. Recently an international Seminar was held there.

CHAPTER XV

MEDICAL AND PUBLIC HEALTH SERVICES

Historical background

Ladakh had no scientific medical and public health services programme in the past; modern systems of water supply and sanitation being unknown to its people. Various ailments and diseases frequently occurring in the region due to unhygienic conditions were, however, remedied by means of indigenous drugs, composing of elephant's milk, herbs and leaves, prescribed by **Amchies**, traditional and hereditary medical practitioners who treated the patients not in dispensaries and hospitals but at their houses. Besides prescribing boiled water, a practice which is still followed by Ladakhis as a remedy for ordinary diseases these **Amchies** gave vegetable substances which the sick used as the most valuable medicine, no matter what their complaint might be.

The Ladakhis also believed in the practice of witches as a prevention of disease. Being still prevalent in the region, this belief inspires many Ladakhis to obtain occult powers by drinking the concoction of human flesh, milk and other ingredients. In order to procure flesh, the aspirants have to make unrelenting endeavours as people would do when cannibalism prevailed in the region before the advent of Buddhism.

The common practice of swearing on mother's flesh, **Amai-Shai**, is believed to reflect the features of cannibalism and human sacrifice, the primitive religion of Ladakh.

Modern medicine and surgery

The introduction of the modern system of medicine, allopathy and surgery is attributed to the arrival of the Christian



Child Care Unit in the Hospital

1 William Woodville Rockhill. The Land of the Lamas, PP. 132-133



Missionaries in the region. Coming in the beginning of the present century, these missionaries made available to the people the modern medicines enabling them to protect themselves against the effects of small pox, tuberculosis, Cholera etc. which used to take a heavy toll of life in the form of epidemics. The allopathic system of medicine, especially surgery became exceedingly popular under the guidance of the missionaries who opened dispensaries and hospitals in the region.

With the dawn of Independence, the dispensaries and hospitals, the institutions of modern medicine and surgery came to be organised on firm footing. The broad objectives of health programme, under the supervision of able doctors of the Government, have been not only to control and eradicate communicable diseases but also to augment training courses for medical and para-medical personnel in the region during the last 35 years. Besides employing the traditional **Amchies** to cure disease through indigenous system, the Government has opened dispensaries and hospitals throughout the region to provide curative and preventive health services to the people. Through the Primary Health Centres, supported by sub-centres and hospitals, the people of rural areas get free medical aid. Under various health programmes, launched so far especially after the planning process started in the State, notable achievements have been made in regard to the eradication of malaria, small-pox and tuberculosis.

The statistical data available with us gives a clear idea of birth and death rates and the causes of the mortality. For 1951, 1961, 1971 and 1972, the birth and death rates per thousand are given below :

Year	Birth rate per 1000 population	Death rate per 1000 population	Net increase per 1000 population
1951	6.62	10.00	-3.5
1961	7.43	6.43	+1.00
1971	8.00	6.08	+2.72
1972	8.39	4.83	+3.56

The following table shows the causes of mortality for 1951, 1961 and 1971:—

Year	Cholera	Malaria	Pneumonia	Typhoid	T.B.	Accidents & Injuries
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1951	384	68	..	42	21	..
1961	..	..	..	..	..	..
1971	2	..	..	..	..	..

Year	Dysentery and Diarrhoea	Fevers	Cough & respiratory diseases	Small Pox	Others	Total
(1)	(8)	(9)	(10)	(11)	(12)	(13)
1951	..	..	..	..	315	830
1961	..	..	..	..	..	..
1971	..	220	154	6	202	584

During 1981, 1013 persons were born and 473 persons died in Ladakh. Their districtwise breakup and the cause of death as recorded under normal registration system is given below:—

Year	Births			Deaths		
	Leh	Kargil	Total	Leh	Kargil	Total
1981	536	507	1043	208	265	473

Number of deaths recorded by various causes in 1981 are given below:—

S. No.	Cause of Death	Number of Deaths		
		Leh	Kargil	Total
1.	Accidents and injuries	8	1	9
2.	Cholera	2	..	2
3.	Small Pox	..	..	..
4.	Plague	..	..	..
5.	Maternal Cause	..	2	2
6.	Fevers	26	75	101
7.	Respiratory Diseases	11	22	33
8.	Diarrhoea & Dysentery	3	22	25
9.	All other causes	158	143	301
Total :		208	265	473

Medical facilities

Health being an important factor in the development of human resources, steps have been taken to protect it against unhygienic conditions and fatal diseases. For this purpose a net work of hospitals and dispensaries has been established by the Government in the region, which work round the clock, looking after the sick. There are three hospitals, one at Leh and two at Kargil, which are adequately equipped with the latest facilities, having the bed strength of 80 and 90 respectively. Besides, 21 dispensaries/health units, 71 first aid centres and separate centres for controlling tuberculosis and venereal diseases, there are a few dental clinics, Child and Maternity Welfare Centres, a Public Health Laboratory at Leh, one Mobile X-Ray Unit, one Mobile Dental Unit, one Mobile Dispensary Ambulance, 2 Public Health Units and a Sanitation Unit. A table containing the number of medical institutions in the region is given below:—

**Number of Medical Institutions (block-wise) in Ladakh Region
as on 1980-81.**

S. No	Type of Institutions	Leh District					Total
		Leh Block	Khaltsi Block	Nyemoa Block	Nubra Block	Durbuk Block	
1	2	3	4	5	6	7	8
1.	Hospitals,	1	..	..	..	..	1
2.	Pry. Health Centres	..	1	1	1	..	3
3.	Sub Centres	..	2	2	2	..	6
4.	Allopathic Dispensaries	3	3	..	2	1	9
5.	Medical Aid Centres	11	11	7	8	..	37
6.	Family Welfare Centres	1	..	..	1	..	2
7.	Leprosy Centres	1	..	..	..	..	1
8.	Amchi Centres	5	7	9	4	..	25
9.	Mobile Dispensaries	1	..	..	..	..	1
10.	T, B, Hospital/ Centres,	1	..	..	..	..	1
11.	Post Martum Unit	1	..	..	..	..	1
12.	Ancillary School for ANMS (Medical Assistants)	1	..	..	..	..	1
Total :		26	24	19	18	1	88

1 Directorate of Health Services, Srinagar.

S. No.	Type of Institutions	Kargil District					Total
		Kargil Block	Dras Block	Chiktan Block	Sankoo Block	Zaskar Block	
1	2	3	4	5	6	7	8
1.	Hospitals	2	..	..	..	..	2
2.	Pry. Health Centres.	..	1	1	1	1	4
3.	Sub Centres,	..	2	2	2	2	8
4.	Allopathic Dispensaries	4	1	2	4	1	12
5.	Medical Aid Centres	13	3	2	10	6	34
6.	Family Welfare Centres	1	..	..	..	..	1
7.	Leprosy Centres	1	..	..	..	..	1
8.	Amchi Centres	3	1	7	..	6	17
9.	Mobile Dispensary	1	..	..	..	..	1
10.	T, B, Hospital Centres,	1	..	..	..	..	1
11.	Post Martum Unit	..	..	..	..	..	..
12.	Ancillary School for ANMS (Medical Assistants)	..	..	..	..	..	..
		26	8	14	17	16	81

It shows the interest, the State Government is taking in the improvement of the Public Health in the region.

In the region the number of medical institutions has gone up from 130 in 1979-80 to 184 in 1981-82.

The following table shows the number of patients treated during 1976-77, 1977-78, 1978-79, 1979-80, and 1980-81 in the hospitals and dispensaries of the entire region :—

Year	Outdoor Patients	Indoor Patients	Total
1976-77	180673	1116	181789
1977-78	246897	1485	248382
1978-79	172932	1497	174429
1979-80	101623	1365	102988
1980-81	136002	1869	137871

Common diseases

Owing to dingy houses, high altitude of the region and unhygienic conditions, respiratory diseases are common, causing considerable mortality in the region. Besides, incidence of measles is occasionally noticed and to eradicate this disease the Government has undertaken a wide programme of vaccination under which people are vaccinated free of cost.

Similarly, to control the incidence of Leprosy which is high in the areas like Nubra and Khamti, the Department of Health has trained five local officials at Nani, Allahabad during 1980-81, besides, imparting basic knowledge in Leprosy to the field staff assistants. As a result, 138 cases of Leprosy were detected in Leh district during 1981-82 and necessary treatment was provided to them in time.

Gastrointestinal troubles and skin diseases are also common in the region.

Public health

Excepting Government dispensaries, Health Units, Hospitals, Family Planning Centres and Clinics, there are no private clinics and hospitals operating in the region.

