

## CHAPTER- 6

### Development of Tourism in Darjeeling Hills and its Impact

#### 6.1 Introduction

Tourism has come to occupy a major slot in the economy of Darjeeling hill areas. Darjeeling the “queen of the hills” where nature has kept her doors wide open have of late become major attraction to tourist worldwide. The hills are abound in a variety of flora and fauna from the alpine to the tropical. Darjeeling and nearby hills offer immense opportunities for trekking, rock climbing, mountain biking, hand gliding and the river Tista flowing the hills attracts the young and brave for white water rafting and canoeing.

Darjeeling popularly known as the “jewel in the crown of the East Himalayas” has been destination for the nature lovers. Dotted with world famous tea gardens the hill town, through dogged by water scarcity is being frequented by tourists for a joy ride on its toy train run by the Darjeeling Himalayas railways that has been awarded with world heritage status by UNESCO. Some call it a paradise for shopping and a kaleidoscope of Indian, Chinese and Tibetan cultures and so no tourist would miss the sunrise over the Mount Everest and the Kanchenjunga.

An attempt has been made to analyse the evolution, growth and development of tourism the second most important economic activities in the Darjeeling hills. Data has been collected from both primary and secondary sources. Various reports, published work, gazetteers, and departmental reports have been thoroughly consulted to get relevant information. Tourist bureau, foreigner registration office, Hotel Association’s transport offices have been visited to gather information of tourist arrival in the Darjeeling hills. Extensive field survey has been carried out involving questionnaire survey among sample respondents from both tourists and local residents to gather primary information on the assessment of impact of tourism under physical, economic, social sectors. Data has been analysed using standard statistical methods under excel platform.

The present chapter aims to study the evolution and growth of Darjeeling as a tourist centre. Moreover, an attempt has also been made to make a comprehensive compilation of a complete inventory of all attractions of tourist significance in the Darjeeling Himalaya. An assessment has also been made of the relative degree of tourist preferences and interest in each tourist spot by using a rating index based on the percentage of tourist footfalls in each

spot. An overall assessment of the availability and distribution of resources related to tourism infrastructure has also been attempted.

## **6.2 Evolution of Tourism**

Tourism in the Darjeeling Himalaya evolved essentially from a high altitude settlement, originally established by the British in India to serve the needs of the civil servants and soldiers of the East India Company. It has subsequently undergone considerable functional evolution so that it now serves an almost entirely Indian clientele. This evolution may be regarded from three vantage points. From the stand point of cultural ecology, the hill station once functioned as part of British colonial ecosystem. Owing to its cool temperatures and its embodiment of an upper class British lifestyle, the British perceived it as a necessity of living in India. Since Independence, however, it has become an integral part of an indigenous ecosystem. Secondly, tourism in the Darjeeling Himalaya can be studied from the viewpoint of settlement geography. From a very small centre with a single purpose function as a health sanitarium, it has developed into a multi-functional type of settlement with a series of inter related activities with overlapping hinterlands. Thirdly, the changing functions of this region also process of Indianisation and the complex process of modernization.

Three factors seem to be of prime importance with regard to the development of Darjeeling as a British hill station, that is, political considerations; height above sea level and the chance factors related to the personal interests of its founders. Travel and tourism developed further with changes in the socio-economic environment. The evolution and growth of tourism in the Darjeeling Himalaya can be analyzed in three distinct phases in terms of colonial and post-colonial episodes:

Stage I: British period (1835 –1947)

Stage II: Post Independence period (1947-1988)

Stage III: Present Scenario (1988 onwards)

### **6.2.1 Tourism in British Period**

The evolution of Darjeeling dates back to 1835 when Captain Lloyd established a sanitarium. The complication of the Calcutta, Darjeeling road in 1838 was the first step towards introducing modern communication. The introduction of narrow gauge railway in 1881 increased the accessibility of Darjeeling in the colonial period and the tea industry was

the pivot of growth and development. An inflow of civil servants, officials, planters and labourers helped the gradual expansion and many civic amenities were gradually appended to this town. This also helped the development of “second homes” around Darjeeling, Kalimpong, and Kurseong of the wealthy landlords from the Bengal.

Initial development of Darjeeling was due to two functions: that of a sanatorium as well as a strategic military station. The establishment of a sanatorium led to urban development and an increase in population. The most important medical institution was the Eden Sanatorium, built in 1882 and it was meant exclusively for the British. The Lewis Jubilee Sanatorium was erected in 1887, on land donated by the Maharaja of Cooch Behar and this was meant for the Indians (O'Malley, 1907).

The major economic activity in Darjeeling was centered on the tea industry. While tea was grown on an experimental basis from 1840, the industry was established as a commercial enterprise in 1856. By 1874, there were 113 tea gardens and by 1905 there were 148 tea gardens (O'Malley 1907). The Darjeeling Planters' Club was established in 1868. The growth of Darjeeling into very popular hill-station was meteoric. Epithets equating the hill station to “*Queen of Hill Stations*” started gaining popularity. Schools like Loreto Convent, St. Paul's, St. Joseph's and Queen's Hill were started by Missionaries for the British children. Today these schools are indices of high status.

The British government also took initiative to develop tourism activities indirectly through offering restricted accommodation for the tourists in Government Bungalow/Dak Bungalow at many places of tourist interest. The Bungalows as shown in table 6.1 were available for the accommodation of travelers and tourists who had obtained passes authorizing them to occupy. The bungalows were constructed in very convenient places. The British had constructed those bungalows without disturbing the environment. In addition to this they had planted different kinds of trees and other valuable plants in and around those spots for the beautification of land and environment so that those places are still considered as very good tourist spots.

The evolution of hotels in Darjeeling began in 1839, when the Darjeeling Family Hotel was established with 12 rooms which was followed by Wilson's Hotel in a two storied house containing 18 rooms. It was followed by Nelson Hotel and thereafter hotels like Woodlands, Drum, Rockville, Bellevue and Mt. Everest followed suit.

*Table 6.1 Accommodation facilities for tourists during the British period in Darjeeling hills*

| No | Nature of accommodation | Place        | Distance in km          | Altitude in meter | Bed-rooms |
|----|-------------------------|--------------|-------------------------|-------------------|-----------|
| 1  | Dak Bungalow            | Kurseong     | 18 from Kurseong        | 1482.9            | 6         |
| 2  | Dak Bungalow            | Pankhabari   | 24 from Kurseong        | 548.8             | 2         |
| 3  | Govt. Bungalow          | Badamtam     | 7.5 from Darjeeling     | 792.7             | 2         |
| 4  | Govt. Bungalow          | Jorepokhari  | 12.5 from Ghoom         | 2256.1            | 2         |
| 5  | Govt. Bungalow          | Kalijhora    | 32 via Tista Bridge     | 167.7             | 3         |
| 6  | Govt. Bungalow          | Kalimpong    | 28 via Rangit           | 1219.5            | 4         |
| 7  | Govt. Bungalow          | Mirik        | 26 from Sukiapokri      | 1524.4            | 2         |
| 8  | Govt. Bungalow          | Peshok       | 18.5 from Kalimpong     | 1006.1            | 4         |
| 9  | Govt. Bungalow          | Pedong       | 43 from Tista           | 1451.2            | 6         |
| 10 | Govt. Bungalow          | Phalut       | 50 from Darjeeling      | 3600.9            | 2         |
| 11 | Govt. Bungalow          | Rangarum     | 7.5 from Darjeeling     | 1737.8            | 2         |
| 12 | Govt. Bungalow          | Reyang       | 25 from Kalimpong       | 190.5             | 4         |
| 13 | Govt. Bungalow          | Sandakphu    | 37 from Manebhanjan     | 3636.9            | 2         |
| 14 | Govt. Bungalow          | Senchal      | 6 from Goom             | 2439.0            | 6         |
| 15 | Govt. Bungalow          | Tanglu       | 23 from Ghoom           | 3071.3            | 2         |
| 16 | Govt. Bungalow          | Tista Bridge | 19 via Rangit           | 216.5             | 2         |
| 17 | Forest Bungalow         | Battassia    | 5 from Jorephokhri      | 2121.3            | 2         |
| 18 | Forest Bungalow         | Debripani    | 2.5 south of Jorepokhri | 1829.3            | 3         |
| 19 | Forest Bungalow         | Lepchajagat  | 5 from Ghum             | 2134.1            | 4         |
| 20 | Forest Bungalow         | Paimajua     | 4 north of Tonglu       | 1798.8            | 2         |
| 21 | Forest Bungalow         | Rambhi       | 5 southeast of Ghum     | 1905.5            | 2         |
| 22 | Forest Bungalow         | Ramam        | 7 southeast of Phalut   | 2286.6            | 3         |
| 23 | Forest Bungalow         | Rimbick      | 6.5 north of Palmajua   | 2432.9            | 2         |
| 24 | Forest Bungalow         | Jaisi        | 2 north of Lopchu       | 1280.5            | 2         |
| 25 | Forest Bungalow         | Babukhola    | 4 east of Toong         | 1822.6            | 2         |
| 26 | Khasmahal Bungalow      | Dalapchan    | 33 via Kalimpong        | 1380.5            | 2         |
| 27 | Khasmahal Bungalow      | Gorubathan   | 77 via Tiger bridge     | 457.3             | 4         |
| 28 | Khasmahal Bungalow      | Kumai        | 82 via Damdim           | 518.3             | 2         |
| 29 | Khasmahal Bungalow      | Mongpong     | 63 via Siliguri         | 182.9             | 2         |
| 30 | Khasmahal Bungalow      | Nimbong      | 68 from Kalimpong       | 1798.8            | 2         |
| 31 | Khasmahal Bungalow      | Pagriabong   | 98 via Tiger bridge     | 365.9             | 2         |
| 32 | Khasmahal Bungalow      | Pankhasari   | 77 via Tiger bridge     | 411.6             | 2         |
| 33 | Khasmahal Bungalow      | Patengodak   | 87 via Damdim           | 1585.4            | 2         |
| 34 | Khasmahal Bungalow      | Samthar      | 68 from Kalimpong       | 1722.6            | 2         |
| 35 | Khasmahal Bungalow      | Sinjee       | 60 from Kalimpong       | 1204.3            | 2         |
| 36 | Khasmahal Bungalow      | Siokbir      | 65 from Kalimpong       | 975.6             | 2         |
| 37 | Khasmahal Bungalow      | Targta       | 92 via Tiger bridge     | 1722.6            | 2         |
| 38 | Khasmahal Bungalow      | Tarkhola     | 26 via Tista            | 190.5             | 2         |
| 39 | Khasmahal Bungalow      | Tolo         | NA                      | NA                | NA        |
| 40 | Traveller's Bungalow    | Lopchu       | 15 from Darjeeling      | 1615.9            | 2         |
| 41 | Traveller's Bungalow    | Rississum    | 12 from Kalimpong       | 1954.3            | 3         |
| 42 | Traveller's Bungalow    | Tista        | 23 from Darjeeling      | 216.5             | 3         |
| 43 | Traveller's Bungalow    | Birik        | 10 from Tista bridge    | 274.4             | 2         |

*Source: Collectorate, Kutchery, Darjeeling, Divisional Forest Office, Darjeeling & Kalimpong*

With the growth of tourist facilities, the number of tourists also went up. Most of the tourists at this stage were British officials and wealthy Indian aristocrats like the Maharajas of Burdwan, Cooch Behar and Digha owned palatial bungalows in Darjeeling. A number of hotels were also established in Kurseong, Goom and Kalimpong during the British period (table 6.2).

