

**VALUATION OF TOURIST SITES IN
MEGHALAYA: A CASE STUDY OF
EAST KHASI HILLS**

By

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Submitted

**In Partial Fulfilment of the Requirement of the Degree of Doctor of
Philosophy in Economics**

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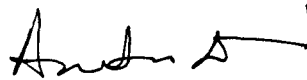


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I, Amrita Devi, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

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LIST OF ABBREVIATIONS

ASSOCHAM	The Associated Chambers of Commerce and Industry of India
BSE	Bombay Stock Exchange
CVM	Contingent Valuation Method
EFTEC	Economics for the Environment Consultancy Ltd., UK
ENTEC	Environmental and Engineering Consultancy, UK
ENVIS	Environmental Information System, Government of India
GDP	Gross Domestic Product
GOI	Government of India
IBEF	India Brand Equity Foundation
LTC	Leave Travel Concession
MOT, GoI	Ministry of Tourism, Government of India
NMV	Non Market Valuation
NSDP	Net State Domestic Product
OECD	Organisation for Economic Cooperation and Development
TCM	Travel Cost Method
TSA	Tourism Satellite Accounting
UN	United Nations
WTTC	World Travel and Tourism Council
UNWTO	United Nations World Tourism Organisation

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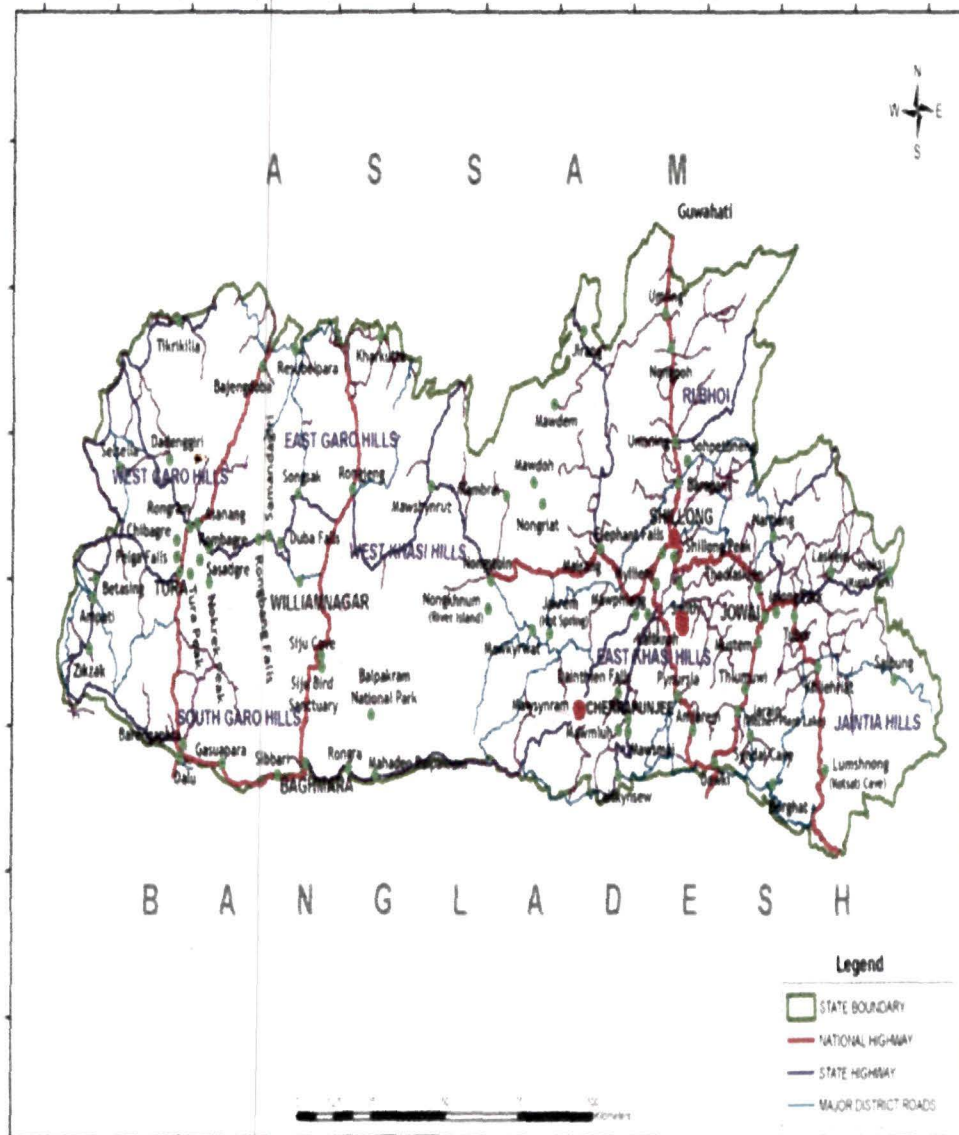
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Meghalaya and the Study Area



Chapter-1

Introduction

- 1.1 Background**
- 1.2 Classification of Tourism**
- 1.3 Tourism and Recreation**
- 1.4 History of Tourism**
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- 1.10 Chapterisation**

Chapter 1

Introduction

1.1 Background

The word 'tourism' did not appear in the English language until the early eighteenth century and till then, tourism was more connected with the idea of voyage than with individuals being temporarily away for pleasure. The word 'tourist' was coined in the later part of the nineteenth century where a person was defined as a tourist, who travelled for pleasure and out of curiosity, as he had nothing better to do. The Austrian economist Hermann Von Schullard (1910) as presented in Karma and Chand (2004, p.34), provided one of the earliest definitions of tourism as, "sum total of operators, mainly of an economic nature, which directly relate to the entry, stay and movement of foreigners inside and outside a certain country, city or a region". In 1937, the League of Nations came up with a definition of a tourist as any person visiting a country other than that he usually resides for a period of at least 24 hours and whose travel involves one of the following purposes:

1. Travel for pleasure and domestic reasons including health,
 2. Travel for attending any international marriage,
 3. Travel for business purposes and
 4. Travel in the course of cruise even though the stay may be less than 24 hours
- (Bhatia 2002, p. 86).

Theobald (1994) suggested that etymologically, the word "tour" is derived from the Latin word 'tornare' and the Greek 'tornos,' meaning 'a lathe or circle; the movement around a central point or axis.' This meaning changed in modern English to represent 'one's turn.' The suffix -ism is defined as 'an action or process; typical behaviour or quality' whereas the suffix -ist denotes one that performs a given action. When the word tour and the suffixes -ism and -ist are combined, they suggest the action of movement around a circle. One can argue that a circle represents a starting point, which ultimately returns back to its beginning. Therefore, like a circle, a tour

represents a journey that is a round trip, i.e., the act of leaving and then returning to the original starting point and therefore, one who takes such a journey can be called a tourist.