The number of medical personnel, serving in the region is as follows :—

Number of Medical Personnel as on 1980-81

S. No.	Category	Number of Medical Personnel		
		Leh District	Kargil District	Total
1.	Doctors	30	30	60
2.	Nurses	18	15	33
3.	A. N. M.	46	51	97
4.	Medical Assistants	46	70	116
5.	Laboratory Technician (including X-Ray Technicians)	5	15	20
6.	Basic Health Workers	14	23	37
7.	Health Inspectors	2	4	6
8.	Health Visitors	2	4	6
9.	Para Medical Assistants	1	1	2
10.	Anchies	25	17	42
Total :		189	230	419

Supply of drinking water

In the towns of Leh and Kargil drinking water is supplied by tapping water from the reservoirs and by engaging water tankers. The Central Ground Water Board is also exploring the possibilities of under ground water in the region and have so far successfully drilled two tube wells for supplying water to the town of Leh. The supply of potable drinking water being one of the basic programmes of the development plans, efforts are underway to provide it to the villages which have been identified disadvantageous in respect of the availability of water.

The table given below shows the number of villages covered under tape water supply scheme and population benefited so far :

District	Total No. of inhabited villages (Nos.)	Rural Population as per 1981 census (in lakhs)	Covered under Potable Drinking water supply (as per 1981)	
			Villages covered	Village Population benefited
Leh/ Kargil	235	122127	30	7000

Family planning

Family Planning, a welfare programme aiming at raising the standard of the common masses by checking the excessive growth of population, was introduced in the region during 1963-64. There are at present, two family planning centres, attached to Leh and Kargil hospitals, inspiring parents to regulate and limit the number of their children who otherwise suffer for want of proper food, education and affection. Each of these centres is headed by the Extension Educator but necessary medical advice and operations are conducted by the doctors. Thus, during 1970-71, 20 Vasectomy Operations were performed in the region. In 1975-76, the number of such operations rose to 73. At the Family Welfare Centre, Kargil 7 operations of Vasectomy and 15 of tubectomy were performed during 1980-81.

Sanitation and slum clearance

Nature has been very kind to the region in providing it with rarefied atmosphere which greatly contributes to the development of conditions congenial to public health and physique. The absence of humidity in the air further contributes to this development, but the increasing influx of tourists and rural population particularly in Leh and Kargil towns results in environmental pollution. The need for properly resigned and laid out sewerage and drainage scheme is being acutely felt for, though much is being done by the notified area committees of the region.

Vaccination

Constituting an important part of the Public Health Service Programme, vaccination has played a vital role in preventing small-pox in the region. It is in pursuance of the Act of 1963, that the vaccination is being regularly done and after an interval of 5 years the people, in both urban and rural areas, are benefited by it. Soon after launching B.C.G. campaign in 1972-73, the Health Department deputed a team which started vaccination at various places. The number of persons, thus vaccinated and re-vaccinated during 1976-77, 1977-78, 1978-79, 1979-80 and

1980-81 is as follows :-

Year	Persons Vaccinated		
	Vaccinated	Re-Vaccinated	Total
1976-77	6268	23698	29966
1977-78	4192	24325	28517
1978-79	7025	16880	23975
1979-80	6518	8637	15155
1980-81	2083	1706	3789

Training and Research Centres

For imparting necessary training to compounders, sanitary inspectors, laboratory technicians, nurses and dias, Health Department has started an elaborate programme in the region. Trained persons have been employed for this purpose who conduct regular courses in the region. Besides, a good number of students from the region are undergoing training in medicine/surgery and nursing at the Medical Colleges of Srinagar and Jammu.

The following table shows the number of students admitted in Government Medical College, Srinagar for the last five years from the region :-

Year	No. of Students	Amount of Scholarship
1979-80	3	Rs. 12599.00
1980-81	2	Rs. 4245.00
1981-82	6	Rs. 9516.00
1982-83	3	Rs. 4339.00
1983-84	4	

At present, there are 3 candidates who have been registered for P.G. Course (for M. D/M. S. Courses). One seat for every session is reserved for the region.

Rehbar-i-Sehat

The State of Jammu and Kashmir deserves credit for being the foremost in launching what is called the Pilot Project of

Rehbar-i-Sehat, a broad based programme the main aim of which is to make available to the rural masses the effective and efficient medical aid. Through this scheme, which is being run in close coordination with the Department of Education, the villagers of the entire State have been benefited immensely.

It was in 1980, that the scheme was for the first time introduced in the region, Nubra block being the main centre. Then gradually the scheme was extended to other blocks of the region.

As a result of the coordination between **Rehbar-i-Sehat** and the Department of School Education, teachers both male and female having aptitude for the scheme, are trained as para professional functionaries at the District Hospitals of Leh and Kargil. The training course lasts for three months after the expiry of which period these teachers perform the following functions :—

- (a) They create awareness among the rural masses regarding common health problems and hygiene.
- (b) They inspire and motivate people for Family Planning and also refer various cases to the appropriate health centres.
- (c) They supervise births and deaths recorded by Chowkidar or village Panchayat Secretary and render assistance to their respective schools in the development of Health Programmes.
- (d) They also participate in village health working group and render first aid and curative treatment to the needy.

Besides, these teachers educate villagers on the problems of environmental cleanliness and sanitation. For this they visit villages, generally after duty hours in their schools, and move along with their first aid kit bags to treat the minor ailments.

Year and block-wise number of teachers trained in the region for **Rehbar-i-Sehat** is given below :—

S. No	Name of the Block	Year	No. of teachers trained	No. of teachers in position
1.	Nubra	1980	25	20
2.	Nymo	1981	23	23
3.	Sankoo	1981	20	14
4.	Khultsi	1982	35	35
5.	Chiktan	1982	25	25

CHAPTER XVI

PUBLIC LIFE AND SOCIAL SERVICE

It was immediately after the Treaty of Amritsar, concluded between Maharaja Gulab Singh and the British in 1846¹, that the territories of Jammu, Kashmir and Ladakh were united in a single political entity, presently called the Jammu and Kashmir State. Since then the State has in succession witnessed tremendous changes in its socio-economic and administrative set-up.

Soon after having consolidated his position in the State, Maharaja Gulab Singh adopted various measures to effect changes in its traditional system of administration. He divided the administration into several branches and entrusted its civil branch to a council of courtiers, which was to be headed by a senior-courtier, a man of considerable influence and prestige. Besides, for administrative convenience the Maharaja divided his domains into several provincial divisions, i. e. Jammu, Kashmir, Ladakh and Gilgit, each of which was further sub-divided into Districts and Tehsils.²

The State administrative apparatus was again re-organised in 1886, when Maharaja Ranbir Singh ascended the throne. The new Maharaja set-up Revenue, Civil and Military Departments each of which was put in charge of a Minister. All the Ministers, who headed different departments, were individually and collectively responsible to the Maharaja. They functioned under his direct instructions and control.

The Maharaja also systematised the Criminal Law by enacting Ranbir Panel Code.³

¹ For details see Treaty of Amritsar, 1846

² National Archives of India, Foreign Political Consult, July 1863, November, 73-75

³ Bagh Ram; Note on Administration of Justice in Kashmir State, Nov. 18; 1889.

In 1924, further impetus was given to the State Administration by Maharaja Pratap Singh. The Maharaja appointed an Executive Council comprising five members, and himself became its president. Although the council was empowered to take important decisions regarding administrative matters, the Maharaja retained his inherent powers of veto and control.¹

Maharaja Hari Singh, who succeeded his uncle, Pratap Singh in 1925, also took steps to bring about changes in the administrative set-up of the State. He introduced reforms in police, revenue and civil departments and promulgated new constitutional provisions for the Government of the State. ²Then in 1927, the Maharaja re-organised the Executive Council, raising the number of Ministers to six. He also appointed an Administrator-in-Waiting who despite having no portfolio, functioned as the main link of communication between the ruler and his ministers.³

Moreover, the Maharaja appointed a High Court of judicature in 1928 and restored to the courts full criminal and civil jurisdiction.⁴

The Maharaja made arrangements for protecting in numerous ways the interests of the people of the State. He issued an order that grants of land for building purposes were to go to the State Subjects only. He made it his State Policy that only State Subjects were appointed to posts under his Government. Besides, he gave incentives to the State Subjects regarding contracts which were to go to them even if the bid of the non-State Subjects was five percent more favourable. The Maharaja also instructed the officials of the Department of Civil Supplies to give preference to indigenous products.⁵

¹ Constitution of Jammu and Kashmir State Council 1924.