**Table 6.2 List of Hotels and Boarding houses in Darjeeling hills during the British period.**

| Sl No. | Name                             | Place      | Location            |
|--------|----------------------------------|------------|---------------------|
| 1      | Bellevue                         | Darjeeling | Commercial row      |
| 2      | Garrets (Central house)          | Darjeeling | Mount Pleasant Road |
| 3      | Central hotel                    | Darjeeling | Post office Road    |
| 4      | Drum druid                       | Darjeeling | Commercial row      |
| 5      | L.J. Vado Ltd                    | Darjeeling | Commercial row      |
| 6      | Hotel Mount Everest              | Darjeeling | Auckland Road       |
| 7      | Park Hotel                       | Darjeeling | Meadow Bank Road    |
| 8      | Rockville (the Grand)            | Darjeeling | Harman's Road       |
| 9      | Woodlands                        | Darjeeling | Off Cart Road       |
| 10     | Add Villa                        | Darjeeling | Observatory Hill    |
| 11     | Alice Villa                      | Darjeeling | Mount Pleasant road |
| 12     | Annandale                        | Darjeeling | Cart Road           |
| 13     | Beechwood House                  | Darjeeling | Mackenzie Road      |
| 14     | Caroline villa                   | Darjeeling | Kutchery Road       |
| 15     | EL Esparanza                     | Darjeeling | Kutchery Road       |
| 16     | Fern Cottage                     | Darjeeling | Post office Road    |
| 17     | Havelock House                   | Darjeeling | Auckland road       |
| 18     | La Roche                         | Darjeeling | Kutchery Road       |
| 19     | May Cottage                      | Darjeeling | Lloyd's Road        |
| 20     | Moss bank                        | Darjeeling | Cart Road           |
| 21     | The Labyrinth                    | Darjeeling | Auckland Road       |
| 22     | Balaclava Hotel                  | Ghoom      | Old military Road   |
| 23     | Clarendon Hotel                  | Kurseong   | Cart Road           |
| 24     | Sorabjee's Hotel                 | Kurseong   | Cart Road           |
| 25     | Wood Hill                        | Kurseong   | Club Road           |
| 26     | Rowley Lascelles Ward's Bungalow | Kurseong   | Giddapahar          |

Thus the development of tourism in Darjeeling during the British period represents the phenomenon of expansion of colonialism in the tropics (Mitchell, Nora, 1972). Indeed, they symbolize the growth of modern tourism in the region. This period has certainly provided the initial thrust needed to catapult the Darjeeling Himalaya into modern tourism industry by revolutionizing the present land-use patterns, much to the advantage of tourism in the region.

### **6.2.2 Tourism in Independent period (1947-1988)**

The end of the British Raj in 1947 left behind its footprints in the Darjeeling Himalaya where colonial bungalows on plantations are preserved to this day and the hill schools still retain British traditions. Administration is an important function and Darjeeling still holds the status of the district administrative headquarters. Economic activity is dominated by trade in the 3 T's, that is, tea, timber and tourism. Recreation and commercial tourism have developed phenomenally in the last few decades. New forms of adventure tourism like trekking, rock climbing and rafting have developed. Contemporary urban landscapes have replaced the cottages with massive multi-storied buildings, while numerous hotels, restaurants, plantations and floriculture nurseries have evolved to sustain the region. Thus, the urban landscapes of Darjeeling, Kalimpong, Kurseong and other tourist centres in the region have been considerably altered. Massive constructions catering to the hotel industry have led to the replacement of the verdant forests with concrete jungles. Civil conditions have deteriorated and water shortages and slums have become rampant. Today the hill resorts of Darjeeling Himalaya have become a part of Indian lifestyles. Tourists visit these destinations during their seasons of preference and many infra-structural facilities including varied touristic amenities are being developed.

After 1950, the Indian Government also paid more attention to the growth of tourist industry. Tourism industry in India received a boost when the Indian Tourism Development Corporation (ITDC) was formed in 1965 with the objective of developing accommodation, transportation, entertainment and other tourist facilities. The year 1968 was then declared the 'Year of Indian Tourism' where policies and decisions were adopted to promote tourism throughout the country. Consequently, the influx of tourists has increased and tourism has become a significant part of the economy of the region. With improved transport facilities and expansion of infra-structure, these hill resorts have become more accessible, even to the less affluent middle class. Not surprisingly now tourist destinations like Mirik, Mongpu, Tinchulay, Lava and Lolegaon, Bara Mangwa, Makaibari etc have mushroomed around the three sub divisions of Darjeeling, Kalimpong and Kurseong.

During this period, a notable feature was the establishment of the Tourism Department of the Government of West Bengal in 1958. Subsequently, it has been converted into the West Bengal Tourism Development Corporation, (WBTDC) since November 1975. Prior to 1975, tourism in Darjeeling was managed privately and without much

encouragement or interference of the Government. Since 1975, the WBTDTC runs several tourist institutions throughout the region while at the same time serving as an important platform of supplying visitors with basic information about the various destinations in the region and in serving as outlet centers of various handicrafts of the region. The establishment of Darjeeling Gorkha Autonomous Hill Council in 1988 led to tourism activities being transferred to the DGHC. However, the West Bengal Tourism Development Corporation continues to operate in the area.

The picture of tourism in Darjeeling in the post-Independence era however has not always been rosy. A major setback in International tourism occurred when the Darjeeling hill areas were closed to foreign tourists after the Indo-China conflict of 1962. These direct restrictions were lifted in 1985 and the number of foreign tourists to the region increased significantly. Although, even now there are restrictions to foreign tourists in visiting many localities and a visitor can stay in Darjeeling hills for 15 days but only with prior permission from the Indian Missions abroad, the Foreigners' Registration Offices or the Home Department of the West Bengal State Government. Consequently, the number of tourist particularly the foreign tourists visiting Darjeeling increased markedly. When compared with the growth in the resident population, the increase in tourist population is far greater. It has been surmised that the increase in the number of tourists has been so rapid that infrastructures facilities cannot keep pace.

The genesis of the problem in the area can be traced to the haphazard growth and uncontrolled granting of land use rights by the British. Expansion of construction activities along the steeper slopes has exceeded the carrying capacity of the land. Hence, the frequency and intensity of landslides increased. Besides, an expansion of the built-up area at the expenses of forest or open space has resulted in an increased run off accompanied by a reduction in spring discharge. Lower rate of infiltration has resulted in the lowering of the ground water table and hence a reduction in the discharge of yield of springs. This has adversely affected the water supply in the town since the natural springs form the only source of water supply.

The rapid increase in tourist has also resulted in the creation of high density urban areas lacking in aesthetic value as the high rise building obstruct views. In addition, the increase in the built up space to provide for tourist amenities has taken place at the expense of forest areas. Darjeeling has witnessed a sudden growth in the number of vehicles which is

now posing a major threat to the health and environment and safety of the much acclaimed health walkers.

The tourism industry in the Darjeeling hills needs to be re-evaluated which should be followed up by judicious action by all the stakeholders and it is up to the hill people to decide the future of increasingly strong presence of mass tourism.

### **6.2.3 Present Tourism activities (1988 onwards)**

Tourism in the Darjeeling hills was organized and systematized properly after the formation of the WBTDC. New destinations like Mirik and Mongpu have been created in the 80's to serve as satellite townships to ease the burden on the old tourist centers of Darjeeling and Kalimpong. The establishment of the Darjeeling Gorkha Autonomous Hill Council (DGAHC) in 1988 led to the tourism activities being transferred to the DGAHC. However, the WBTDC also continues to operate in the area. After the formation of the DGAHC the region saw an upsurge of unprecedented growth rate in the tourism sector till 2007. In late 2007 political instability resurfaced in the region causing a sharp decline in the total number of tourist arrivals. Consequently, the tourist industry like all other economic sectors in the region plummeted to an all-time low. There is at present an acute need to sustain tourism activities through proper management and administrative intervention.

The overall expansion of tourism in the Darjeeling Himalaya – or the “*pleasure-periphery*” (Turner and Ashis, 1975) of West Bengal, is essentially driven by the lure of awe inspiring scenic beauty, the availability of interesting sightseeing, the liberal tourist incentives and cheap costs that apply to tourism in most third world environments. Tourism development in the Darjeeling Himalaya has witnessed the unprecedented mushrooming of destinations with enormous investments in resorts and hotels, services and other infrastructure. While critics decry mass tourism for its adverse cultural effects and social inequalities from “economic leakage”, nonetheless, conventional tourism remains the single most important type of tourism dominating in the Darjeeling Himalaya.

#### **6.2.3.1 The trend of tourism**

The Darjeeling Himalaya has been experiencing a substantial tourist inflow during recent years. The growth of tourism can be assessed from the following facts: (i) the number of hotels in Darjeeling hills has increased from 68 in 1980 to 280 in 2010; (ii) bed capacity increased from about 850 in 1980 to 9000 in 2010; (iii) total tourist arrival in the year 2001

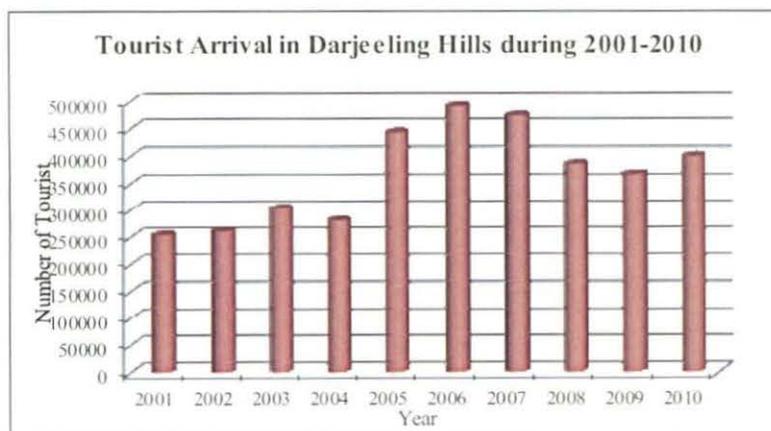
was 2,54,086 thereafter it peaked to 4,91,158 in 2006 and in 2010 it was 3,12,741 and (iv) the number of registered vehicles in Darjeeling has multiplied from a mere 10,317 in 1995 to 22,665 in 2009.

**Table 6.3 Tourist Arrivals in Darjeeling Hills (2005-2010)**

| Tourist Arrivals in the Darjeeling Hills |         |             |          |             |        |             |
|--|---------|-------------|----------|-------------|--------|-------------|
| Years                                    | Foreign | % Variation | Domestic | % Variation | Total  | % Variation |
| 2001                                     | 11100   | -           | 242986   | -           | 254086 | -           |
| 2002                                     | 12350   | 11.26       | 249032   | 2.49        | 261382 | 2.87        |
| 2003                                     | 18700   | 51.42       | 284315   | 14.17       | 303015 | 15.93       |
| 2004                                     | 18090   | -3.26       | 261596   | -7.99       | 280496 | -7.43       |
| 2005                                     | 27218   | 50.46       | 415901   | 58.99       | 443119 | 57.98       |
| 2006                                     | 30394   | 10.45       | 460764   | 09.73       | 491158 | 09.78       |
| 2007                                     | 29669   | -02.44      | 444253   | -03.71      | 473922 | -03.64      |
| 2008                                     | 26346   | -12.61      | 359258   | -23.66      | 385604 | -22.90      |
| 2009                                     | 23819   | -10.61      | 342813   | -04.79      | 366632 | -05.17      |
| 2010                                     | 27218   | 12.49       | 372741   | 08.03       | 399959 | 08.33       |

Sources: Tourist Bureau, Darjeeling; Foreigners Registration Office, DIB, Darjeeling

These changes clearly indicate tremendous increase in tourist activity. The growth of tourism in the region is further reiterated by the analysis of Tourist traffic (both international and domestic) in the region. Darjeeling Himalaya attracted as many as visitors 1.21 lakh in 1986.



