

CHAPTER - V

IMPACT OF TOURISM – AN ANALYSIS

INTRODUCTION

There exist a close functional relation between man and environment ever since the evolution of life on took place earth. Ever since human being appeared on planet earth, they have fully exploited the physical environment for their selfish gain. In order to fulfill unmet aesthetic and material needs, human beings have been exploiting natural environment, thereby putting pressure on existing ecology. Man as a geomorphic agent, effect geomorphic processes by various engineering works such as quarrying, mining, excavation, dumping and tourism development activities.

The survey of tourist and local people was conducted in various places in Sikkim with the objectives to understand the thinking, attitudes & behavioral pattern of domestic and foreign tourists. Thus in order to meet these objectives, a primary data collection was carried out especially in the main tourist magnetic spots. During the time of survey, several tools and techniques were adopted while collecting primary data such as interviewing with tourists through questionnaires, field observations, diary maintain, problem posing approaches etc, to obtain the factual information. The survey was conducted in the month of April-June, October-December, and August-September 2004-05. The survey was targeted at both domestic and foreign tourists at Gangtok, Pelling, Changu and North Sikkim. The total number of responses rate is 380 and the number of domestic tourists and foreign tourists shared 239 and 81 respectively.

As per the survey, majority of the domestic respondents were from the neighboring state of West Bengal, which shared about 53 percent, the total foreign tourists were basically from Europe and the Southeast Asian countries. The respondents were educationist, industrialists, students and

businessmen. There were respondents who were trekkers, meditator, and editor also.

5.1 DEMOGRAPHIC PROFILE

The survey reveals that majority of the domestic tourists visiting Sikkim hail from the neighboring state of West Bengal which accounted for (53 percent) of the total tourist population. Besides, tourist flow was seen from Maharashtra (16 percent), Delhi (11 percent), U.P (9 percent) and Gujarat (4 percent). The tourists visiting Sikkim from other states of the country were mainly from Uttaranchal, Rajasthan, Kerala, Punjab, Bihar, Haryana, Assam, Orissa, Himachal Pradesh and Tamil Nadu. In aggregate, these states shared about 7 percent of the total number of Indian tourists. It may be mentioned here that tourist generation from northeastern state seems to be negligible. According to the tourist's survey of 1992, which was conducted by the Bureau of Economics and Statistics, about 61 percent of the domestic tourist were from West Bengal. Hence in order to enhance this huge neighboring domestic tourist market, a sustainable tourism development program for the state having the objective of promoting quality tourism is sine-qua-non.

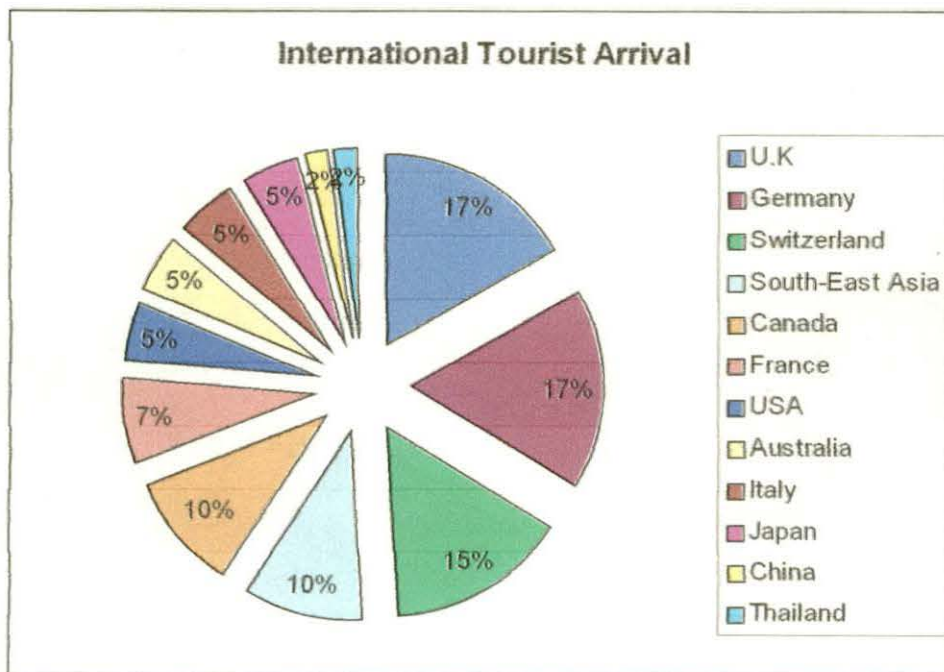


Fig 5.1-International tourists flow

5.2 TOURIST ARRIVAL

The inflows of tourists from overseas are also found in large number. It remained a fact that European countries are the major tourists generating countries in the world. Among the foreign tourists the survey suggested that majority of tourists originated in U.K and Germany and both the countries shared equal number of about (17 percent) each, which is followed by Switzerland (15 percent), Canada and South East Asia (10 percent), France (7 percent), USA (5 percent), Australia (5 percent), (Fig 5.1) Japan (5 percent), Italy (5 percent), Thailand (2 percent) and China (2 percent).

5.3 AGE SEX COMPOSITION

The survey was intended to acquire first hand information on distribution of age and sex composition of the tourists in Sikkim. The division of tourists on the basis of age and sex has been done for the purpose of studying their behavioural perception. Accordingly, the respondents were categorized into three major age groups and they were further classified on the basis of their sex. The first category (Table 5.1) comprised of below 20 years of age, followed by 20 to 40 years of age and above 40 years. The survey revealed that the tourists were either domestics or foreign and the ratio of local tourists was virtually nil. Around 55 % of tourists had attained the age above 40 years. Of which, male shared 41 percent while female shared 14 percent only. Around 43% respondents were from the age group of 20-40 years. Of which male shared 30% and female shared 13% only. The respondents below 20 years were negligible in numbers.

TABLE 5.1: AGE SEX PROFILE OF TOURISTS (IN PERCENTAGE).

Age Group (in years)	Male	Female	Total
Below 20	1	1	2
20 to 40	30	13	43
Above 40	41	14	55
Total	72	28	100

Source: Field Survey, 2005

5.4 TRAVELLING PATTERN

In order to gather information on the pattern of tourist flow in Sikkim, survey found out that domestic tourists travel mostly with their family members. Around 60 percent of domestic respondents (Fig 5.2) were found traveling with their family members compared to 22 percent in case of foreign tourists. Around 56% foreign tourists comprised of individual tourists.

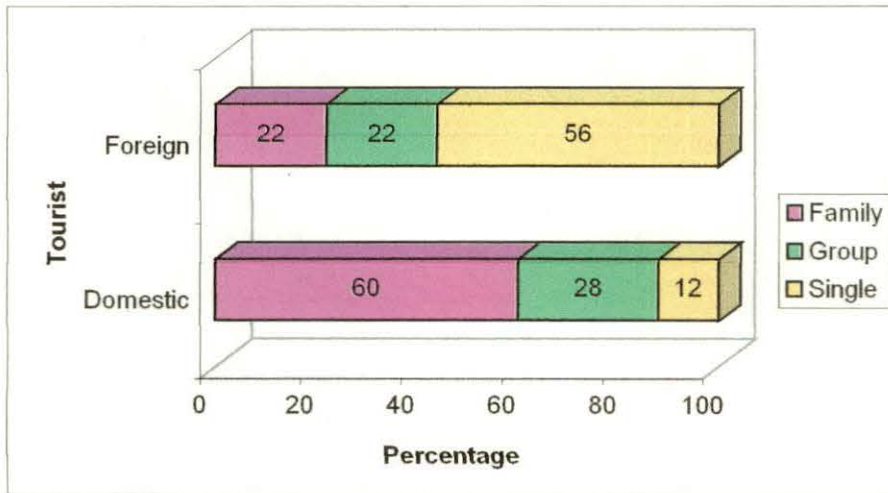


Fig 5.2-Travel pattern of tourists

5.5 OCCUPATION STRUCTURE

The occupation pattern and distribution of tourists (Fig 5.3) revealed that 88% of the foreign respondents were private entrepreneurs and Indian tourists as entrepreneurs were 8% only. On the contrary 44% of domestic respondents were holding Government jobs. Total businessmen and students shared 48% of domestic tourists. It means 48% domestic tourists including businessman and students visit Sikkim during their holidays. Hence during school holidays, growth of domestic tourists increases manifold.

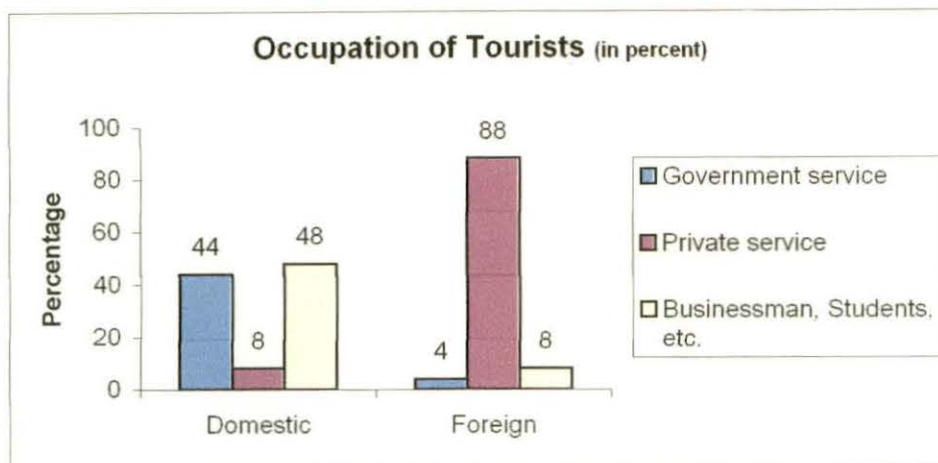


Fig 5.3 Occupational Structure

5.6 INCOME DISTRIBUTION

According to income range tourists were classified into three groups namely, below Rs 50,000, Rs 50,000 - 100,000 and more than Rs100, 000 respectively.

TABLE 5.2: INCOME GROUPS OF FOREIGN/ DOMESTIC TOURISTS (In Percent)

Income group (In Rs)	Domestic	Foreign
Below 5,000	25	Nil
50000-10,0000	55	34
Above 100,000	20	66
Total	100	100

Source-Field Survey,2005

The respondents were not open to reveal their income. However the majority of foreign tourists i.e. (66 percent) have been authenticated to have their annual income of around Rs100, 000 and above. In the case of domestic tourists only 20 percent were categorised within the income group of Rs100, 000 and above. Majority of domestic respondents i.e. (55 percent) have their annual income recorded between Rs 50,000 -100, 000. The (Table 5.2) clear picture about income structure of both foreign and domestic tourists is self-explanatory. The survey analysis indicated that majority of domestic tourists i.e. (55%) coming to Sikkim belong to the income group falling between

Rs50,000 - 100, 000. Therefore high spending tourists are generated from foreign countries.

5.7 PSYCHOGRAPHIC ANALYSIS

The main objectives were to find out the impact of tourists on themselves and to the host population. With this given parameter the nature of tourists with their background and their perception towards various conservation practices are being traced out successfully. Both the domestic and international tourists reflected their information with respect of travel purpose, length of stay; transportation facilities availed by the tourists and exposure to local cultural practices and overall opinion on Sikkim as a travel destination.

5.8 PURPOSE OF TRAVEL

The main aim was to examine the motivation factor and tourists perception towards natural and socio-cultural aspects vis a vis sustainability. Concerned for environment was also given due consideration before drawing the conclusion.

It (Fig 5.4) reflected that 80 percent from international and 73 percent from domestic tourists visit Sikkim for pleasure and leisure. It is mainly due to paid holiday system of service introduced by various nations in the world. The survey reflected that about 20 percent of the foreign respondents were religious tourists belonging to Buddhist religion. During survey some respondents were found coming to Sikkim for adventure-oriented activities as well.

The tourist survey indicates that 75 percent of respondents came to Sikkim for sightseeing and pleasure trip and religious purpose constitutes 4 % only. Besides, educational tour and research activity also motivated 15% of tourists.