² Constitution of Jammu and Kashmir State Council and the Rules of Business, State Council Resolution Nov. 28, 1925. Jammu and Kashmir Government Notification Order No. 3 dated March 11, 1927.

⁴ Ibid; Order No. 1 dated March 25, 1928.

⁵ By State Subject were meant those persons born and residing within the State before the commencement of the reign of Maharaja Gulab Singh and those settled therein before the Samvat 1984 (1885 AD) and since then been permanently residing therein. (For details see Bulraj Puri; Jammu and Kashmir Federalization P. 25)

Compelled by the public uprising of 1931, Maharaja Hari Singh set-up a Franchise Commission and the Constitutional Reforms Committee, which bodies finally recommended to establish a representative Assembly in the State. Accordingly, in 1934, the Jammu and Kashmir Regulation No. 1, was passed to establish the Assembly, named as the Jammu and Kashmir **Praja-Sabha**. The Assembly, thus established was to consist of 75 members. Out of these 42 were to be nominated and 33 to be elected through Franchise carrying so high qualifications as to make only 6 percent people entitled to vote.

In 1939, Maharaja Hari Singh, repealed the Act of 1934. Instead he introduced a new Act¹ which apart from placating the rising temper of the people in the State and their incessant demand for Self-Government, provided for a legislature body and chamber. The **Sabha** was to consist of 75 members of whom 40 were to be elected and rest to be nominated. Of the elected members, 7 were to be elected by special constituencies representing Taziumi-Sardars, Jagirdars, land holders assessed to land revenue exceeding Rs. 250/- per annum and pensioners receiving Rs. 100/- or more as pension per month. The members of the Council of Ministers retained their ex-officio position in the **Sabha** which they held under the Constitution Act of 1934.² Besides, reserving the powers to appoint official members and those representing certain special constituencies, the Maharaja vested in himself the power to nominate two members to the Assembly.³ The tenure of the **Sabha** was fixed for a period of 3 years. It was empowered to legislate on all matters except those relating to the Maharaja and his family. Likewise, the **Sabha** could not make laws that would infringe treaties, conventions and agreements between the State and the British Government or any other Foreign Power, frontier policy including that relating to Gilgit and Ladakh, Jagirs of Poonch and Chenani, the rights and the privileges of the Jagirdars and Illaquadars, organisation and control of the State forces, Nazool Department, Dharmarth Trust and the provisions of the Constitution Act itself. Under the new Act, provisions were also made for the re-organisation of

¹ Jammu and Kashmir Constitution Act Smvt. 1989.

² Jammu and Kashmir Constitution Act 1939, Sec. 5

³ Ibid., Part VI, P. 21

the High Court and for the appointment of a Board of Judicial Advisors.

In July 1943, the Maharaja appointed another Commission of Enquiry, under the Chairmanship of Rai Bhadur Ganga Nath, the Chief Justice of the State, to review the working of the constitution and to make recommendations to secure the safety, and integrity of the State and also for its efficient administration.¹ The deliberations of the commission were, however, protected and irregular and the result was that much of the enthusiasm with which it had started working died down.

In 1945, the Maharaja issued a proclamation to set-up a Diarchial System of Government and for this purpose appointed two Ministers amongst the elected members of the Sabha one being from the National Conference. As was anticipated the Diarchy did not work effectively. The National Conference Minister Mirza Mohammad Afzal Beg, having little power to do anything resigned from the council only after a year's stay there and actively participated in the Quit Kashmir Movement, launched by the Conference in 1946 as a protest against the autocratic rule.² The revolt flared up but the Maharaja met it with sudden and severe policy of repression.³

In October 1947, the Maharaja acceded to India giving the centre full authority to exercise control over Defence, External Affairs and Communication and reserved the rest of the powers for himself⁴. In his accession document Maharaja Hari Singh specifically stated that his sovereignty over Jammu, Kashmir and Ladakh shall not be varied by any amendment of the Indian Independence Act of 1947, and that nothing shall be deemed to commit him in any way to the acceptance of any future constitution of India.⁵ By doing this the Maharaja enabled the State including Ladakh to evade that process of integration which had been adopted with regard to other Princely States. Consequently, the State succeeded in preserving its historical and socio-cultural identity while acceding to India.

1 Command order dated 12-7-1943, Gazette dated 15th July 1943.
2 Pandit Ram Chand Kak to Mirza Afzal Beg, dated 19th March 1946
3 Bazaz, P.N; History of Struggle for Freedom in Kashmir, P. 225.
4 Instrument of Accession.
5 Ibid.

Soon after the accession was finalised, an Emergency Administration headed by Sheikh Mohammad Abdullah, the popular Leader of Kashmir, was set up in the State to carry on the work of administration at a very critical time when invaders were busy in destroying everything that came in their way.¹ The Emergency Administration endeavoured earnestly to help the State in restoring supply lines suspended during the raid and in looking after the interests of the refugees poured in the State from the areas occupied by Pakistan.

In order to make the State administration more effective, the Government of India advised the Maharaja to institute an interim Government in the State with Sheikh Mohammad Abdullah as its Prime Minister.² In March 1948, the Interim Government was instituted by a proclamation and a Council of Ministers was formed on the basis of collective responsibility. The Council was entrusted with the work of convening a National Constituent Assembly, based on adult franchise, to frame a constitution for the State.³

In July 1950, the Maharaja left the State on the advice of the Government of India and thereby paved the way for his son Yuvraj Karan Singh to become the Head of State⁴. On April 20, 1951, Yuvraj Karan Singh ordered by proclamation the convening of a Constituent Assembly. The proclamation read :

Whereas, it is the general desire of the people of the State of Jammu and Kashmir that Constituent Assembly should be brought into being for the purpose of framing a constitution for the State,

Whereas, it is commonly felt that the convening of the Assembly can no longer be delayed without detriment to the future well-being of the State,

And whereas, the terms of the proclamation of the Maharaja dated 5 March, 1948, in regard to the convening of a National Assembly as contained in clauses 4 to 6 of the

1 Government Gazette dated 9th June, 1949.
2 Teng, M. K; Kashmir's Special Status, P. 38.
3 Ibid.
4 Ibid.

operative part thereof do not meet the requirements of the present situation,

I, Yuvaraj Karan Singh, do hereby direct as follows :

"A Constituent Assembly consisting of representatives of the people elected on the basis of adult franchise, shall be constituted forthwith for the purpose of framing a constitution for the State of Jammu and Kashmir".¹

Thus, elections to the Constituent Assembly were held in September. The Assembly was inaugurated in November, 1951 and soon after this, it amended the Constitution Act of 1939 and enacted the Constitution Act of 1951 by virtue of which the powers of the Government were vested with the Council of Ministers and the ruler was made a constitutional head. The Act also made it clear that the powers of the Legislative Assembly could be exercised by the Constituent Assembly as well until other provisions were made to that effect.

It may be remembered that the Constituent Assembly was instituted within the ambit of the special provisions contained in Article 370 of the Constitution of India which came into force on 26th January 1950. In accordance with these special provisions the State was exempted from the application of the provisions of the constitution of India dealing with the Indian States². The special status of the State was further strengthened by a separate formula, called Delhi Agreement which was arrived at between the Central and the State Governments in July 1952³.

Immediately after the Delhi Agreement, the Assembly adopted the report of the Basic Principles Committee in the form of a resolution according to which the State was to have its own flag and official language and the Head of the State was to be elected by the State Legislature and confirmed in his office by the President of India⁴. Designated as **Sadar-i-Riyasat**, the Head of the State was to remain in office for a term of five

years, after the expiry of which period he could be re-elected also.¹ The **Sadar-i-Riyasat** was to be aided and advised by a Council of Ministers, headed by the Prime Minister. The Council was to be jointly responsible to a legislature.

Thus by this historic resolution the hereditary rule of autocrats came to an end and the beginning for Democratic Government was made possible in State. While Yuvaraj Karan Singh was the first **Sadar-i-Riyasat** of the new Government, Sheikh Mohammad Abdullah became its Prime Minister. But on account of difference between the latter and the centre on the quantum of autonomy for the State, and the divergence in the outlook in the leadership levels, the Sheikh was removed and a new Government was formed with Bakshi Ghulam Mohammad as its Prime Minister.²

The State Constituent Assembly was then convened to finalise the principles on which the Constitution of Jammu and Kashmir State would be based and to consider the provisions contained in the Delhi Agreement. The Constituent Assembly's Basic Principles Committee and the Advisory Committee on Fundamental Rights and citizenship were re-constituted on 20th October 1953. These Committees conducted joint deliberations for about a month in order to define further division of powers between the Centre and the State. The decisions taken were placed before the Constituent Assembly in February 1954, which conveyed its recommendations to the President of India, who on 14th May 1954, proclaimed the Constitution of India (Application to Jammu and Kashmir) Order 1954, and thereby paved the way for laying down the frame work of the relationship between the Centre and the State. The President's order 1954 incorporated the recommendations of the Constituent Assembly and amended the special provisions envisaged by Article 370.