The concept of tourism as a service industry was first formulated in the period between the two World Wars. Hunziker and Krapf (1941) defined tourism as “the sum of the phenomena and relationships arising from the travel and stay of non-residents, in so far as they do not lead to permanent residence and are not connected with any earning activity” (Sharma, 2005, p.14). United Nations Conference on International Travel and Tourism 1963 in Rome drew a distinction between a tourist and a visitor and defined a visitor as a person whose stay is less than 24 hours. The XXI UN General Assembly designated 1967 as the International Tourism Year (UN Canada website, Years and Events) with a unanimous resolution recognizing the fact that tourism is the basic and most desirable human activity deserving the praise and encouragement of all people and all governments. In 1981, the International Association of Scientific Experts in Tourism defined Tourism in terms of certain activities selected by choice and undertaken outside the home environment. Tourism, therefore, implies travelling for predominantly recreational or leisure purposes and also refers to the provision of services in support of this act. The World Tourism Organization defines tourists as people who, “travel to and stay in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.” However, tourism and travel are often used interchangeably, although travel implies a more purposeful journey.

As a service industry, tourism has numerous tangible and intangible elements. Major tangible elements include transportation, accommodation and other components of the hospitality industry. The major intangible elements relate to the purpose or motivation for becoming a tourist such as rest, relaxation and the opportunity to meet new people and experience other cultures or simply the urge to do something different from the daily humdrum of life and have an adventure. The availability of disposable income, availability of leisure time, reasonable health and inclination to travel are some of the basic important factors which determine an individual’s travel plans. In addition to these, tourism infrastructure of an area, such as the transport and accommodation facilities also significantly affects the decisions of individuals to visit that particular area. Again certain laws and regulations of some

countries in the form of restrictions on travelling, especially abroad sometimes constrain development of tourism. For instance, the United States prohibits its citizens from travelling to Cuba.

1.2 Classification of Tourism

The United Nations in its recommendations on Tourism Statistics in 1994 classified three forms of tourism which are as follows:

1. **Domestic tourism**- involving residents of a given country travelling only within the same country;
2. **Inbound tourism**- involving non-residents travelling in a given country;
3. **Outbound tourism**- involving residents travelling in another country.

Combining these three basic forms of tourism, the UN also defined different categories of tourism as:

1. **Internal tourism**, which comprises domestic tourism and inbound tourism,
2. **National tourism**, which comprises domestic tourism and outbound tourism,
3. **International tourism**, which consists of inbound tourism and outbound tourism.

Another most recent definition of tourism coined by the Korea Tourism Organization is that of **intra-bound tourism**. This type of tourism differs from domestic tourism as it encompasses policy-making and implementation of national tourism policies. The promotion of intra-bound tourism also contributes to the growth of local economy as it lays special emphasis on the promotion of specific regions. Examples of such campaigns include “See America” in the United States, “Get Going Canada” in Canada, and “Guseok Guseok” (corner to corner) in South Korea.

1.3 Tourism and Recreation

There is often a very vague divide or no divide at all, between recreational activities and tourism. According to the definition used by the World Tourism Organization (1997), a day trip to engage in outdoor recreation, for instance, a visit to the national park during the day does not constitute tourism, whereas if the travellers stayed overnight, it would. However, some authors like Tisdell (2000) give little significance to such distinctions, since recreation is an integral part of tourism. The World Tourism Organization defines a tourist as a traveller visiting a destination for at least 24 hours, but less than a year, for the purpose of recreation, holiday, sports,

business meetings, conventions, study, visiting friends and relatives as well as religious activities. Tourism is also regarded as a commercial economic phenomenon rooted in the private domain whereas recreation is viewed as a social resource rooted in the public domain. Outdoor recreation studies have focused on the public sector (community and land management agencies), concerns such as wilderness management, social carrying capacity and non-marketed valuation of recreation experiences. In contrast, tourism tends to have a more 'applied orientation' which concentrates on traditional private sectors (tourism industry) and concerns such as the economic aspects of travel expenditures, travel patterns and tourist demands, advertising and marketing.

Therefore, the distinction between tourism and recreation may be regarded as one of 'degrees of involvement' in leisure activities. Tourism, primarily relates to leisure and business travel activities, which centre on visits made by visitors to a particular destination and consequently involve an infusion of new money from the visitors into the regional economy. Thus, tourism is viewed as a primary industry, which, through visitors' spending, increases job opportunities and tax revenues and enhances the community's overall economic base. However, recreation generally refers to leisure activities which are undertaken by the residents of the immediate region, and their spending pattern involves a recycling pattern of money within the community associated with day, overnight and extended day-stay recreation trip.

However, it is undeniable that there is not a very great divergence between the two terms in theory, activities engaged, impacts and particularly, as recreation is becoming increasingly commercialized and the boundaries between public and private responsibilities in recreation and leisure have substantially changed. Rafferty (1993) opined, "Recreation may be defined as refreshment of the strength and spirit after toils during leisure time. It is the activity for inherent enjoyment and not for what it may do for us later". The relationship between tourism, leisure and recreation is thus complementary.

As far as the present work is concerned, these distinctions will not be retained and local visitors from the vicinity of the selected sites, who do not stay overnight, are also considered as 'day visitors' with purely recreational motives. In order to avoid improper estimation of their recreational values, only the local expenses incurred by them are considered in the estimation of demand function as well as willingness to pay or recreation benefit.

1.4 History of Tourism

The notion of tourism might have originated with the concept of medieval 'pilgrimage'. Although the pilgrimages were undertaken primarily for religious reasons, the pilgrims quite clearly identified the experience as a kind of holiday. The term 'holiday', itself is derives from 'holy day' and its associated leisure activities (*Tourism, Wikipedia*). Pilgrimages are important in modern tourism even today as evident from the visits to Lourdes or Knock in Ireland and the Kumbh Mela (Pitcher Festival) held in India after every four years. In recent years, modern equivalents of pilgrimages, such as visits to the grave of Jim Morrison in Pere Lachaise Cemetery, USA, have become very common.

'Health tourism', although in existence from days of yore, gained prominence only in the eighteenth century. In England, it became associated with spas, places with supposedly health-giving mineral waters, treating diseases from gout to liver disorders. Bath was the most fashionable resort, but Buxton, Harrogate and Turnbridge Wells also flourished. In fact, Great Britain gradually emerged as the home of the 'seaside holiday' attracting the royals and the laymen alike (*Tourism, Wikipedia*). This trend has spread to different parts of the world and India is now considered as a major 'medical tourism' destination, owing to the availability of quality medical service at comparatively cheap rates. According to a report by RNCOS, the number of medical tourists is anticipated to grow at a compound annual growth rate of over 19 per cent from 2009 to reach 1.1 million by 2012. This report adds that India's share in the global medical tourism industry will climb to around 2.4 per cent by the end of 2012 (IBEF, Website). The more health conscious Indians also travel to different places within the country such as sea beaches for the improvement of health. Again, when people from areas which do not have proper medical facilities, such as North-East India visit the 'medical hub' in the southern states for treatment, they also visit places of interest in the neighbourhood of the treatment site. Therefore, many a people earn from their formal or informal businesses due to the inflow of medical tourists in those areas (Datta and Kundu, 2009).

Another significant development during eighteenth century was the emergence of the concept of 'Leisure travel' which was primarily associated with the industrialization of United Kingdom, which became the first European country to promote 'leisure time' to its increasing industrial population. Initially, this applied to the owners of the machinery of production, the economic oligarchy, factory owners

and the traders who comprised the 'new middle class' of that time in the society. That period also saw the establishment of Cox & Kings in 1758 as the first official travel company. Over time, the concept of leisure time was also extended to the 'working class' and the concept of need-based 'package' tourism began to develop as we now see almost everywhere in the world.