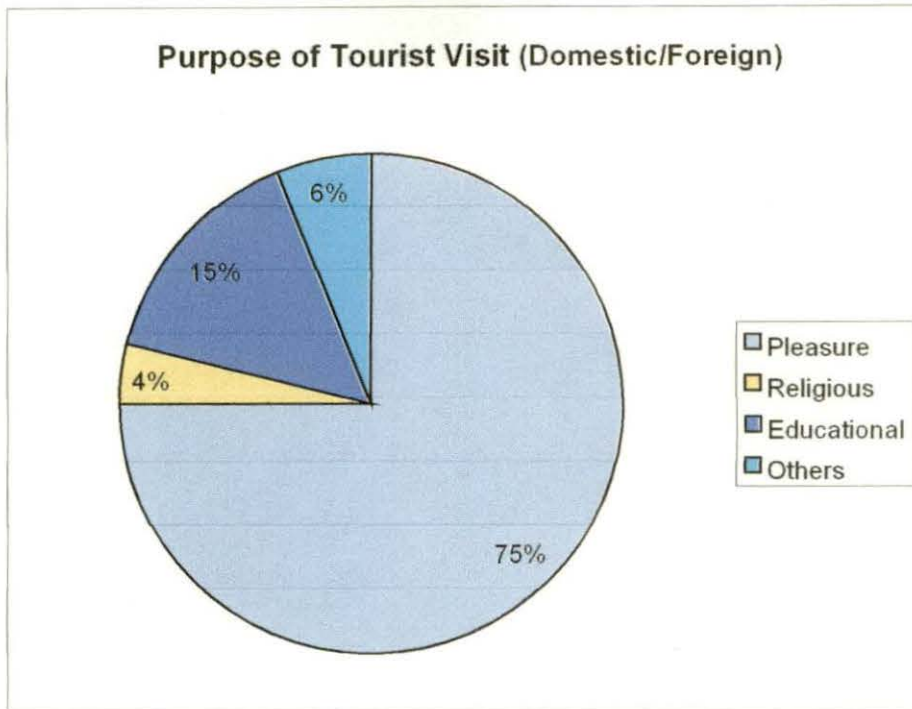


Fig 5.4 Purpose of visit

5.9 LENGTH OF STAY

It is analysed that the domestic tourists on an average stay for hardly 3-4 nights while the foreign tourists excluding the trekkers stay for an average of 4-6 nights. Most of the foreign tourists were found to have spent long duration. The main reason for staying longer period amongst the foreign tourists could be non-dependent family member in their respective family and long available paid holidays, as they are individual holidaymakers. Whereas in Indian context, tourists constitute entire family members, hence they get back in time to look after their household affairs. Each Indian household has dependant family members. Further, domestic tourist is seasonal and holiday pattern is controlled by school vacation. The tourists from West Bengal can visit Sikkim and stay for a week. It is due to proximity and nearness to tourist destination.

5.10 SOURCES OF INFORMATION

It includes matter pertaining to marketing strategy adopted for the promotion of tourists. What makes tourist visit Sikkim? It is revealed that

tourists get informed through friends, information center, travelogues and medias.

TABLE 5.3: SOURCES OF INFORMATION FOR TOURISTS (IN PERCENTAGE)

Source of Information	Domestic	Foreign
Information center	33	31
Friends	55	26
Travelogues	-	43
Others	12	-
Total	100	100

Source-Field Survey, 2005

The information about Sikkim as a tourist magnetic land is basically derived from friends, who had already visited the spot. Besides travel guide, information center and internet serves the purpose. Almost 55 percent of the domestic respondents and 26 percent of the foreign tourists get information about this mystery land through friends or relatives. As in the case of foreign tourists they gather information through various travel books and travelogues. (Table 5.3) The information center provides information to nearly 33 percent of domestic tourists and 31 percent of international tourists respectively.

5.11 TRANSPORTATION ANALYSIS

The transportation analysis with respect to tourism can be examined in three different stages. Initially, from origin to entry point to Sikkim i.e. Bagdogra, New Jalpaiguri or Siliguri. Next point starts from pick up point to destination (Gangtok or any other tourist magnetic place of Sikkim). As roadway is the only mode of transportation network in Sikkim, taxi and private vehicles are important agents of transportation. Hence the mode of transportation availed by tourists for movement within Sikkim is mainly by bus, taxi and private cars. According to information acquired from survey, it revealed that about 86 percent of the tourists had used taxi as the medium of transportation within Sikkim in order to visit different tourist magnetic spots. Remaining 7 percent had used bus and 7 percent remained uncategorized.

5.12 EXPOSURE TO LOCAL CULTURE

Culture here refers to the customs, beliefs, art, way of life including food habit, dress coding etc. of a social organization at a given time and place. There is spatial variation in cultural practices among the different groups of people living therein. Tourists coming to Sikkim from different parts experience the cultural peculiarity of native place. Some tourists were eager to explore and perceive new cultural environment and some trying to unfold it. The social and cultural attributes of population in Sikkim exhibit variety of ethnic, religious and socio-economic groups. These multiplicities of ethos have different life style. Tribal groups especially the Lepchas, Bhutias have typical dress coding peculiar for a newcomer. In dietary culture, there are several types of indigenous foods used in Sikkim and most of the tourists were also fond of it. Thus not only the physical phenomenon but also the cultural phenomenon has played prominent role in nursing tourism environment in Sikkim. The ethnocentric views of tourists visiting Sikkim revealed that maximum number of tourists preferred testing local food, drink, mix with local people and wear local traditional dresses.

TABLE 5.4: TOURISTS ADAPTALILITY TO LOCAL CULTURE

Particular	Foreign	Domestic
Local food tested	71	65
Local drink tested	66	57
Mixing with local people	68	71
Wearing local traditional dress	39	32

Source-Field survey, 2004-05

It is depicted that (Table 5.4) the cultural attributes of Sikkim has also influenced tourists in many ways. Majority of tourists showed keen interest in visiting villages where the traditional culture is predominantly rehearsing. Almost all the tourists were fascinated to perceive these types of environment and sought solace in the tranquility of villages. Therefore delicate culture is subject to tourist exploration.

5.13 PROBLEMS IN TOURISM BUSINESS

Travelling or visiting a place for pleasure is the main characteristic features of tourists. Therefore activities associated with providing accommodation, services and entertainment forms diverse tourism activity. Sikkim being mountainous region, beautiful snow capped mountains, exotic plant and animal, clean environment, favourable climatic conditions, hospitable people and mystic culture are beautifully juxtaposed in close harmony with civilization. All these ravishing nature of this land are the ideal conditions that are creating pleasure for tourist lots. The inaccessible track of mountain belt, rugged topography and highly sensible zone for landslides owing to very steep slope of land and fragility are some of the major problems for tourists in Sikkim. All these problems faced by tourists are analyzed and reflected (Table 5.5) accordingly.

5.5: PROBLEM FACED BY TOURISTS IN SIKKIM (Both Domestic and Foreign)

Parameters of Problem areas	Percentage of tourist to total
Transportation and communication	46
Health and Hygiene	26
Road network	35
Peoples Behavior	06
Information Services	18
Others	22

Source-Field Survey, 2004- 05

The major problem is associated with transportation and communication or road network. Regarding transportation facilities, the only roadways linking Sikkim is 31 National Highway and major tourist vehicles are jeeps, bus and taxi services. There is no railhead in this region. However there exist a helicopter service from Gangtok to Bagdogra. The only road network in Sikkim is frequently suffered from several types of natural calamities such as landslide, earth flow etc. which obstruct transportation activity. Transportation facility generally aims at distance decay and this distance is not simply a question of physical distance in terms of kilometer but

also a question of cost, time and comfort involved in mobility. Hence, it is appropriate to talk in terms of economic distance, which is determined by the mode of transport. The distance is a prime concern for travelers thus, transport plays a crucial role in creating tourist magnetic environment. The (Table 5.5) indication of road transport as major hindrance is self-explanatory.

5.14 INCOME FILTRATION

The main objective of collecting information about expenditure pattern of tourists visiting Sikkim is to evaluate the contribution of tourism towards economic structure of the state. Hence, in order to obtain clear picture in this aspect, six main items are recognized under which a tourist would be expected to spend. It includes travel, transport, food, accommodation, recreation and other category. The pattern and volume of expenditure helps in studying rate and trend of income generated at various level of service center. The percolation of income towards rural area is controlled by degree and availability of surface transport. The expenditure on tourism diversifies through transportation to different focal point of a backward region.

5.15 EXPENDITURE ANALYSIS BASED ON RESPONDENTS

Both domestic and foreign tourists spend about 41 percent on transport (Table 5.6), 22 percent on food, 19 percent on accommodation, 8 percent on marketing and 6% for recreation.

5.6: EXPENDITURE ANALYSIS OF BOTH DOMESTIC AND FOREIGN TOURISTS

Items	Percentage to total
Travel or Transport	41
Food and beverage	22
Accommodation	19
Marketing	08
Recreation	06
Others	04
Total	100

Source –Field Survey, 2005

5.16 OPINIONS ON SIKKIM AS A TOURIST DESTINATION

About the liking and disliking Sikkim as a tourist destination, the survey findings revealed that around 46% of the domestic and 28% of the foreign tourists considered Sikkim as preferred destination in India. They were basically impressed by natural scenic beauty of snow-capped mountains, exotic flora and fauna, mystic culture and all hospitable people. This entire phenomenon has provided a most favorable condition for Sikkim to become a tourist destination. Around 9% of tourists were found unwilling to revisit Sikkim. Almost all the respondents were in favour of advising others to visit Sikkim. On being asked, the respondents suggested the following measures to improve the situations. It include a) Vehicular exhaust to be strictly checked and anti-pollution norms to be provided at the major tourist attractions b) Provision for operation of dustbins at the loci of highly tourist concentration zone for the management of solid waste product or garbage in order to keep the city clean. c) Need for creating environmental awareness among the local people as well as tourists who are coming to Sikkim. d) Unchecked price of commodities, entertainment and infotainment for tourists in the evenings. e) Need of tourist police. f) Improvement in the behaviour of driver. g) Check on neglect of domestic tourists. h) Improvement in inhospitable and alien treatment found in North Sikkim.

5.17 REASONS FOR THE GROWTH OF TOURISM INDUSTRY IN SIKKIM

The fundamental bases for the growth of tourism industry in Sikkim are stated below. The picturesque Himalayan ranges along the length and breadth of Sikkim provide breathtaking view of mountain ranges. The snow-capped peaks, the gliding glaciers, the farming waterfalls, the glittering lakes and shrines, the forested ranges and the fascinating landscape in the mountainous sectors of Sikkim exert profound influence on visitor and viewers. From the climatic point of view too, Sikkim on the basis of topographic altitude, provides pleasant and healthy climate ranging from hot, warm to cool and cold. Therefore in Sikkim Himalayas one can choose one's own climate as suited to the visitors. In other words, tourists coming from any

part of the world can have the climate best suited to him. In addition to physical basis, Sikkim is endowed with a storehouse of antique arts and cultural heritage. There are renowned temples and monasteries exhibiting various images pertaining to ancient arts, crafts and religious believes. The most prominent e.g. are Rumtek Monastery Ranka Monastery, Pemayangtse Monastery, and Enchey Monastery. All these help in generating income at various levels.

5.18 IMPACT OF TOURISM

The progressive curiosity of man to view unseen places, longing for exploration and to know something about them has resulted on the mobility of people from his original birth place to unknown and unseen passage of the world. This movement has given rise to a specific category of activities called tourism. There lies a strong relationship between tourism activity and prevailing environment condition at a given place and time. Environment mostly consists of three major segments, abiotic, biological and socio-economic. In other words, environment is conceptualised under the classifications of natural, built, and cultural. This categorization closely relates to typology adopted in describing various environmental assets that attract tourists and provide a parameter for analysing tourism impacts. The natural environment includes air, water, flora, fauna, soil, natural landscape or physical shape and climate. The built environment encompasses urban fabric, buildings, monuments, infrastructure, parks, landscapes and open spaces. The cultural environment includes values, beliefs, moral, behavior, arts and history of communities. Before analysing the nature of environmental effects resulted by tourism, analyses on nature of environmental needs preliminary deliberations. The several types of environmental problems can be broadly classified into resource depletion and unabated pollution problems.

Before tracing out the environmental impact caused by tourism, it is appropriate to trace out its potentiality that can lead to the growth of tourism in Sikkim. The geographic environment is almost identical to that of Kashmir and Switzerland.

5.18.1 Impact classification

The study on impact of tourism helps measure the intensity of tourist influx vis a vis their impact on economy, socio-culture and environment. In this context, alteration and change brought about by growing tourist population in the host environment is discussed at length. Various aspect of cause and effect relationship has been dealt with meticulously. To study and analyse the impacts, the parameters identified are negative and positive impact, impact on tourist and impact on host destination.

5.19 POSITIVE ECONOMIC IMPACT OF TOURISM IN SIKKIM

In terms of economic gain, tourism has contributed non share in state's revenue both in direct and indirect form. People of the tiny state of Sikkim are attached to tourism activity. The capacity of tourism industry in generating employment and income makes tourism sector a multidimensional business hub. The receipt and payment and earning from direct and indirect sources contribute to national and per capita income of a nation. It is therefore proved that tourism plays a significant role in shaping the economic standard of a region in particular and nation as a whole. Besides, there are problem areas in tourism sectors, which often hinder its proliferation; all such aspects have been dealt with in depth. Roger H. Ballou, President, American Express, USA (Travel Services) told the delegates to the 1993 annual convention of Pacific Asia Travel Association (PATA) in Honolulu that worldwide employment in tourism services had grown to 127 million and capital investment had topped US \$ 422 billion. In 1982, European Economic Community (EEC) estimated that there were 11 million jobs that were directly or indirectly related to tourism in EEC countries. Of this, 70% were involved in domestic tourism and the rest in international tourism. The British Tourist Authority estimated in 1985 that there were one and a half million people engaged in jobs relating to travel business in Great Britain. The rule of the thumb is that one job is created by one international tourist from an affluent country in India's low (Pranseth, 1998) wage economy.

5.19.1 Direct and indirect effect

Income and employment generated by tourism basically refers to the additional income and employment generation in various tourism sectors directly. Whereas indirect income and employment refers to income generated in sectors, which supply input to the tourism industry. Such input could be in the form of supply of vegetable, fuel and various services, transportation, which in turn help increase the total output.