Meanwhile, the Constituent Assembly of the State appointed a Drafting Committee which prepared preliminary Draft Constitution in October 1956. The Draft Constitution was adopted by

1 Proclamation of Yuvaraj Karan Singh dated 1st May 1951

2 For details see Constitution of India Article 370.

3 Balraj Puri, op. cit; P. 106.

4 Teng ; of P. cit; P. 66

1 Basic Principles Committee Report.

2 Teng; op. cit; pp. 66-71.

the Assembly on 17th November 1956 after a thorough discussion. This Constitution is in force in the State at present with modifications here and there.

The Constitution clearly lays down the form of parliamentary democracy for the State and affords the fullest possibilities to the people of its region to flourish in consonance with their respective cultural characteristics.¹ The basic principles committee of Constituent Assembly reported :—

“The governing features of the State Constitution would be based on democracy, equality and social and economic justice. The guiding principles of the State policy would be to ensure the rebuilding of the State by harnessing all its resources for the purpose of securing a better and prosperous life for the people. In order to achieve that the entire economic activity of the State will be conducted in accordance with plans envisaged in New Kashmir”.²

To secure the economic emancipation of the people of the State, the Jammu and Kashmir Government had already taken some revolutionary steps under the able guidance of Sheikh Mohammad Abdullah before 1951. A detailed information of these measures is contained in New Kashmir, a document called “An Apparatus of Social Organisation.”³ Among these, the most significant measure was the land to tiller legislation which enabled the landless peasants to free themselves from the servitude of the landlords.⁴

The preamble of the Constitution of the State further strengthened the democracy and economic justice in the State declaring :

“We the people of Jammu and Kashmir, having solemnly resolved to secure to ourselves... ..

Justice, social, economic and political ;

Liberty of thought, expression, belief, faith and worship ;

¹ See Constitution of Jammu and Kashmir State.

² Report of the Basic Principles Committee of the Constituent Assembly.

³ Opening Address by Honourable Sheikh Mohammad Abdullah to the J & K Constituent Assembly.

⁴ Ibid.

Equality of status and of opportunity, and to promote among us all :

Fraternity, assuming the dignity of the individual and the unity of the Nation.

The preamble qualifies every provision of the constitution and every single stipulation assumes its right meaning in the light of the ideals embodied in it”.

A distinctive feature of the constitution is its part IV, embodying the Directive Principles of the State Policy which, unlike the Directive Principles of Indian Constitution,¹ expressly State that the State shall promote the welfare of the people by establishing and preserving a socialist order and that it shall “develop in a planned manner the productive forces of the country with a view to enriching the material and cultural life of the people and foster and protect.

- (a) The public sector where the means of production are owned by the State ;
- (b) The co-operative sector whose means of production are co-operatively owned by individuals and ;
- (c) The private sector where the means of production are owned by an individual or corporation employing labour provide that the operation of this sector is not allowed to result in concentration of wealth or of the means of production to the common detriment.”

The constitution provided for a bicameral legislature, with two houses, i.e. Legislative Assembly and Legislative Council, and **Sadar-i-Riyasat**, as Head of the State. The Legislative Assembly was to consist of 100 members who were to be elected by Adult Franchise. 25 Seats in the Assembly were left vacant for the people of the area still under the occupation of Pakistan. The Legislative Council was to be composed of 36 members of which 21 were to be elected from Jammu and 11 from Kashmir including Ladakh. 6 members were to be nominated to the

¹ The Directive Principles contained in the Constitution of India are not qualified by any such technical definitions.

council by **Sadar-i-Riyasat** to secure the representation of socially and economically backward classes and persons having special knowledge or practical experience in the field of literature, science, art cooperative movement and social services. The rest were to be elected by Local Bodies, Constituencies etc.

Since 1957, up to the present the constitution has undergone ten amendments from time to time. The sixth Amendment Act of 1965 changed the complexion of the State Executive by altering the nomenclature of **Sadar-i-Riyasat** and Prime Minister into those of the Governor and the Chief Minister respectively. The qualifications for the office of the Governor in Jammu and Kashmir State are to be the same as required in other States of Indian Union. He can be dismissed or transferred by the President of India. As regards the Chief Minister the change was introduced only in the name so as to bring it at par with other Indian States. He is to have the same position and powers as enjoyed by the Chief Ministers of other Indian States.

The constitution provides for a High Court of Judicature, comprising the Chief Justice and other judges. The Chief Justice is appointed by the President of India after consultation with the Chief Justice of India and Governor of the State. The other judges of the High Court are appointed by the President in consultation with the Chief Justice of the Supreme Court, the Governor of the State and the Chief Justice of the State High Court.

The people of Ladakh, numbering about 1.34 lakhs according to 1981 census are duly represented both in the parliament and the State Legislature. They have one seat in the Parliament and four seats in the State Legislature which are equally distributed between Leh and Kargil. Both these districts are equally represented in the Assembly and the Council.

The elections for the State Legislature were held during 1957, 1962, 1967, 1972, 1977 and 1983. The first three elections were held under the supervision of the State Election and Franchise Commissioner whereas those of 1972, 1977 and 1983 under the direction, control and supervision of Election Commissioner of India. During 1957, election, three nomination papers were

received, one from Leh and two from Kargil. Shri. Kashuk Bakula was declared elected unopposed for the Leh seat while from Kargil out of the two nomination one withdraw and the other candidate was therefore, declared duly elected to the Legislative Assembly.¹

In Ladakh there exist three political parties viz, National Conference, Congress (I) and Janta Party.

During 1967 elections, out of two Assembly seats the Leh seat was won by the Congress (I) where as the Kargil seat went to the Independent candidate. The votes were polled in the following manner :-

Name of the Constituencies	Total Electorate	Total Votes Polled	Parties Position	
			Congress	Independent
Leh	24984	19917	16270	3647
Kargil	26692	18177	7309	10868

During the Mid Term General Election to Lok Sabha in 1971, the Leh seat was won by Shri Kushuk Bakula, the Congress(I) candidate. The votes were polled in the manner shown in the following table:-

Name of the Constituencies	Name of the Contesting Candidates	Party Affiliation	Leh	Kargil	Total
Ladakh	Sonam	Independent	4203	12477	16726
	Kashuk Bakula	Congress (I)	14706	6039	20783

During 1977 elections for the State Legislature, however, the independent candidates came out successful both at Kargil and Leh. The Kargil seat went to the independent candidate uncontested whereas the Leh seat was lost by the Congress by 251 votes. The trend of voters towards the Congress Party and

¹ Administrative Report of J & K State, 1957-58, P. 168.

the Independent candidates is clearly indicated by the following table :—

Name of the Constituency	Total No. of valid votes polled	Congress	Independent
Leh	22333	11041	11292
Kargil	Uncontested		

In 1977 elections for the State Legislature, the Leh seat was won by Sonam Narboo who defeated his nearest rival Sonam Gyalten. In Kargil Munshi Habib Ullah defeated his two rivals Kachoo Ali Mohammad and Chering Mutum. The detailed information regarding the party affiliation of the candidates and the votes polled is given in the following table :—

Name of the candidate	Name of the constituency							
	Leh				Kargil			
	Votes Polled				Votes Polled			
	Congress	Janata	National Conference	Independent	Congress	Janata	National Conference	Independent
1. Sonam Narboo	11736	—	—	—	—	—	—	—
2. Sonam Gyalten	—	7450	—	—	—	—	—	—
3. Kachoo Ali Mohd.	—	—	—	—	11021	—	—	—
4. Munshi Habibullah	—	—	—	—	—	—	13549	—
5. Chering Mutin	—	—	—	—	—	—	—	327

In the recent elections for the State Legislature, held in June 1983, the Leh seat was won by Sonam Gyalchank, the congress (I) candidate who defeated his nearest rival Sonam Wangchuk Narboo, the National Conference nominee and Minister of State for Information and Tourism by more than 10,000 votes¹.

Munshi Habib-Ullah, the National Conference candidate from Kargil defeated Congress (I) nominee, Kachu Ali Mahammad by 260 votes in a straight cornered contest².