The rapid industrialisation of the United Kingdom also led to the invention of 'Winter sports' for the British leisured class looking for amusement during the coldest season. The first such event was held in 1864 in the Swiss villages of Zermatt and St. Moritz. The first packaged winter sports holidays were held in 1902 at Adelboden, Switzerland. In recent past, the Fun Ski & Snow Festival, which has been organized annually by Korea Tourism Organization since 1998 that has been witnessing participation of about 10,000 tourists from Asia, is one of the most successful winter tourism products in Asia (*Tourism*, Wikipedia).

Although records of wealthy people travelling to distant parts of the world to experience new cultures and discover hidden facts can be found even in the Middle Ages, yet 'mass travel' could only develop with the emergence of two crucial features:

1. Improvements in technology which allowed the transport of large numbers of people in a short span of time to places of leisure and interest, and
2. Higher levels of disposable income and increased leisure time for a sizeable portion of the population, owing to rapid industrialisation in the Western nations.

The pioneer of modern mass tourism was Thomas Cook who, on July 5, 1841 organized the first package tour in history. He arranged for the rail company to charge one shilling per person for a group of 570 temperance campaigners from Leicester to a rally in Loughborough, UK. Recognizing the potential of tourism, he started organizing package tours, a convenient "off the peg" holiday product in which everything was included in one cost and inclusive of accommodation throughout Britain and the European continent. This appealed mostly to the 'working class', who were until then unable to opt for long expensive tours. Looking at the potential, other tour operators also started offering similar packages, leading to the rapid development of the tourism industry in Victorian Britain. The growth of railways in this age also resulted in the growth of seaside towns and the railway companies themselves promoted some of these resorts. All these developments facilitated the growth of

tourism in general and health tourism, in particular, supported primarily by the growing middle class of then Britain.

However, for over a century, domestic tourism was the norm, with foreign travel being reserved for the rich culturally curious or more adventurous individuals. The development of sea travel led to shipping companies offering cruises for summer months, which became an immediate 'fad' for the affluent British citizens. The real age of international mass travel, however, began with the growth of air travel after the Second World War (*Tourism, Wikipedia*).

The development of international mass tourism began with the combination of cheap air travel and package tour along with a significant improvement in the standard of living of individuals across the Western world. The fall of colonisation by Britain, France and Portugal in the mid-twentieth century in different parts of the developing world, also opened up unexplored tourist destinations. Despite the allure of mass package tourism, it has at times been an exploitative process, by which tour operators in a country with a high standard of living make use of development opportunities and low operating costs in countries with lower standard of living. However the development of many tourist areas in previously poor parts of the world has also resulted in the rise in standards of living and it has been observed that when there is equality of bargaining power, both parties can gain economic benefits from such arrangements (*ibid.*). In India also we observed rapid expansion of movement of tourists in recent years due to the drastic reduction in airfare, expanding network of the tour operators and incentives provided by the government as a part of tourism promotion, especially to those visiting North-Eastern part of the country.

1.5 Recent Developments

In recent years, a discernible upward trend in tourism has been observed as tourists with increasingly higher levels of disposable income and greater leisure time are developing a taste for 'niche' tourist products. They are also better educated and have more sophisticated tastes and desire different forms of tourism such as Adventure Tourism, Agri Tourism, Bookstore tourism, Cultural Tourism, Ecotourism, Garden Tourism, Heritage Tourism, Medical Tourism, and Space Tourism, which are broadly referred to as 'niche tourism'. This increasing demand for better quality and diversified products has resulted in the following trends:

‣ The old ‘sun, sea and sand’ mass market has fragmented, as people desire more specialized versions of it, such as ‘Club 18–30’, quieter resorts with select hotels, self-catering, etc.

‣ People are taking second holidays in the form of short breaks in different cities and rural areas as their discretionary income increases.

‣ There has been a growth in niche markets catering for special interests and activities, including growth of ‘destination hotels’.

The tremendous developments in technology and transport infrastructure have also led to the development of new types of affordable ‘holiday markets’. The recent trends can be listed as:

‣ The development of mass cruise holiday markets.

‣ The advent of affordable holidays to long haul destinations such as Thailand and Kenya for Ecotourism and Adventure Tourism,

‣ The phenomenon of the low budget airlines which utilize small regional airports, also helped to open up tourism in hitherto unexplored small towns and villages (*Tourism, Wikipedia*).

Changes in lifestyle, has made it necessary to redefine the concept of tourism. In many cities, a great majority of the people have been adopting a tourism lifestyle, living as tourists all the year round – eating out several times a week, visiting theatres, shopping and indulging in short breaks several times a year. This is often facilitated by internet purchasing of tourism products. Some of these sites have now started to offer dynamic packaging, in which an inclusive price is quoted for a tailor-made package requested by the customer.

However, there have been a few major setbacks in tourism, such as the terrorist threats to tourist destinations as happened in recent in Bali, Indonesia; Mumbai, India and some other European cities. Some of the tourist destinations like Costa del Sol and Cancun have lost popularity due to shifting tastes. The tsunami caused by the earthquake in the Indian Ocean on December 26, 2004 hit Asian countries bordering the Indian Ocean and also the Maldives and thousands of people including many tourists died. This together with the vast clean-up operations severely hampered tourism in the area. Excessive environmental degradation and rampant concretization also led to the decline of tourism in certain areas like Costa Brava in

Spain where a mere 11 per cent of the land remain unblemished by low quality development (*ibid.*).

A positive impact of all these unfortunate events has been the wide promotion of the concept of 'Sustainable Tourism'. In the recent decades, more people have become aware of the devastating effects tourism can have on communities and the development of 'Ecotourism or Green tourism' has become linked to the concept of sustainability without degrading or depleting the resources, of a region. The UN thus recognized the year 2002 as the International Year of Ecotourism and it is now well-recognised in many developing countries.

The United Nations World Tourism Organization (UNWTO) forecasts that international tourism will continue to grow at annual average rate of 4 per cent, by 2020 and Europe will remain the most popular destination though its share will drop considerably. Space Tourism is also expected to 'take off' in near future despite huge expenditure involved in it.

1.6 Statement of the Problem

The tourism industry is one of the fastest growing industries in the world and has become one of the largest global economic activities. It has become a major source of foreign exchange earning, employment and a very important contributor to the government revenue for both developed and developing countries alike. In 2000, this industry contributed over US \$110 billion to global revenue and this number has been increasing exponentially ever since. The estimated direct and indirect employment generated by this service industry was 5.3 million and 8.5 million, recording a total of 13.8 million people in 2001. This industry also provides an opportunity to display the skills of local people in handloom and handicrafts through fairs and festivals (Gupta, 2007). India has also taken rapid strides in this industry. From a modest 17,000- foreign tourist arrival and Rs. 7.7 crores foreign exchange earnings in 1951, the industry has progressed to earn Rs. 5073 crores foreign exchange in 2008 with a tourist inflow of over 39 lakhs (Indiastat.com). In terms of World Tourism Receipts India's rank improved from 34th in 1998 to 20th in 2007. The average Indian foreign exchange earning per tourist in 2005 was \$1462 which was only second to that of USA that stood at \$1698.