*Figure 6.1 Tourist arrival in Darjeeling hills*

At present the figure hover around 3.5 to 4 lakh annually. Table 6.3 shows the growth pattern of tourist arrivals in the region. It is evident that there is no continuous increase in the tourist flow, but there is a rise and fall in numbers (figure 6.1). This may be attributed to

factor like the weather conditions or political disturbances in the region. It can be seen from the tourist arrival figures for the year 2008, both foreign and domestic figures have plummeted sharply by almost 21%. This can be attributed to the fresh agitation for a separate Gorkhaland state. To a certain extent the negative role of media was also responsible. Thus, it becomes very obvious that peace and security are as much needed for the tourism.

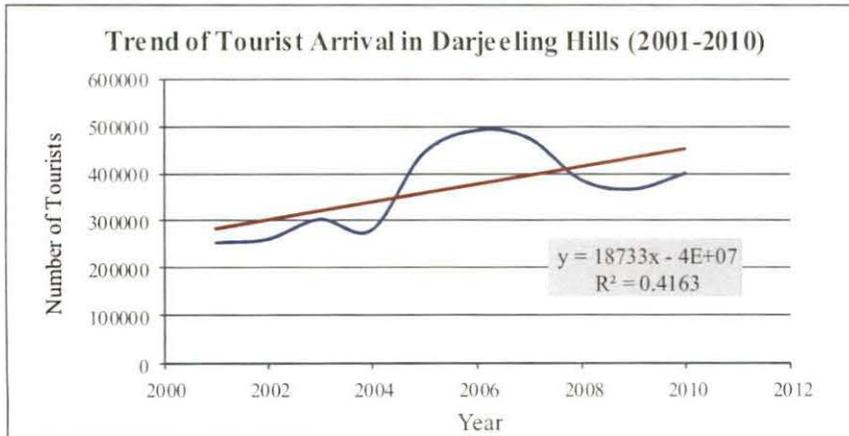


Figure 6.2 Trends of tourist arrival in Darjeeling hills

An attempt has been made to study the trends of tourist traffic (both International and domestic). The time series analysis of tourist arrival in Darjeeling hills (figure 6.3) reveals that both domestic and international is on increase with the time. However, the domestic tourist arrival is increasing trend is more prominent than the foreign tourist. The strong positive correlation as shown in figure 6.3 is a proof of such contention.

### 6.2.3.2 Spatial distribution of tourist arrival

It is interesting to note that both the domestic as well as the international tourist prefer to visit Darjeeling and its environs among the other hill areas like Kurseong and/or Kalimpong. The subdivision wise distribution of tourist arrival in Darjeeling hills has been given in table 6.4 and diagrammatically represented in figure 6.2. It reveals that on an average in between 2001-2010, 77% of the total tourist arrived Darjeeling sub-divisions, another 16% arrived Kalimpong and its environs and only 7% preferred to visit Kurseong as their destination. Such preference remains more or less constant over the past decades (figure 6.4 & table 6.4).

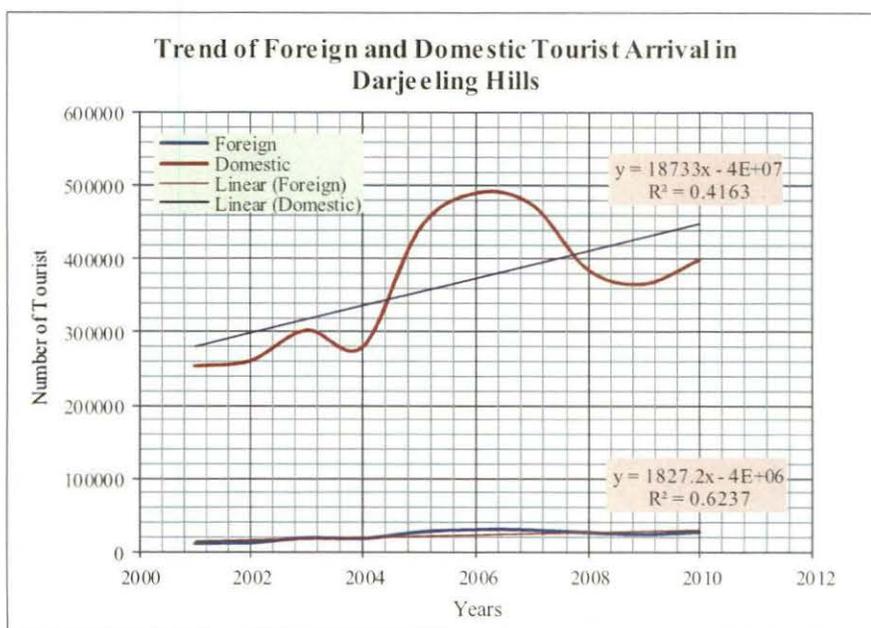


Figure 6.3 Trends of foreign and domestic tourist arrival in Darjeeling hills

It is found that the tourist arrival in Kalimpong has increased considerable while that in Kurseong declined. Perhaps calm and less congested urban environment along with its British infrastructure attract more tourists. On the contrary, overcrowding coupled with trafficcongestion displays its negative role to attract tourist to visit Kurseong. As a result, number of tourist arrival is declining steadily in the recent years (figure 6.5).

Table 6.4 Sub-division wise arrival of tourist in the Darjeeling hills

| Year | Sub-divisions |          |           | Total  |
|------|---------------|----------|-----------|--------|
|      | Darjeeling    | Kurseong | Kalimpong |        |
| 2001 | 185000        | 16424    | 52662     | 254086 |
| 2002 | 187925        | 21168    | 52289     | 261382 |
| 2003 | 218301        | 30324    | 54390     | 303015 |
| 2004 | 198342        | 26880    | 55274     | 280496 |
| 2005 | 359832        | 27856    | 55431     | 443119 |
| 2006 | 393321        | 30556    | 67281     | 491158 |
| 2007 | 382403        | 28976    | 62543     | 473922 |
| 2008 | 303967        | 23853    | 57784     | 385604 |
| 2009 | 289675        | 21745    | 55212     | 366632 |
| 2010 | 293912        | 17212    | 88835     | 399959 |

Sources: Tourist Bureau, Darjeeling; Foreigners Registration Office, DIB, Darjeeling

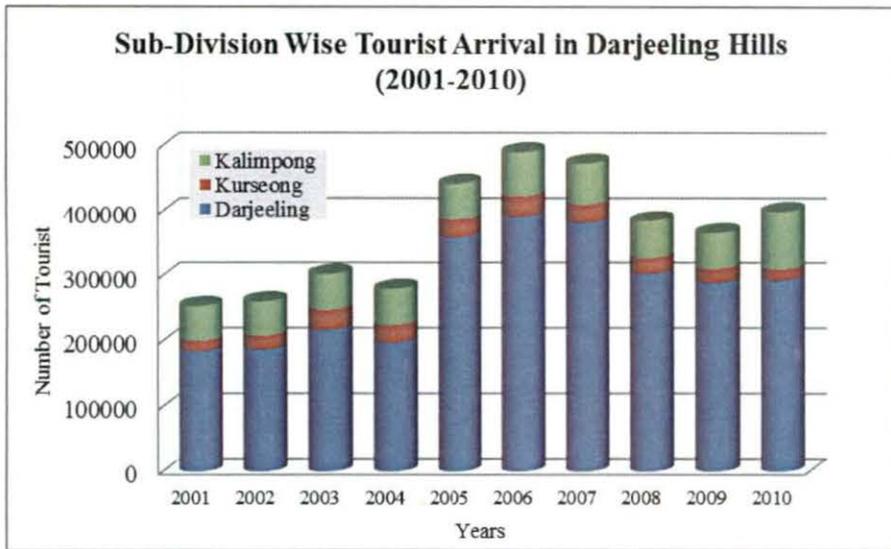


Figure 6.4 Sub-division wise tourist arrival in Darjeeling hills

An attempt has been made to study the trends of tourist traffic in all three sub-divisions in Darjeeling hills. The time series analysis of tourist arrival in Darjeeling, Kurseong and Kalimpong sub-divisions (figure 6.5) reveals that while Darjeeling sub-division shows an impressive growth in tourist arrival, the Kurseong sub-division recorded a virtual stagnation and the Kalimpong sub-division recorded only marginal increase over the last decade. The strong positive correlation as shown in figure 6.5 is a proof of such contention.

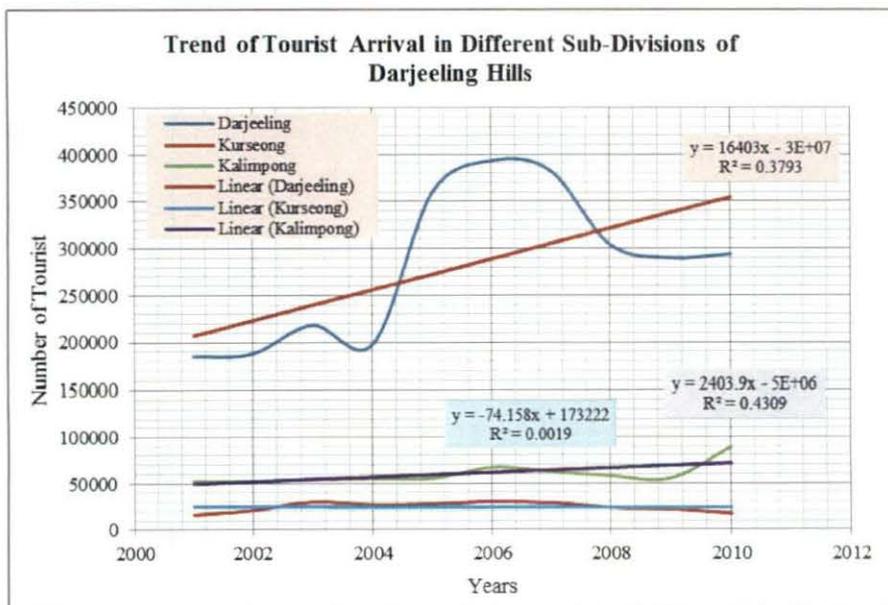


Figure 6.5 Sub-division wise trends of tourist arrival in Darjeeling hills

### 6.2.3.3 Seasonality of tourism

The seasonal variations reveal that tourism has 2 (two) peak periods in the Darjeeling Himalaya viz March-April and October-November (table 6.5).