¹ The Times of India, June 10, 1983, P. 1.

² Ibid.

News Papers and Periodicals

Ladakh Phonya was the first and the last local news paper published from the region in the early forty's of the present century. Started in 1983, Bikrimi, by J. E. Peters of Morovian century. Started in 1983, Bikrim, by J. E. Peters of Morovian Mission and published in Bodhi language, the Phonya continued exercising profound influence on the Ladakhis for some time, but its publication was stopped and consequently, a void was created that has not been filled so far. However, Information Department Leh issues copies of Ladakh Bulletin called "Khabar Nama Ladakh" which throws light on the developmental activities in the region. Besides, the following newspapers and periodicals, published outside the region, furnish the Ladakhis with necessary information on local, national and international matters.

	English	Daily
The Times of India	do	do
The Indian Express	do	do
The Hindustan Times	do	do
The Statesman	Urdu	do
Nawa-i-Subah	do	do
Srinagar Times	do	do
Aftab	do	do
Wullar	do	do
Iqbal	English	Weekly
Illustrated Weekly of India	do	do
Link	do	do
News Week	do	do
Mainstream	do	do
Sports Week	do	do
India Today	do	Fortnightly
Readers Digest	do	Monthly
Seminar	do	do
Science Today	do	do
Imprint	do	do
Huda	Urdu	do
Shabistan	do	do
Ajkal	do	do
Shama	do	do

Labour Welfare

The Labour Welfare programme came into being in the State in 1953 when, in view of the spurt in the Trade Union Movement and in recognition of the important role assigned to the labour in the Industrial Development, the Jammu and Kashmir Government established a separate Labour Department. In the beginning the Department could not register its mark due to its meagre resources and limited staff. However, in 1961, it was reorganised in order to implement the labour laws effectively. Again in 1969, the Department was re-organised to provide necessary staff at the District level and to implement various laws especially the payment of wages Act and the Industrial Disputes Act so that all complaints of non-payment of wages were attended to promptly.¹

All these measures resulted in improving the lot of the labour and in opening branch offices at various places in the State. These branch offices were placed under the charge of Labour Officer. In Ladakh there is one Labour Office with its headquarter at Leh and two branches at Kargil and Dras. The main functions of the office are to supply ponies and porters to the Military personnel and to ensure the welfare of the labour class. Besides, it looks into the disputes relating wages etc. and implement labour laws. Since Ladakh is a border area the task of the Labour Officers is tedious. They have always to work on war footing. A large number of labourers mostly from Kargil are seen working in big projects such as Hydel Projects. Their welfare is being looked after by the Labour Department.

Social Welfare

Social Welfare activities and programmes, which constitute the important items of the working of the Democratic Government of the Jammu and Kashmir State, are being looked after by the Community Development and **Dehat Sudhar Department**. Although, in view of colossal social problems, the need for such Department was keenly felt as early as 1956-57, it was brought into being not before 1959. The main functions of the department are to ensure the welfare of scheduled castes and other backward classes, besides creating favourable conditions for the promotion of social welfare of the whole society.

¹ Source : Labour Commissioner, J & K Government.

In Ladakh region, the Social Welfare Office was set-up with District Social Welfare Officer at Leh and Social Welfare Officer at Kargil in 1966. The office has done commendable work by starting **Bal-Ashram**, an institution which looks after the nutrition scheme for children in the age-group of 0-6 years and for the pregnant mothers¹.

During the 6th Five Year Plan, an amount of Rs. 5.00 lakhs was allocated for social welfare schemes in the region. Also one craft centre for the destitute women was started where training is imparted in certain arts and skills. After completing their training, these women make out a living easily.

Advancement of Backward Classes

On account of its peculiar physical features and divergent climatic conditions the region remained steeped in backwardness till recent times. But for the last few years the condition has changed considerably as due attention is being paid for all round development of the project.

¹ Source : Development Commissioner, Ladakh.

CHAPTER XVII

PLACES OF INTEREST

The Moonland Ladakh is unique in many respects. It is the loftiest region of the earth inhabited by man. Most of the highest peaks of the world including K-2 (Godwin Austin), the second highest peak after Mount Everest, adorn the majestic mountains of this region. Its barren mountains contain within their bosom beautiful and lush green valley's, rivers, streams and gushing springs which enhance the variegated charm of the whole region. In its North are located the primitive snow-capped mountains which contains some enormous glaciers. Its cold deserts, at an altitude of over 4000 metres, ooze out boiling water from their salt springs. The green pastures of the Nubra Valley with its surrounding snow clad mountains and running streams have a unique charm of their own. For its lofty mountains and table lands, Ladakh has rightly been described as the roof of the world. Its every geographical feature is unique, beautiful and absorbing for those who love nature, it has great attraction for the travellers and the tourists alike.

The cultural heritage of Ladakh is also unique, interesting and attractive in many respects. Ladakh has evolved a composite culture from such great religions as Buddhism and Islam. The adherents of these regions live together, as members of one family, in complete harmony and accord. The monasteries and the Gumpas, the art, the music and the dance of Ladakh have a special charm of their own. They have a great appeal for the foreign travellers in particular. In short the tourists and the travellers feel greatly rewarded after undertaking an arduous journey to Ladakh. A brief description of some places of interest is as follows :—

Alchi

Situated on the left bank of river Indus, the village Alchi in Leh District is conspicuously known for its wall paintings

reposited in monasteries. Depicting heavenly bodies and episodes from the life of Sakya-mani-Buddha, these wall paintings are genuinely considered the oldest among the Ladakhi paintings.

From the architectural point of view also the Alchi monastery is famous. It is a representation of the Ladakhi and Kashmiri styles, in particular the doors and pillars have been carved in the later style.

The village has an area of 144 sq. Kms. with 125 households. The village, according to 1981 census, had a population of 557 souls.

Bazgo

Bazgo, also known as the gateway of Ladakh, is a big village in Leh District. The place once formed the capital of Ladakh and was strongly fortified. Because of its invulnerability, Tibetans called it **Rab-brtan-Lha-rtse**. "Divine Peak of Great Stability."

The village is famous for painting in Maitreya temple built by Tse-wang Namgyal whose portrait is there on the main entrance wall; he is shown with his two younger brothers.

The village has an area of 330 sq. Kms. with 128 households. According to 1981 census, the village had a population of 611 persons.

Chuglamsar

Chuglamsar, a village on the bank of river Indus is about 20 Kms. from Leh. Surrounded by willow and popular trees.

The village presents a delightful look, attracting large number of tourists every year. The foot bridges constructed on river Indus further enhance the beauty of the village, inspiring visitors to stay there in tents.

The village is also famous for the school of Buddhist philosophy where a large number of scholars is seen very much engaged in seeking religious and spiritual knowledge.

The village has an area of 346 sq. kms, with 92 households. As per 1981 census, the village had a population of 2,173 persons.

Dras

Named after the river Dras, this village of the Kargil Dis-

tract stands in a broad opening of the valley of the same name. The village is amidst the hills consisting of alluvial plateaus with a width of 2 to 3 Kms. and a length of nearly 5 Kms. It is bound in the North by low irregular shaped hills which, though barren, look like a huge mass of stone and rock. On the Southern side, there is first a low ridge and above that tower great precipices of lime-stone rock. The Dras river enters the valley by a gorge, flows through eight metres below the level of the lowest alluvial terraces and leaves by a similar narrow rock passage.

It is located between Lat. 35°. 30N. Long. 76° E. and is 146 Kms. from Srinagar on the Srinagar Leh route. Dras is the second coldest inhabited place in the world with an altitude of 2977 metres from the sea level. Short stay in Summer can, therefore, be a pleasant experience but winter with heavy snow-fall is terrible.

It is inhabited by Brokpas of the Dardic stock speaking Shina dialect and are distinguished by the Aryan features from the Balti population.

Four rock-carvings by the way-side at Dras are a source of great attraction for the tourists. A brief description of these rock carvings is given below :—

- (1) The first statue measuring 5.9"x3.1" is of Maitreya and dates back to 10th/11th century. There is an inscription at extreme right of upper edge of the block.
- (2) Lotus flower is carved on the 2nd stone and it measures 3"x1.7"x5.4".
- (3) Third stone bears a figure of a male ridding on a horse. It is a memorial stone and dates back to 15th/16th century A. D. The size of the block is 1.6"x2.3"x5'.
- (4) Fourth stone, measuring 6" high, is a black carved on four sides with the image of Maitreya. A donar couple is shown on the extreme side of the image.

