Chapter 2
The Study Area

The present study attempts to analyse the geography of tourism industry within the Kashmir region of Jammu & Kashmir. Kashmir is generally used as the short form for the state of Jammu and Kashmir. But it is a misnomer as the name of the state itself. The name Jammu and Kashmir itself connotes the embedding of two regions – the Jammu region and the Kashmir region – to form the state. But in truth there are three distinct parts which form this northernmost state of India. All these regions are distinct and unique in terms of geography, demography, culture and economy. This chapter observes the physical settings of the state as a whole with an emphasis on the Kashmir region – the study area.

2.1 Jammu & Kashmir: area and situation

Jammu & Kashmir, the northernmost state of India, lies between 32°17’N to 37°6’N latitude and 73°26’E to 80°30’E longitude (Husain, 2006). Total area of the state is 2.22 lakh sq. km and its total population, according to 2011 census, is 12.55 million. J&K is bounded by Tibet in the east, China & Afghanistan in the north & Pakistan in the west; southern & south–eastern boundaries are made by the Punjab & Himachal Pradesh states of India.

2.2 Regional divisions of J&K

The state of Jammu and Kashmir is one of the largest states of India, in terms of its geographical area. And it is one such region of the whole world whose borders and boundaries are highly confusing. Three countries – India, Pakistan and China – claim whole or a part of it to be theirs but the ground truth is that the state is divided unevenly between the three countries (Map 1). The total geographical area of the Maharaja State is 222236 sq. km. An area of 101387 sq. km. is being administered by India. Azad Kashmir, often referred to as P.O.K. (Pakistant Occupied Kashmir) or P.A.K. (Pakistan Administered Kashmir), with an area of 78114 sq. km. is administered by Pakistan. China captured an area of 37555 sq. km. of the state’s
territory called Aksai Chin, during 1962 Indo-China war. An area of 5180 sq. km. in the Karakoram range, was gifted by Pakistan to China, during the construction of Karakoram highway (Khan, 2005). Thus India has about 46 per cent per cent of

Map 1

J&K’s territory under its control, Pakistan administers 35 per cent, while as China has secured 19 per cent. Apart from this political uncertainty, Jammu and Kashmir is highly diverse both in terms of natural and human settings. Broadly, the valley can be divided into three distinct divisions each varying from the other in terms of geography, history, culture, religion, language, economy, climate, soil, vegetation and
so on. These three distinct physiographic units of the state are separated by the water divides between Chenab and Jhelum, and Jhelum and Indus. The drainage basin of Chenab river occupies the southernmost part of the state – Jammu – the Jhelum basin corresponds to the valley of Kashmir and towards the extreme north lies the Indus furrow the Trans Himalayan land namely the Ladakh.

2.3 The Kashmir region: an introduction

The name of Kashmir implies “land desiccated from water”. The term has been derived from Sanskrit Ka water, Shimira to desiccate. In Sanskrit Puranas, Kashmir is called Gerek (hill) nestled as it is in hills. In chapter VIII of Avanadikosha, the meaning of the word Kashmir is given as ‘land, ruling in which is difficult’. The ancient Greeks called it Kashpeiria, and in the classical literature Herodotus mentions it as Kaspatyros and Hekataios calls it by the name Kaspalyros or Kaspapryos. It is called ‘Shie-mi’ in the narrative of To Yeng and Sung Yan (578 AD). Huien Tsiang, a Chinese traveller, who visited Kashmir in 631 AD, calls it Kia-shi-mi-lo. Kashmir has further been shortened into Kashir by the Kashmiris in their own tongue. It was also called as Kismire, Cassimere, Chishmeere, Kachemire, Cashmere, Kashmire, Cashmeer (Foster, 1921; Bernier, 1891). The Tibetans call it Khachal (snowy mountain), and the Dards (the inhabitants of Gures, etc.) Kashrat (Koul, 1925). Ptolemy called this territory as Kaspeiria, In the poem of Dionysios ‘Kaspeiroi’ is mentioned as a tribe (Stein, 1899).