The Central Government has also given special emphasis to boost this sector and in 2007-2008 had sanctioned nearly Rs.146 crores for 86 projects involved in the

creation of better tourism infrastructure. In the 2006-07 annual budget also, it had allocated about Rs.350 crores for the creation of better tourism facilities. For many developing countries, tourism has become one of the major contributors to social and economic development, whereas for many others, tourism is the prime source of foreign exchange revenue. However, the benefits of tourism may be outweighed by the damages done to local environment, and the repatriation of profits by the foreign investors. Therefore, maintenance of tourism resources has become an important issue in the context of development of tourism activities for its sustainable progress.

The nature of tourism economics has parallels with ecological and environmental economics and with economics of development. The tourism industry relies heavily on commodities, which are not marketed and therefore have the characteristics of public goods or collective goods. This industry also depends on commodities which are only partially marketed and therefore involve externalities. So its relationship to the environment (natural, social and man-made) is both of dependence and of impact. In nearly all cases, tourism modifies the environment and the modifications can be viewed as favourable or destructive depending on an individual's point of view. Furthermore, depending upon circumstances, tourism developments may be either a force favouring the conservation of the extant environment or one hastening their destruction and deterioration. This dichotomous characteristic of tourism calls for considerable evaluation of results obtained from the economic analysis of tourism development as well as for a high degree of accuracy in evaluating policies for tourism development.

The development and sustainability of tourism depends largely on environmental conservation and preservation. However, man-made and modified natural environment may also be valued for tourism and recreational activities. In addition, it must be also recognised that the terrain of certain environment may require modification for human accessibility. Nevertheless, considerable surveys and discussions are a must before deciding to forego an extant environment, especially if the environmental changes to be affected are irreversible.

That tourism and recreational activities however have certain negative impacts on the environment of a place, the socio-cultural life and even the economic aspects of that place cannot be denied. For instance, valuable flora and fauna may be lost, delicate habitats permanently altered, dumping of non-biodegradable wastes by holiday-makers, over-utilisation of natural resources due to greater inflow of tourists,

contamination of air and water bodies, and the like can greatly alter the quality of the environment of a place. Again, it has been noted that, the existence of large scale tourist activities is highly correlated to changes (sometimes adverse) in socio-cultural aspects of the region concerned.

Tourism has been a very important source of revenue and employment in Meghalaya. This state is endowed with diverse scenic natural beauty that attracts a large number of domestic and foreign tourists every year. Moreover, the state as well as the central tourism departments, having foreseen the recreational and tourism potential of the state had envisaged special packages to boost this industry as evident from the draft 'Meghalaya Tourism Policy, 2001'.

	Domestic			Foreign		
	1996	2003	2007	1996	2003	2007
Meghalaya	136183 (28.21)	371953 (12.79)	457685 (9.68)	1573 (50.31)	6304 (53.25)	5099 (11.84)
N-E India	482747	2921811	4726218	3126	11838	43058

Note: figures in the parentheses represent percentage of North-East India as a whole.

The total number of domestic tourists who visited different tourist sites of Meghalaya has increased significantly from 136183 to 457685 during 1996 to 2007 while that of foreign tourist increased from 1573 to 5099. However, its share to the total number of tourists visiting North-East India as a whole has declined over the years from 28.21 to 9.68 per cent in case of domestic tourists and from 50.31 to 11.84 per cent for foreign tourists during the same period. This may be attributed to the fact that in the early years, Meghalaya was the preferred destination of most of the tourists visiting North-Eastern India. However, over the years, other North-Eastern states are also emerging as unexplored tourist destinations and hence the rate of growth with lower bases in these states is much higher than the growth rate exhibited by the state of Meghalaya.

The state of Meghalaya has a higher potential of attracting domestic and foreign tourists because of the following reasons:

- Better transport and communication network compared to some other North-Eastern states,
- The absence of Inner Line Permit which is required for visiting a few other North-Eastern states,
- Limited socio-cultural disturbances in the state.

➤ The presence of a greater number of hotels and tourist resorts in the state as compared to the other North-Eastern states.

➤ The pleasant climate of the state which positively affects the health of the visitors.

Although, tourism is one of the most important economic activities in the state of Meghalaya, yet no study has been done for the valuation of these resources that caters to the recreation requirement of a large number of people every year. Valuation is essential for the proper pricing that will help a balanced and sustainable utilisation of such resources. In most cases, due to the under-pricing of tourism resources and their non-rival nature, they tend to degrade at a much faster rate, which is also compounded by the lack of monitoring of the resource usage. Thus, there is a need of proper valuation of the social and economic benefits that arise from these tourist sites that would help policy formulation for proper utilisation of tourist resources. In this study, therefore, an attempt is made to estimate the recreation value of three tourist sites in Meghalaya along with the tourists' willingness to pay for improvements in these sites. Here, it may be noted that this study is neither the valuation of the material resources used, nor the market price of the resources or existence value rather it is the estimation of the recreation value enjoyed by the tourists by visiting the sites which is not directly marketed.

1.7 Objectives of the Study

Though the primary objective of this study is the valuation of three tourist sites in Meghalaya, the specific objectives of this study are:

1. To examine the contribution of tourism to employment and income in the areas around the chosen sites.
2. To analyse the effect of different socio-economic and geographical factors (income, distance, cost, age, marital status, education etc) on the frequency of visits to these three chosen sites.
3. To estimate the recreation benefit obtained by the tourists from the three chosen sites, and
4. To estimate the willingness to pay for the improvement of the tourist resources in the sites and management for the better amenities that may be provided to the visiting tourists in these sites.

1.8 Hypotheses

The following hypotheses have been tested in the study:

1. The distance of the tourist sites from the area of 'origin' of the tourists is inversely related to the frequency of visits to the site.
2. The level of income of the tourists has significant positive impact on their frequency of their visits.
3. The Total Travel Cost incurred by the tourists is inversely related to their frequency of their visits.
4. Willingness to pay of the tourists for the maintenance and improvement of the amenities in the tourist site is positively associated with the level of income of the individual tourists.

1.9 Areas of the Study

The North-Eastern region of India especially Meghalaya (the abode of cloud) is endowed with verdant forests, silvery waterfalls and swift mountain rivers. So the tourism potential of the region and Meghalaya in particular is huge. The present case study in Meghalaya is concentrated on three sites, the Lady Hydari Park one of the most popular recreation site in the city of Shillong; the Shilong Peak, the highest peak from where a clear picturesque view of the city is available and which is about 25 kilometres away from the city and the Nohkalikai Falls in Cherrapunjee, which is about 55 kilometres away from the city and is the wettest place on the earth and thus the most popular site among the visitors of Cherrapunjee area. Thus, these three tourist sites are chosen depending on the uniqueness, popularity and distance from the capital city Shillong. Most of the visitors to this last site were from outside the state and they were visiting the Nohkalikai Falls along with some other spots (Mawsmi cave, Ramakrishna Mission, Thangkarang Park, Seven Sister Falls etc) in the vicinity with the same travel expenditure, with the exception of separate entry charges for the different sites. So the valuation of that site in effect represents the recreation value of all the other sites grouped together. Although many of the visitors to the Lady Hydari Park also visit some other spots in the city for them only the local travel cost will be considered for the park and hence the demand and recreation surplus will be

representative of the park only. The features and recreation products available in the three chosen sites are described below.