**Table 6.5 Month-wise foreign tourist arrivals in Darjeeling hills**

| Months    | Years  |        |        |        |        |        |
|-----------|--------|--------|--------|--------|--------|--------|
|           | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   |
| January   | 1,006  | 1,938  | 1,970  | 1,805  | 1,676  | 1,694  |
| February  | 1,494  | 2,160  | 1,780  | 1,013  | 2,156  | 2,193  |
| March     | 3,272  | 3,338  | 3,114  | 3,362  | 3,326  | 3,366  |
| April     | 1,609  | 3,109  | 3,029  | 3,777  | 4,397  | 4,437  |
| May       | 855    | 3,116  | 2,486  | 2,928  | 2,142  | 2,164  |
| June      | 2,308  | 1,336  | 1,219  | 799    | 1,533  | 1,551  |
| July      | 1,079  | 1,325  | 1,345  | 994    | 746    | 756    |
| August    | 1,614  | 1,561  | 1,222  | 1,814  | 1,264  | 1,300  |
| September | 3,075  | 2,140  | 2,019  | 1,518  | 1,522  | 1,557  |
| October   | 3,077  | 4,902  | 5,519  | 3,970  | 2,695  | 2,720  |
| November  | 4,863  | 3,530  | 3,201  | 2,704  | 676    | 687    |
| December  | 2,967  | 1,939  | 2,765  | 1,662  | 1,686  | 1,700  |
| Total     | 27,219 | 30,394 | 29,669 | 26,346 | 23,819 | 23,143 |

Source: *Foreigners Registration Office, DIB, Darjeeling.*

Darjeeling town, singularly a unique hill station in terms of its physical setting, attracts the largest number of tourists in comparison to the other centres in Darjeeling Himalaya. The high turnout that is evident in summer is essentially due to the fact that the scorching temperatures in the plains compel tourists to seek cool, exhilarating climates of the hill resorts. In autumn factors like the Dussherra and Diwali vacations in West Bengal and the clear weather skies in the hills giving much clarity to the mountain ranges attract a substantial number of domestic tourists. Furthermore due to climatic preferences, foreigners arrive in more numbers during the autumn and winter seasons (figure 6.6).

The Darjeeling Himalaya has been witnessing a substantial tourist inflow in recent years. An interesting development has been the emergence of ‘weekenders’ who give rise to short spells of intense tourist activity in the region during the weekends on short term holidays irrespective of the tourist season. As a result, tourism is steadily coming up to be a year-round activity though the bulk of it is still around the twin peaks of pre monsoon-summer and autumn.

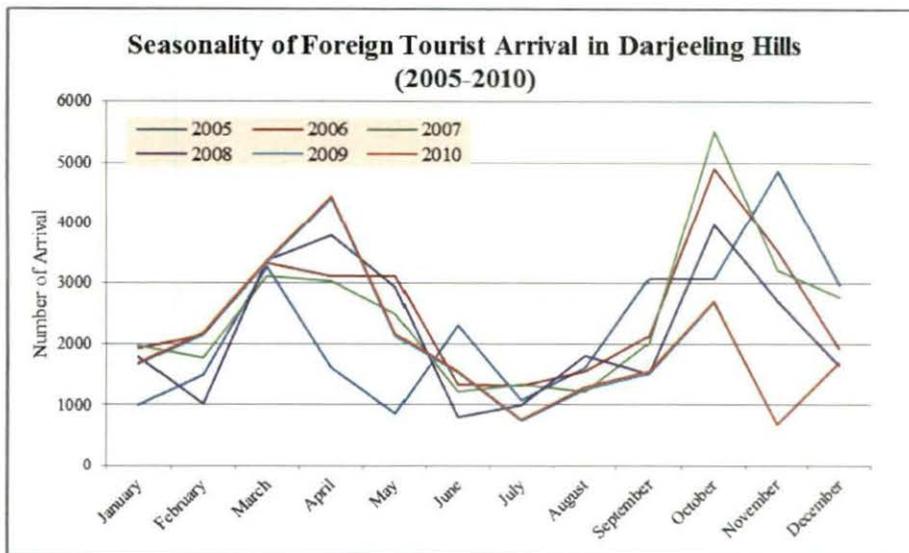


Figure 6.6 Seasonality of foreign tourist arrival in Darjeeling hills

#### 6.2.3.4 Tourism Resources in the Darjeeling hills

**Physical environment:** Nature has endowed the Darjeeling with splendid scenic beauty in the landforms of tectonic, glacial and fluvial origin. This region is also endowed with the undulating plains of the terai, beautiful lakes and cascading rivers and waterfalls which offer great attractions to the tourists. The Darjeeling Himalaya has natural resources that provide multi-dimensional outdoor tourist activities such as sightseeing, trekking, boating, rock climbing, white water rafting, fishing etc. in addition there are numerous recreation areas such as parks, zoological and botanical gardens, lakes and other related resources.

With the Kanchendzonga range dominating the skyline, the mountain scenery is unsurpassed in the world. A wide panoramic visits profoundly flaunts snowy peaks like Kanchendzonga (8585m), Janno (m), Kabru (m) Lhotse (8501m) and even the world highest peak Mr. Everest (8848 m) is visible in the distance.

The Darjeeling Himalaya stands out distinctly with regard to natural assets. Scenic corridors offer some of the most exquisite scenery and memorable wilderness experience of mountain treks and trails along with the additional benefits of experiencing ethnic and cultural values preserved in these remote pockets. Mountain viewing can be enjoyed from numerous hill tops and vantage points that have now become famous destination points solely for this criterion. The most notable and outstanding vantage points in the Darjeeling Himalaya are spread out throughout the district. A number of these vantage points are off the

usual routes and are accessible only along trekking trails. However, a vast majority of these points are in very easily accessible points.

Mountain landscape around Sandakphu and Phalut in the Singalila environs is the best resource of the Darjeeling Himalaya for treks along trails that provide scenic enjoyment of dramatic land architecture, wilderness of extraordinary solitude, alpine pastures with wild flowers filling up the slopes like carpets and wildlife – which are rare and endemic to the region. The famous “*Rhododendron trail*” along the Indo-Nepal border, starts from Maneybhanjang that culminates in Sandakphu/Phalut at an altitude of 3636 m.

The rivers like Tista and Rangit provide breathe taking views of steep slopes with cascading waterfalls, crystal clear tributaries gushing at the confluence or even wide river terraces laden with golden crops of maize and rice. The Tista provides beautiful tourist destinations like “Triveni”, where white-water rafting has become immensely popular form of adventure tourism.

Darjeeling town itself is the premier tourist centre of the region. Developed by the British as a sanatorium, it later became a thriving tourist resort and earned the epithet of the “Queen of Hills.” The magnificent architectures of the Raj Bhawan, the St Andrew Church, the Elysee House and innumerable such buildings bear witness to its former grandeur and importance. Kalimpong attracts the maximum number of tourists after Darjeeling. In addition to its scenic grandeur, it has numerous trails for soft treks along Kalimpong town – Relli River – Kaffer – Lolaygaon – Lava – Algarah – Kalimpong via Dr. Graham’s Homes and Tirpai hills. The Tibetan Handicrafts of Kalimpong are very famous and much sought after products include carpets, bags, antiques and religions objects like thanka paintings and dorje or the prayer wheel (maney). The lake town of Mirik developed with the intention of serving as a satellite township to ease the burden of excessive tourists on Darjeeling town during the twin peak seasons of summer and autumn – has its own distinct charm and appeal. Kurseong, has perhaps one of the best views of the wild and sloping terrain, surrounded by emerald green forests and tea gardens with a bird’s eye view of the plains of Siliguri and Bagdogra.

**Climate:** The climate of Darjeeling hills by virtue of her elevation, alignments of ranges, windward and leeward locations, proximity to the peaks/snowline, water bodies and natural vegetation display wide differences of climatic conditions especially with regard to temperature and precipitation. Cool temperate climate of Darjeeling even lured the early

British officers to annex the area to develop sanatorium for the British soldiers and ailing officers.

**Flora and fauna:** The Darjeeling Himalaya epitomizes a botanist's "utopia" due to its species richness. This region supports at least 4000 flowering plant species, including 28 rhododendrons and 322 orchids; of which 53 orchid species are "endangered" or "rare". At least 144 of the plant species are endemic to Eastern Himalaya and 29 are restricted to Darjeeling Himalaya alone. The Darjeeling Himalaya is also rich in faunal species. The Singalila National Park, the Senchal Wildlife Sanctuary and the Neora Valley National Park are undoubtedly the most picturesque representatives of the rich and diverse flora and fauna in the entire West Bengal. It shelters many endangered species of the Himalayan region. Of the faunal distribution, 131 species of mammals are recorded in the Darjeeling Himalaya, including endangered species like the Red Panda (*Ailurus fulgens*), the Himalayan pheasant (*Satyr tragopan*) and the Salamander (*Tylotriton verrucosus*). It is estimated that there are about 550 bird species in the region along with 125 freshwater fish, 51 reptiles and 25 amphibian species. However, on account of mass tourism some of the most valuable species in this region is being threatened as shown in table 6.6.

**Table 6.6: List of Himalayan Species under grave danger on account of destruction by the Tourists for different purposes**

| Sl No | Species  | Supply of fuel | Collection of flower for decoration | Specimens trampled by boots, cylinders boxes etc | Plants parts gathered for medicinal purpose | Preparation of fancy articles | For making walking stick |
|-------|--|----------------|-------------------------------------|--|---|-------------------------------|--------------------------|
| 1     | <i>Abies densa</i>                             | +              | -                                   | -  | -   | -                             | -                        |
| 2     | <i>Acer pectinatum</i> Gledt.                  | +              | -                                   | -  | -   | -                             | -                        |
| 3     | <i>Aconitum palmatum</i>                       | -              | +                                   | -  | +   | -                             | -                        |
| 4     | <i>A.heterophyllum</i> wall.Ex. Royle          | -              | +                                   | -  | +   | -                             | -                        |
| 5     | <i>A.violaceum</i> Jacq.Ex.Stapf.              | -              | -                                   | +  | +   | -                             | -                        |
| 6     | <i>Allium wallichii</i> .                      | -              | -                                   | +  | +   | -                             | -                        |
| 11    | <i>Betula alanoides</i>                        | +              | -                                   | -  | -   | -                             | -                        |
| 12    | <i>B.michrophylla</i>                          | +              | -                                   | -  | -   | -                             | -                        |
| 13    | <i>Bupleurum raniltonii</i> Balak              | -              | -                                   | +  | -   | -                             | -                        |
| 14    | <i>Himalayense</i> Klotz.                      | -              | -                                   | +  | -   | -                             | -                        |
| 15    | <i>Campanula aristata</i> wall.                | -              | +                                   | +  | -   | -                             | -                        |
| 16    | <i>C .colorate</i> wall.                       | -              | -                                   | +  | -   | -                             | -                        |
| 17    | <i>C himanobambusa falcata</i> (Nees)          | -              | -                                   | -  | -   | +                             | +                        |
| 18    | <i>Cicerbita macrorrhiza</i> (Royle) Besuv     | -              | -                                   | +  | -   | -                             | -                        |
| 19    | <i>Cortia dipressa</i> (Don.) Norman           | -              | -                                   | +  | +   | -                             | -                        |
| 20    | <i>Corydalis cashmeriana</i> Royle             | -              | +                                   | +  | +   | -                             | -                        |
| 21    | <i>Cyanathus integer</i> wall ex Benth.        | -              | +                                   | -  | -   | -                             | -                        |
| 22    | <i>Dactylorhiza hatagirea</i> (D.Don) Soo Nom. | +              | -                                   | +  | +   | -                             | -                        |
| 23    | <i>Gentiana arcentia</i> (D.Don) Cl            | -              | -                                   | +  | -   | -                             | -                        |