Hemis

Hemis is about 36 Kms. from Leh and is well known for its Gumpa, which is one of the oldest monasteries in the region. The monastery is very rich in art and sculpture and houses very rare and ancient Buddhist relics. Most of the statues and images

are gold plated studded with precious stones. Some of the prayer halls contain very ancient and rare paintings and manuscripts. Every year, a festival is held at Hemis in the month of June and on this occasion, many people visit this monastery and witness masked dances and plays. Hemis has an area of 176 Sq. Kms. with 80 house holds. According to 1981 census the village had a population of 192 persons.

Hemis Shukpa

It is a noted place in Leh Tehsil. The place is named after a grove of a hundred or two large shukpa, or pencil cedars. The girth of several of these trees is about 2 metres and some of them have irregular trunks measure 3 metres or more. These taper quickly upwards, reaching to a height of about 10 to 15 metres. It is believed that the grove is holy and protected by gods; diseases and misfortunes are said to overtake those who commit sacrilege against it.

At Hemis Shukpa, are the remains of a fort or tower, which was built by the Sokpos, who invaded Ladakh towards the end of 17th century A. D. The tower is most heavy of the many towers built by them at various places.

Kargil

Kargil town, the headquarter of the Kargil District is one of the two important towns of Ladakh. Situated in the valley of Suru, it is an important halting place on the Srinagar Leh route. The town is spread over the banks of Suru and is the meeting place of the three routes, one connecting Zaskar, the other after crossing the suspension bridge goes to Yarkand via Leh, while the third goes to Skardu. Number of metalled roads have been constructed after Independence and important among such roads are the Kargil-Leh road and Kargil-Baltal road which connects Kargil and Leh with Srinagar. Besides, these roads, a net work of bridle paths have been laid out.

Located at an altitude of about 2676 metres from the sea level, Kargil has an annual rainfall of 306.5 MM with a maximum temperature of 35°C and a minimum temperature of —22.6°C.

The town, according to 1981 census, had a population of 3527 persons. The town has an area of 2.14 Sq. Kms.

In Kargil there is an old fort situated in an isolated boulder-bed in the stream of Suru river. The only means of its communication with the bank is the ordinary rickety bridge.

The things sold in the market are salt, sugar, tobacco, tea embroidery from Kashmir and other things. It is believed that the local rocky-salt sold in the market cures stomach-ache. Electricity to the town of Kargil is provided by a diesel generating set. Various facilities available at Kargil are as follows :—

1. Hospitals	Two
2. Higher Secondary Schools	Two
3. Cinema	One
4. Public Library including reading Room	One
5. Dak Bunglow	One.

Khardong

This village in Leh Tehsil lies on the Leh-Nubra road. It is mostly bounded by high cliffs. From this village one debouches into the larger valley of the Shayok river. Khardong has an area of 506 Sq. Kms. with 103 households and the population of the village, according to 1981 census, stood at 491 persons.

Lamayuru

Lamayuru, an important village in Leh Tehsil is situated between Budhkhharbo and Khaltsi on the half way down from the Fatula, the highest point on the Srinagar-Leh road. Here is a monastery built on the summit of cliffs which are partly rock and partly alluvial matter. Some portions of it are curiously built on timber placed across Chasma. The inside walls have been decorated with paintings. Among other images there is a colossal statue of Avalokiteshvara with eleven heads and one thousand hands. This monastery also houses some of the very rare manuscripts on religion, law and ethics. The village has an area of 206 Sq. Kms. with 94 households. The population of the village, in 1981 was 564 persons.

Leh

The town is situated at a distance of 434 Kms. from

Srinagar. Leh is the principal town and the administrative headquarter of the Leh District. It is located between Lat. 35° 35'N and Long. 78° 3'E. Its altitude is 3508 metres from the sea level.

Entering the town from the direction of Kashmir, one passes through a long, wide and straight bazar in which the houses on both sides of the lanes are built in a regular and uniform manner. At the farther end of the bazar one passes into the old part of the town and finds some old houses which were built by the Kalons.

Outside the town are several plantations of willow and poplar trees. To the east of the town there are the mountains without any cultivation. But to the West, the whole width of the valley about one Km. is cultivated land, descending in terraces, with small hamlets scattered over it.

The most conspicuous object in the town is the palace of the former rulers. It is 200 ft. in length and is composed of nine storeys. The outer walls have considerable slopes as the thickness diminishes rapidly with their increase in height. Higher up on the same rocky ridge is the monastery and the towers of an old fortification.

Leh, has been the most important commercial centre in the past, where carvans from Sinkiang across Yarkand came with their merchandise to be bartered with goods from India. However, with the passage of time, Ladakh lost its importance as a centre of commercial activity. Although Srinagar-Leh road has considerably been improved, yet Leh remains cut off during winter, when heavy snow-fall blocks all the passes that connect Ladakh with the rest of the country. During winter months, only the planes of Air India carry passengers from Srinagar to Leh and back besides the goods of daily consumption.

Leh is a cosmopolitan town where Ladakhis, Tibetans, Yarkandis, Kashmiris, Punjabis and others rub shoulders with one another and live in a perfect harmony. According to 1981 census, Leh town had a population of 8718 persons. The town has an area of 9.2 Sq. Kms. with 1485 households.

Khaltsi

Located in Leh Tehsil, Khaltsi is an important resting place on the Kargil-Leh road. The village is on a plateau about 76 metres above the river. There is a long strip of cultivated land watered from a side-stream. Crops and fruit trees grow on it, and even luxuriously, walnuts and apricots ripen well though the height above the sea is near about 3050 metres.

The village is famous for some old inscriptions dating back to 200 B. C. Some of these stones bear carved figures of Budha and Buddhistavas. The village has an area of 139 Sq. Kms. with 96 households. The population of Khaltsi according to 1981 census, was 620 persons.

Likir

The village is between Bazgo and Nubra in Leh Tehsil. Likir is famous for its monastery, built in the 11th century by the King of Ladakh, Ladchen Gyalpo, who collected a few hundred Lamas and got them settled in this monastery. The Monastery houses many images, statues and paintings. Likir has an area of 378 sq. kms, with 171 households. The population of the village according to 1981 census, was 816 persons.

Mulbek

About 40 kms. from Kargil, the village is famous for its monastery and a large Buddha's image carved on the rock. The village leads to a pass called **Namika-La**, 3965 metres high. It has an area of 321 sq. Kms. with 133 households. According to 1981 census, the village had a population of 915 persons.

Nubra

Nubra Valley is on the right bank of the Nubra River. It is famous for hot water springs which are supposed to cure ailments notably rheumatism. The water is too hot to put land into it. All around, the ground is covered with deposits and a few Kms. further downstreams is a expanse of grassland, where during the winter, the Soda oozes up and is collected for sale.

In Nubra Valley, the villages are fertile and full of trees and flowers. However, at the same time the valley is as gaint and stony as any other part of Ladakh.

Padam

It is the headquarter of the Zanskar tehsil and is on the bank of the river Zanskar. On the opposite bank of the river is the Karsha Gumpa and in order to reach there, one has to negotiate a rope bridge. This can be avoided if one visits the area in early September, when the river can be crossed on the horse back.

The position of Padam is very curious as it is built on a mount of moraine, about 24 metres high. On the summit of this heap was the royal palace which now stands dilapidated.

Except Padam, where Muslims constitute about 40 percent of the population, Zanskar is entirely populated by the Buddhists. The people are very simple and their main wealth is their cattle. Padam has an area of 205 Sq. Kms. with 156 households. The population of the village, according to 1981 census, was 139 persons.

Pushkum

The village Pushkum is situated at a distance of 8 Kms. from Kargil. There are small alluvial plains in its proximity. It is a large village watered by cuts from the stream called Wakha. These water courses are bordered by many willow and tall poplar trees. Nearly 300 metres above the village, on the edge of a cliff are some remains of a fort that used to be held by a Raja who was a tributary to Ladakh.

Spituk

Spituk, a village in Leh Tehsil is located at a distance of 8 Kms. from Leh. The river Indus is the sources of irrigation for the cultivated land of this village. There is an isolated rocks, about hundred metres high, on which all the older buildings are situated, which include a monastery and a fortification.

The village has an area of 1618 Sq. Kms. with 184 households. The population of the village according to 1981 census, was 1776 persons.

Sankar

Situated at a distance of half a Km. from Leh Market, the place is known for a Gumpa, which houses a number of images of Tibetan reformer, Tson-kha-pa. The monastery is an ancient

one and possesses a gorgeous representation of a Buddhist deity with thousand eyes, thousand arms and thousand legs. There is a huge image of Avolokiteshwara in this monastery.