1.9.1 Lady Hydari Park

The Lady Hydari Park owes its existence to Lady Hydari, the wife of a former Governor of the erstwhile state of Assam. It extends over a kilometre in length and is replete with varieties of flowers and orchids of exquisite hue and colour. The park also hosts a mini-zoo cum deer-park in its premises and thus it is a major source of attraction for children of all ages. The park is frequented by domestic and foreign tourists along with the local visitors throughout the year. However, over the years, the quality of the recreational facilities in the Park has deteriorated significantly. Regular visitors to the Park complain (also expressed by the surveyed respondents) about the nonchalance of the Park authorities towards the animals and birds in the mini-zoo, the unkempt flower gardens and the unclean restrooms. As such, a proper valuation of the Park may help estimation of the demand for this site and the estimate of the recreational benefits obtained by the visitors to the Park will underline the importance of maintaining the resources of the Park and provide guidelines for policy formulation.

1.9.2 Shillong Peak

The pristine Khasi Hills in Meghalaya are well-guarded by the Shillong Peak along with the Diengiei Peak or Lum-Diengiei to its north-west and Sohpetbneng Peak or Lum-Sohpetbneng to its north-east, which stands in a tripod formation. The Shillong Peak towers over the southern limits of the city at a height of 6445 feet above sea-level. It is venerated as the abode of the Khasi deity-U Blei Shillong, the creator and protector of the Khasi Hills and its denizens.

The Shillong Peak is a favourite getaway of the city's population, since it offers pristine natural environment at a distance of approximately 25 kilometres from the heart of the city. It also attracts a large number of domestic and foreign tourists as it is the highest peak of these hills. The Laitkor Peak, which is situated very close to the Shillong Peak offers a breath taking view of the entire city including the adjoining Shillong Cantonment area, Happy Valley and Assam Regimental Centre from the Shillong view point. As darkness descends on the city, the myriad city lights transform it into a veritable fairyland for viewers in the Laitkor Peak.

In the recent past, however, this area has witnessed rapid deforestation and crowding (in certain pockets) that may in future affect the inflow of tourists in the area, which is otherwise an important source of employment and income for the inhabitants, who have been associated with tourism related activities of the Peak area. Thus a proper valuation of this site is imperative for sustainability and viability of this site as a popular tourist destination.

1.9.3 Nohkalikai Falls, Cherrapunjee

The Nohkalikai Falls, situated a few kilometres to the west of Cherrapunjee (locally known as Sohra) is a clear bubbling stream emerging from a steep mountain bed to hurl down a rocky precipice, into a deep gorge thereby creating an awesome spectacle of natural beauty. This cascading waterfall is considered to be one of the highest and most beautiful waterfalls in India.

According to popular legend, in ancient times, a young lady named Ka Likai who had a daughter from an earlier marriage had married for a second time but her new husband loathed her daughter. One day when Ka Likai returned home from the fields, she was surprised to find that her husband had already prepared the evening meal. After consuming the meal, she discovered the remains of her daughter's body in the curry pot and realized that her husband had just fed her daughter's flesh. Distraught with grief and remorse she rushed to the nearby cliff and jumped over the precipice adjoining the waterfall. The fall has ever since been known as Noh Kalikai which means the leap of Ka Likai.

Over the years, the Noh Kalikai waterfall has gained much popularity and almost all the tourists coming to this part of India make it a point to visit this splendid waterfall. The ever-increasing tourist inflow here provides a lot of scope for employment for the local youth in hotels, guest houses, restaurants and in the manufacture of bamboo artefacts that are much in demand from the visitors. In order to facilitate comfortable transportation, roads leading to the waterfall have been widened in the recent past. However, all these improvements have resulted in the alteration of the original pristine environmental conditions and this continuous process raises apprehension of its adverse affect on the natural environment of the area. Proper evaluation of the site would therefore provide some important guidelines for the preservation and sustainable utilisation of the site.



1.10 Chapterisation

The study has been completed in seven chapters. The first three chapters include a background of the study, review of earlier studies conducted in the field and methodology of the present study respectively. Analysis of the effects of tourism on the growth of income and employment opportunities in and around tourist sites has been presented in chapter-4. The socio-economic characteristics of the surveyed tourists in the three selected sites have been described in detail in chapter-5. Thereafter, in chapter-6 analyses of the impacts of relevant socio-economic factors on the frequency of visit and tourist inflow into the chosen sites have been presented. The chapter has also been devoted to the estimation of visit demand function and consumer surpluses or the recreation benefit obtained by the tourists or visitors and their willingness to pay for the management and improvement of the concerned sites. Finally, the summary of observations of the study and the policy implications drawn from the study has been outlined in chapter-7.

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Chapter-2

Review of Literature

- 2.1 Introduction**
- 2.2 Natural/Semi Natural Land Valuation Studies**
- 2.3 Valuation Studies using the Contingent Valuation Method**
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Chapter-2

Review of Literature

2.1 Introduction

The scope of the subject of tourism and recreation is very vast and open to interdisciplinary studies. Recreation as an economic phenomenon has a high correlation and linkage with the economic environment of a place, as the levels of income; level of price of related good/s and other economic factors influence it. A plethora of quality literature exists in the field of tourism, recreation and their evaluation.

'The Travel Trade' authored by Likorish and Kershaw in 1958 was the first important work in the field of tourism. Burkart and Medlik (1981) in their book '*Tourism— Past, Present and Future*' (2nd edⁿ), tried to provide concepts, anatomy and significance of tourism and they clearly depicted the involvement of major industries such as passenger transportation, accommodations and hospitality, tour operations and travel agencies in the promotion of tourism marketing, planning and development of tourism policies. The differences between tourism and recreation, demand and supply of recreational activities, their impact on physical environment and other related aspects were also discussed by other tourism and recreational geographers like Hall (1991), and Rafferty (1996).

In the field of recreational economics, Neil Mansfield (1971) in his pioneering work, presented the report of a survey conducted on the recreation traffic for the Lake District in the UK during 1966 and established a relationship between the number of trips from the given zone of origin to the Lake, on the one hand, and the zonal population, car ownership rates and cost of reaching the Lake, on the other hand.

Another enterprising book, which explicitly described the contemporary relationship between tourism, recreation and eco-tourism was, *Tourism Economics, the Environment and Development* edited by Tisdell (1999). In this book the mutual relationship among tourism, development and the environment along with the underlined theory of public finance in tourism, externalities that exist in tourism,

ecotourism and investment in tourism and sustainability of tourism have been extensively discussed. The important issues of international and domestic economic gains from tourism, conservation and awareness through tourism as well as the demand and supply of recreation sites and their evaluation also found a place in the book. Tisdell also addressed the problem of economic evaluation of a recreational site, and presented a number of case studies on reservoir and marine ecosystems. The contributions of tourism and ecotourism in the Chinese Republic, Australia and the Islands of Maldives were thoroughly described in this book.