|    |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|
| 24 | <i>G. contorta</i> Royle                                | - | - | + | - | - | - |
| 25 | <i>G. tubiflora</i> (G. Don.) Griseb.                   | - | - | - | - | - | - |
| 26 | <i>Gentianella pedunculata</i> (D. Don) H. Som.         | - | - | + | + | - | - |
| 27 | <i>Geranium himalayense</i> Klotz.                      | - | + | + | - | - | - |
| 28 | <i>G. nepalense</i> SW                                  | - | + | + | - | - | - |
| 29 | <i>G. wallichiana</i> D. Don. Ex SA                     | - | + | + | - | - | - |
| 30 | <i>Goodyera repens</i> (L) R. Br                        | - | - | + | - | - | - |
| 31 | <i>Juniperus commis</i> L. var <i>sexatillis</i> Pallas | + | - | - | - | - | - |
| 32 | <i>J Indica</i> Bertol                                  | + | - | - | - | - | - |
| 33 | <i>J. equamata</i> Bunch, Ham                           | + | - | - | - | - | - |
| 34 | <i>Leonotopodium himalayanum</i> DC                     | - | + | + | - | - | - |
| 35 | <i>Meconopsis aculeate</i> Royloc                       | - | + | + | - | - | - |
| 36 | <i>Nardostachys grandiflora</i> DC                      | - | + | + | - | - | - |
| 37 | <i>Parnassia nubicole</i> Wall. Ex. Royle               | - | + | - | - | - | - |
| 38 | <i>Pedicularis bifida</i> (Buch. Ham ex D.) Pennel      | - | + | + | - | - | - |
| 39 | <i>P. gracilis</i> Wall. Ex Benth                       | - | + | + | - | - | - |
| 40 | <i>P. pectinata</i> Wall. Ex Benth                      | - | + | + | - | - | - |
| 41 | <i>Picrorhiza scrophularifloa</i> Penneli               | - | - | + | + | - | - |
| 42 | <i>Pinus wallichiana</i> Jacks                          | + | - | - | - | + | - |
| 43 | <i>Polygonum graminifolium</i> Hook                     | - | + | + | + | - | - |
| 44 | <i>Potentilla argyrophylla</i> Wall ex Lehm             | - | + | + | + | - | - |
| 45 | <i>P. biflor</i> wild. Ex Schelecht                     | - | + | + | - | - | - |
| 46 | <i>P. fruticos</i> L. var. <i>Pumila</i> Hook. f        | - | + | + | - | - | - |
| 47 | <i>Primula denticulate</i> Sm.                          | - | + | + | - | - | - |
| 48 | <i>P. redidii</i> Duthie                                | - | + | + | - | - | - |
| 49 | <i>Rhododendron arboreum</i> Sm                         | + | + | - | - | - | - |
| 50 | <i>R. campanulatum</i> D. Don                           | - | + | - | - | - | - |
| 51 | <i>R. lepidotum</i> Wall ex G. Don                      | - | + | + | - | - | - |
| 52 | <i>Saxifraga asarifolia</i> Stemb.                      | - | - | + | - | - | - |
| 53 | <i>S. diversifolia</i> Wall. Ex Saring                  | - | - | + | - | - | - |
| 54 | <i>S. parnassifolia</i> D. Don                          | - | - | + | - | - | - |
| 55 | <i>Saussurea gossypiphora</i> D. Don                    | - | + | - | - | - | - |
| 56 | <i>s. obvallata</i> (DC) Odgew.                         | - | + | + | - | - | - |
| 57 | <i>Selilnum elatum</i> (Edgew.) Cl                      | - | + | - | + | - | - |
| 58 | <i>S. wallichianum</i> (DC raizada & Saxena)            | - | + | - | A | - | - |
| 59 | <i>Swertia speciosa</i> D. Don                          | - | - | + | + | - | - |
| 60 | <i>S. tetragone</i> Edgew                               | - | - | + | + | - | - |
| 61 | <i>Tehinnocalamus falconeria</i> Hook f. ex. Munro      | - | - | - | - | + | + |
| 62 | <i>T. spathifloras</i> (Trin.) Munro                    | - | - | - | - | + | + |
| 63 | <i>Viola biflora</i> L.                                 | - | - | + | + | - | - |
| 64 | <i>Zanthoxylum alatum</i> Roxb.                         | - | - | - | + | - | + |

**Socio-cultural:** The people of Darjeeling Himalaya are a diverse group with varying customs, costumes and traditions. Among the regions many ethnic groups are the Lepchas, Bhutias, Sherpas and Nepalis consisting of Brahmins, Chettris, Newars, Tamangs, Rais, Limboos, Mangars, gurungs etc. all contributing significantly to the regions heritage. The Buddhist and Hindu inspired traditions and arts, the numerous religious festivals, the thanka paintings, wood carving, the music and dances, the ethnic costumes and the different forms of

architecture create a compelling cultural landscape. This cultural landscape is now subject to new economic appraisals as potential tourist attractions.

The Darjeeling Himalayan Railway has declared a World Heritage site by the UNESCO. Exhibitions of the region's music, dance and paintings are frequently scheduled exclusively for tourist viewing.

**Historical and religious:** The Darjeeling Himalaya has a rich cultural heritage which comprises historical and religious interest. The famous Mahakal Temple on the top of the Observatory Hill; the Senchal Devi Dham atop Tiger Hill; the holy Devi Dham at Giddapahar (Kurseong); the Thakurbari; the Mangal Dham at Kalimpong are a few of the very sacred hindu temples which constitutes noteworthy attractions for both Hindu and non-Hindu tourists. There are about eighty monasteries in Darjeeling Himalaya belonging to various sects of Buddhism like the Ghum monastery, Dali Gompa; The Bhutia Busty Gompa, the Tamang Gompas at Darjeeling, Mirik, Kalimpong and many others dot the entire region. These monuments point to the assimilation of the Tibetan culture in the region.

**Festivals and fairs:** The festivals of Darjeeling Himalaya belong essentially to two main cultural streams based on religion: the Nepali culture, based on Hinduism and the Bhutia - Lepcha culture, based on Buddhist traditions. The two major festivals of the Nepalese, the Dasain and Tihar are known as Dussehra and Diwali respectively in the rest of India.

**Folklore and folk dances:** Folklores are important aspect of the rich cultural heritage in the Darjeeling Himalaya. From times immemorial, shamanism, spirit possession and mystical rites are performed openly and with festive ardour, especially on "Guru Puja" or mid *shravan* (i.e., August) the day all "jhakris" gather to pay obeisance to the deity at Mahakal Temple.

**Arts and crafts:** Arts and crafts are a part of the cultural development of a society. The one sector that has benefitted from Tourism is the local art and craft sector. In order to satisfy the demands of tourists in the form of gifts and souvenirs the local products are handicraft in the region. Some of the notable handicraft products include: thanka paintings; carpets and woolen garments produced by the Tibetan Refugee Centre and Hayden Hall; wood carvings, candles and bamboo items are very popular among tourists.

**Infrastructure:** The tourist industry has always been greatly assisted by the development of its infrastructure notably a good transport network, accommodation, civic amenities and recreational facilities. Keeping in view this fact, an attempt has been made to analyze the

civic amenities and important public utility services which have provided better amenities and comforts to both the tourists as well as the inhabitants of the region.

Over the years the number of hotels and other accommodations for the visitors has increased considerable not only in urban centres but also in semi-urban and at vintage locations for attracting tourists. Consequently, the number of registered hotel has also increased. In Darjeeling town there exist 150 registered hotels with 9000 beds, Kalimpong has 50 registered hotels with 3000 beds, Kurseong has 16 registered hotels with 960 beds, Mirik has 18 hotels with 1080 beds. It is interesting to note that the number of Star category hotels has also increased to 10 mostly situated in Darjeeling town. Number of hotels in rural environment and vintage points has also increased to 20 with 1200 beds. Number of tourist lodges owned by the government tourist departments has increased to 15 by the year 2010 with a total bed capacity of 900 in Darjeeling hill areas.

The West Bengal Forest Development Corporation (WBFDC) has also promoted eco-tourism in Darjeeling hill areas. Nine number of “nature resort” with clusters of eco-friendly cottages have been developed in Lolaygaon (17 cottages), Lava (18 cottages), Kalimpong (4 cottages), Suntalay khola (6 cottages), Rangpo (2 cottages), Mongpong (4 cottages), Jaldhaka (2 cottages), Samsing (6 cottages) and Lepchajagat (6 cottages).

While the temporal analysis shows the different phases of growth of tourism in the Darjeeling Himalaya – there seems to be a marked spatial imbalance in the development of tourism in the region. It is clear that the marked spatial imbalance is the greatest with respect to resource based facilities, comprising of outstanding physical features. Certainly, not all areas of Darjeeling Himalaya are equally endowed with spectacular visual landscapes.

The identification of the types and distribution of recreation resources in the Darjeeling Himalaya in terms of its natural, socio cultural and infrastructural aspect, reveals that there is an excessive spatial imbalance of tourism in the region. The growth is not uniform and it has mostly been concentrated in and around the town of Darjeeling, while Kalimpong and Kurseong sub-divisions are woefully neglected.

### **6.3 Environmental Impact of Tourism**

Rapid expansion of tourism as one of the largest and fastest growing industry in the world and as an economic activity of immense importance has caused numerous changes in almost every sphere of life of the host societies and the destinations. Considerable debate

exists today over the nature and extent of the impact which tourist development may have on host societies and localities (UNESCO, 1976). Tourism, which was once regarded as unreservedly beneficial, is no longer seen in that light, (Young, 1973; Bryden, 1973). Tourism, by its nature, involves contact and interaction between the residents of and the visitors to the destination. And this contact inevitably creates considerable positive and negative impacts. This development of tourism affects not only the tourists and the developers, but also other sectors of the economy, the society in general and the environment as a whole. Consequences of this interaction are commonly referred to as the “impacts of tourism” and can be categorized into three main types: economic, socio-cultural and ecological.