Direct effects of tourism are relatively easy to measure. Let us assume that a US visitor to Sikkim stayed at Norkhill Hotel. After his 3 day stay, he paid to the hotel \$ 500 which became the direct income of the hotel. But the \$ 500 did not stay with the hotel. Of this amount, \$250 was disbursed to employees as wages, \$ 200 went to suppliers of food, liquor and other services, \$40 went towards the payments of utilities and \$ 10 were remitted to the owners of Norkhill hotel towards their services. Although direct payment was \$ 500 only, \$490 moved through the Indian economy to several receipts that in turn, passed certain percentage of their receipts to others who provided them goods and services.

5.19.2 Gross domestic product

Tourism has an important contribution to the Gross Domestic Product. Travel and tourism generates largest GDP. All expenditure incurred by tourists will be further incurred on building hotels, roads and other tourist services. The (Table 5.7) data speaks about source of income deriving from various action of tourism.

TABLE 5.7: INCOME GENERATION FROM VARIOUS SOURCES (2005)

Sectors	Income (Rs in thousand)
Travel	2868
Food	5941
Accommodation	6200
Marketing	1855
Recreation	1260
Others	1413

Source: Field Survey, 2005

5.19.3 Employment generation

With the increase in number of tourists, there will be an additional employment generation in the service sector. Such effect is seen in the area of direct employment. If there is an increase in the number of visitors to a destination, there is bound to be an increase in the manpower requirements of the travel industry. A 33% increase in the occupancy of tourist hotel will result in increasing the demand for more staff at the hotel counter, drivers, guides and shops etc. It is the direct employment resulting from increased flow of tourists.

Indirectly, further avenue for new employment is also created in the field of agriculture, horticulture, manufacturing units etc. The (Table 5.8) reports on employment in tourism sector is generated in hotels, restaurants, souvenir shop, front desk, guide, handicraft manufacturer, drivers, owner, travel agents, and many other related sectors.

Tourism is a tool, which helps to eradicate unemployment problem in the state. In the case of Sikkim, one of the pressing problems is mounting on menace of unemployment. The development of tourism industry is one of the most practical ways of alleviating this problem by imparting trainings to tourist guides, hotel managers, tour operators etc. Educated and enterprising manpower can be accommodated in this sector.

TABLE 5.8: EMPLOYMENT PATTERN IN SAMPLE HOTELS

OWNERSHIP	MANAGERS	EXECUTIVES	OFFICE STAFF	RECEPTIONIST	SKILLED STAFF	UNSKILLED STAFF	TOTAL EMPLOYMENT	
							PEAK SEASON	LEAN SEASON
GOVT. OWNED	4	9	13	18	30	74	148	147
PARTNERSHIP	1	0	0	1	1	2	5	5
PROPRIETORSHIP	7	4	5	4	26	26	70	66
PRIVATE LIMITED	14	10	19	16	75	58	187	165
PUBLIC LIMITED	1	3	3	2	12	30	51	40

Source: TEC, 1998

5.19.4 The multiplier effect

The concept of multiplier effect is closely related to income multiplication by tourism activity. It explains that the flow of money generated

by tourist multiplies in various sectors within and outside the tourism sector. The various economic benefit arising out of tourism business include benefits from infrastructure investments, roads, water supply, other public amenities, hotels, restaurants, museums, clubs, sports complexes, public transport, national parks, wildlife sanctuaries, art and craft, preservation of indigenous culture etc. It is seen that tourism brings multi-faceted gains to the economic structure of a host region. (Bhatia, 1997) This concept of multiplier is widely applied in the context of Sikkim. The hoteliers, service providers, suppliers, tours operators, shopkeepers, guides, drivers are benefited in multiplication of income.

5.19.5 Tourism multiplier

It basically explains the role of international tourism expenditure in bringing higher income for tourism suppliers. This income gets distributed over wide areas as wages, salaries, rent, interest, profits, and indirect income to suppliers of goods and services. This is further distributed to food and beverage services, phone and electricity companies, fuel suppliers, taxis, printers and many others. The recipients of all these incomes may spend the new income or save it for further investment. To the extent that they choose to spend on goods and services produced locally, a round of new transaction creates new induced income for secondary suppliers. They themselves have more to spend and the cycle moves on.

It can be illustrated as under. If an American tourist spends US \$ 2,000 in Bombay, including the hotel bill. Of this amount \$ 1,000 is the direct income to the hotel and we know how it will be spent as explained earlier in the case of Maurya Hotel, New Delhi. The remaining \$ 1,000 is re-spent in the economy from indirect or induced income. Since those who receive the money, keep certain part of it for further investments, they may recalculate only \$500. The next transaction may be for \$ 250, and the subsequent for \$ 125. The total value of the income created over the same period works out to \$2,000+\$ 1,000+\$ 250+\$ 125=4,000. Multiplier=2 Same principles are applied in case of tourist activity in Sikkim as well.

5.19.6 Foreign exchange

Tourism business helps strengthen economy by enhancing its foreign investment. The positive balance of payment helps in enhancing its foreign exchange. Foreign exchange is not the only advantage. In terms of employment, tourism has an edge over other industries. India Tobacco Company (ITC) set up a factory with 300 million rupees investment, which generated employment for only 300 people. A hotel with similar investment provided jobs to 600 people. This is applicable to most countries more so in developing countries where (Pranseth, 1998) wages are lower.

5.19.7 National and per capita income

Tourism is the biggest foreign exchange earner for the countries like Nepal, Thailand, Spain and New Zealand, and ranks third among the export earnings items of India.

An increase in expenditure by foreign tourists in a country raises the national income. On the reverse side, an increase in expenditure on tourism abroad by the nationals of a country lowers the national income. Thus the net income generated in a country by tourism will vary directly with the expenditure of visitors in the host country and inversely with expenditure abroad by their own nationals. In Indian context tourism has an advantage in bridging the gap of India's balance of payments.

According to Dr. N. K. Sengupta, a former Secretary of the Planning Commission of India, "Tourism has the capacity to generate valuable foreign exchange with almost 100% value added, thus making it the most readily available source for resolving the balance of payment crunch." Accordingly, during March-June, per capita income of service sector in Sikkim goes high, due to increase in tourist traffic.

5.19.8 Tax benefits to the state

The state Government collects huge amount of revenue from tourism sector. In every movement of tourists, income through tax is generated. In order to visit Changu and Nathula, hundred rupees from each passenger is

collected. Besides, environment tax is also levied on top of that. Entry fees are charged from visitors, camera fees are separately collected from the visitors. Therefore there are direct and indirect tax collection systems in Sikkim. The state Government is indirectly earning from the vehicles coming to Gangtok as road tax. In every purchase of commodity, government is benefited through taxing system such as imports duty, sales tax, income tax, hotel tax, transport tax, entertainment tax etc.

Revenue generation (Fig 5.5) from tourism sector has been increasing constantly. Over the years, Sikkim tourism has been able to generate (TEC, 1998) huge amount of foreign exchange and employment opportunities. Direct income of the state has gone up to Rs 40.39 lakhs in 2000 from mere 38 lakhs in the year 1997.

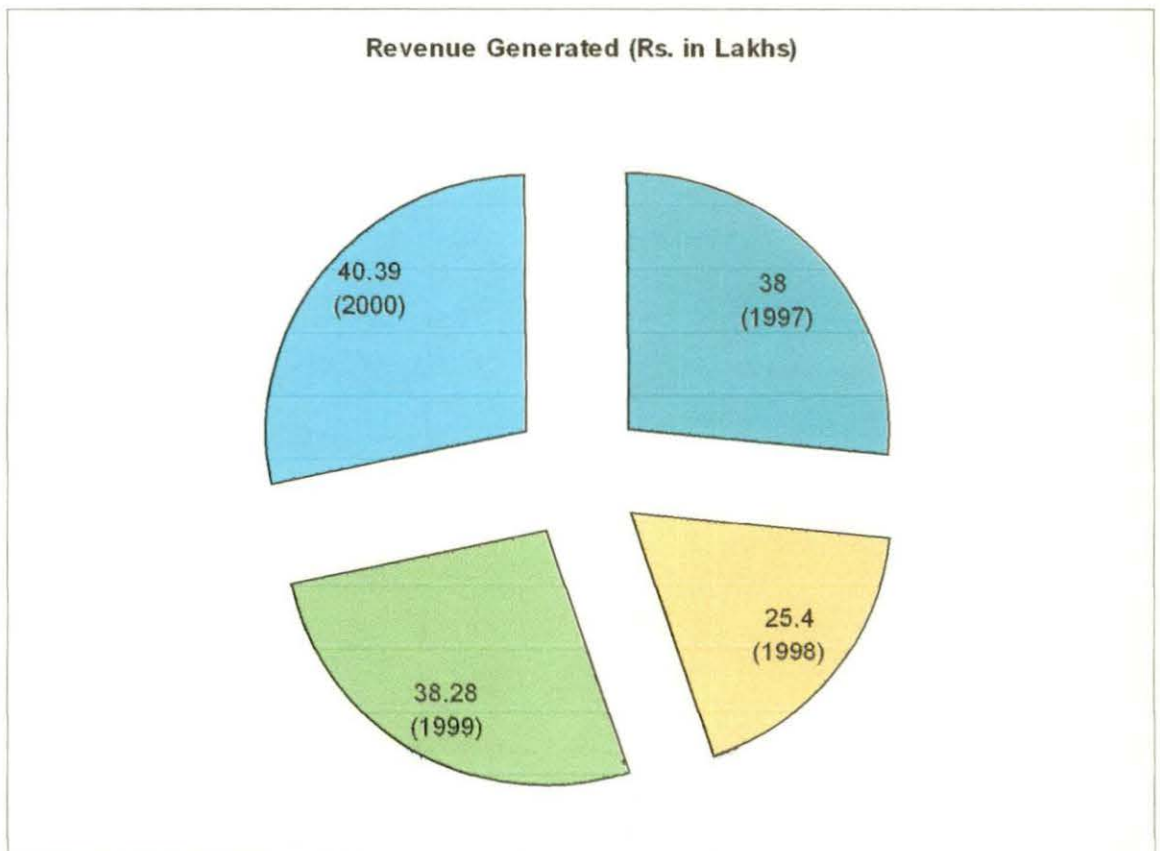


Fig 5.5 Revenue generated from Tourism (1997 –2000) TEC, 1998.

5.19.9 Projection of income and employment generation

The tourism industry is normally viewed as labour intensive. the direct employment it provides in hotel is in thousand. It is the indirect employment, which is relatively higher than direct employment. To estimate the employment generation in hotel transport and travel industries, estimates of tourist arrivals and peak season bed requirements are studied. The additional projected direct employment generated in different sectors are calculated (Table 5.9) which shows employment of 13,276 persons (Table 5.10) by the year 2011, that is exceptionally beneficial for the Sikkimese economy.

TABLE 5.9: TOURISM RECEIPTS AND DIRECT INCOME GENERATED BY TOURIST EXPENDITURE (projection, Rs. in Crores)

Year	1995	1997	2001	2006	2011
Tourism Receipts	15.95	24.31	45.39	89.71	180.12
Income	6.89	10.49	19.59	38.72	77.73

Source-TCS, 1998

TABLE 5.10: ADDITIONAL DIRECT EMPLOYMENT GENERATION (projection)

Institutes	Employed	Base year addl. Employment generated				Total
		1997	1998-01	2002-06	2007-11	
Hotel sector	Per bed norm					1997-11
Managers	0.05	100	70	130	260	560
Office staff	0.08	160	110	220	400	819
Skilled	0.16	310	230	440	820	1800
Unskilled	0.13	250	190	360	617	1470
Hotel sector(Total)	-	820	600	1150	2150	4720
Restaurant sector	-	750	550	1060	1980	4340
Travel agents	0.001065	136	53	88	119	396
Transportation		750	550	740	1780	3820
Total direct employment generated in all tourism sectors						13276

SOURCE-TCS, 1998

5.19.10 Distribution of wealth

The income generated by elite people penetrates down towards the downtrodden society in exchange of services provided by them. The international visitors and visitors from metropolitan cities pouring into Sikkim will surely spend handsome amount in pursuit of peace and tranquility. In this

way many locals have been employed and they are earning from various tourism related sources.

5.19.11 Regional gap reduction

With the advent of mass tourism, people are interested to see not only the natural product but also associated in the process of learning diverse social aspects of a region. In the process of learning, they travel deep into the forest and inaccessible areas in pursuit of knowledge. Similarly Khajuraho is a remote corner of Madhya Pradesh but after the recognition of Khajuraho, thousands of tourists flock into the region. In Sikkim, the remote areas like Dubdi and Tumlong Monastries, Sincor bridge are often visited by tourist despite of their distant location.

5.20 NEGATIVE ECONOMIC IMPACT OF TOURISM IN SIKKIM

The negative economic impact of tourism is negligible, however there are some effects, which may bring about negative development in the state of Sikkim. In less developed countries, residents tend to observe and learn the lifestyle of the richer visitors from affluent societies and try to emulate their way of life. In economic terms, it may bring about changes in the consumption pattern of local residents resulting in higher propensity to import consumer items used by the tourists. The second change is on the price level in the host country. Tourists from rich countries may bring price pressures with them, affecting local residents. Researchers have cited such phenomena-taking place in the Caribbean, the Canary Islands (Pranseth, 1997) and the Fiji Islands. In Sikkim, rise in price is experienced during the peak season and the local people residing in Pelling, Gangtok have to pay fancy price for all the commodities. Problem and scarcity of vehicle during tourist season is unnecessarily leading to price hike. Seasonal employment has created laziness and local youths are becoming dependent on easy money. The villagers are facing problem in the field of cultivation as the workforce are migrated to tourist spots. Tourists basically of international origin also face some problems regarding fluctuating price hikes and inflation. With the

enhancement of standard of living, people belonging to poor economic background are regarded with discrimination and sense of inferiority is rooted in the minds of such affected party in Sikkimese society.