Since environmental goods and services are not traded in the usual markets, the benefits derived from these commodities are external to the market. Even when some expenditure is incurred for the consumption of these goods, for instance, the travel expenditure involved in reaching a tourist site, it is difficult to have proper pricing for the good (in this case the visit to the site), since the visit to the site is not traded directly in the market. A significant number of environmental goods are public goods and do not involve any 'out-of-pocket expenses' for their consumption. Consequently, these goods are increasingly exploited beyond their 'carrying capacity' and are invariably associated with the 'free rider's problem'.

Until very recently environmental problems were considered to be local and easily regulated by command and control (CAC) instruments (Garrod and Willis, 1999). But owing to the ever-increasing proliferation of science and information technology, environmental goods have not only become more accessible for a larger group of people, they are also being exploited at a much faster pace. In such a scenario, non-market valuation (NMV) of environmental goods and services are undertaken to ascertain the individual's preferences for the various non-marketable environmental goods. NMV is the process of placing a monetary value on goods and services that do not have out-of-pocket costs or are directly sold in the market (Bateman, et al. 2002). The estimated values from NMV studies yields a monetary value of individual preferences for such goods and are used in cost-benefit analyses to calculate the value of changes in environmental quality (Boardman, et al. 2006; Bockstael and Freeman 2005). This enables policy makers to estimate the environmental impact of human actions by valuing qualitative and quantitative changes in environmental assets brought about by uncontrolled economic activity. It thus facilitates the inclusion of environmental costs and benefits in the same political dialogue as conventional costs and benefits. Over the years, NMV has been used in

both developed and less developed countries to calculate *more realistic* estimates of the values of environmental goods and services (Smith 1993, Navrud and Pruckner 1997, Kahn 2005).

In the United States, in mid-nineteenth and early twentieth century, non-economists such as Henry David Thoreau (1854) and John Muir (1901; 1912) sowed the seeds of non-market valuation studies, when they began discussing the non market values of environmental goods (i.e. wilderness). In 1915, an economist named Clark argued that these values relating to the environment and environmental quality should be taken into account, even though they are not captured in ordinary market transactions. He suggested that if these values were estimated, they could be used in economic analysis to capture a more “true” value estimate of a good or service (Clark 1915a, 1915b; Carson and Hanemann 2005).

Over the last five decades, NMV methods have been used as tools for environmental policy decision making, particularly for project evaluation, environmental impact assessments, regulatory reviews and environmental accounting (Carson, et al. 1994; Navrud and Pruckner 1997; Freeman 2003; Adamowicz 2004; Kahn 2005). However, more efficient methods of environmental regulation are being developed in the recent years, primarily owing to evolving technology and a greater willingness amongst customers to experiment with more integrative and comprehensive control mechanisms. The most important of such systems has been the evolution of market-based approaches for environmental regulation, partly as a consequence of a shift from socialism to market philosophy and also because new technology has facilitated the adoption and implementation of market mechanism (Garrod and Willis, 1999).

There exist several environmental valuation techniques that enable elicitation of the preferences of individuals for non-market goods and services. These techniques can be grouped under three broad categories:

- 1) **Revealed Preference or Indirect Approaches** which include Hedonic Markets and Travel Cost Methods,
- 2) **The Stated Preference Approaches** which include the Contingent Valuation and Choice Experiments Techniques,
- 3) **Benefit Transfer Method**

The Revealed Preference Techniques determine preferences for a given environmental good by observing the behaviour of individuals in markets that are related to that good. For example, the hedonic pricing method is most commonly applied in relation to the housing market, where property prices are determined not only by the physical characteristics of the property but also by a variety of environmental attributes in the neighbourhood area. The travel cost method is used to value primarily the recreational use of woodlands, wetlands, national parks and similar sites. In the latter case, the expenses incurred in travelling to a particular site are used as a proxy for the value (or price) of visiting the site.

The Stated Preference Methods measure individual preferences through 'hypothetical' or 'simulated' markets. The contingent valuation and the choice modelling methods use questionnaire based surveys, whereas the contingent ranking method requires individuals to rank a number of related alternative environmental goods in order of their preferences. For instance, the impact of human action on the environmental conditions of an area can be measured by using either of the two approaches: Willingness to Accept (WTA) or Willingness to Pay (WTP) and the Benefits Transfer Approach. The use of the WTA or WTP measures yields results in monetary terms, for instance, if human actions positively affect the quality of an environmental good, the improvements in welfare can be measured either by a WTP for the gain or the WTA a certain amount of money to forego the gain. In the same way, in the context of deterioration in the quality of an environmental good, the reduction in welfare can be measured either by the WTP to prevent the loss or the WTA for enduring the loss of welfare. This implies that, in a market situation, only the individuals with a WTP higher than or at least equal to the market price will purchase the environmental good in question. The excess of the WTP over the market price is known as the Consumer Surplus and indicates the net benefit that a consumer receives from the consumption of a particular commodity. In the context of an ordinary market good, the WTP comprises total consumer surplus (over all units of consumption) and total price paid (total expenditure). But in the case of non-marketable and hence non-priced environmental goods, that can be obtained freely; the WTP is wholly comprised of consumer surplus.

The Benefits Transfer Approach involves applying monetary estimates provided by existing studies to a new context of a study for which a monetary

valuation is required. As such, valuation results may be ‘transferred’ from one location to another location or from one point in time to another or both.

While most NMV studies focus on using only one methodology, some economists attempt to value environmental commodities using a combination of NMV methods in the same study, i.e., CVM and TCM (Grandstaff and Dixon 1986; Adamowicz, et al. 1988; Kling 1997). Other studies by Boxall, et al. (1996), Scarpa and Willis (2006), Mogas, et al. (2006), attempted to estimate the efficiencies of the various methods by comparing the results obtained by using different methods of valuation.

2.2 Natural/Semi Natural Land Valuation Studies

Economists have conducted valuation studies for a wide variety of natural and semi-natural environmental resources. There are studies that have been used to value land types such as wet-lands, heath-lands, and dales and also designations such as National Parks and Sites of Special Scientific Interest (also known as SSSIs in the UK) which include areas earmarked for conservation owing to their specific natural, geological or physiographical features. Such lands are mostly situated in the urban fringes and although not used for housing needs, yield numerous benefits in their undeveloped state. The non-market benefits of these urban fringes in both generic and specific terms, as outlined by EFTEC (Economics for the Environment Consultancy Limited, UK) and ENTEC (Environmental and Engineering Consultancy, UK) (2002), have been listed in Table-2.1.

2.3 Valuation Studies using the Contingent Valuation Method

In 1947, a German economist named Ciriacy-Wantrup asserted that there were non-monetary benefits that may be reaped from and costs involved in the establishment of soil conservation measures which were yet to be valued. He termed these “extra-market” values and believed that data for these values could be calculated. This served as the foundation of the non-market valuation technique known today as Contingent Valuation Method (CVM).