*Table 6.7 Impact of tourism in Darjeeling hills*

| Types          | Positive impact of tourism  | Negative impact of tourism   |
|----------------|---|--|
| Physical       | <i>Preserves:</i> <ul style="list-style-type: none"> <li>◦ Environment</li> <li>◦ Flora and fauna</li> <li>◦ Parks and nature reserves</li> </ul>   | <i>Changes:</i> <ul style="list-style-type: none"> <li>◦ Physical environment and ecosystem</li> <li>◦ Habitats flora and fauna</li> <li>◦ Negative change in physical integrity of area</li> </ul>  |
|                | <i>Encourages:</i> <ul style="list-style-type: none"> <li>◦ Ecological preservation</li> <li>◦ Improves waste management</li> <li>◦ Awareness for the environment</li> </ul>  |  |
| Economic       | <i>Creates:</i> <ul style="list-style-type: none"> <li>◦ Job opportunities for skilled and unskilled</li> <li>◦ Foreign exchange</li> <li>◦ Diversification</li> </ul>  | <i>Increases:</i> <ul style="list-style-type: none"> <li>◦ Price of land housing and essential commodities</li> <li>◦ Excessive demands on health care and police services during peak season</li> <li>◦ Seasonality of income</li> </ul>  |
|                | <i>Improves:</i> <ul style="list-style-type: none"> <li>◦ Infrastructure</li> <li>◦ Regional development</li> <li>◦ Standard of living</li> </ul>   |  |
| Socio-cultural | <i>Preserves:</i> <ul style="list-style-type: none"> <li>◦ Folk traditions</li> <li>◦ Culture</li> <li>◦ Art and history</li> </ul>   | <i>Leads to:</i> <ul style="list-style-type: none"> <li>◦ Excessive demands on local amenities and institutions</li> <li>◦ Overcrowding and traffic congestion</li> <li>◦ Disruption of traditional life</li> <li>◦ Demographic change</li> <li>◦ Erosion of cultural values</li> <li>◦ Vandalism of historic sites</li> </ul> |
|                | <i>Encourages:</i> <ul style="list-style-type: none"> <li>◦ Education/ training of human resource</li> <li>◦ Contact with outside world</li> <li>◦ Expands knowledge</li> <li>◦ Rediscovery of lost traditions</li> </ul> |  |

exists today over the nature and extent of the impact which tourist development may have on host societies and localities (UNESCO, 1976). Tourism, which was once regarded as unreservedly beneficial, is no longer seen in that light, (Young, 1973; Bryden, 1973). Tourism, by its nature, involves contact and interaction between the residents of and the visitors to the destination. And this contact inevitably creates considerable positive and negative impacts. This development of tourism affects not only the tourists and the developers, but also other sectors of the economy, the society in general and the environment as a whole. Consequences of this interaction are commonly referred to as the “impacts of tourism” and can be categorized into three main types: economic, socio-cultural and ecological.

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|                | <i>Improves:</i> <ul style="list-style-type: none"> <li>• Infrastructure</li> <li>• Regional development</li> <li>• Standard of living</li> </ul>   |  |
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|                | <i>Encourages:</i> <ul style="list-style-type: none"> <li>• Education/ training of human resource</li> <li>• Contact with outside world</li> <li>• Expands knowledge</li> <li>• Rediscovery of lost traditions</li> </ul> |  |

The Darjeeling Himalaya, where wanton encroachment by man has led to the degradation of the eco-system. In many parts, the biomass, the flora and fauna, the water resources have suffered greatly due to heavy and unplanned encroachment. In many cases, the failure to provide drainage, disposal of garbage, supply of waterpower, transport and communication in respect to the corresponding tourist demand has been the cause of environmental degradation.

Economic transformation through tourism is widely accepted and tourism has been recognized as an industry. It increases employment and income potential in almost every sector of economy at the national, regional and local levels. The social and cultural aspects of tourism, though less perceptible, have far reaching consequences than other factors. The perception of social change is intimately related to human values. Socio-cultural transformation through tourism is rather gradual and its evaluation involves a considerable span of time. The impact of tourism in Darjeeling may be positive that have nurtured the growth and development of the regional economy or negative that bring about unwanted constraints in the region. Thus, an attempt has been made by the present investigator to analyze the manifold impacts of tourism under the headings (i) environmental impact, (ii) economic impact and (iii) socio-cultural impact.

### **6.3.1 Physical Impacts**

The development of tourism in the study area clearly shows that the environment of various places has largely contributed to the growth of tourism. Scenic sites, pleasant climates, attractive landscapes have been a major influence in drawing people to specific tourist destinations. However, most literature on the impacts of tourism has viewed the relationship between tourism and environmental conservations as one of conflict. Numerous examples have been cited, the world over, of negative or detrimental impacts of tourism on environment which include degradation of natural resources by deforestation and erosion, destruction of landscapes and congestion as well as negative effects on cultural heritage and social customs.

Tourism, on the other hand, is also perceived as having beneficial aspects, both social and physical: the conservation of natural resources; attempts of achieving sustainable tourism development; improving welfare through recreation; creating employment; restoring ancient monuments and heritages etc. Thus, whilst there may be different perceptions of the issue, achieving the correct balance of positive and negative impacts, i.e. minimizing and avoiding

negative effects should be the goal of any tourism development strategy. Further, where environmental degradation has been caused in the past, policies can be directed towards corrective action to enhance environmental quality. Instead of a conflicting relationship, tourism and environmental conservation, therefore, need to be a supportive or symbiotic relationship, whereby each supports and benefits from the other, within the total context of development.

#### **6.3.1.1 Positive physical impact**

The existing knowledge about tourism impacts of the tourism industry in the region is highly fragmented. Emphasis is laid on the negative impacts only. While, here is ample evidence of the negative impacts of tourism on the environment of the study area, tourism has been responsible for inculcating environmental appreciation. The tourist industry has discovered made known and rendered accessible specific regions and aspects of nature: the pristine mountain ranges, the turbulent rivers, the verdant forests of Darjeeling Himalaya all form the very basis of the tourism industry in the region. While new destinations are continuously being discovered and marketed, it is the simultaneous conservation of the scenic areas, along with the historical and cultural heritage – that is gaining ground and is of utmost significance today. Slowly but inevitably, there is growing realization that the economic potential of tourism is inextricably linked to the conservation of the prime tourist destinations, which is today being considered an essential investment.

Tourism in the Darjeeling Himalayas has not only promoted conservation, but in some cases, it is also providing the economic means by which such measures can be taken. For e.g. the maintenance and repairs of the world famous DHR and institutions like the HMI and the Lloyd's Botanical Garden and Rock Garden at Gangamaya and Batasia Loop are from the funds generated from tourism earnings. Tourism has also provided the incentive to conserve the endangered DHR by incorporating the UNESCO to confer the "World Heritage" status. In the context of tourism development in the Darjeeling Himalaya conservation of the environment has been mainly of four types:

1. Firstly, tourism has provided the incentive and stimulus for the conservation of natural resources i.e., the establishment of the Singalila National Park; the Neora National Park, the Senchal Wild Life Sanctuary have succeeded to some extent, in protecting diverse species of flora and fauna in the region, that were otherwise, endangered or threatened with destruction. Such efforts are not without the

contribution of tourism that provides the thrust for the preservation of the natural environment and its enjoyment by the tourist. The establishment of these reserves and sanctuaries has resulted in other benefits like the creation of employment with the park and in auxiliary tourist services, provision of infrastructural facilities etc. which are the secondary effects of conservation.

2. Tourism has led to the restoration and regeneration of several sites of historical and cultural interest. The DHR; the cottage of Netaji Subhas Chandra Bose at Kurseong and Mayapuri Complex in Darjeeling are some of the places with great historical significance that have been restored and rejuvenated mainly because of the stimulus provided by tourism.
3. Tourism has been solely responsible for the transformation of old buildings and sites, by retaining their original features and putting them to better use for tourism facilities. Most notable example of this would be the old world colonial charm of the “sick-and-on-the-verge-of-collapse” tea gardens of Darjeeling. The utilization of these gardens as ‘tea-tourism destinations’ as in Makaibari, Glenburn, Bannockburn etc has not only benefited the entire garden community, but has also been immensely helpful in relieving pressure of the tourists on the congested hill resorts of Darjeeling as well as on other crowded circuits, by providing an alternative form of tourism.
4. Finally, visitors can also credit tourism in the Darjeeling Himalaya with the introduction of administrative and planning measures at many places to prevent further physical deterioration of tourist attractions due to their excessive and uncontrolled use i.e., Mirik, Labha and Loyalgoan were planned and developed as satellite tourist destinations with sole intention of diverting tourists to reduce the stress capacity on the crowded hill station towns of Darjeeling and Kalimpong. Tourism may be the means of enhancing the tourist’s sense of environmental appreciation; it can also serve as the means of preserving areas of scenic beauty or centers of historical interest by providing an economic or social rationale to enforce purely environmental considerations. (Pearce, 2006.).

#### **6.3.1.2 Negative physical impact**

It is well documented that the tourism activities have had many fold far reaching adverse consequences on the regional environment (OECD, Paris 1980). Expansion of tourism has identified four major sources of environmental stress due to tourism-generated activities. Such as:

- i) Restructuring of the environment brought about by a variety of construction activities. "The replacement of a natural has a variety of far-reaching and long-lasting consequences in terms of existing biological species and physical conditions in the area. It may be also cause significant changes in visual amenity.
- ii) Environmental stress results from the generation of new or increased waste residuals. In resort communities, it creates water pollution through the discharge of inadequately treated effluents and sewage into water bodies; it may seriously impair human health and destroy flora and fauna.
- iii) Recreation activities have had adverse environmental impact including soil erosion and landslides, change in plant cover and species diversity, habitat changes that subsequently affect wild-life and this leads to a further series of impacts.
- iv) Stress generated from seasonal population increases and densities. It results in congestion in these areas. Thus, seasonal influx increases the demand on natural resources.

The ever increasing population and escalating tourist influxes into the region are causing changes in land use patterns in Darjeeling; which, over the years have resulted in a situation that has put a tremendous pressure on the environment. The process of land use change brought about by the development of tourism in the area through the passage of time has gradually increased the environmental hazards that we are now exposed to. Man's activities, in the area has escalated the pressures of an increasing population on the ecologically fragile environment leading to wide spread deforestation, soil erosion, landslips and landslides in the region.

The various steps that were taken to bring about the changes in the land use and the direct and indirect results that emanated should be taken as important lessons and warnings. Signs of environmental breakdown began to manifest by the turn of the century itself, when the landslides of 1899, which took the toll of many lives and the loss of a lot of property in the area, following unprecedented rainfall, came as a warning to planners. The report of the committee, which was appointed to inspect the condition of buildings, roads and drains; to find remedies for preventing the occurrence of such landslide narrowed down not only to the natural phenomena of heavy amount of rainfall that was received during the particular period, but also, and more so, to man's own indifference and ignorance. The report revealed defective draining of sites, excessive lead of drains, imperfect or badly constructed revetments, neglect to reduce or protect steep slopes, defective supervision of building sites

and quarrying in unsafe localities. These findings led to the promulgation of an act, which ensured immediate protection work to be carried out in the district. The fact that an act could come into force and lead to extensive protection works which were considered necessary as far as preventive measures were concerned, stands as one good example of the “will” which needs to be emulated when we have all the advantages of modern technology today.

### **6.3.2 Economic Impact**

Since 2000 AD, tourism is already being slotted and projected as the “numero uno” or the “first among service industries”. Today, tourism is the world’s largest employer, generating nearly 200 million jobs, directly or indirectly that accounts for nearly 10 % of jobs globally (Honey and Roove, 2000). Tourism is the principal “export” (foreign exchange earner) for 83% of developing countries and the leading export of  $\frac{1}{3}$ <sup>rd</sup> of the poorest nations. International tourism in developing nations is increasing by 9.5% annually, compared to a 4.6% growth worldwide. Porter (1978) reiterates that tourism reinforces developing economies as a positive force by improving infrastructure and dispersing economic activities. Thus, tourism invites foreign exchange earnings, generates employment and income and accelerates infrastructural development.

In Darjeeling hills tourism is the second largest export industry after tea providing direct and indirect employment to nearly 38% of her population. The emergence of tourism as an important source of foreign exchange earnings is also of crucial importance its economy. However, domestic tourism is the source of wider tourist movements and has significant importance as an economic activity.