Kashmir region is a political division of the Jammu & Kashmir state which mainly consists of the Valley, and the surroundings hills and mountains along with numerous side valleys. The region lies between Zanskar and Dhauladhar ranges. It is 135 kilometres long and 40 kilometres broad in its middle – the broadest part (Wadia, 1919). Valley of Kashmir is restled in the north-western folds of the Himalayas and is surrounded on almost all sides by mountain ranges. It is an oval shaped valley filled with thick deposits of alluvium. The valley is drained by the vitatsa (Jhelum) and its tributaries viz., Lidder, Indus, Pohru, Sandran, Bring, and Vishav & Sukhnag. Kashmir region lies in the centre of all the regions of the J&K (Map 2)
Map 2

Study Area
(Administrative Divisions)

Source: Census of India, 2011
2.4 A brief geological history

Kashmir today is a cool, temperate place, full of poplars, willow, chinar, apple and walnut trees. The vegetation and the environment that we see today have been continuously modified in the past by climatic changes, geological uplifts, as well as by anthropogenic activities. If we scan the last two million years, we find that the valley has gone through subtropical and glacial (cold) climates. In fact, it has experienced several Ice Ages (Agarwal, 1988). The valley was a huge lake, called Satisar, which was desiccated later. The Wular lake through which Jhelum flows and the Dal lake are remnants of this lake (Krishnan, 1949). Irfan Habib (2010) testifies that it was a Chinese pilgrim, Xuan Zhaung (c. AD 640) who for the first time recorded that Kashmir Valley was a lake. The rise of Pir Panjal range on the south-west and the Himalayan foothills on the north-east had created a vast lake, or perhaps a number of lakes in the present Kashmir valley. Further rise of the Pir Panjals lifted up even the lake sediments, shifting the basin towards the Himalayan flank. In recent geological times, the basin drained out through the Jhelum and large areas of land emerged. In the last few hundred thousand years, the wind transported glacial silts provided a mantle of silt-like dust (loess) all over the valley. Glaciers, in the wake of their retreat, left a large number of ponds which in course of time changed into bogs and preserved excellent pollen records of the vegetational changes of the last 20-30 thousand years (DeTerra and Paterson, 1939).

2.5 Physical setting

The region of Kashmir lies between the Pir Panjal and the main Himalaya. It is a great basin of about 135 by 40 kilometers, with its floor lying 1585 metres above sea level. The floor is the floodplain of the Jhelum river. The most striking feature of the region is the flat-topped terraces known as Karewas. These Karewas are the deposits of clays, sands and silts of the lacustrine origin (Spate and Learmonth, 1967).

Kashmir has been described as “the province or country” consisting of “an extensive plain, surrounded on all sides by lofty mountains”. It is also considered as “the valley of the river Behat, or Jelam, which is seperated from that of the Chenab on the south, by rugged and often snowy ranges, and from the basin of the Indus on the north, by
the main axis of the Western Himalaya, which, originating in the peaks of Kailash, separates the basins of the Sutlej and the Chenab from that of the Indus. The mountains which surround the plain of Kashmir are very lofty. Those on the north are for the most part bare and rugged on their southern face, while those which lie to the south appear from the plain to be magnificently wooded with forests of pines and deciduous-leaved trees, descending almost to their base. On both sides of the valley the mountains rise above the level of perpetual snow, but those on the north side are considerably loftier than the others. Numerous transverse valleys penetrate into these mountains, which are well cultivated in their lower parts, and, higher up, present superb mountain scenery (Thomson, 1852).

2.6 Administrative divisions

State of Jammu and Kashmir has three distinct physiographic as well as administrative regions. Ladakh is the largest of all, followed by Kashmir and then Jammu. The state is divided further into 22 districts: 10 in Kashmir region, 10 in Jammu region and 2 in Ladakh region. Table 2.1 gives the names of the districts along with the population and density of the population.