5.21 IMPACT OF TOURISM ON SOCIO-CULTURAL ENVIRONMENT

Impact of travel, trade and tourism, falls directly on host tourist destinations and guest tourist themselves. The degree and intensity of use of recreational resources by tourists and their interaction with the surrounding environment is directly proportional to the degree of negative impact within a given destination. In other words, the degree of negative socio-cultural impact varies from person to person, time to time and place to place.

The impact of tourism on any society and culture of a particular community is normally influenced by rate and magnitude of adaptability. Generally the tourists touring towards any particular destination bring about symbiotic and heterogeneous social attributes to the host country. Such situation may affect the local ethics, social habits, moral values and behavioural pattern of host population, which eventually lead to demographic and structural changes in a society.

This interaction with tourists and local people often lead to social tension creating disharmony and disturb the existing local cultural ethos. Intermingle between host and alien culture usually propagates and alteration of social values comes into effect. Such circumstances may create room for eroding moral and religious values.

During the process of mixing, culture of rich societies prevail over poor societies, transformation of traditional hospitality of the local resident gets exposed to commercial practices. Adoption of consumer behavior, social evils like begging, drugging, prostitution, loss of dignity and frustration may get cultivated in either of the society.

The impact study further shows trend of westernization and alteration of traditional culture, art and artifacts, aesthetic norms, and bio-piracy leading to illegal trade of antique objects of animals. Feeling of inferior cultural complex, imitation and superficiality in demonstrating own culture and tradition

are the examples found in Sikkim, bio-piracy and superficial pseudo cultural development is also taking place.

The exhibition, commercialization and selling of traditional cultural events may lead to the creation of pseudo-cultural substitution of folklore. A drastic change is seen in the life styles, attitudes and life pattern of the local people of Sikkim in general and Gangtok in particular, where sign of replacement of regional culture is noticed.

5.21.1 Negative effects

Cultural and social change takes place through a number of factors, slowly over a period of time. (Bezbaruah, 1999) Having long association with tourists and tourist destinations during the course of field study, various effects have been identified. Generalizations have been made with respect to Jina's parameters.

- 1 **Demonstrative effect** It is the outcome of close interaction between divergent group of people which is noticed in mass tourists concentration zone. It is a kind of tendency of resident people to give their impulse to follow the other culture. Such situations give birth to social hybridization. In such scenario, local resident under the influence of tourists, tend to emulate their behavior, food habit, dress and attitude. In Sikkim, the drivers, hoteliers in the trekking route of Dzongri, Pelling, Yumthang have developed similar behavioral pattern due to their close affinity with the tourists. The young boys of Gangtok have shown shift from traditional to modern and western outlook.
- 2 **Homogenization** It is the outcome of interaction between two culture having their affinity to each other. In such cases, technologically advanced group naturally gain supremacy by their virtue of adoptive nature. In case of Sikkim, western culture from outside invades the local set up due to positive response offered by host population. It is revealed that Indian and western culture comes to Sikkim and affects the local culture.

- 3 **Contract effect** Commonly it is surfaced by changing pattern of relationship among the social groups. People who are involved directly in tourism activities are absorbed so much that they many times loose ties between themselves. The cases have been observed especially in Gangtok, where manpower involved in tourism sector is loosing tie with their families and community. In Gangtok and Pelling, number of antique shops, restaurants, travel agencies and several other economic activities are established by the local manpower. The employees of tourism sector having close contact with tourists do not get much time for the people belonging to their on community. It is due to their constant interaction with tourists coming from outside.
- 4 **Xenophobia** It normally refers to the fear or disliking of strangers/foreigners by the local people and community..The residents of host region often develop fear-psychosis against the tourists and visitors. In remote areas, people shut their doors before strangers. The local residents feel sense of insecurity and debarred from freedom, hence, obnoxious treatment is noticed from some individuals. The parents of Yuksum and Dzongri trekking belt have developed obnoxious attitude towards tourists. In the far-flung remotest corner of North Sikkim, the Lepcha tribe is intermingled in their purely traditional unaltered culture. It is noticed that they have general tendency to close their doors whenever any stranger passes by their residence. The locals in Sikkim many times dislike domestic tourists.
- 5 **Autochthonic** It symbolises change of culture, where, effect originate mostly in the tourist destinations. The autochthonic culture is basically emerged out of uncontrolled exposure of local residents with the tourists. Such changes take place when foreigners are given privileges to mix up freely in the milieu of host society. During this free mixing process of autochthonic, the young generations have the tendency to adopt western way of life, manners and cultural values.

This kind of situation is noticed in some places of Lachung, Gangtok, and Pelling, where a tourist staying in same destination for a longer duration has resulted in alteration of dress pattern and food habit among local youths.

Many villagers in Yuksum and Ravangla stated that they have not seen their sons for two years, but knew that they are working in some tourism agency. These parents feel bad when their children do not attend festivals such as *Dassin,tiwar* etc.

- 6 **Cultural confrontation** It is also a type of cultural impact of tourism. In this scenario, poor sector sometimes losses its moral values in tourism development (Jina, 1994) process. With the emergence of tourism, the natural as well as socio-cultural structure of a region has been facing the challenges of several setbacks relating to cultural erosion. For example, the tourists and drivers do not treat the girls selling tea and stationary at Changu Lake region with respect. Besides, local beer sellers in (Field study, 2004-05) Ravangla and Pelling are often treated derogatorily.

Sikkim is no doubt a major tourist destination due to rapid growth of domestic and international tourism over the years. Tourists not only transfer money into this region but also inflict harmful affects towards society and culture of Sikkim. Their dress and address, food habits and merry-making manners bring some sense of vulgarity, newness and uniqueness in the region they travel.

Hence the imitation of foreign culture and lifestyle by the host people leads to cultural erosion. Moreover, interaction between tourists and inhabitants also lead to the change of autochthonic culture. The youths below 30 years of age are easily carried away by the guest culture as observed during the survey. In Pelling, one of the guardians complained about their son's behaviour. He stated that the boys including his son never return home in time, do not eat at home and do not attend rituals and ceremonies at home. The guardian complained "the local boys have lost the sign of respect to elders and family ties. During off season, they remain jobless

because they do not work in the field." Such situation may lead to loss of traditional knowledge and culture. (Field study, 2004-05)

TABLE 5.11: EXPOSURE OF TOURIST to LOCAL CULTURE (IN PERCENTAGE)

Particular	Foreign	Domestic
Local food tested	71	65
Local drink tested	66	57
Mixing with local people	68	71
Wearing local traditional dress	39	32

Source-Field survey,2005

It (Table 5.11) is obvious that the cultural attributes of Sikkim have influenced tourists; as the respondents desiring to visit the villages of Sikkim were many in numbers. Nearly 68-71 percent tourists at an average intermingled with host community. In such a scenario, there may break out atrocity, if the factor of irritation and disliking is greater than liking. (Table 5.11). In Gangtok, many sex workers are found involved in such an ugly business (Samay Dainik 5-10-2005) Therefore sex tourism may prevail if proper check is not restored in time.

5.21.2 Negative socio cultural impact of tourism

The final outcome of interplay of two forces, local and alien culture in this context, will lend up with the conclusion that strong and acceptable culture and tradition will prevail over the weaker one. Tourism being the largest industry in the world, millions of tourists across the globe is on the move. During their travel, tourist just do not move alone rather they move along with their tradition, food habit, language, custom, tradition, rituals and religion. Hence during the course of inter continental, overseas movement; cross-cultural events are hybridizing unnoticed. At this juncture, assimilation, repulsion, erosion, invasion of cultural elements comes into affect and exhibit supremacy of one culture over the other. In such fighting process, a new type of society comes into effect with neo-traditional structural society.

The negative impacts of tourism broadly fall under the broad outline of social, cultural, traditional values and morphology. The tourists bring to the host country a strange society, which affects and even transform local social habits by disturbing basic and long-established values and patterns of behavior of host population. It may even lead to structural changes in many sectors of society. During tourist season, resident population has to accept not only the effects of overcrowding but also required to live in contact with an alien. This "co-existence" of tourists and the resident population often leads to social tension and xenophobia (Jina,1994) is noticed in very popular tourist areas.

The close interaction of divergent groups of people, termed as 'demonstration effect', manifests itself by transformation of social values. Generally, it brings change in social attitudes and outlook and often leads to erosion of moral and religious values. Such scenarios are manifested through increased crime levels. The impact of rich society over poor society has been damaging repercussions on the host population by putting traditional hospitality into commercial uses. The appearance of consumer behavior; social evils like begging, drug-peddling, prostitution, loss of dignity and frustration are growing with the growth of tourism.

Since Sikkim is no exception to foreign tourist, cross-cultural dichotomies are bound to prevail. The details of examination made during the course of field study have been highlighted herewith in depth.

1. **Erosion of culture** Due to several factors the traditional culture of Sikkimese people is in waning stage. This problem is further aggravated by high rate of tourist influx followed by quick transformation and adaptation of local youths to western culture. It is due to exposure of local communities to the western outfit. This trend is common among the youngsters residing in urban centers. The capital town of Gangtok, Namchi, Pelling is no surprise, even the remote destination showed an alarming trend. While in Yuksom, Yumthang, youths have fully exposed themselves into western look and modern outfit. During the field survey,

none of the Lepchas were found in their traditional dresses. On the way to North Sikkim, few ladies were found in traditional dresses around Namprikdang, near Mangan. In Lachung and Lachen areas, women dressed in traditional attire normally do not come out of their houses; it means they consider their dress inferior to other dresses. Around 80% men (Table 5.13 and 5.14) wear traditional dresses occasionally during the festivals and ceremonies only. The only women above the age group of 60 years are found wearing traditional *bakkhu*. In Yuksum, Gareythang, Tashiding and Pelling area, almost 90% of the population belonging to Nepali community wear modern shirt and pant and only aged old people wear *daura, sural and chaubandi choli*. On being asked, why don't they wear traditional dress, they responded "firstly, it is not readily available in market and tailors can not stitch *daura, sural, choli* etc". Secondly, shirt, trouser are comfortable and economically viable. Thirdly, as a matter of prestige and identity as they feel that Nepali dress is cheap and worn by the people of Nepal. Fourthly, they are imitating the market fashion. It is justified that not a single person in Gangtok, Namchi and Pelling were found dressed in traditional Nepali attire. Therefore in Sikkim, Nepali culture is slowly vanishing. It is calculated that in marriage ceremonies 90% of the bridegrooms are decorated in modern suit and tie. Among the other community, few Bhutias belonging to Lama and Tibetans clan wear traditional dress. However in marriages, almost 90% of Bhutias and Lepchas were found decorated in traditional outfit. In offices and market, everyone is dressed in modern outfit. Therefore, it can be concluded that the tradition of Sikkim is preserved and uphold only by the old and poor people residing in the remote and inaccessible corner of Sikkim. The tradition and culture of Sikkimese people are limited to festivals only. On being interviewed some school goers studying at TNSS, astonishingly responded "they have not even seen and touched their traditional dress". No NGO and social organization is working in this field for conservation of traditional wealth of Sikkim.

2. **Erosion of language** The lingua franca of Sikkim is Nepali and other tribal languages are virtually dead. The Govt. has duly recognised regional languages of Sikkim. Despite all attempts, only 5% of the young generation speak and write in their mother language. Some Bhutia, Lepcha and Nepali respondents replied that they are not interested in their language because it earns them inferiority complex among their friends.
3. **Erosion of religious sanctity** The auspicious occasions like *Tendong Lho-rumfaat Pang Lhab Sol, Diwali, Dasai* are celebrated with vigor, but spiritual fragrance and significance of celebration is being diluted. All such festivals are celebrated in modern way. In *Tendong Lho Rumfaat*, beautiful cultural programme is showcased to reflect the tradition of Lepcha community but no ritualistic *puja* is held as ceremonies in the villages. It is estimated that only 10 percent population are aware of their history and culture. This 10 percent people comprises of people attaining more than 60 years of age. As per the survey conducted on 17th September 2005 on the occasion of Biswakarma puja, it was noticed that, there were nearly 61 *pandals* of various size and budget. Some important *pandals* were at S.P.W.D mechanical, Metro garage, Tadong Taxi drivers, Tata Garage, Deorali taxi Stand, Panihouse, Tenzing and Tenzing Garage, Bypass garage, Arithang, Lal Bazar taxi stand, Mainline bus driver, main line taxi drivers, in Bazar, Burtuk, Chandmari workshop, SNT workshop, and Govt. Drivers Association at Tashiling Secretariat. On the day, mass local visitors were flocking to *Pandals* located at various places. Till 14.00 Hrs, pundits chanted mantras and everything went well. The Governor of Sikkim attended *puja* at Govt. driver Pandal in Secretariat complex. Large number of people irrespective of cast, creed and religion took part in Puja. However, in the evening after 18.00 Hrs, all the nearby youths gathered and started western and Hindi film songs and dance. In Tadong, Deorali and Panihouse area, some boys were found alcoholic dancing in perfect tune of modern Hindi, Nepali and English songs. The *Bhajans* including *Aarati* was not sung; rather cassette player and electronic gadgets replaced it. In 5th mile garage, youths themselves were

found fighting till late night. During *Dasai* festival 2004, it was observed that, almost 90% households in Yangang, Namchi, Pelling, Ravangla, Lingmo, Rongli, Makha areas did not perform *Puja*. The festival of *Dasai* started with alcohol and delicious non-vegetarian food items. Only on the *Dasami*, elders put *tika* over the forehead of youngsters with blessings.