Tourism is thus instrumental in increasing the sustainable income in the local economy of Darjeeling hills where economic development has remained sluggish. The difficult terrain and frequent occurrences of natural disasters delimit the sphere of economic growth. In this region, the scope for industrialization is limited – in the absence of raw materials and skilled labour. Under such circumstances, the best, or rather, the only viable option for Darjeeling is to recharge the sluggish economy by utilization of the “tourism potential” that is explicit in her natural splendour and cultural heritage. Limited access to other resources in the region has made tourism a prerogative and an obvious choice to develop a sustainable economy. Today, the significance of tourism as a revenue earner in the Darjeeling Himalaya has become very evident. At the turn of the new millennium, the

increase in tourist arrivals has been remarkable, wielding tremendous social impact in the region, while at the same time hauling up its sagging regional economy.

**Table 6.8 Economic impact of tourism in Darjeeling hill areas.**

|   | <b>Positive economic impact</b>   |   | <b>Negative economic impact</b>  |
|---|---|---|--|
| 1 | Tourism generates local employment, directly in the tourism sector and in support and resource management sectors.  | 1 | Higher demand created by tourism activity may increase the price of land, housing and a range of commodities necessary for daily life. |
| 2 | Tourism stimulates profitable domestic industries, hotels and other lodging facilities, restaurants and food services, transportation systems, handicrafts and guide. | 2 | Demands on health service provision and police services can increase during the tourist seasons at the expense of the local tax base   |
| 3 | Tourism generates foreign exchange for the country and injects capital and money into the local economy   | 3 | Undesirable opportunity costs including transfer of funds from health and education  |
| 4 | Tourism helps to diversify the local economy.   | 4 | Increase in administrative costs and capital out flows   |
| 5 | Improved road systems and infrastructure that contributes to the entire destination can be justified and supported by the benefits from tourism development.          | 5 | Acquisition of a poor reputation as a result of inadequate facilities improper practices or inflated prices.                           |
| 6 | Often the jobs created through tourism can be low paying and unskilled but they constitute an important step for the poor to improve their economic condition.        | 6 | Negative reaction from existing enterprises due to the possibility of new competition for local manpower and government assistance     |
| 7 | Increased tax revenues from tourism.  | 7 | Better alternative investment and real estate speculation.   |
| 8 | Increased knowledge concerning the potential for investment and commercial activity in the region.  | 8 | Inadequate estimation of costs of tourism infrastructure development.  |

*Source: United Nations (2003) Poverty Alleviation through Sustainable Tourism Development, New York.*

Tourism is an important activity in the Darjeeling Himalaya – generating incomes and employment for the local residents. Tourists every year spend to the tune of 32.54 crores. Apart from an increase in the income and the demand for local products, tourism also results in a multiplier effect. Everybody right from the hotel owner to a porter benefits from tourism. The multiplier effect refers to the way in which tourist expenditures filter through the economy and generate other economic activities. The multiplier is expressed as a ration of change in the host’s economic level of output, income, employment, revenue earnings and foreign exchange to the change in tourist spending that brought it about. In addition to the

contribution of tourism to economic growth, the labour intensive nature of tourism and tourism related industries results in a significant impact upon the level of employment.

An official release by the Joint Director of Tourism, West Bengal in 2009 taking the annual flow of both foreign and domestic arrivals in the Darjeeling and Dooars the quantum of revenue has been calculated, based on the presumption that the minimum average daily expenditure of a foreign tourist is Rs.1000 per day and a domestic tourist spends Rs.800 per day. Tourism may be viewed as an economic activity and thus as an industry. Tourism has been identified as one of the fastest growing industries in the world. It has grown from the pursuits of a privileged few to a mass movement of people with an urge to discover the unknown, to explore new and strange places, to seek changes in environment and to undergo new experience. The major economic impacts of tourism activities in Darjeeling hills are tabulated in the following table (No. 6.7) to apprehend the impacts.

### **6.3.3 Socio-cultural impacts**

The qualitative changes which tourism causes to the socio-cultural structures of host areas are difficult to measure. While assessing an overall view of the regional impact of tourism, it becomes necessary to consider these parameters. Thus, the development of tourism should not be based on the sole criteria of the quantifiable positive economic advantages but must also take into account the socio-cultural consequences and other non-tangible impacts, which are not readily quantifiable in exact figures (Tewari, 1981).

In the Darjeeling hills, it has been seen that in addition to its economic potential, tourism introduces new interactions between the local residents and the visitors. It has been instrumental in fostering acculturation, diffusion of ideas, exposure to new innovations and technologies that are prompting new lifestyles and aspirations. Consequently, the potential of socio-cultural impacts is great. Thus, in any integrated approach to the study of tourism cannot, and should not, be restricted to evident economic advantages to be gained from it, but should take into account its social and cultural impacts as well.

In recent years there has been considerable debate on the social and cultural impact of tourism. While the economic impact can be quantified, measured and evaluated, the same cannot be applied in the case of socio-cultural impacts. Pearce (2008) asserts that *the social impacts of tourism will vary according to the differences between the visitor and visited, chiefly in terms of numbers, race, culture or social outlook*. Critics of tourism argue that the

long-term consequences for the local people may be negative while supporters of tourism view local customs and traditions as colourful assets to be exploited by the tourism industry. Proponents of tourism however argue that in order to overcome the backward economy, the dynamic tourism industry should be vigorously pursued without sentimentality over its potential cultural impacts (Gurung, 1984).

Table 6.9 Socio-economic impacts of tourism in Darjeeling hills

| A |   | Positive Social impact   |   | Negative Social impact   |  |
|---|---|--------------------------|---|--------------------------|--|
| 1 | The quality of life of a community can be enhanced by economic diversification through tourist.   | 1                        | Rapid tourism growth can result in the inability of local amenities and institutions to meet service demands.   |                          |  |
| 2 | Local communities as well as domestic/international visitors can use recreational and cultural facilities created for tourism.  | 2                        | Without proper planning and management, litter vandalism and come often accompany tourism development.  |                          |  |
| 3 | Public spaces may be developed and enhanced through tourism activity.   | 3                        | Tourism can bring overcrowding and traffic congestion.  |                          |  |
| 4 | Tourism enhances local community's esteem and provides an opportunity for greater understanding and communication among peoples of diverse backgrounds.   | 4                        | Young members of the host community are susceptible to the economic expectations these tourists bring and can result in disruption of traditional community ways of life. |                          |  |
|   |   | 5                        | The community structure may change, e.g. community bonds, demographics and institutions.  |                          |  |
| B |   | Positive Cultural impact |   | Negative Cultural impact |  |
| 1 | Tourism can enhance local cultural awareness.   | 1                        | Youth in the community begin to emulate the speech & attire of tourist  |                          |  |
| 2 | Tourism can generate revenue to help pay for the preservation of archaeological sites, historic buildings and districts.  | 2                        | Historic sites can be damaged through tourism development and pressures.  |                          |  |
| 3 | Despite criticism about the alteration of cultures to unacceptable levels, the sharing of cultural knowledge and experience can be beneficial for hosts and guests and can result in the revival of local traditions and crafts | 3                        | There can be long term damage to cultural traditions and the erosion of cultural values, resulting in cultural change beyond a level acceptable to the host destination.  |                          |  |
| 4 | Increased in level of local interest and participation in types of activity associated with event.  | 4                        | Commercialization of activities which may be of a personal or private nature.   |                          |  |
| 5 | Strengthening of regional values and traditions.  | 5                        | Modification of nature of event or activity to accommodate tourism  |                          |  |
| 6 | Increased local prides & community sprit  | 6                        | Potential increase in crime.  |                          |  |
|   | Increased awareness non-local perceptions.  |                          | Tendency toward defensive attitude concerning host regions.   |                          |  |

Source: United Nations (2003) & Modified based on Getz (1977) Matheson and Wall 1982.

Thus, it is obvious that there are both positive and negative socio cultural impacts of tourism. Any policy for the growth and development of tourism must, therefore, aim at maximizing the positive effects and minimizing the negative effects of this “necessary evil.” A prime consideration in examining the social and cultural impact of tourism is the nature and composition of the various groups involved and the interactions and relationships between them. The major identifiable positive and negative impacts of tourism activities in Darjeeling hills are summarized in table 6.8.

It is not difficult to argue that tourism is damaging the environment including the wildlife of Darjeeling hill areas. It is not possible to develop tourism without incurring environmental impacts but it is possible with correct planning to manage tourism development in order to minimize the negative impacts while encouraging the positive impact. The trek route to Sandakaphu and Phalut as well as other tourist spot of Lava and Lolaygaon has so well established or tourist path for a long time a special expedition was under taken to clear up the litter that lay around halting camp. To obtain hot water to meet the needs of tourists for a wash after the day’s trek, wood is cut down and thereby aggravating deforestation. There is evidence that tourism threatens the wildlife that tourists come to see. The wild animals of different wild life century and national park of the hill areas may have their feeding and breeding activities interrupted as tourist vehicles surround them so that tourists can take photographs.

The construction of roads and other infrastructure are indispensable for efficient transport and communication system for tourism development but these unavoidable activities are mainly responsible for destruction of hill areas land resource along its vegetation and animal wealth. The construction for accommodation facilities like rest houses, tourist bungalow, resorts, building and seasonal accommodation units, recreation centre etc. have posed the most serious menace to the land resources of the region not only does it accelerate slope degradation but it also causes damage to crops, animals and plants, housing and public properties. The beauty of hill areas forest, alpine meadows and peak is the main sources of tourist attraction. The continual flow of tourists, mountaineers, trekkers etc. is likely to have almost negative impacts on these natural resources to a certain extent.

A considerable area of virgin forest is also being replaced for providing necessary amenities to visitors for tourism promotion. It has been seen that a huge forest area has been destroyed only by road construction from 1980 to 2006 in the Darjeeling Hill area.

Deforestation not only result into resource depletion but also deteriorated fresh and underground water, wildlife and other related resources along with acceleration of disastrous phenomena like heavy soil erosion and landslides. Many flora are threatened and extinct due to increasing rate of tourism traffic and direct and indirect activities of tourists. Many important and charming species of flowers like orchid *primulas*, *Anthorium* etc. are now found in reduced abundance along the treks, roads sides and other easily accessible areas. This degradation will definitely occur in the entire area with increasing number of tourists.

Tourist activities like invasion in wildlife habitat close view watching and photography hunting poaching and other disturbances etc. have created a problem for wild animal, mammals and birds an affected in large extent more than reptiles insects and other small animal. These activities further affect the feeding and breeding habits and ultimately the entire life cycle. The small animals die due to heavy and frequent traffic which affect the food chain in wild system. The increasing tourist craze for the Himalayan wildlife and their products is also responsible for its destruction as it increases the demand of stuffed animals, ivory ornaments, furs, tails, quills, feathers, horns, skins, musk and wildlife souvenirs, etc. Such demand provokes the curio trade resulting into poaching and slaughtering of animals. The deer, black bear, hare, leopard etc. are few well known animal species which are in great danger due to poaching in Darjeeling hill areas. To prevent and reduce degradation of Darjeeling hills natural resources, there should be scientific and well planned growth of tourism in which experts of different disciplines along with local people should have close involvement in planning.