<table>
<thead>
<tr>
<th>District</th>
<th>Population</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anantnag</td>
<td>1070144</td>
<td>375</td>
</tr>
<tr>
<td>Baramula</td>
<td>1015503</td>
<td>305</td>
</tr>
<tr>
<td>Badgam</td>
<td>735753</td>
<td>537</td>
</tr>
<tr>
<td>Bandipore</td>
<td>385099</td>
<td>1117</td>
</tr>
<tr>
<td>Ganderbal</td>
<td>297003</td>
<td>1151</td>
</tr>
<tr>
<td>Kulgam</td>
<td>422786</td>
<td>925</td>
</tr>
<tr>
<td>Kupwara</td>
<td>875564</td>
<td>368</td>
</tr>
<tr>
<td>Pulwama</td>
<td>570060</td>
<td>598</td>
</tr>
<tr>
<td>Shupian</td>
<td>265960</td>
<td>852</td>
</tr>
<tr>
<td>Srinagar</td>
<td>1269751</td>
<td>703</td>
</tr>
</tbody>
</table>

*Source: Census of India, 2011*

These districts are further divided into tehsils, for administrative purposes. Map 3 shows the boundaries between different tehsils (based on Census of India, 2011).
2.7 Physiographic units

On the basis of stratigraphy & altitude, the region of Kashmir can be divided into the following physiographic units:

1. The Jhelum Valley floor
2. The Karewas
3. The side valleys
4. The Great Himalayas
2.7.1 The Jhelum valley floor
It extends from Khanabal (district Anantnag) in the south-east up to Baramulla town in the north-west. It is known as ‘the Rice–Bowl of Kashmir’. The valley floor has an elaborate road transport system and enormous potential for tourist development. As Moonis Raza (1998) has aptly said, “Kashmir is, indeed, the gift of the Jhelum.”

2.7.2 The Karewas (wudars)
The raise plateau-like surfaces of the relict lake sediments have been termed Karewas, after a Kashmiri word, and one loosely refers to the so-called primeval lake as the Karewa lake (Agarwal, 1988). Karewas are unique to valley of Kashmir. These are flat topped or undulating surfaced mounds on the sides of Jhelum flood plains, flanking the surrounding mountain precipices. These are lacustrine deposits spreading over an area of 13 to 26 kms. on the left flank of Jhelum. Karewas have great economic & agricultural importance.

2.7.3 The side valleys
The valleys of the major tributaries of Jhelum have been termed as the side-valleys. They have relatively steep gradients. Lidder valley, Lolab valley, Pohru valley, Madhumati and Erin valleys, Sind valley, Bringi and Sandran valleys, Vaishav and Rembiara valleys are some of the important side-valleys of the region.

2.7.4 The Great Himalayas
The Kashmir valley, the wudars and the side valleys are surrounded by the loftiest mountains of the world – the Himalayas. Greater Himalayas are known as Zanskar in J&K. These lie to the north of Kashmir division (Husain, 2006). They separate the valley of Indus from that of the Jhelum River. Their average height is greater than 5000 m.

2.8 Drainage
A drainage basin has an important bearing upon the landscape of an area as the landscape gets reshaped with the passage of time by the incidence of drainage network. All the major rivers flowing through the Kashmir are tributaries of Indus.
Chenab and Jhelum are the important rivers. Chenab serves exclusively the Jammu region and Jhelum flows through the valley of Kashmir, while the Indus has its bearing more on Ladakh region.

Map 4

Jhelum is the major stream flowing in the valley of Kashmir. In fact Jhelum valley is the synonym of the Kashmir valley. Some of the major tributaries of Jhelum are Bring, Sandran, Vishav, Rambiara, Romoshi, Dudhganga, Shaliganga, Pohru, Madhumati, Sind, Liddar etc. in most of the sub-basins of the valley there is a dominance of the streams of the first and the second orders. The proportion of first
and second order stream segments is above 80 per cent in 8 sub-basins and above 70 per cent in seven sub-basins.