4. **Pseudo culture** The tourism promotional festivals, fairs and commercialization for traditional cultural events may lead to the creation of pseudo-cultural folklore for the tourists with no cultural sustainability. People seem to have lost patience in ritualistic lingering. In Laxmi Puja or Diwali, except for some Marwari, Bihari and Bengali community, none of the local communities celebrate it with religious discipline.
5. **Neo Colonialism and invasion of local culture** Due to many reasons establishment of neo-colonialism is developing in Sikkim. It is proved that the local residents tend to speak the language of tourists, wear western outfit and eat Pizza and hamburger.
6. **Change of foodstuff** In Gangtok, Pelling and Namchi, none of the restaurants and hotels serves traditional, ethnic and local food. It is analysed from the survey that, despite of high demand for local food and beverages, no one has taken keen to introduce it. On the other hand, restaurant selling Pizza, hotdog, cold drinks, bakeries are rapidly mushrooming even in the remote destinations. It clearly indicates that (Table 5.12) the rate of extinction of local cuisine is highly accelerated.
7. **Loss of ethnic rituals** The rituals of each ethnic community is diverse; everyday is special to some of the communities with respect to their religious ceremonies and rituals. However, due to external influence, people have no time to think such values. This is attributed mainly to busy life and lack of knowledge about the richness of individual culture. At this point of time, tourism growth may further aggravate the problem.
8. **Religious transformation** In religious faith it is observed that many Lepcha communities have been shifting from Buddhism to Christianity. This trend is not uncommon among other religious groups as well. After Sikkim joined the mainstream, various churches were built to cater to the

need of people. One of the Lepcha respondent uttered that Buddhist rituals are very expensive and they interacted with many Christian followers and found out that Christianity is simple and economic.

9. **Threat to custom and tradition** People have forgotten years old tradition of performing *Puja* in the *Sansari* and *Devithan* areas. During the survey it was revealed that *devithan* was preserved near entel motors at 6th mile East Sikkim. Every year *puja* was organized and people use to participate in majority but now a days weak participation is noticed in such events. It is understood that tourism in Sikkim is making its people busy as well as lazy.

TABLE 5.12: TRADITIONAL AND ALTERNATIVE FOOD HABIT

Community	Traditional food	Replaced by	Current Practice
Lepcha	Khuri (Barley+Vegetable)	Rice, dal, and vegetables readily available in market	Occasionally consumed during festivals ceremonies and religious functions.
	Tshuknyuk (Rice + Bantarul made)		
	Saktit (Bamboo fermented, Curry)		
	Sukyor (Curry)		
	Pasyen-Khu (Tree fern mixed bread)		
	Salyang Shyer (Fermanted food)		
	Tunglukbuk Chi (Root Item)	Not in use	
	Pakzikbuk Chi(Arok)(tongba)	Wine	
	Kutshung Jom(Kluyaplo)(maize food)	Rice	
Nepali	Kinema	Tinpacked fish	
	Thotney	Not in use	
	Wacchipa	Biryani	
	Pua	Suii halwa	
	Fyaplo, dhero	Rice	
	Phuraula	Pyaji, Samosa	
	Kasar	Bunialaddo	
	Bhatmas, makai, tarul (pindalu, sakarkhanda, ghar, ban, simal, ,etc.)	Bhujia, chips, patties, pastary, dosa,	
	Limboo- thi, yanbben	Beer, whisky, pickle	
	Gundruk, soldar	Dal	
Bhutia	Khabje, jero	Packed namkeens	

Source-Field Survey, 2005

10. **Adoption of western outfit** The dress pattern of the local community has revealed almost 90 percent transformation from traditional (Table 5.13) to western outfit. In Sikkim, only 10 percent population wear their traditional

dress. Tourism is one of the reasons for such transformations. The locals believe that western style of dress design is impressive to tourists and present generation youths. The traditional outfits (Table 5.14) are rare and endangered which is limited to very few rural folks, belonging to poor section of society. The dresses like *Sari*, *daura suruwal*, *bakkhu* etc, are virtually replaced by suit, trouser shirt and jeans.

Among the youngsters, tight jeans, T-shirts, and transparent outfit are common in all parts of Sikkim. The loss of culture is taking place at the cost of tourists and economic gains in the name of globalisation and modernisation. Sikkimese, especially the Nepalis feel their culture inferior to western culture and they want to show off that Sikkimese are shoulder

TABLE 5.13: TRADITIONAL DRESS CODE AND ITS REPLACEMENT (MALE)

Community	Dress code for male	Replaced by
Lepcha	Sumok Thyaktuk, Papri	Hat, cap
	Tago	Shirt
	Tohmu	Trouser
	Banmok	Knife
	Tungib	Bag
	Ihyangshik /Lhom	Lather shoes
	Sali (bow)	(Not in daily use)
	Tshong (arrow)	(Not in daily use)
	Pangrek/Nyamrek	Leather belt
Nepali	Daura, Sural, Askot.	Shirt, pant, waist
	Askot	Half jacket
	Galphan	Muffler
	Lukuni,	Over/long coat.
	Khukri	Knife (not used as dress)
	Cotton Patuka	Leather belt
	Dhakatopi, Feta	Cap, hat etc.
	Limboo-hangjangwa,	Shirt , T-shirt
	Langdepma	Shocks
Bhutia	Khuchen kho, hentachi, zyaja	Shrit, pant
	Shyambu thuri	Cap, hat etc.

Source-Field Survey, 2005

to shoulder with tourist and have better economic standard. They often try to prove their quick assimilation with the other party. The survey also reflected that people in this region irrespective of caste and creed, spend more on food and clothing. Almost 80% of households even in the villages are neat and

clean with toilet so one can't distinguish their economic background by their outward look and get up.

11. **Behavioral change** The survey reported change in the behaviour of local population. Though, Sikkimese people are known for their simplicity, complacent, honesty and respectful behaviour yet one out of ten in urban and one out of twenty in rural Sikkim speak lie and do not show regards to their elders. Such fragile social environment may further get deteriorated due to tourism growth.

TABLE 5.14: TRADITIONAL DRESS CODE AND ITS REPLACEMENT (FEMALE)

Community	Traditional dress for female	Present status
Lepcha	Taroh (head scraf)	Not in daily use
	Tshomrik (ribbon)	Not in daily use
	Nyilop-Zyer	Ear-ring modern
	Lyak (garland)	Used occasionally
	Tagoh-hanz	T-shirt, Sleeveless top
	Nyamrek	Leather belt
	Dumvan (gada)	Used occasionally
	Dumpra	Coat, Jacket
Nepali	Majetro	Shawl
	Chaubandi choli,	Blouse, t-shirt
	Gunew, faria,	Jeans,skirt, kurtapajama, sari
	Patuki	Belt
	Limboos-Sumjangwa, sardakpa	Kurtapajama etc.
	Hembari	Not in use
Bhutia	Khuchen kho, thuchi hanju, pangden	Kurtapajama, pant,t-shirt,
	Kusen	Jacket, sweater, coat
	Shyapcha	Sandal, fashion shoe
	Tshering kyangap shyambu	hat,cap

Source-Field Survey, 2005

12. **Replacement of local cuisine** Dietary habit of local Sikkimese have drastically changed. There are no restaurants in the town where local ethnic food is served. The young age group of every household demand hot dog, pizza, sizzelers and Macdonalds foodstuffs. During the survey it was revealed that every hotel has specialized in Bengali, Punjabi and Italian food. It reveals that the locals are now adapting to foreign taste at the cost of mass erosion of local ethnic food and beverages. The children in Gangtok and Namchi were familiar with Maggi, Kurkure, Hotdog, Pizza

(Table 5.16) and some had tasted Macdonald food. On the contrary, 90% of the respondents among children found ignorant of Nakima, Khaipi, Gundruk, Sinki, and other local food items. It is proved that (Table 5.11) about 71 percent foreigners and 65 percent domestic tourists are fond of local ethnic food and culture. Hence the rate of adaptation to host culture is severe. The foreign tourists inflict their tradition easily as the locals are adaptive in nature. Such situation may invite invasion of indigenous culture.

13. **Alcoholism** Sikkim is synonymous to hot drinks mainly Whisky, Beer, Rum etc. During field survey, it was authenticated that more than 50 percent of the respondents consume alcohol. Around 20 percent tourists tasted it for the first time in Sikkim because it is available at cheap rate. It may be mentioned here that one out of five youths of 15-20 age groups smoke and drink freely in Society.
14. **Illegal trade** The illegal trade of historic objects are practiced in some parts of the State. The cases of bio-piracy have been identified in Sikkim. There lacks maintenance of existing heritage centers. Every cultural resource either stone, temple or monasteries are polluted by writing buzz vulgar words (*like I lov u etc.*) It is a clear indication of loss of aesthetic value and moral of host population.
15. **Replacement of existing tradition-glaring examples** The local languages have been virtually put off to practice, even the lingua franca Nepali is not correctly spoken by 90% of its population. The mother tongue is spoken only by 5 percent of its people. It is analyzed that majority in Gangtok speak English and Hindi language and speaking English is a matter of status symbol as described by one of the respondents. All the cinema halls run packed with Hindi cinema. In the household, Hindi T.V serials and programmes have been the lifeblood of Sikkimese housewives. The survey conducted in five video parlours showed that the attendance of Lamas are growing day by day. At least 5 % of video movie watchers are the lamas from nearby monasteries. Other minor situations are as under:-

- a. The boys and girls move hand in hand like husband and wife. As reported by some house owners in Gangtok and Tadong College area, some boys stay with girls till midnight and living relation is prevailing in these places.
- b. Confrontation and clashes between hosts and guests arises due to cultural and behavior dissimilarity. Along the taxi stand, quarreling between host and guest is a normal phenomenon. As reflected in the survey behavior of drivers and tourist players are not satisfactory in Sikkim. One of the respondents even suggested for improvement in this line.
- c. The drug trafficking, thefts, robbery, criminal acts are growing fast. The young drug peddlers are many times recorded to have arrested in Rangpo checkpost .
- d. The respondents of Ravangla, Yuksum, Pelling informed that, they never use to lock their door in the past, it is very recently that they keep everything under lock and key. It clearly states that the fear of theft and burglary has been introduced in Sikkim along with the introduction of tourism.
- e. Along with tourist human behaviour, honesty, sincerity, loyalty also went away from Sikkim.
- f. In Yuksum some women complained that during tourist season male population migrate for job and females are overburdened with household work. This may bring serious change in demography.
- g. The word trust has been erased out from the dictionary of Sikkim. In the name of competition, cutthroat atrocity and ego hassle is prevailing among the minds of residents.
- h. In Gangtok and Namchi, young generation is greatly influenced by western dance and music. The celebration is done by dancing and singing in western tune, be it a party, picnic, *puja* or programme. Sikkim does not have the university of its own nor it has better library and open space garden, but there are five numbers of discos for entertainment in Gangtok town. At this situation, tourism growth may deteriorate social values and integration.

- i. In an article in *New York Times*, Dr. Frances Collington tried to prove a correlation between the growth of tourism and increase in divorce in Hawaii. Tourism experts did not hesitate to equate mass tourism with post-barbarian invasions. But to compare the negative and positive impacts of tourism in study area, one easily comes to the conclusion that the positive impacts of tourism on the socio-cultural life of hosts (Bhist, 1994) are greater than the negative ones.
- j. Transformation and replacement of existing treasures are going on full swing. The traditional ornaments are not put to use (Table 5.15) as a result such ornaments are dying out forever from the society.

The traditional craftsmanship, customary laws, rituals, dance, music, are dying day by day. In order to please tourist, *Gundruk*, *Sinki*, *Kinema*, *Sisnu*, *Kodo*, *Fapar* have been replaced by hot dog, pizza, idle, dosa, samosa and locals area addicted to these foodstuff. Tradition folklore has been replaced fully and *dourasural*, *Bakkhu*, *Hanju*, etc. (Table 5.13 and 14) are replaced by skirt, suit, jeans, T-shirt etc. Discipline, docility is replaced by dacoit, drug, divorce etc and cheating, lying, disobedience replaced human and moral values. Work culture is virtually nil, educated ones do not feel themselves fit to work in the agriculture farm.

The lovely and touchy word Ama and Baba are replaced by Mum and Dad and survey report reveals that 60 percent parents feel inferior to be called as Ama Baba. The *Rodhi*, a traditional Gurung night festival is being replaced by nightclubs and discos. Further, *Basant Pancchami*, *Kushe Aunshi*, are substituted by Saturday hangout, Sunday special, weekend celebrations and datings. Earlier, guests were treated as God and doors of houses were always kept open but nowadays visits are limited to appointment and knocking the door is mandatory before entry. The mobile phoning system and internet has invited friends from far but avoided next door neighbour. People may physically be sitting together in a dining table but communicating with the third person over telephone. The development of tourism may further multiply the existing problems.

