

# Nepal

## Geography

Situated in the lap of Himalaya, Nepal is located in between the latitude 26° 22' N to 30° 27' North and longitude 80° 4' E to 88° 12' East and elevation ranges from 90 to 8848 meters. The average length being 885 km. east to west and average breadth is about 193 km. north to south. The country is bordering between the two most populous countries of the world, India in the east, south, west and China in the north. Nepal is a land locked country and home place of natural beauty with traces of artifacts. The northern range (Himalaya) is covered with snow over the year where the highest peak of the world, the Mount Everest, stands. The middle range (Hill) is captured by gorgeous mountains, high peaks, hills, valleys and lakes. The Southern range (Terai) is the gangaitic plain of alluvial soil and consist of dense forest area, national parks, wildlife reserves and conservation areas. The temperature and rainfall differ from place to place.

Sandwiched between two Asian giants--China and India--Nepal traditionally has been characterized as "a yam caught between two rocks." Noted for its majestic Himalayas, which in Sanskrit means the abode of snow, Nepal is very mountainous and hilly. Its shape is roughly rectangular, about 650 kilometers long and about 200 kilometers wide, and comprises a total of 147,181 square kilometers of land. It is slightly larger than Bangladesh or the state of Arkansas. Nepal is a landlocked country, surrounded by India on three sides and by China's Xizang Autonomous Region (Tibet) to the north. It is separated from Bangladesh by an approximately fifteen kilometer -wide strip of India's state of West Bengal, and from Bhutan by the eighty-eight-kilometer-wide Sikkim, also an Indian state. Such a confined geographical position is hardly enviable. Nepal is almost totally dependent on India for transit facilities and access to the sea--that is, the Bay of Bengal--even for most of the goods coming from China.



Geographically, the country is divided in three regions: Mountain, Hill and Terai accommodating 7.3, 44.3 and 48.4 percent of the population respectively. Based on area of districts these regions constitute 35, 42 and 23 percent of the total land area. There are 5 development regions and 75 administrative districts. Districts are further divided into smaller units, called Village Development Committee (VDC) and Municipality. Currently, there are 3,915 VDCs and 58 Municipalities in the country. Each VDC is composed of 9 wards, Municipality ward ranges from 9 to 35. Kathmandu is the capital city.

For a small country, Nepal has great physical diversity, ranging from the Tarai Plain--the northern rim of the Gangetic Plain situated at about 300 meters above sea level in the south--to the almost 8,800-meter-high Mount Everest, locally known as Sagarmatha (its Nepali name), in the north. From the lowland Tarai belt, landforms rise in successive hill and mountain ranges, including the stupendous rampart of the towering Himalayas, ultimately reaching the Tibetan Plateau beyond the Inner Himalayas. This rise in elevation is punctuated by valleys situated between mountain ranges. Within this maze of mountains, hills, ridges, and low valleys, elevational (altitudinal) changes resulted in ecological variations.

Nepal commonly is divided into three broad physiographic areas: the Mountain Region, the Hill Region, and the Terai Region. All three parallel each other, from east to west, as continuous ecological belts, occasionally bisected by the country's river systems. These ecological regions were divided by the government into development sectors within the framework of regional development planning.

The rhythm of life in Nepal, as in most other parts of monsoonal Asia, is intricately yet intrinsically intertwined with its physical environment. As scholar Barry Bishop learned from his field research in the Karnali region in the northwest, the livelihood patterns of Nepal are inseparable from the environment.

### **The Mountain Region**

The Mountain Region (called Himal in Nepali) is situated at 4,000 meters or more above sea level to the north of the Hill Region. The Mountain Region constitutes the central portion of the Himalayan range originating in the Pamirs, a high altitude region of Central Asia. Its natural landscape includes Mount Everest and the other seven of the world's ten highest peaks, which are the legendary habitat of the mythical creature, the yeti, or abominable snowman. In general, the snow line occurs between 5,000 and 5,500 meters. The region is characterized by inclement climatic and rugged topographic conditions, and human habitation and economic activities are extremely limited and arduous. Indeed, the region is sparsely populated, and whatever farming activity exists is mostly confined to the low-lying valleys and the river basins, such as the upper Kali Gandaki Valley.