Contingent valuation is a method of estimating the non-market value of environmental attributes or amenities such as values of a forest, endangered species or recreational or scenic resources and the like. These values are generally measured on the basis of individual’s willingness to pay for improvement of the environment or the

willingness to accept compensation for damaged environment or to accept a condition of being deprived of the improved environment. The most appealing aspect of the contingent valuation method is that it asks respondents to directly state their values, rather than inferring values from actual choices made by the individuals, as is done in case of the 'revealed preference' methods. It is for this reason that the CVM is known as a 'stated preference' technique in contrast to other 'price based' revealed preference methods. This method allows us to estimate total value rather than components of that total value (Frykblom, 1997) and is therefore one of the most commonly used methods of environmental valuation.

Every CVM study can be divided into five stages:

1. Setting up of the hypothetical market,
2. Obtaining the bid,
3. Estimating average WTP/WTA,
4. Estimating the bid curve,
5. Aggregating data to estimate society's WTP/WTA (Bannerjee, 2001).

The first step involves defining the valuation objective, which includes determining exactly what services are to be valued, and the relevant population to be interviewed. The second step involves making preliminary decisions about the survey itself, including the method in which it will be conducted - by mail, phone or in person, the sample size and other related questions. The answers depend, among other things, on the importance of the valuation issue, the complexity of the questions being asked and the size of the budget of the interviewer.

Personal interviews are generally considered to be the most effective for complex questions, because it is often easier to explain the required background information to respondents in person and people are more likely to complete a long survey when they are interviewed in person. In some cases, visual aids such as videos or colour photographs can help respondents understand the conditions of the scenario that they are being asked to value. However, personal interviews are generally the most time consuming type of survey.

Mail and telephonic surveys are also occasionally used in CVM studies, but these methods are not only expensive but are also required to be kept short, otherwise response rates have been reported to drop dramatically (*ibid.*).

Table-2.1: Non – Market Benefits of Natural / Semi – Natural Land		
Generic Benefit	Specific Benefit	Description
Ecology	Biodiversity	Richness and variety of species
	Habitat	Characteristics of a site where a particular plant or animal lives
Hydrology	Rainfall interception	Function of site to absorb rainfall and run-off
	Flood defence	Natural flood defence function in the form of a flood plain
	Water quality	Protection of quality of water (e.g. underlying aquifer)
Air Quality & Climate	Filtration by vegetation	Particulate interception/removal
	Micro climate	Control of local micro-climate (e.g. temperature control)
	Carbon sink	Carbon storage in tree stock and control of release
Soil	Soil and mineral resources	Protection of soil and mineral resources
Landscape	Landscape character	Fabric, character and quality of the landscape
	Visual amenity	Views of the landscape available to the public
Tranquillity	Noise	Protection from noise sources (e.g. a buffer function)
	Light	Protection from light sources
	Visual	Site specific visual benefits (small scale)
Accessibility	Network value	Network value of existing cycle/footpath network or green commuting routes
Recreation	Sport	Formal sports use (e.g. grass pitches)
	Leisure and recreation	Informal recreational activities (e.g. dog walking), tourist attractions.
Cultural Heritage	Archaeology	Material remains of past civilisations, including Scheduled Ancient Monuments Cultural Heritage
	Built environment context	Settings for listed buildings, historic landscapes, formal parks and gardens.
Source: EFTEC (Economics for the Environment Consultancy Limited, UK) and ENTEC (Environmental and Engineering Consultancy, UK) (2002).		

A number of alternative strategies can be applied to elicit proper WTP/WTA bids from respondents. These are:

1. **A Closed-ended Referendum:** In this method, the interviewer suggests a single value to which respondents can either agree or disagree. The responses obtained in this way are known as Dichotomous Choice Response.
2. **An Open-ended Referendum:** In this method, the interviewer attempts to obtain the WTP/WTA bids from the respondents using any of the following three strategies:
 - i. **Bidding Games:** The interviewer starts with a very low bid and asks the respondent if he would be willing to pay this amount. If the respondent agrees to pay the amount, then the bid value is increased until that level is reached at which the respondent denies paying the particular amount. On the other hand, if the respondent denies paying the amount quoted by the interviewer at the first instance, the bid value is lowered till the level is reached at which he finally agrees to pay the amount.
 - ii. **Payment Card:** In this method also, the respondent is asked to choose a card indicating an amount based on his socio-economic conditions and the average expenditure on other public goods. When the selection is made, a higher amount is suggested to the respondent. This process is repeated until the respondent denies paying a particular amount of money.
 - iii. **Open-ended questions:** In this method, a respondent is asked to directly state an amount he is willing to pay/accept without making any prior suggestions to him.

The other three steps involve the compilation, analysis and reporting of the results obtained in the survey. The data has to be analyzed using proper statistical techniques appropriate for the type of questions asked. In the data analysis, the researchers also attempt to identify any responses that may not express the respondent's value for the services of the site. From this analysis, the researchers can estimate the average value for an individual or household in the sample, and extrapolate this to the relevant population in order to calculate the total benefits obtained from the site.

The first practical application of the technique was observed in 1961, when Robert Davis, who was not aware of the theory behind CVM, applied his own

variation of CVM to his PhD thesis at the Harvard University. He estimated the value of benefits from recreational deer hunting in Maine, USA (Davis 1963) and then compared the survey results with an estimation of value based on travel costs and found good correlation with his results.

The contingent valuation method rose to high prominence in the 1980s when the US government agencies were given the power to sue for damage to environmental resources which included non-use or existence values. Since, existence values cannot be assessed through market pricing mechanisms so contingent valuation surveys were suggested to assess them. The Exxon Valdez oil spill in Prince William Sound, Alaska was the first case where contingent valuation surveys were used in a quantitative assessment of damages and since then the use of the technique has spread to all corners of the world.

Economists from different countries have considered a wide variety of natural and semi-natural environmental resources for valuation studies. The results of some important valuation studies conducted in the UK by primarily using the Contingent Valuation Method are summarized below.

Rae (1983) undertook a comprehensive study of the Mesa Verde and the Great Smoky National Parks, situated in Colorado, USA and argued that visibility of these areas was an important determinant of the satisfaction derived by individuals. The researcher used the Contingent Valuation Method for the study and estimated that the WTP for improved visibility under three different conditions in both the National Parks. The estimated results in terms of 1981 prices are given below:

- For Mesa Verde:** Clear visibility in place of intense plume \$5.1
- Clear visibility in place of intense haze \$4.6
- Clear visibility in place of moderate haze \$2.8
- Great Smoky:** Clear visibility in place of intense haze \$14.8
- Clear visibility in place of moderate haze \$10.0
- Clear visibility in place of slight haze \$5.0

Willis (1989) used the Contingent Valuation Method (CVM) with open-ended questions to estimate the value of wildlife conservation in three SSSIs. The estimated

WTP per hectare per year (at 1986 prices) were: £648 for Derwent Ings, £2799 for Skipwith Common and £557 for Upper Teasdale.

Hanley and Craig (1991) also used the Contingent Valuation Method with open-ended questions to estimate the willingness to pay for prevention of further afforestation of Northern Scotland's Flow Country and its environmentally sensitive peat bogs. The study estimated the mean WTP per person per year at £16.79 (at 1991 prices).