#### **6.4. Environmental Impact**

The most important direct impact that the tourism industry brings on the environment is increased pressure on the carrying capacity of the ecosystem in each tourist locality. Increased transport and construction activities lead to large scale deforestation and destabilization of natural landforms, while increased tourists flow leads to increased in solid waste dumping as well as depletion of water and fuel resources. Tourist movement to ecologically sensitive area lead to destruction of rare and endangered species due to trampling, killing, disturbance of breeding habitats. Noise pollution from vehicles and public address systems, water pollution, vehicular emissions, untreated sewage, etc. also have direct effects on bio- diversity, ambient environment and general profile of tourist spots.

##### **6.4.1. Statistical analysis**

The study adopts a multivariate data analysis technique to assess the impacts of tourism in the four dimensions. It is suggested that a minimum sample size should be at least 200 (or more) to minimise the chance of getting exaggerated goodness-of-fit indices due to small sample size (Anderson and Garbing, 1988). Thus, the sample size for the present study was 250 respondents comprising of senior citizens, government servants and people engaged in tourism either as guests or host were. The impact of tourism on the environmental aspect in Darjeeling hill area was considered. Items for each dimension were selected to measure the residents' perception of tourism impacts. A survey using questionnaires was used to collect data. A five point Likert scale (strongly disagree = 1 to strongly agree = 5) was used to measure the items.

Factor Analysis was conducted using SPSS 15.0. First of all, to determine the appropriateness of factor analysis the Kaiser-Meyer-Olkin measure of sampling adequacy and the Bartlett's Test of Sphericity were examined. A value of 0.60 or above from the Kaiser-Meyer-Olkin measure of sampling adequacy test indicates that the data are adequate for factor analysis and that a significant Bartlett's Test of Sphericity ( $p < 0.001$ ) is required (Tabachnick and Fidell, 1989). In order to ensure that each factor identified by the factor analysis has only one dimension and that each attribute loads on only one factor, attributes that had factor loadings of lower than 0.4 were eliminated from the analysis (Kim, 2002).

#### **6.4.1.1 Environmental impact variables**

The items used to measure environmental impacts of tourism can be categorized into three different sub dimensions;

- i. Pollution,
- ii. Solid waste and
- iii. Wildlife and ecology.

These three environmental sub-dimensions of tourist impacts were measured. Items that are used to measure each sub-dimension were summated and the summated scales were used to assess environmental impacts of tourism. Three items for pollution, three items for solid waste and three items for wildlife and ecology were used to measure residents' perception of each sub-dimensions of environmental impact of tourism. A 5 point Likert scale (strongly disagree=1 and strongly =5) was used to measure these items.

##### **i. Pollution**

- Tourism brings environmental pollution;

- b. Tourism produces noise, congestion and littering
- c. Tourism activities like boating and rafting produce serious water pollution in rivers.

**ii. Solid waste**

- a. Tourism produces large quantities of waste products;
- b. Tourism related business produce huge quantity of garbage – solid and liquid;
- c. Littering by tourists destroys the beauty of the landscape.

**Table 6.10. Factor Analysis result of the environmental impact of tourism**

| Constructs and Scales   | Loadings | Eigen values | Variance explained |
|---|----------|--------------|--------------------|
| <b>Pollution</b>  | .860*    | 2.283        | 76.10 %            |
| • Tourism produces noise, littering and congestion  | .905     |              |                    |
| • Tourism brings environmental pollution;   | .917     |              |                    |
| • Tourism activities like boating and rafting produce serious water pollution in lakes and rivers.                    | .766     |              |                    |
| <i>Kaiser-Meyer-Olkin MSA</i>   | .742     |              |                    |
| <i>Bartlett's Test of Sphericity</i>  | .000     |              |                    |
| <b>Solid waste</b>  | .890*    | 1.863        | 62.12 %            |
| • Tourism related businesses produce a large amount of garbage  | .992     |              |                    |
| • Littering by tourists destroys the beauty of the landscape  | .953     |              |                    |
| • Tourism produces large quantities of waste products   | .775     |              |                    |
| <i>Kaiser-Meyer-Olkin MSA</i>   | .728     |              |                    |
| <i>Bartlett's Test of Sphericity</i>  | .000     |              |                    |
| <b>Preservation of wildlife and ecology</b>   | .880*    | 1.871        | 74.53 %            |
| • Tourism contributes to the preservation of the natural environment and protection of the wildlife in the community; | .957     |              |                    |
| • Tourism contributes to loss of forest cover and green space   | .960     |              |                    |
| • Tourism has improved the ecological environment in the community in many ways.                                      | .743     |              |                    |
| <i>Kaiser-Meyer-Olkin MSA .811</i>  | .794     |              |                    |
| <i>Bartlett's Test of Sphericity</i>  | .000     |              |                    |

\*Reliability coefficient (Cronbach's Alpha)

**iii. Preservation of wildlife and ecology**

- Tourism has contributed to the preservation of the natural environment and protection of the wildlife;

- Tourism has improved the ecological environment in the community
- Tourism contributes to loss of forest cover and green space

#### **6.4.1.2 Environmental impact of tourism variable**

The environmental impact of tourism was measured with three dimensions:

##### **i. Pollution**

Three items were used to measure the pollution. From a principal component factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.661) and the Bartlett's Test of Sphericity ( $p < 0.001$ ) indicated that the data were acceptable for factor analysis (table). All factor loadings were greater than 0.70 and loaded only on one factor. Cronbach's Reliability Estimate was .85 and the factor explained 76.10 % of the variance.

##### **ii. Solid waste**

Three items were used to measure the solid waste. From a principal component factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.628) and the Bartlett's Test of Sphericity ( $p < 0.001$ ) indicated that the data were acceptable for factor analysis (table). All factor loadings were greater than .70 and loaded only on one factor. Cronbach's Alpha Reliability was .88 and the factor explained 62.12 % of the variance.

##### **iii. Preservation of wildlife and ecology**

Three items were used to measure the preservation of wildlife and ecology. From a principal component factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.704) and the Bartlett's Test of Sphericity ( $p < 0.001$ ) indicated that the data were acceptable for factor analysis (table). All three items had factor loadings greater than .70 and loaded only on one factor. Cronbach's Reliability Estimate was .89 and the factor explained 74.53 % of the variance. Hence all three items were used to measure preservation of wild life and ecology.

From the table 6.9, it is apparent that residents perceive marked environmental threats as tourism activities increase in the locality. The primary area of concern is in the amount of and types of environmental pollution, solid waste and garbage that are increasing in these communities as a result of the growth of tourism in their areas. The local populace also view tourism as being instrumental in the loss of green spaces and forest cover in their localities.

On a more positive note however, residents are also of the opinion that certain tourism activities like ecotourism, tea tourism and flori-tourism contribute to the preservation of the natural environment and that tourism has also contributed in many ways, to the conservation and protection of the local flora and fauna within the communities.

## 6.5 Conclusion

In Darjeeling hills, at the time, when it is not only the erosion of the soil that should concern us – but the erosion of our value systems, the very exquisite scenic grandeur and invigorating climate that earned the epithet of “*The Queen of Hill Stations*” for Darjeeling has taken the form of a one way ticket to Doomsland. The fragile and susceptible ecosystem can hardly withstand such unprecedented exploitation. There is, as the Mahatma had once put it, “enough for every man’s need, but not enough for man’s greed!”

Granted, that development of tourism in the hills areas is of fundamental importance, but it should not proceed at the cost of ecological and societal degradation. Therefore, to be really effective ‘development without destruction’ is the only way forward for a long, lasting and sustainable solution to the manifold problems that hound the region. Findings of this study are consistent with the assumptions that the economic, social, cultural and environmental impacts of tourism do exhibit sub-dimensions. Moreover, it can be observed that each tourism impact dimension has both positive and negative impacts. The results from this study are indicative of the fact that when residents of the community were asked to reveal the impacts of tourism on the community, they assessed the perception of tourism impact in both positive as well as negative ways.

The present study also indicates a positive relationship between the economic impact of tourism in the sense that the residents’ sense of satisfaction of material wellbeing increases with better economic conditions attributed to tourism, which in turn seems to influence their overall life satisfaction. Thus, it would be quite pertinent to note that tourism in a community should be developed, not simply on the analysis of costs and benefits in the short term, but also from a long term perspective of resident’s quality of life and sustainable tourism.

There is no denying that tourists do influence the host population’s culture. The places in the mountains have remained relatively isolated from the mainstream and therefore, the

value system and traditions of mountain people are vulnerable. Cultural tourism is one of the instruments to fight tourism's adverse socio-cultural impact.

This huge yearly influx of tourists far exceeds the carrying capacity of the city, almost paralyzing the socio-economic life due to near breakdown of the basic amenities and community services. Unplanned urbanization, which is a direct result of increase in tourism activities, is the root cause of this ecological devastation. Increased transport and construction activities lead to large scale deforestation and destabilization of natural land form while increased tourist flow leads to increase in solid waste dumping as well as depletion of water and fuel resources. Flow of tourist to ecologically sensitive areas lead to destruction of rare and endangered species due to trampling, killing, disturbance of breeding habitat. Noise pollution from vehicular emissions, untreated sewage etc. also has direct effects on biodiversity, environment and general ambient of tourist spots.

Large scale deforestation to realize tourism related development has led to severe environmental hazards like soil erosion, landslides, river siltation droughts, floods etc. Dumping of wastes and garbage by campers and tourists, inadequate sanitation system, unplanned abstraction of water, building of dams and bridges, have all contributed in the metamorphosis and town plan rules are openly flouted.

In the Darjeeling Himalaya, tourism has conventionally been portrayed as an agent of change within the tourist-visited areas. However, for any assessment of the overall impact, it becomes very essential to look beyond the purely economic benefits and focus on the net result of the welfare of the local community, comprising the sum of the desirable as well as the undesirable effects over the full range of social conditions. Any concept of development that embraces increases in economic output and accompanying material standards of living must also include social well-being.

While, the role of tourism as a major economic activity in Darjeeling hills cannot be denied, the necessity of regulating it in a manner compatible with environment conservation can not be over-emphasized. Against this back ground, perspective planning integrating environmental and ecological factors is of utmost importance in Darjeeling hills as they are ecologically fragile and sensitive. Beside long term perspective planning, immediate measures are necessary to contain the adverse impacts. A number of schemes for improvement of tourism infrastructure in Darjeeling hill area have been launched by the DGHC for sustainable development of the tourism industry. These include:

- (a) Diversion of tourist traffic from overcrowded Darjeeling-Kalimpong areas to the newly discovered places of tourist interest in regulated manner.
- (b) Introduction of entry tax on outsiders to generate revenue to be spent on maintenance and development of tourism infrastructure.
- (c) Provisions for providing planned and properly maintained basic amenities like water supply, health, public transport and communication.
- (d) Modernization/Introduction of solid and liquid waste disposal system in areas of tourist interest.
- (e) Regular monitoring including checking of tourist inflow by regulating entry point for different tourist hot-spots in Darjeeling hills.
- (f) Spreading of environmental awareness amongst tourist as well as local population.
- (g) Imposition of penalties for deliberate destruction of forests, bio-diversity and heritage sites and littering and causing noise pollution etc.
- (h) A comprehensive plan for arresting further environmental degradation of the hill areas needs to be formulated along with the tourism development activities.

The development of tourism in the hills areas is of fundamental importance, but it should not proceed at the cost of ecological and societal degradation. Therefore, to be really effective 'development without destruction' is the only way forward for a long, lasting and sustainable solution to the manifold problems.

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