The Jhelum River runs for an extensive stint across the Jammu region and ultimately pours into the Indus River. The water of the river contains a lot of mud and it is a popular traveler destination, particularly for the nine historic bridges on it. Among the five rivers of Punjab, it is the longest stream which traverses the Jhelum district. The river is a branch of Chenab and it is approximately 813 km or 505 miles long. The river features a number of barrages and dams such as the Rasul Barrage, the Mangla Dam, and the Trimmu Barrage.

Most of the rivers of the state have their origin in the Himalayas. The Jhelum River is the sole important river in the Himalayan mountain range that runs across the Kashmir basin. Chenab river, Doda river, Dras river, Indus river, Jhelum river, Markha river, Neelum river, Nubra river, Ravi river, Shingo river, Shyok river, Suru river, Tawi river, Tsarap river, Yapola river and Zanskar river are some of the major rivers of the state of J&K.

The Indus River features an extensive and meandering itinerary and traverses the territory of Kashmir. The river is an outstanding location for adventure sports like whitewater rafting. The banks of this river are home to lofty mountains and deodar and pine forests. The branches or tributaries of the Indus river are Astor River, Nagar River, Dras River, Balram River, Ghizar River, Gar River, Gumal River, Gilgit River, Kurram River, Kabul River, Shigar River, Panjnad River, Sohan River, Shyok River, Zanskar River, Tanubal River. The basin of the river is famous for its diversity of exotic flora and fauna. The confluence of two rivers in the Himalayas creates the river Chenab and these rivers are known as the Bhaga and the Chandra River. As a result of this, the Chenab River is famously called as Chandrabhaga. The Neelum River is also known as Kishanganga. It joins the Jhelum River near Muzaffarabad.

2.9 Climate

J&K is situated in sub-tropical latitudes. But each of the three regions viz Jammu, Kashmir & Ladakh have marked difference in climatic conditions owing to different
physiographic features. Jammu division has the tropical heat, characterised with monsoon rains and cool winters. Climate of Ladakh is very cold, arid and dry. The valley of Kashmir has continental climate characterised with marked seasonality. It has a modified sub-tropical climate because of the mountain ranges surrounding it. The valley has a fairly long period of winter & spring seasons. Six different reasons are recognised by Kashmiris:

a) Sonth (spring): Mid-March to Mid-May.
b) Grishm (summer): Mid-May to Mid-July.
c) Wahrat (rainy season): Mid-July to Mid-September.
d) Harud (autumn): Mid-September to Mid-November.
e) Wand (winter): Mid-November to Mid-January.
f) Sheshur (season of severe cold): Mid-January to Mid-March.

2.10 Soils

Kashmir region depicts rich diversity in soils, whose origin varies from alluvial to lacustrine and glacial. In the valley of Kashmir the soils are decidedly glacio-fluvial in nature, with modifications brought by human intervention (Bhagat, 1990). Raza et.al. (1978) broadly divided the soils of Kashmir with reference to the major physiographic divisions as:

1. Valley soils, including the valley basin and the side-valleys of the Jhelum, up to 1850 m;

2. Highland soils, mainly between 1850 and 3350 m; and


The valley soils are found in the low altitude areas of the Jhelum basin. These soils are rich in nitrogen, organic matter and other plant nutrients. The soil of the highland is deficient in bases. Karewa soils are mostly formed of silt and are poorer. Nitrogen content in the Karewa soils varies from 0.644 to 0.00132 and lacks in organic matter. Important soil types are are described in the following sections (see Map 5).
1. **Sekil or Sandy soil:** It is poorer soil with more sand. It is found in the upper Sindh basin. The vast areas of sekil soil are under forests.

2. **Bahil or loamy soil:** It is fertile soil next to Surhzamin. It is found on the right and left flanks of the Surhzamin and is found in a much wider tract.

3. **Nambal or Swampy and clay soils:** It is mostly water-logged but have clay in it. Wherever possible, it is put to better uses. It extends over a large area from Shadipur to Sopore and around the Wular lake.
4. **Gurti or silty soil**: It is formed by the flooding of the areas along the main channel of the Jhelum river.