TABLE 5.15: TRADITIONAL ORNAMENTS OF VARIOUS ETHNIC GROUPS AND ITS PRESENT STATUS.

Community	Ornaments	Present status
Lepcha	Nyilop-zyer (ear-ring), kukyup (ring).	All items are either not put to use or used occosionally
	Lyak-mutik (Garland pearls)	
	Ley-melung (golden garland)	
	Sambrang bur (Waist garland)	
	Banchetkup (traditional sickle for lady)	
	Kahgyer (silver made wrist wear)	
	Thyangyer (silver made ankle wear)	
Nepali	Dhungri, Mudri, Bulaki, Tillari, Potay, Chaptesoan. Nau-gedi, Marari, Chura, Sirbandi, Reji etc.	
	Kalli,	
	For Limboos- Samyang fung,(head gear),labena langbangi,nesse, pongwari itchi (pualomala)	
Bhutia	Shey khaw, zhi phiru, muti, eeyu.	

Source-Field Survey, 2005

Bhatkhuni is replaced by birthdays. (Table 5.16) the custom of birthdays have also become the status symbol in Sikkim society. Work has been important than worship.

The ratio of oily food, fried eatables are directly proportional to killer disease like cancer etc and urbanization and pollution have invited diseases like bronchitis, malaria, fever, asthma, jaundice, diabetes, etc. Erosion of discipline and character has encouraged threat like AIDS, crime etc. The diseases and hospitals are equally coming up and Malthusian principle is fully

TABLE 5.16: ALTERATION OF TRADITIONAL CULTURE AND LIFESTYLE.

Tradition-customs	Alteration/substitution
Bhatkhni	Birthday
Moi	Lassi, cold drinks
Momo, T-momo, kudi,satu,sekwa,	Pastries, cake, pastry etc.
Furaula, sel roti, kodo-fapar roti	Chips, bhuja,kurkure,lays,maggi
Chang, vaati, chanuwa, tongba, nigar	Whiskey, beer, rum, scotch.
Gagri & dhiri	Bucket, waterfilter
Janto, dhiki, okhli-musli	Mill, machine
Tolung, harpey, theki, madani-neti	Dairy farm equipments
Dhibri-panas	Candle, electricity
Aarati and Bhajan	Pop Bhajan in Gadgets
Incense and butter Burn	O point bulb
Arrange marriage	Love marriage

Source – Field Survey, 2005

applied with the growing incidents of landslide, earthquake, and accidental deaths. The growing numbers of vehicles have increased with growing numbers of accidental deaths as well. By the process of lifting chips, stones, rods, cement etc from its natural deposit, ecological and tectonic disturbances are visualized at large.

5.21.3 Positive socio-cultural impact of tourism

1. Tourism is often called as a 'passport of peace'. Human beings are knowledge seekers, always wanting to expand his horizon and mental faculty. Through socio-cultural, scientific, economic, religious and scientific exchange, feeling of friendliness is injected into the human minds. As a result, mutual understanding, sense of collectivism and concept of interdependency is cultivated into human mind. Similarly, coming in contact with tourist, both the host and guest population are benefited. The people of Sikkim get well acquainted with foreign alien culture and feel the sense of preserving it. Many gentlemen in Gangtok are familiar with the lifestyle and behaviour of tourist.
2. The impact is applicable to both guest and host. Depending upon the quality of human resource and mental faculty of an individual, interaction with tourist helps in boosting knowledge and human behaviour.
3. It is only through mutual understanding and respect that friendly environment can be cultivated in the minds of people living in different nations. Such an atmosphere results in better understanding which help uproot the feeling of hatred and cultivate the habit of friendliness and brotherhood. In Sikkim, it is noticed that tourists flock with those having identical language and tradition. The local guide at Dzongri and Gangtok have been able to understand the feeling of tourists, understand their language and easily get along with them. This is an example of how host people benefit from mixing with tourist.
4. Tourism brings investment. The tackling of certain social problems, opening of schools and dispensaries and revival of old customs and style along the trek route to Everest in Solu Khumbu district of Nepal is yet another example

of (Bisht, 1994) humanizing tourism and making it more acceptable and trauma-free for local people.

In Sikkim, tax benefit has been utilised for the improvement of tourist infrastructures. Recently opened artificial lake at Aritar in East Sikkim has been upgraded and improved by the funds received from visitors.

5. The change is the only permanent thing in this world. Therefore it is high time for host people to get acquainted with tourist and derive the best possible benefit from them. Tourism is wealth and strength, if handled properly it may change lives.

6. Tourism is not always proportionate to erosion and invasion of local culture. The growing tourism business in Sikkim has helped in improving the sites and introducing numbers of conservation practices. For example, in Ralong-Borung hot spring and water garden, major improvement has taken place; it is mainly due to mass tourist pouring into the region.

7. At a social level, balanced tourism favours contacts between holidaymakers and local population. As a result, encouragement of cultural exchanges and ethnic relations take place between two countries. If planned in this way, tourism undoubtedly provides positive socio-cultural advantages (Bhist 1994). The visitors always appreciate hospitable Sikkimese people. As a result, better relationship and understanding is established with tourists.

8. Excavation, renovation, conservation and preservation of art, architecture; paintings, heritage sites vis a vis maintenance of such places takes place with a view to promote and develop tourism. Similarly in Sikkim various ruins, monasteries and heritage centers like Pemayangtse, Rumtek. Tashiding monasteries Rabdantse and Yuksum are maintained by the Government. This has resulted in the preservation of traditional art and artifacts in the religious site.

9. With a view to preserve dialects and language spoken by various ethnic communities, Government has declared seven language as state language and Lepcha, Bhutia, and Limbu language have been introduced in curriculum at the undergraduate level. These are the steps taken with a vision to promote tourism by showcasing diverse languages.

10. Various tourist destinations at the far-flung remote areas have been developed and proper care has been taken to preserve the valuable items. For example Yuksum, Khecheopari, Aritar are situated in the distant place from the capital, yet proper growth of tourism has been experienced in these regions. This process will reduce regional disparity and maintain level of economic standard.

11. Tourism help realise the values of own society. Due to pouring of tourist, local people feel the importance of their existing resources. As a result, conservation practices are introduced at the local and micro level. Besides, awareness among the local people is created and sense of belongingness is cultivated in the minds of local population. For example, once, two foreign tourists visited Ranka village and asked for ethnic food and he was served with buckwheat bread, in return tourist paid Rs 500 and said, "this was the food they were dying to taste for the last twenty years". Ever since, people (Field visit, 2005) in the locality continued with the same business.

12. Tourism helps in building society by introducing planned development. Management of destination is learnt from the tourist itself. As per the requirement of tourists, amenities are provided and similar planning is carried out in a society. This helps local people in planning their surrounding. In Sikkim, many model houses have been constructed with a view to encourage village tourism.

13. Tourism may help renew vanishing architectural traditions, peculiarities, ancestral heritage and the cultural environment. Through the promotion of *thanka* painting, large numbers of youths are employed to preserve and produce it for sale in the market. Similarly lost culture, costume and rituals are regenerated for tourists.

14. With the expansion of cultural and religious tourism in the state, rebirth of local arts and crafts of traditional cultural values are revamping at large scale. The department of culture is preserving traditional houses of Sikkimese people. Further model houses have been built as a step towards preservation of its heritage. Besides, tourism promotional fairs and festivals are organized to preserve the existing resources, where local cuisine, dress etc. are

displayed which have developed sense of competition among the community towards its preservation. Such fairs are held in Gangtok, Namchi and Ravangla during the month of October, November and December.

15. At international level, intermixing with tourists help in understanding their culture, behaviour and remove misunderstanding and ill feelings against them. For example, there is a general tendency among Sikkimese to avoid and dislike plainsmen, however such feelings have been vanishing day by day. It is due to the sense of friendship through mutual relation and intermixing with the guests. In Sikkim, many people have become fluent in Bengali and English over the years. Almost all the drivers can manage to speak in Bengali language with Bengali tourists.

16. Cultural exchange by understanding foreign language and art is vigorously taking place in Sikkim.

17. Tourism acts as a tool of national integration and international understanding. Promotion of mutual understanding between the two nationals through tourism interface and interdependency is experienced by many nations including Sikkim.

18. Tourism is helping in knowing the socio-cultural aspect of other states and nations through exchange of ideas with tourists. Even the uneducated tourist guides are fluent in English in Dzongri and base camp areas.

5.22 NEGATIVE IMPACTS ON NATURAL ENVIRONMENT

In terms of environment, supremacy of negative impact prevails over positive impact. Located in the seismically fragile zone with the given landscape, Sikkim may have prospered economically but naturally she has been losing her natural endowments. The larger areas having potentials to grow as tourist destinations are located in the high altitude areas. As a result, all the infrastructure development takes place at the cost of mountain environment. Therefore tourism activity must be dealt with meticulously in order to achieve sustainable development. An assessment of impact on environment has been carried out to reflect major predicaments in the study area. The negative impact of tourism on environment can be identified

through various parameters. The resources are the natural endowments of Sikkim, all the development activities are controlled by available natural resource. Therefore depletion of resources may result in natural disaster in the long run. An attempt has been made to discuss all the parameters in the forgoing pages.

5.22.1 Depletion of plants and animals resources

As mentioned (Table 4.1), most of the faunal diversity is marked under endangered category. The birds and mammals are mostly endangered with similar endangered species of Rhododendrons (Table 4.1). It clearly indicates that Sikkim does not have all the flora and fauna recorded by Salim Ali and Hooker. The destruction of ecology in the name of tourism development is the subject matter of present study.

The immediate loss from the effects of tourism activities on floral and faunal species include destruction of breeding habits, killing of animals for hunting, and to supply goods to the souvenir trade, alteration of natural vegetation cover through clearance of plantation to accommodate tourist amenities and clearance of jungle to meet the firewood demand. In the Kanchendzonga biosphere (Chettri, 2000) reserve, loss of natural vegetation and disturbance to living organism are multiplying.

Tourism tries to create ecological imbalance at the very first step of tourism infrastructure development. The digging of earth and extraction of building materials for the sake of building tourism infrastructure is posing irreversible devastation to the physical shape of the earth.

1.Degradation of forest.

The principal cause for degradation of forests in Sikkim has been discussed in accordance with the principles laid down by Negi. The growing numbers of tourists are constantly replacing the existing flora and fauna of Sikkim. Clearance of vegetative cover is taking place in order to create tourism playground. Beautifully juxtaposed physical wealth of Sikkim gifted with wide range of bio-diversity, continues to amaze the visitors while traveling

across the length and breadth of Sikkim. The high mountain wall in its northern parts and the Singalila and Chola ranges form almost impenetrable barriers on three sides. Sikkim an enclosed area, sloping from north to south direction is often described as an amphitheatre and stairway. Owing to steep variation in altitude it offers varied climatic conditions, making conducive for the growth of flora and fauna. Tropical, temperate to alpine vegetation is well represented and exotic rhododendrons are the glory of Sikkim

The Yumthang flower valley of North Sikkim as well as the Hilley-Versay area of West Sikkim is the loci of rhododendrons, which can be promoted to naturalists. Moreover, the alpine zone is equally amazing in its variety. These zones include the Singalila range, Khangchendzonga, Lachen, Lachung and the Chola range. The Yellow anemones of Yumthang and the blue poppy flowers of Dzongri are the wonders. Wildflowers like aconites, gentians, violets, geranium, potentials, primrose, anemone cowslip, blue aster, saxifrages and the medicinal Jatamasi are also found in different altitudes of Sikkim.

Hikers, trackers and mountaineers even can enter into reserved forest and sanctuaries. The degradation resulted from such activities are of following types viz. soil erosion caused due to trampling, deforestation due to fuel requirement, threat to wildlife and threat to culture.

There are instances of bio-piracy in Sikkim. A tourist from Russia was caught with species of butterflies. Removal of orchid and medicinal plants are noticed in Lachung, Lachen, Rabong, Yangang etc. Along the trek route of Western Sikkim tempering and plucking of flowers are seen in the tourist season.