Shay

This village in Leh tehsil is located at a distance of 15 Kms. from Leh. Many people come to this place to see the colossal statue of Buddha installed in Shay Gumpa by the famous King of Ladakh, Deldan Namgyal in about 1655 A. D. The statue is about 13 metres high above the base and occupies two storeys of the building. It is made of brass, studded with precious stones and is gold plated. A sacred lamp burns here throughout the year in which butter is used.

The village has an area of 637 Sq. Kms. with 485 households. The population of the village according to 1981 census was 1136 persons.

Shergol

With Shergol, one enters the land of Gumpas and Lamas. The village is at a distance of 32 Kms. from the Kargil town and has an area of 86 Sq. Kms. with 37 households. The population of the village according to 1981 census, was 258 persons.

Stakna

Located in Leh Tehsil, the village has become famous for the Stakna Hydel Project, the biggest Hydel Electricity Project in Ladakh. The project envisages to harness the water of Sind, at a place 30 Kms. from Leh so as to generate 65 MW's of power. The project will supply electric power to Leh town and surrounding villages. The project when completed will, to a considerable extent, meet the much felt shortage of electric power in the region.

Stakna has an area of 276 Sq. Kms. with 54 households. The population of the village according to 1981 census, was 252 persons.

Suru

Suru is a beautiful valley skirting the northern slopes of Nunkun mountains. In the upper part of the valley is a monastery and in the middle of the valley is a picturesque group of buildings on a small hill.

Suru Valley is mild and picturesque but barren from Kargil to Sankoo, where it opens. Due to heavy rainfall, wild roses and other flowers grow and there are good pastures land in the higher parts of the valley.

Yangthang

Yangthang or "New Plain" is a place of historical importance in Leh tehsil and was settled in 1850 by a Lama, who by his wisdom and good management got the main water-course made and established cultivation there. He also built monastery in the valley, in which there are now many Lamas. The land attached to the monastery, which by grant is free of Government dues, is cultivated by labourers who receive food and clothing from the monastery.

Other Places of Interest

In every village or town of the region a major attraction for a visitor is a Gumpa, a Chorten, or a Mani-Wall. These religious places are of much archaeological, historical and cultural importance.

Mosque

During the reign of emperor Aurangzeb, a mosque was built by a Ladakhi king in Leh. This mosque is situated in the main bazaar near the ancient palace of the king of Ladakh.

Church

There is a Morovian Mission Church at Leh and Khaltsi. The tomb slabs in the Christian cemetery at Leh are worth noticing especially the graves of adventures, travellers, who passed away in Ladakh.

Chortens

The chortens house the ashes of the dead lamas and are in the shape of square plate made of mud and stones, decorated and painted. In every village one can see many chortens, decorated in different colours.

Paintings

Ladakh is famous for oil paintings which are known as Thankas. In every Gumpa is a master artist who paints vari-

ous episodes from the life of Buddha and such paintings are hung on the walls of the monasteries and the private houses. The paintings present some beautiful sceneries of Ladakh besides depicting life of Buddha. They are also available for sale in the market.

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E R R A T A

Page	Line	For	Read
4	7	Nam-Lon	Nan-Lon
4	13	Togo-chher	Togo-chhe
7	24	Gasher-brun	Gasher-brum
7	37	Bose, C.C.	Bose, S.C.
9	5	marley	Barley
18	16	comfact	contact
21	7	(Reference no. (1) deleted).	
33	21	(Fullstop after shikaries is deleted.)	
34	34	(Colon after the word declared is deleted).	
56	8	spport	support
57	36	missoinaries	missionaries
64	26	politey	policy
77	15	Urban	Rural
78	Between 21 & 22	(Read : Group has a decreasing number of persons till the last age)	
88	33	animal	Amiable
104	11	prfer	prefer
123	25	irrrigation	irrigation
125	22	deleted	
138	25	been	been
140	4	Thinsey	Thiksey
146	22	soown	sown
154	25	(Full-stop after the word lakhs is deleted)	
155	27	sulphel	sulphur
157	15	The above table that	The above table shows

Page	Line	For	Read
162	24	parpets	carpets
169	4	benifited	benefitted
170	4	crdit	credit
173	14	commrcial	commercial
175	16	8	9
177	26	the fact close	the fact of close
179	3	; (Semicolon)	. (Full-stop)
180	5	especially	especially
188	29	Leh Nyoma	Leh to Nyoma and Mud
189	9	wer	were
192	18	above	on page number 189
199	22	(The letter a is deleted).	
207	11	rateof	rate of
216	23	19924 1981-82	18740 1983-84
218	35	Sourcei	Source
229	3	Back ground	Background
231	33	Ladakh	Leh
238	9	thepassage	the passage
238	18	guarnteed	guaranteed
238	21	reajlised	realised
239	22	hactares	hectares
243	25	poliece Forcee	Police Force
243	26	cadr	cadre
244	31	oferime	of crime
245	27	Ibid	Source : Deputy Inspector General of Police, Kashmir Province.

Page	Line	For	Read
246	35	Source Deputy Inspector General of Police, Kashmir Province	Ibid
247	29	Ibid	Source : Deputy Inspector General of Police Kashmir Province.
247		After line no. 16 read (viz Leh and Kargil, only 13 % of the total number of crimes)	
248	33	the words and Kargil are deleted	
249	12	trm	term
252	25	dispoisal	disposal
254	1	Juddge	Judge
259	3	who resposn'ble	who are
263	29	(The word Unit is deleted).	
264	4	(Bracket is closed after the word district)	
266	37	Francuue	Francke
268	32		2 (Reference No.)
270	36	Jammu and Kashmir Laws, Vol. IV (1973), PP. 825—826	Ibid.
271	33	Ibid	Jammu and Kashmir Laws, Vol. IV (1973).
271	36	Jammu and Kashm'r Laws, Vol. IV(1973), p. 828	Ibid,p.828
274	31	Ibid,pp. 858—861	Jammu and Kashmir Laws, Vol. IV (1973), pp. 858—861
274	32	Jammu and Kashmir Laws, Vol. IV (1973) , pp. 855—856	Ibid.
275	29	Ib'd, pp. 853—867	Jammu and Kashm'r Laws, Vol. IV (1973), pp. 853—867.
276	5	Drass	Dras

Page	Line	For	Read
276	7	Zank	Zanskar
280	28	ndia	India
281	4	Kashmir provlnc	Kashmir Province
292	11	Thilksey	Thiksey
295	24	Between words chemre Hem's is fallstop	
296	18	prevolant	provalent
296	21	appirants	aspirants
297	26	availble	available
297	32	—3.5	—3.38
299	8	plaugue	plague
299	24	dispansaries	dispensaries
300	20	Martum	Mortum
301	25	Martum	Mortum
304	23	resigned	designed
308	13	Wating	Waiting
308	30	(Last word of is deleted)	
308	32	(Insert No. 3 as S. No. 8 of the reference).	
308	39	Bulraj	Balraj
311	22	Yuvraj	Yuvaraj
312	36	of p.	Op;
315	35	defitions	definitions
316	37	(comma after 1957 is deleted).	
319	5	(Line No. 5 is deleted).	
320	6	seperate	separate
320	40	soure	source
322	23	regions	religions
323	18	Tse	Tshe
323	25	popular	poplar
326	4	tabacco	tobacco
326	16	debovcnes	debouches
328	15	monstery	monastery
328	17	monstery	monastery
328	23	monstery	monastery