In the early 1990s, pastoralism and trading were common economic activities among mountain dwellers. Because of their heavy dependence on herding and trading, transhumance was widely practiced. While the herders moved their *goths* (temporary animal shelters) in accordance with the seasonal climatic rhythms, traders also migrated seasonally between highlands and lowlands, buying and selling goods and commodities in order to generate much needed income and to secure food supplies.

## **Hill Region**

Situated south of the Mountain Region, the Hill Region (called Pahar in Nepali) is mostly between 1,000 and 4,000 meters in altitude. It includes the Kathmandu Valley, the country's most fertile and urbanized area. Two major ranges of hills, commonly known as the Mahabharat Lekh and Siwalik Range (or Churia Range), occupy the region. In addition, there are several intermontane valleys. Despite its geographical isolation and limited economic potential, the region always has been the political and cultural center of Nepal, with decision-making power centralized in Kathmandu, the nation's capital. Because of immigration from Tibet and India, the hill ranges historically have been the most heavily populated area. Despite heavy out-migration, the Hill Region comprised the largest share of the total population in 1991.

Although the higher elevations (above 2,500 meters) in the region were sparsely populated because of physiographic and climatic difficulties, the lower hills and valleys were densely settled. The hill landscape was both a natural and cultural mosaic, shaped by geological forces and human activity. The hills, sculpted by human hands into a massive complex of terraces, were extensively cultivated.

Like the Mountain Region, the Hill Region was a food-deficit area in the early 1990s, although agriculture was the predominant economic activity supplemented by livestock raising, foraging, and seasonal migrating of laborers. The vast majority of the households living in the hills were land-hungry and owned largely *pakho* (hilly) land. The poor economic situation caused by lack of sufficient land was aggravated by the relatively short growing season, a phenomenon directly attributable to the climatic impact of the region's higher altitude. As a result, a hill farmer's ability to grow multiple crops was limited. The families were forced to adapt to the marginality, as well as the seasonality, of their environment, cultivating their land whenever they could and growing whatever would survive. Bishop has noted that "as crop productivity decreases with elevation, the importance of livestock in livelihood pursuits . . . increases. For many Bhotia [or Bhot] living in the highlands . . . animal husbandry supplants agriculture in importance." During the slack season, when the weather did not permit cropping, hill dwellers generally became seasonal migrants, who engaged in wage labor wherever they could find it to supplement their meager farm output. Dependence on nonagricultural activities was even more necessary in the mountain ecological belt.

## **Terai Region**

In complete topographic contrast to the Mountain and Hill regions, the Terai Region is a lowland tropical and subtropical belt of flat, alluvial land stretching along the Nepal-India border, and paralleling the Hill Region. It is the northern extension of the Gangetic Plain in India, commencing at about 300 meters above sea level and rising to about 1,000 meters at the foot of the Siwalik Range. The Terai includes several valleys (*dun*), such as the Surkhet and Dang valleys in western Nepal, and the Rapti Valley (Chitwan) in central Nepal.

The word *terai*, a term presumed to be derived from Persian, means "damp," and it appropriately describes the region's humid and hot climate. The region was formed and is fed by three major rivers: the Kosi, the Narayani (India's Gandak River), and the Karnali. A region that in the past contained malaria-infested, thick forests, commonly known as *Char Koshe Jhari* (dense forests approximately twelve kilometers wide), the Terai was

used as a defensive frontier by Nepalese rulers during the period of the British Raj (1858-1947) in India. In 1991 the Terai served as the country's granary and land resettlement frontier; it became the most coveted internal destination for land-hungry hill peasants. In terms of both farm and forest lands, the Terai was becoming Nepal's richest economic region. Overall, Terai residents enjoyed a greater availability of agricultural land than did other Nepalese because of the area's generally flat terrain, which is drained and nourished by several rivers. Additionally, it has the largest commercially exploitable forests. In the early 1990s, however, the forests were being increasingly destroyed because of growing demands for timber and agricultural land.