2. Degradation by Forest Fires

In great Indian forests, each year precious forests wealth are destroyed in forest fires. Forest fires may occur due to the following causes:

i- *Intentional causes*

More than half of the occurrence of fires in India is due to intentional causes. The villagers in order to obtain a good growth of grass often

fire the forest floor. This fire destroys a large forest area. The tribals to search the wild animals burn wild grass. The local people set fire to the forest to scare away wild animals from village and fields. The miscreants for taking revenge against forest officials also use forest fire as a tool to frighten them. They set fire to forest in a bid to settle scores with the forest department. Attempts are made to destroy the evidence of illicit felling by setting fire to the forest.

ii- *Unintentional causes*

This includes, unextinguished campfires of trekker, sparks from steam engines, un-extinguished cigarette butts, biris or matchsticks, torchwood etc.

iii- *Natural causes*

Natural causes of fires include, fires caused by lightning, friction generated by rolling stones, bamboo culms etc. and volcanic (Negi, 1991) eruptions.

iv- *Damage caused by forest fires in Sikkim Himalayas.* According to Negi, damage can be studied as damage to the crop, damage to regeneration, effect on the productivity of the forest, effect on the protective power of a forest as it maintain a delicate balance in the ecosystem by providing protective benefits such as forests bind the soil together and prevent soil from being washed or blown away by water or wind, they break the force of the falling raindrops, they maintain the balance of gases like oxygen and carbon dioxide in the atmosphere. Forests maintain nature's hydrological cycle. The forest fire damages soil and destroys organic matter and nutrients of soil. The loss of wildlife animals is tremendous in case of such incidence. Fires burn the eggs of birds, destroy the young ones and damage their habitat, which is an integral part of the forest ecosystem. Thus, the delicate balance of nature is disturbed. Aesthetic loss is counted as it destroys areas of recreational and scenic values. Tourists and picnickers avoid areas

that have been burnt by forest fires as such sites present an ugly, scary look.

v- *Degradation by loss of Forest Land*

Many a times forest lands are converted into projects sites. In Sikkim huge lands are transferred to other establishments, (**Appendix V**) such as hydropower projects at North and East Sikkim, tourist destinations at Solopok, airports at Pakyong, offices, road and bridges, hotels at Pangthang, mining etc

vi- *Degradation by illicit felling and removal of forest produce*

The illegal cutting of trees and removal of forest products, without a valid permits by the individuals.

vii- *Degradation by Lopping*

The cutting and removal of branches and leaves of trees for fuel, fodder and shelter of cattle also degrade forest.

viii- *Degradation by removal of forest floor litter*

The litter is manure but when removed form surface, it losses its nutritional values.

ix- *Degradation by domestic animals.*

The tempering by animals degrades forestland making it harder and unfit for vegetative growth.

x- *Degradation by plants*

Sometimes unwanted, ecologically harmful shrubs cover the entire area and hinder growth of other plants.

xi- *Degradation by forest diseases*

Various diseases kill plants during the time of germination.

xii- *Effect s of low temperature*

In Alpine Lachung, Lachen, Yumthang, many endangered species of plants affected by severe cold, snowmelt, frostbite, avalanche, and many plants are stunted and dead.

xiii- *Rainfall*

Excess rainfall also affects growth of plants and grass. In Pakyong, Renock and Namthang are large area under crop was destroyed by heavy rainfall and hailstorm.

5.22.2 Air pollution

The pollution of air either by concentration of suspended particle or by adding of foreign element beyond recycling and absorbing capacity may cause severe health hazards. The unmet demand has resulted in air, soil, land and water pollution. The prevailing air is comparatively clean and pure in Sikkim except for Gangtok. However pollution is caused all along the main road, public places, drains, garbage disposal pits, jhoras and market place of Singtam and Jorethang. During peak tourist season, thick smoke cover Changu, Pelling, Gangtok and Singtam. Besides industry and vehicle, dust generated by unmetalled roads is harming the atmosphere.

i-**Smoke** The invasion of suspended particulate matters, toxic fumes and gases like carbon monoxide, sulphurdioxide, oxides of nitrogen etc have polluted the ambient air quality of Sikkim. Main source of these pollutants are petrol and diesel based automobiles, chimneys, heating system fitted in the offices (all the Banks in Gangtok are heated with chimney during winter), vehicular traffic particularly in National Highways No.31 from Ranipool to Gangtok is very high. (Field survey 2005) The congestion of traffic, caused by inbound and outbound loaded trucks, emit toxic fumes and monoxide.

During office and schools timings, problem of traffic gets aggravated especially in Holy Cross and TNA complex, where hundreds of school vehicles ply everyday. Also in early morning and evening when truck enters the main road, immeasurable amount of smoke is released to the atmosphere. The traffic jams are due to limited road width, lack of parking places, absence of proper pedestrian facilities, encroachment on road sides, mixing of local and highway traffic, lack of management, poor geometries of road intersections and alarming growth of vehicles. Number of vehicles on the

road has risen (Fig 4.2) sharply, beyond the carrying capacity of the narrow roads.

Higher emission of toxic smoke by the vehicles are mainly due to unhailed engines, overloading, long and steep climbing, congested roads, and frequent traffic jams and weak enforcement of the laws controlling air pollution. No doubt the natural vegetation of Sikkim acts as air filter/purifier but with the increasing number of vehicles day by day, air pollution is bound to increase in future. In that situation the citizen will have to suffer, if strict measures are not taken to check it.

Other minor sources of smoke are burning of fuel wood and char-coal for cooking, room heating, burning of plants leaves and solid waste in the localities. Tobacco smoking also pollutes the immediate air, which we breathe. Smoking of tobacco in the traditional bamboo pipes and also in the form of cigarette, cigar and *bidi* is a common habit of the residents of Sikkim as a whole. One of the respondents complained about suffocation from odors spread in hotel due to smoke of tobacco, coal, firewood and fumes of frying and cooking.

ii-**Dust** Air is also polluted by dust particles. The aged people of Sikkim say that dust was limited to agriculture field only but all the residents along the roadside from Tadong to Gangtok informed that they collect 100 gram of dust everyday. The wind picks up dust/soil particles from unsown agricultural fields, construction sites and stone quarries in and around Gangtok. In the past, when the strong winds blew there used to be sweet whistling sound from the surrounding pine trees, but now the strong winds carry dust everywhere causing health hazards to the people. The suspended dust particle in the air comes down with the rains thus increasing turbidity in the rainwater and acid rain.

iii-**Foul Odour** The major air pollutants in Gangtok are foul odours. The main polluters are rotten and undecomposed solid waste, garbage, rubbish, improper urinals and open defecation. The fresh and pure air of Sikkim is replaced by obnoxious gases. As per the survey mapping of bad odour, the

areas at present Lal bazar, Jhora near panihouse, Manipal drainage, back side of the STNM hospital, Vajra Jhora, and all latrines and urinals of Lal bazar, supermarket, were found stinking. In the villages, open defecation urinals, cowsheds, piggery and poultry sheds are the main polluters. (Field survey, 2005)

Along the Jhoras and depressions, static water invite mosquito breeding. Besides, unmanaged kitchen refuse like, leftover foods, skins of vegetables and fruits, egg shells, froth-foam of boiled rice, rotten food items and waste parts of fish, chicken etc. are the great polluters producing foul odour.

The residents of lower 5th mile Jhora areas are badly affected by the obnoxious smell and filth brought down by the Jhora stream. During rainy season, dirt and garbage are collected at the lower side of Gangtok causing serious damage to local environment. The waste generated from byproduct of Milk union at 5th mile outlet is as bad as Namli garbage storage area. (Field survey, 2005)

5.22.3 Noise pollution

The 'micro-mini' environment of urban ecosystem is also subject to noise pollution, a typical gift of the modern age. The noise nuisance is variously defined as 'unwanted sound' or 'vibrational energy out of control' (Smith, 1972). Noise includes any loud and undesirable sound, disturbing peace of mind. It also causes irritation, distraction, loss of concentration, annoyance and damage to hearing power. Noise has become a major health hazards in the cities. Adverse ecological, physiological (pathological) and psychological effects of noise on human beings and other life forms are quite evident nowadays. Various health problem caused by noise include increase in cholesterol level in human blood, high blood pressure, heart and liver diseases, mental abnormalities in fetus, peptic ulcer, hypertension and ultimately emotional (Verma and Agarwal, 1983) and behavioral problems in men.

In the peaceful and calm environment of Sikkim, even low irritating sound makes noise pollution. Main sources are blowing of horns along the

National Highways, repairing and testing of automobiles in the workshops at bye pass, ear bursting sound produced by bursting of silencer pipes of the vehicles along the NH 31, garage, blasting of rock, music blast and electronic gadgets. The people inhabiting along NH 31 have sleepless night till 12pm and after 4am in morning, due to heavy vehicle traffic.

5.22.4 Water pollution

The people in the hills have to bank upon surface water for daily domestic and commercial uses. Hence scarcity of treated and potable water is noticed in the places like, Darjeeling, Katmandu, Shimla etc. However Gangtok in particular is devoid of such problems. Intermittent supply of water is noticed in some dry seasons. Where as in Pelling, peak season is characterized by scarcity of drinking water. Almost every villager in the rural Sikkim reflected on drying up of water sources and water scarcity for drinking and irrigation. Due to construction of road and building in the water source areas, the sources have been drying out day by day. In South Sikkim a place called Valeydhunga, known for water sources have been drying out gradually. It is due to forest clearance and introduction of hydropower project on the other side of the valley and (Field Survey, 2005) also due to overgrazing of animals and human interference pollution level has gone up to a great extent.

i. Contamination of Drinking Water

No treatment of water is carried out in rural Sikkim. As per the report of Doctors diarrhea, dysentery and water borne diseases break out often in the villages. A Doctor of Tumin East Sikkim, narrated similar case story in his village. Besides, health conscious people take antehelminthic medicine every three-four month to fight against the impact of polluted water. (Field Survey, 2005).

The contaminated water with pathogenic bacteria and viruses are glaring examples found in the rural Sikkim. The stagnant water is polluted first and mosquito breeding takes place, followed by outbreak of communicable diseases. People take bath and wash cloths and vegetables in open water, as

a result helminthic, scabies and water- borne infection have occurred in many places.

The Department of Water Security and Public Health Engineering maintain water supply in Gangtok however Rural management and development Department looks after few schemes in rural areas.

The natural water collected from springs, streams are treated at Rateychu Selep Tanki and supplied to the people of Gangtok. However in Pelling, Ravangla, Singtam, Rangpo, Yangang, water is consumed directly from the source without much treatment.

The water from the treatment plant is supplied through G.I. pipes for the distribution to consumers. During this process, water gets contaminated. Washing and bathing have also been reported near water the sources and during rains water body accumulates external foreign elements. In open reservoir, animal and human interference pollute water. Sometimes dead organisms are found along with the leaves of trees in the reservoirs. Microorganisms like protozoa, fungi, algae and bacteria etc. are found in abundant in the water storage tanks.

ii-Scarcity of water

Population of Gangtok is increasing rapidly which nullifies any developmental scheme including water supply. In such a critical position, plight of the citizens can be understood in which they even may not get sufficient water; a basic resources. In some of the public taps there is dearth of water and drinking water is equally wasted from the open taps.

iii-Pollution of Water Bodies by Sewerage

All the nallahs, streams and lakes in and around Gangtok are polluted by the urban sewage. Under gravitation the sewerage naturally drains into the Jhora and passes through 5th mile area below Gangtok and finally pollutes Rongni Chu. During rainfall, stream rises above the critical level and untrained Jhora deposits all garbage and filthy material along its bank thereby polluting vast areas along the bank of Jhora.

5.22.5 Soil/land/Earth pollution

Various types of pollutants pollute and degrade quality and fertility of soil. In most of the cases, running water carries the valuable soil/earth itself away. While at some places human activities destroy land and its aesthetic value by turning it into an 'ugly landscape'. (Husain, 1996) In Sikkim, excess cultivation, over construction, urbanization and unmanaged garbage disposal has attributed to land pollution.

i-Soil Erosion, Floods and Water Logging

Various factors like deforestation in the vicinity of the town, making 'seed-beds' in sowing seeds, deep tillage of the hill slopes, excessive use of land and stone quarrying are responsible for soil erosion and consequent degradation of the ecosystem potentiality. In some depression floods and water logging is visualised.

The Loss of precious resource-soil is also caused due to number of construction works in the town e.g., digging of the land for construction of buildings, houses, bridges and roads.

In the name of tourism development Gangtok and other small towns like Namchi, Ravangla, Pelling, Yuksum, Geyzing, Mangan, Lachung, Chungthang etc. have been witnessing haphazard multiplication of hotels and restaurants. The fertile lands are transformed into concrete buildings to fulfill the demand of accommodation created by tourists. In the seismic zone of Sikkim, six story buildings have been constructed without proper plans. In case of earthquake, immeasurable loss of life and property is expected. The landslide at Pakyong, Namli, Sirwani, Rangpo have eroded million tons of fertile soils. There are reports of landslides and burying of houses during rainy season. As reported by SDM Pakyong, around 100 houses were evacuated due to fear of landslide in Pakyong, during the month of July-August 2005.

ii-**Quarrying** In order to supply stone, chip and sand to the construction site, the earth is virtually excavated. As a result, soil erosion, forest depletion, and defacing of landscape are taking place in Ranipool, Mangley, B2 and Indira Bypass area.

iii-**Chemicalization** The biodegradable chemicals dissolve into water, soil and enter into plants, animals and man through an ecological food cycle. But chemicals like DDT do not dissolve into soil and water, instead accumulate there and that causes much harm to the life forms. Excess use of chemical is deleterious to all living beings. (Husain, 1996) Fortunately, no such problem has occurred in Sikkim as Govt. has already put a ban on use of fertilizers and chemicals.

5.22.6 Other minor causes

i-Improper dumping of urban waste

The problem lies with the urban centers because tourists flock to towns for accommodation and other amenities facilities. In Sikkim though Govt. has put a ban on use of plastics yet secondary source of plastics uses are going on. As a result iron, tins, plastic cover, rubber, torn cloth, tyres, packaging waste, human hair from the saloons, bottles, package case, earthen soil, broken TV, radio, medical and house waste are thrown haphazardly along the road and hill side. In Gangtok such problems are minimizing but in other upcoming towns no management of garbage disposal has been done. Therefore defacement of landscape and environment pollution is being added up.

ii. Unplanned housing structure, haphazard growth of town and pollution of space

The haphazard horizontal and vertical expansion of Gangtok, Singtam, Namchi and Pelling towns and multiplication of skyscrapers all over have gifted land pollution and environment degradation in Sikkim.