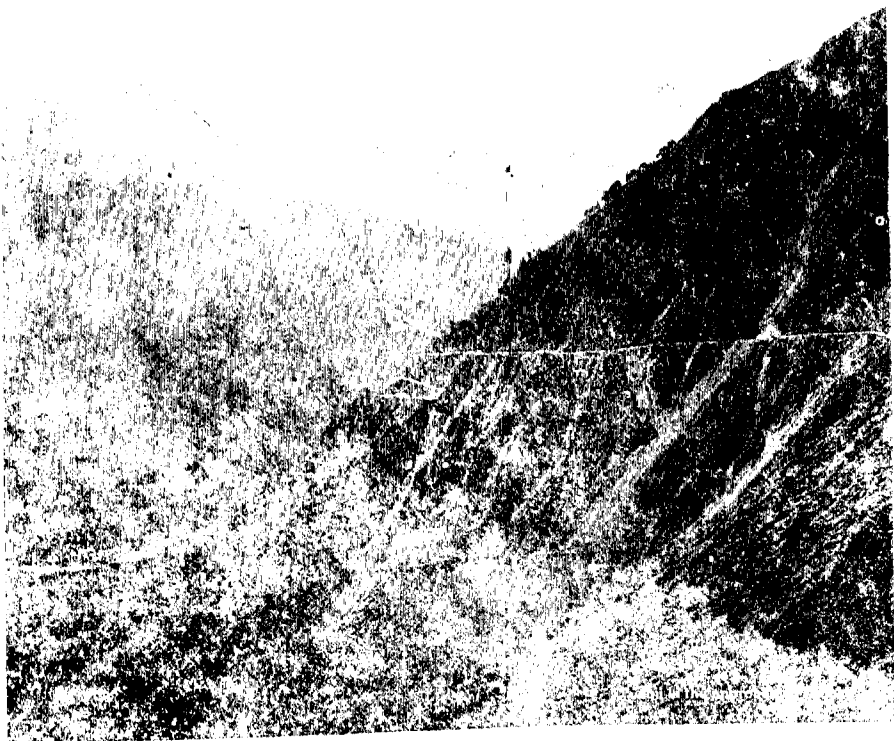
Tending to a flock of pashmina goat



ie Indus river forms ice-caps in the winter



Fertility festival among the Drongpa, at the height of autumn



Zojilla, the approach to Ladakh



Barren landscape near Fotula

Kamji Nuliah close to Fotuia, between Kargil and Leh



Courtesy : J&K Tourism Department.



An overview of Kargil

Courtesy : J&K Tourism Department.



High snow fastnesses near Kargil



A Mosque in Ladakh



Ashura : Mohacua procession in Kargil



Sculpture near Dras



Male and female of Aryan Race enjoying their Folk Song at Dartsigs, Garkon



Ice pinnacles on the snout of a glacier

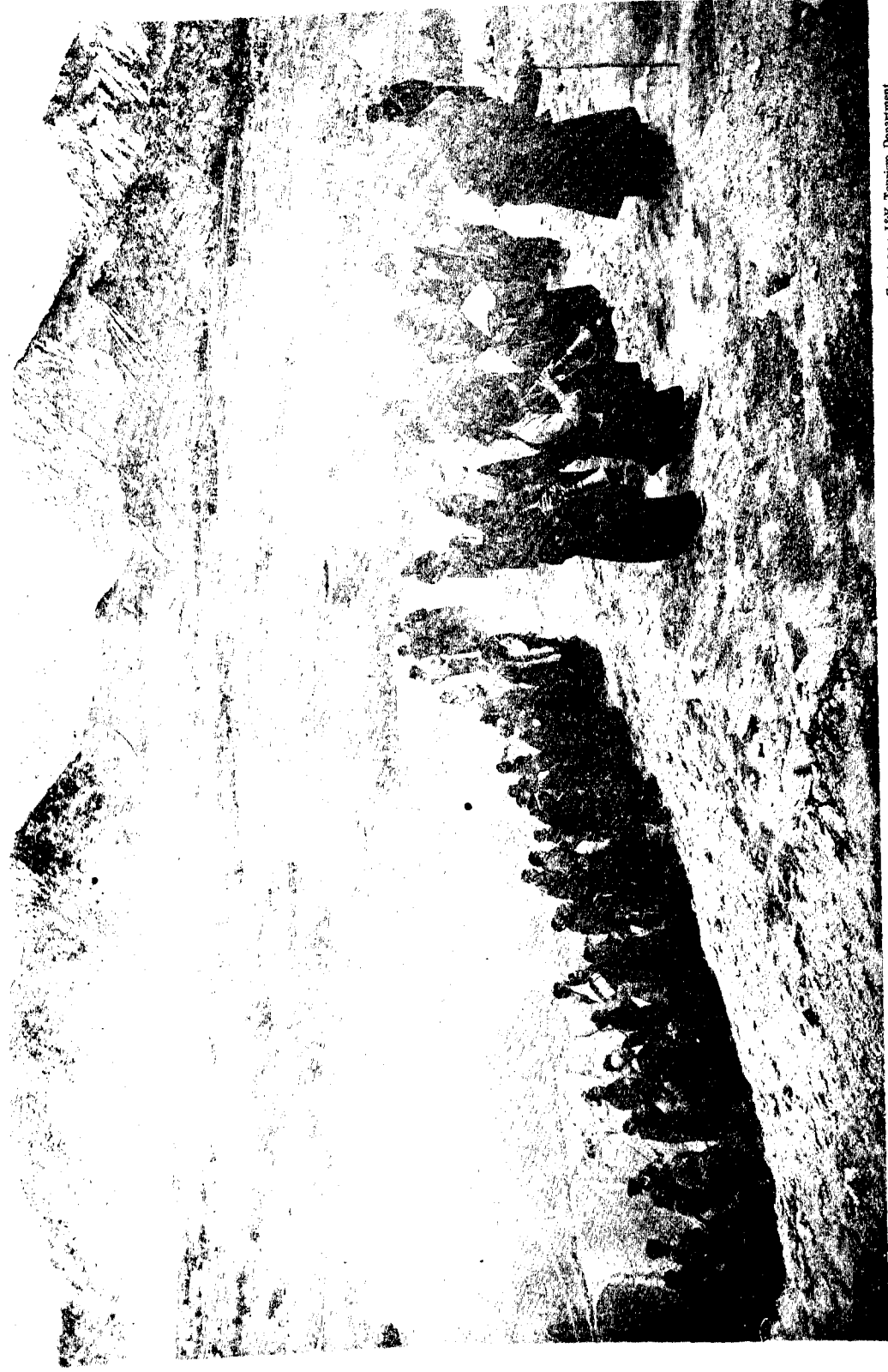
Tso Moriri, a high altitude lake at 14,000 ft.

Courtesy : J&K Tourism Department.



Religious procession carrying the holy tooth of Lord Buddha

Courtesy : J&K Tourism Department.





A Ladakhi with a Prayer Wheel



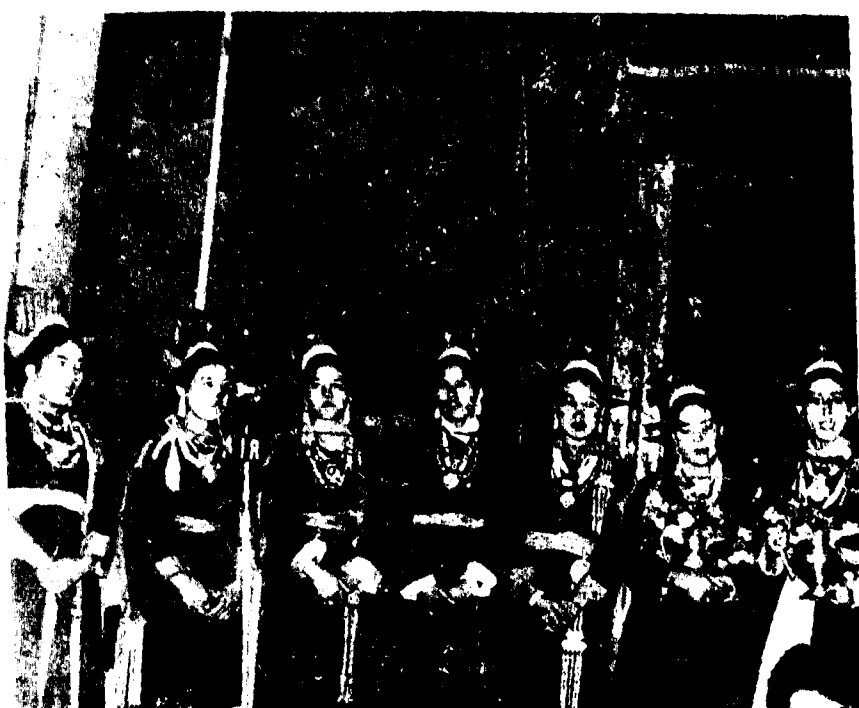
Chortens outside the Phyang Monastery near Leh



Ladakhi's with Flute



Ladakhi Damsels wearing traditional ornaments



Ladakhi women singing a Chorus



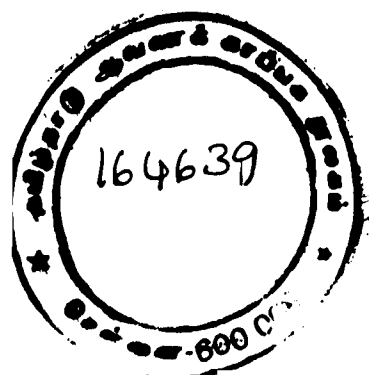
Front of Parkachik Glacier



Statue of Guru Padam Sambhava in the Hemis Gumpa



Hemis Gumpa



Chortens