### **Climate**

Nepal has a great deal of variation in climate. Its latitude is about the same as that of Florida, and a tropical and subtropical climate exists in the Terai Region. Outside the Terai, however, the climate is completely different. The remarkable differences in climatic conditions are primarily related to the enormous range of altitude within such a short north-south distance. The presence of the east-west-trending Himalayan massifs to the north and the monsoonal alteration of wet and dry seasons also greatly contribute to local variations in climate. Scholar Sharad Singh Negi identifies five climatic zones in Nepal based on altitude: the tropical and subtropical zone of below 1,200 meters in altitude; the cool, temperate zone of 1,200 to 2,400 meters in altitude; the cold zone of 2,400 to 3,600 meters in altitude; the subarctic climatic zone of 3,600 to 4,400 meters in altitude; and the arctic zone above 4,400 meters in altitude. In terms of natural vegetational regimes or distribution patterns, altitude again plays a significant role. Below 1,200 meters, the dominant form of vegetation consists of tropical and subtropical rain forests.

Altitude also affects annual rainfall or precipitation patterns. Up to about 3,000 meters, annual rainfall totals increase as the altitude increases; thereafter, annual totals diminish with increasing altitude and latitude. In addition to this latitudinal differentiation in rainfall, two other patterns can be discerned. First, given the northwestward movement of the moisture-laden summer monsoon (June to September), the amount of annual rainfall generally decreases from east to west. However, there are certain pockets with heavy annual rainfall totals, for example, the Pokhara Valley in central Nepal. Second, the horizontal extension of hill and mountain ranges creates a moist condition on south and east facing slopes whereas it produces a major rain shadow on the northern sides of the slopes. The aridity increases with altitude and latitude, especially on the northern slopes, and reaches its climax in the inner Himalayan region and on the Tibetan Plateau. Eastern Nepal receives approximately 2,500 millimeters of rain annually, the Kathmandu area about 1,420 millimeters, and western Nepal about 1,000 millimeters.

The towering Himalayas play a critical role, blocking the northwesterly advances of moist, tropical air from the Bay of Bengal, and ultimately leading to its conversion to rain in the summer. In the winter, this range prevents the outbursts of cold air from Inner Asia from reaching southern Nepal and northern India, thus ensuring warmer winters in these regions than otherwise would be the case.

In addition, there are seasonal variations in the amount of rainfall, depending on the monsoon cycle. Bishop divides the monsoon cycle into four seasons: pre-monsoon, summer monsoon, post-monsoon, and winter monsoon. The pre-monsoon season

generally occurs during April and May; it is characterized by the highest temperatures, reaching 40° C during the day in the Terai Region and other lowlands. The hills and mountains, however, remain cool.

The summer monsoon, a strong flow of moist air from the southwest, follows the pre-monsoon season. For the vast majority of southern Asians, including Nepalese, the term *monsoon* is synonymous with the summer rainy season, which makes or breaks the lives of hundreds of millions of farmers on the subcontinent. Even though the arrival of the summer monsoon can vary by as much as a month, in Nepal it generally arrives in early June, is preceded by violent lightning and thunderstorms, and lasts through September, when it begins to recede. The plains and lower Himalayas receive more than 70 percent of their annual precipitation during the summer monsoon. The amount of summer monsoon rain generally declines from southeast to northwest as the maritime wedge of air gradually becomes thinner and dryer. Although the success of farming is almost totally dependent on the timely arrival of the summer monsoon, it periodically causes such problems as landslides; subsequent losses of human lives, farmlands, and other properties (not to mention great difficulty in the movement of goods and people); and heavy flooding in the plains. Conversely, when prolonged breaks in the summer monsoon occur, severe drought and famine often result.

The post-monsoon season begins with a slow withdrawal of the monsoon. This retreat leads to an almost complete disappearance of moist air by mid-October, thus ushering in generally cool, clear, and dry weather, as well as the most relaxed and jovial period in Nepal. By this time, the harvest is completed and people are in a festive mood. The two biggest and most important Hindu festivals-- Dashain and Tihar (Dipawali)--arrive during this period, about one month apart. The post-monsoon season lasts until about December. After the post-monsoon, comes the winter monsoon, a strong northeasterly flow, which is marked by occasional, short rainfalls in the lowlands and plains and snowfalls in the high-altitude areas. The amount of precipitation resulting from the northeast land trade winds varies considerably but increases markedly with elevation. The secondary winter precipitation in the form of snowfalls in the Himalayas is important for generating a sufficient volume of spring and summer melt waters, which are critical for irrigation in the lower hills and valleys where agriculture predominates. Winter precipitation is also indispensable for the success of winter crops, such as wheat, barley, and numerous vegetables.