5. **Karewa soils**: It is a mixture of coarse sand and small pebbles found in horizontal beds.

6. The higher altitude areas on the peripheral region have immature mountain soils.

7. Entire Madhumati basin and eastern Pohru basin have glacial soils.

8. **Surhzamin**: It is especially cured and highly manured soil for vegetable culture. It has a darkish ash colour and a thick layer of manure. Surhzamin is rated as the best soil in fertility. It is found in the vicinity of Srinagar and Tral.

9. **Kharzamin**: It is a saline soil and is unfit for cultivation.

10. **Rad**: It is a term used for soils of the floating gardens.

**2.11 Vegetation**

Kashmir region is very well endowed with a variety of natural vegetation, ranging from the lush-green alpine pastures to evergreen conifers on the gentle slopes of high altitudes (Husain 2006), and deciduous vegetation with numerous types of fruit trees on the valley floor. The valley of Kashmir and the lofty mountains surrounding it depict great variation in the topography, altitude, climate, soil and land-use features, thereby adding to the diversity of habitats in the region. This has resulted in altitudinal climatic zones, with their characteristic vegetation types. To describe the vegetation of the region, two main ecological zones have been recognised: the valley zone and the montane zone (Dar et.al., 2002). The valley zone comprises the main valley between 1500 – 2300 m altitude. The main vegetation types of this zone are, agro-ecosystem vegetation, aquatic & wetland vegetation. The montane zone comprises the mountains surrounding the main and the side valleys, and extends from 1600 m upto the highest peaks in this region. The vegetation of this zone is categorised into forest and meadowland vegetation (Dar, et.al, 2002).
The region consists of nearly 60 per cent of the total forest area of the state of Jammu & Kashmir. Owing to the latitude and altitude of the region, temperate vegetation is dominant. The slopes of Pir Panjal above 1500 m to 3000 m are dominated by coniferous vegetation, the dominant species being deodar, pine, silver-fish, spruce, laural and paper-birch (Husain, 2006). The northern slopes of Pir-Panjal are dominated by deodar, blue pines and deciduous shrubs, while the Jhelum Forest Division (stretching over Gulmarg to Lolab Valley) is prevailed by cedar, fir and spruce species of conifers. In the flat valley of Kashmir, poplar, chinar and willow are
the main species of vegetation which are deciduous in character (Husain, 2006). Alpine pastures, (known as Marg in Kashmiri) are the vegetation zones lying between 3600 to 4000 m and begin well above the upper limit of conifer forests. Forests are not only important for the ecological balance of the region but the main economy of the state, tourism, is highly dependent on it. Visitors come from far off places to find solace in the dense jungles of the region. So forests are more beneficial economically if they are left untouched.

2.12 Economic setting

Cultivation of crops is a dominant occupation of the people of Kashmir division of J&K. Farming, directly or indirectly, supports about 80% of the total population of the state and 70% of the workforce is engaged in agriculture. Moreover, agriculture contributes nearly 60% of the state revenue (Qazi, 2005). The valley of Kashmir is well known for paddy, maize, saffron and orchards cultivation and is called as the ‘Rice Bowl’ of the state (Husain, 2006). One of the main agricultural produce that Kashmir region is famous for is the saffron cultivation. It is cultivated on the Karewa soils. Horticulture is an old economic activity of the Kashmir region. The great diversity in the geo-ecological conditions of the region is ideal for the cultivation of almost all kinds of temperate fruits.

Other important economic activities of the people of Kashmir region are sericulture, livestock rearing and apiculture. Apart from this Kashmir is known for carpet making, shawls, woollen textiles and paper machie. Due to the lack of basic mineral resources the region has not attracted the industrial development but the abundance of water resources has prompted the govt to tap the hydroelectric potential of the region.

Tourism is also a dominant economic activity of the region as about 20% of the workforce of the state is directly or indirectly dependent on tourism (Husain, 2006). After agriculture and horticulture tourism is the third largest industry in Kashmir and has been recently designated as a major resource for economic revival and employment generation in the region (Tankha, 2013).