Such high buildings cast shadow on the adjacent houses particularly on those lying in the shadow side, thus depriving the inhabitants of sunlight and fresh air. As no space in between the buildings are kept, no light and sunrays pass through. As a result rooms are dark and damp with breeding of hazardous insects and pests like houseflies, mosquitoes, bed bugs, cockroaches, silver fish etc. (Husain, 1996) In the survey, some tenants complained about damp and dark room in Chandmari, Thathangchen,,

Tadong, and Sichey locality. It is also noticed that the houses are too close and there is no privacy at all. In double storied houses when the floor is made of wooden plans, slight movement of that floor produces irritating sound for the people living in the ground floor.

The traditional single storey type houses made of wood/timber, reed, bamboo; plaster, hollow bricks and tin roofs are more safe and comfortable in the earthquake prone and cold area. But the growing use of cement and concrete in construction of houses and buildings (multistoried) create just unhealthy environment to the above. As cement, steel and stone are good conductor of heat, these houses remain more cool in winter and warm in summer. Fire safety devices (Husain, 1996) in the houses and buildings are either absent or inadequate. Shortage of water is already there to put off fire if unfortunately breaks out. In such senario, it is must to equip every house and building with sufficient fire extinguishing devices to avert disaster. Similarly Gangtok is no exception to such problems. The parks, space, gardens, children parks, and road connectivity in the interior houses are not found in any of the towns in Sikkim. The capital Gangtok is often named as jungle of concrete by the travelers.

iii- *Environmental deterioration due to fluctuation in climatic factors*

In winter the climate of Gangtok is less cloudy, rainy and cold. As a result growth of houseflies, mosquitoes, silver fish, other microorganisms and weeds are seen. Mosquito nets were not in use earlier in the past; cooler, fans were never used as the weather used to be pleasant. There was no provision to hang ceiling fan in the rooms. Nowadays slight warm and moist summer require fan to get relief from heat stroke.

iv- *Aesthetic Pollution*

The dirty water in the streams, springs and waterfalls, contaminated water, rotten heaps of garbage on every nook and corner, open drains, filth and foul odour, bursting sound, burning eyes on (Husain, 1996) the roads, cement-concrete jungle of building, growth of weeds, insect, pests and micro-organism, dust and smoke laden impure air, over-crowded streets and

neighborhoods and over all scarcity of urban amenities have eroded the comfortability, natural beauty and charm of the beautiful Sikkim.

v-Erosion

Erosion of top soil due to debri slide, landslide, rock fall, earth fall etc. have washed away major chunk of fertile soil and vegetation. Summer rainfall is characterized by torrential rain and landslide. The department of Irrigation and flood control has measured places prone to slides. (Table 5.17)

Table 5.17: PLACES THREATENED BY EROSION FROM RIVERS

North	East	West	South
1. Mangan 2. Lachung 3. Chungthang 4. Dikchu	1. Ranipool 2. Singtam 3. Sirwani 4. Rangpo 5. Rorathang 6. Rongli 7. Saramsa	1. Legship 2. Dentam 3. Reshi 4. Rimbi	1. Melli 2. Jorethang 3. Majhitar

Source-Irrigation and flood control Department, Govt. of Sikkim, 2001

vi-Visual pollution

The visual pollution is the result of improper sewage treatment, space littering, landscape defacing by excavation and unplanned constructed building. Littering is usually noticed in the tourist destination. The problem of environmental depletion arising out of bio-non-degradable packing materials, which do not have properties of decomposition, blocks the drains and open sewage. Further ugly design of houses and landscape, unarranged hanging of banners etc. is seen in Gangtok, Pelling, Changu and other towns including Singtam, Rangpo and Jorethang.

5.22.7 Solid waste

It is noticed that increase in solid waste is directly proportional to tourist population. As a result, mountain of wastes is generated from various tourist related commodities. The wastes generated in Sikkim are categorized as solid

wastes from towns, agriculture, industries, commercial hotel, restaurant and bio-medical wastes from hospitals.

According to (Katyal and Satake, 1989) following are the major sources of solid wastes generated from various sources.

i- *Agricultural wastes*

The 70 % of Sikkim population lives in village they directly depend on agriculture. In the process of agriculture practices, waste are generated at mass scale. However property of decomposition and decaying has helped in maintaining eco stability. Main waste products are remains of animal fodder, harder cover of seeds, branches and leaves, rice straw, bark, logs, food grain waste etc. Such non-degradable substances therefore result in hazards.

ii- *Household wastes*

The household unused substances fall under this category, such as plastic cover, polythene, paper case, tin, bones, bottles, glass etc. Except for Gangtok, no other rural houses collect garbage from their houses and wastes are thrown in the fertile field.

iii- *Community wastes and party waste*

It includes the wastes generated by group of people living in a particular locality and includes remains of food items in picnic and parties, bottles, tins, paper packs and unused items. In the picnic spots at Saramsa and water garden at the vicinity of Gangtok, waste arising out of residual food stuff, bottles, plastics, mineral bottles are found scattered all over the garden during winter picnicking.

iv- *Fruit and vegetable processing wastes*

The solid wastes are generated from the following fruit and vegetable processing units namely Guava, ginger, cardamom, passion fruit, sugarcane, Mango, Citrus, apple, pineapple, banana peel and root of vegetable plant etc. Sikkim food preservation factory near Topakhani produces these types of wastes.

v- Animal Wastes

The wastes generated from domestication of animals are known as animal waste. It includes remains of animal fodder, bark, bones, wooden and tin items from cattle shed, pigsty etc. In rural Sikkim such wastes are generated in each household.

vi- Industrial wastes

The most hazardous wastes are generated from manufacturing industry, it includes liquid effluents, bottles of chemicals, sake and cover of raw materials, paper waste, dusts, cut items, bottle caps, broken irons, steel and nails. In Sikkim distilleries and Melli breweries such wastes are generated at large scale.

vii- Wastes from construction projects

As discussed in prepage, Sikkim is experiencing the peak of development. Construction of Tista stage V hydropower is going under NHPC guidelines, airport in Pakyong, stadium, roads and offices are mushrooming in every nook and corner of the state. With the decentralization of powers to Panchayati Raj Institutions block level office is under construction in all the constituencies of Sikkim. Besides, private concrete houses multistory buildings are mushrooming alarmingly. Wastes from construction project include, pebble and gravel, rubble, brick, Sand, cement, waste wood, iron, rod, cement waste, and cover paper and poly items are everywhere. It is reported that the waste generated by NHPC at Balutar is being thrown into the rivers causing river pollution.

viii- Aquatic wastes

Solid wastes from aquatic ecosystems include silt, aquatic weeds, algae, lichens etc. (Negi, 1991) Other wastes are residual foods from restaurant, polythene pipes, bags, rubber sticks, spoon, plate, sweet packet cover, *chocklet cover*, *bhujia* and *namkeen* cover and plastic packs. Besides, non- degradable waste from hospitals too adds to the problem. The destination Changu and Pelling are piled up with the layers of unused articles.

In the villages, dumping of waste in the Jhora has caused massive degradation of soil and also resulted in spread of diseases. The plastic covers of eatables are thrown in the open space and accumulation of filthy, dirt and dust is threatening natural environment in the region. The local people are facing numerous problems arising out of such activity.

5.23 POSITIVE ENVIRONMENTAL IMPACT

Tourism is like a knife with a doctor, it may save or kill life from death. Therefore tourism is as delicate as glass and needs proper handling. Similarly planned tourism growth helps in boosting and improving the economic condition and landscaping of the entire region. By applying sustainable way of developmental activity and by introducing the model of carrying capacity, environment remains uninterrupted. The possible benefits are detailed as under:-

- a- In the developing state like Sikkim, tourism cultivates a sense of conservation of natural resources by protecting wildlife, national parks, garbage management, creation of parks, garden with open space, reserves. Similarly Gangtok town development and beautification programme was launched and ropeways, flyovers, footpaths were constructed accordingly.
- b- Many sites of historic and archaeological attractions for tourists have been renovated in Rabdentse, Tumlong, Pemaonchi and Rumtek.
- c- With a view to maintain tourist destinations various ideas are mooted out towards abatement of pollution in the locality. Tourism provides an incentive to clean up environments by putting check on air, water, noise, visual pollution and reducing congestion by upgrading overall aesthetic ambience with suitable landscaping and building design. In Gangtok, with the advent of tourism, water supply, sewage and solid waste disposals, are planned and maintained as per environmental ethics.
- d- Mass awareness among the local people regarding environmental awareness plans have been introduced in Sikkim. The voluntary social organisations have become active in this field.

- e- In order to reduce regional disparity the receipts from international tourism has acted as impetus for the growth of backward region of Sikkim Himalayas.
- f- Penetration of economic benefits to the lowest level of society in the form of foreign exchange earnings. have been noticed vividly. The rural artisans have started making gift articles for the tourist. Besides, supply of vegetable and milk etc is adding to their per capita income even in the remote corner of Sikkim. The Ranka and Rumtek village people are selling milk and vegetable at Gangtok on a daily basis.
- g- Direct and indirect employment opportunities have been created due to all round development of tourism.
- h- Infrastructure development also can not be overlooked as it forms a major economic base.
- i- Income multiplication and multiplier effect have penetrated down below the rural grass root.
- j- Tourism has also helped in raising government revenues in the form of various kinds of taxes levied on tourism activities.
- k- Tourism is a tool in bringing consciousness among the local populace with regards to environmental protection measures. The villagers of Dzongu are familiar with the importance of environment
- l- Introduction of environmental impact assessment and sustainable measures in various development activities have further helped in reducing environmental degeneration.
- m- The promotion of rural and village tourism has enhanced the capacity of rural folk in organising themselves for better living. In Yuksum, Lachung etc some tourist visit village areas and spend money in the villages itself.

CONCLUSION

This chapter enabled researcher to identifying interesting findings mentioned below. Drying up of water sources along with dying tradition and culture. It may be mentioned that *Mahadevthan, Sansari, Deorali, and Devithan* puja Sthals are generally water source areas where common ceremonies are

performed by the community in every villages in Sikkim. To maintain and uphold the sanctity, all such sacred places are kept away from pollutants and encroachments. Plantation is carried out with strict ban on entering, encroaching and cutting grass and tress on such *Sthals*.. However due to tourism activity and other development works penetrating into grassroots, such places are destroyed and people have discontinued to perform Puja in these *Sthals*. As a result, conservation process also has been stopped and hence signs of water source depletion is noticed everywhere. In Yangang, Pakyong, Temi, Tintek area there were many such sacred places in the past but very few remains today. Now a days ceremonies and pujas are performed for the sake of get together, eating and celebrating. In Assam Lingzey and Namthang, Namchi, similar trend is observed. (Field Survey, 2005)

The concept of *Smriti Van* has been introduced in Sikkim, where a notified area is devoted for planting of saplings in the memory of near and dear ones. In all the villages such places are seen but recently it is observed that picnics and parties are celebrated in such areas as a result *Smriti Van* may deplete in future.

Unplanned growth of urban area is characterised by construction of roads, lodges, hotel, cafeterias and problems of open defecation, littering and garbage disposal. The problem of traffic congestion, scarcity of drinking water, latrines, open space, and lack of gardens and children parks are noticed in all the places. The looming pollution around the towns are seen, atmospheric pollutions are experienced especially in tourist peak seasons.

Conversions of agricultural land into industries and hotels have caused massive ecological depletion in Gangtok and surrounding areas. Open sewage and drainage system in Gangtok has caused various hazards. Rainwater is not properly drained, as a result danger of landslides and cracks are found at 5th mile, near college valley. Two buildings were collapsed in Gangtok, hotel Dreamland was evacuated recently to save human life. The Chandmari area falls under sinking zone and there lies every danger of natural calamities. (Field survey, 2005)

The degree of slope is directly proportional to rate of erosion. Sikkim being a hilly tract, fragility is one of the most important characteristic features of its topography. It falls in the highly sensitive erosion prone belt of Eastern Himalayas. The steep slope and uncover vegetation cause physical damage to soil in three forms. Firstly by digging or cutting of earth during constructional activities, secondly by various tourist activities such as trekking, camping, mountaineering and thirdly by run off, landslides and avalanches. During rainy season, million tons of soils are washed away by river Tista.

Sikkim has gone all out for hydropower development along the river Tista and Rangit. Along the dam site, whole earth is being washed away by river Tista and Rangit. Further in Dikchu, Makha and Baluatar in East Sikkim total landscape has been altered by the construction of dams and power colony. The deep jungle has been transformed into a compact urban landscape like Mumbai. Every year, fertile soils are washed away by the rivers and streams draining into main river. The social environment has been prone to erosion due to many reasons and tourism is one of the reasons.

In general negative impact is greater than positive impacts in case of environment and culture, on the other hand positive impacts are found numerous while explaining economic impacts. At this stage it is pertinent on part of a researcher to identify the solution to negative impacts on the environment and culture. Hence attempt has been made in chapter six to identify and introduce principles of eco-tourism for sustainable development of tourism in Sikkim.