### Population

In the geographic diversity and varied climatic conditions 24.8 million people of more than 60 caste/ethnic groups are accommodated in the country. Nepal presents an example of being united in diversity over the history and has maintained its pride to be an independent and sovereign state. The population Census 2001 reports that 53.1 percent population of age 10 years & over is employed and 5.1 percent are unemployed. Contribution of non agricultural activities are gradually increasing in the GDP. The revised estimates of per capita GDP and per capita GNP in terms of US dollar are 242 and 250 respectively for the year 2002/03. The currency is Nepalese Rupee.

Total Area	Total Agriculture Holdings	Total Population in 2001	Male	Female	No. of Households	Literacy Rate (2001 Census) Total 54.1%
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	2001/02						
147181 Sq. KM.	3364139 Ha.	23151423	11563921	11587502	4253220	Male 65.5%	Female 42.8%

Source: CBS, Nepal 2001

### Rivers

Nepal can be divided into three major river systems from east to west: the Kosi River, the Narayani River (India's Gandak River), and the Karnali River. All ultimately become major tributaries of the Ganges River in northern India. After plunging through deep gorges, these rivers deposit their heavy sediments and debris on the plains, thereby nurturing them and renewing their alluvial soil fertility. Once they reach the Tarai Region, they often overflow their banks onto wide floodplains during the summer monsoon season, periodically shifting their courses. Besides providing fertile alluvial soil, the backbone of the agrarian economy, these rivers present great possibilities for hydroelectric and irrigation development. India managed to exploit this resource by building massive dams on the Kosi and Narayani rivers inside the Nepal border, known, respectively, as the Kosi and Gandak projects. None of these river systems, however, support any significant commercial navigation facility. Rather, the deep gorges formed by the rivers represent immense obstacles to establishing the broad transport and communication networks needed to develop an integrated national economy. As a result, the economy in Nepal has remained fragmented. Because Nepal's rivers have not been harnessed for transportation, most settlements in the Hill and Mountain regions remain isolated from each other. As of 1991, trails remained the primary transportation routes in the hills.

The eastern part of the country is drained by the Kosi River, which has seven tributaries. It is locally known as the Sapt Kosi, which means seven Kosi rivers (Tamur, Likhu Khola, Dudh, Sun, Indrawati, Tama, and Arun). The principal tributary is the Arun, which rises about 150 kilometers inside the Tibetan Plateau. The Narayani River drains the central part of Nepal and also has seven major tributaries (Daraudi, Seti, Madi, Kali, Marsyandi, Budhi, and Trisuli). The Kali, which flows between the Dhaulagiri Himal and the Annapurna Himal (Himal is the Nepali variation of the Sanskrit word *Himalaya*), is the main river of this drainage system. The river system draining the western part of Nepal is the Karnali. Its three immediate tributaries are the Bheri, Seti, and Karnali rivers, the latter being the major one. The Maha Kali, which also is known as the Kali and which flows along the Nepal-India border on the west side, and the Rapti River also are considered tributaries of the Karnali.

### Mountain Peaks

There are number of peaks, rivers and lakes in the country. Major peaks are - the Mount Everest (8848 m.), Mt. Kanchanjanga the third highest peak of the world and the second highest in the country (8586 m.), Mt. Lhotse (8516 m.), Mt. Makalu (8463 m.), Mt. Choyoyu (8201 m.), Mt. Dhawalagiri (8167m.), Mt. Manaslu (8163 m.), Mt. Annapurna (8091m.), Mt. Gaurisankar (7134 m.), Mt. Machhapuchhre (6996 m.) and many other gracious peaks.

Source: <http://countrystudies.us/nepal/21.htm>