Again Hanley and Spash (1993), used both the Contingent Valuation and Travel Cost Methods to value all the 'heath-lands' in UK. The objectives of the study were to determine:

- 1) Maximum WTP for entrance fee,
- 2) Maximum WTP for annual visitor permit, and
- 3) Maximum WTP (one time) to trust fund to protect all UK heath lands.

The results obtained by using the Contingent Valuation Method showed that the mean WTP for the daily entrance fee was £0.74 and the WTP for annual visitor permit was estimated at £9.73 (by using the median annual visit rate of 24). The results obtained by using the Travel Cost Method indicated that the user value was £2.89 per visit, with annual user benefits of £317,900, which was equivalent to £1,309 per hectare per year (at 1990 prices).

Bateman, et al (1993) conducted a valuation study of the landscape of the Norfolk Broads and Yorkshire Dales using the CVM with open-ended questions as well as iterative bidding. The primary objective of this study was to estimate the amount of money individuals residing in these areas were willing to pay for preventing the scenic Norfolk Broads and Yorkshire Dales from flooding every year. The study estimated that the willingness to Pay (WTP) for the Norfolk Broads per household per year ranged from £76.74 to £83.67 and excluding the top and bottom 5 per cent of results gave a more realistic mean of £55.90. The mean WTP for the Yorkshire Dales was estimated at £22.12 at 1991 prices.

Cobbing and Slee (1994) used the CVM with payment card options for valuation of wildlife in the Cairngorms area. The study intended to estimate the mean WTP to purchase 20 per cent of the Cairngorms to preserve its wildlife and landscape for visitors to enjoy without destroying the same. The estimated mean WTP to enjoy the wildlife without destroying them was £26.64 and the mean WTP without access to the area was estimated at £15.14 (at 1994 prices).

Bateman and Langford (1996) again conducted a valuation study of the Norfolk Broads area using the Contingent Valuation Method with open ended questions. The objective of this study was also to determine the willingness to pay of the residents to prevent the area from flooding. The results indicated that the approximate mean WTP per household per year (non-users) was £23.29 (at 1994 prices). This estimate was found to be better compared to the result obtained by Bateman, Willis and Garrod (1993), which pegged the mean WTP per household at £55.90.

Willis and Benson (1999) used the Travel Cost Method to estimate the Consumer Surplus for wildlife related visit to a nature reserve. Three different wildlife reserves, namely, the Derwent Ings, Skipwith Commons and Upper Teesdale were considered for the study. The study estimated the Consumer Surplus (CS) per visit (range based on both low travel cost, which included only the costs of running a car as well as high travel costs, which included in addition to the costs of running a car the standing costs (insurance, depreciation, road tax, etc). The total estimated Consumer Surplus for the three sites were:

- i. Derwent Ings: £2,053 to £3,788 (total CS); £0.62 to £1.15 (per visitor); £12.67 to £23.38 (per hectare).
- ii. Skipworth Common: £9,001 to £15,574 (total CS); £0.59 to £1.02 (per visitor); £37.50 to £64.89 (per hectare) and
- iii. Upper Teesdale: £15,105 to £20,633 (total CS); £1.67 to £2.29 (per visitor); £23.38 to £31.94 (per hectare).

2.3.1 Greenbelt Land and Forest Land

A number of studies have also been undertaken to estimate the value of different greenbelt and forest lands. For instance, Willis and Whitby (1985) used the Contingent Valuation Method to study the value of protecting the greenbelt in Tyneside in the UK. The study estimated that the average WTP per household per year for preservation of the area was £35 at 1981 prices.

Hanley and Knight (1992) used the Contingent Valuation Method with open – ended questions, for estimating the value of conservation of a greenbelt site in the UK and estimated that the mean WTP (a one-off payment) into a hypothetical trust fund, which would be used to purchase the greenbelt site (so as to avoid its development) and conserve its existing side was £43 per person (at 1991 prices).

Bishop (1992) used the CVM with open ended questions to obtain the Total Economic Value of two woodland sites: Derwent Walk Country Park (DW) in Gateshead and Whippendell Wood in Hertfordshire (WW). The results obtained indicate the estimated WTP for the landscape, wildlife, and recreational amenities of the two sites. The estimated mean individual WTP per visit to DW was in the range of £0.42 to £0.97 and the mean WTP per visit to WW was between £0.54 and £1.34 at 1992 prices.

Using CVM with payment card options for the valuation of the Marsden Vale Community Forest in Bedfordshire, UK, Maxwell (1994) estimated that the mean WTP values per year per person (at 1992 prices) for the different services provided within the park premises was £4.14 for boat hire, £3.03 for nature trail, £4.06 for entrance fee and £6.00 for the trust fund for preservation of the site.

Bennett et al (1995) also estimated mean per-person WTP entrance fee of £1.11 (at 1993 prices) for the Windsor Forest by using CVM with iterative bidding. Bateman et al (1996) again used the CVM with open ended questions for valuing a 100 acre woodland area. The survey results estimated the mean WTP at £9.94 per year or £0.82 per visit per person.

2.4 Important Valuation Studies Using the Travel Cost Method

The Travel Cost Method is one of the oldest valuation techniques and is used primarily to estimate the demand or marginal valuation curve for non-market goods such as, 'recreational resources which necessitate significant expenditure for their enjoyment' (Henry et al. 1995). Harold Hotelling proposed this method of valuation of environmental goods and services, in his two-page letter to the US National Park Service Authority in 1947. Gradually, Travel Cost Method became the most preferred tool of analysis for estimating the economic use value of ecosystems or recreational sites such as parks, lakes and historical monuments which are situated at a distance from the respondent's home and therefore involve travel expenses for the respondent. The expenses incurred by an individual in travelling to a recreational site are used as a surrogate price to estimate the actual value of the recreational experience. Since transportation costs are personal expenses incurred by individuals, so the demand for a recreation site can be estimated by observing how the number of visits to a particular site varies in connection with the transportation costs. In most studies, there

is invariably an inverse relationship between the cost of visiting the recreation site and the number of visits. Other things being the same, the partial inverse relationship provides the basic downward sloping demand curve. However, the consumer surplus obtained is a measure of the user value of the site only and does not necessarily measure the site's environmental or intrinsic value. This method can also be used to estimate the economic benefits or costs resulting from:

- i. Changes in access costs for a recreational site,
- ii. Elimination of an existing recreational site,
- iii. Addition of a new recreational site,
- iv. Changes in environmental quality at a recreational site. (Envis Centre, 2009)

Wood and Trice (1958) used this method to value a water-based recreational site, where people revealed how much they spent to reach the area for recreation. However, Jack Clawson and Marion Knetsch are widely regarded as two of the most important figures in the early development of this method. The Travel Cost Method has gradually emerged as an important tool for valuation of recreational sites in spite of several limitations, primarily due to the absence of improved related market approaches for valuation studies.

2.4.1 Travel Cost Method for Valuation of Natural Areas

The Travel Cost Method has also been used commonly for valuing National Parks and reserves. Knetsch and Davis (1965) undertook the valuation of the Pittson Area Woods in Northern Maine, USA, using a variety of techniques. In this study, a question asking individuals how much further they would drive to reach similar recreational facilities, if those in Pittson were not available to them, yielded an estimated benefit of \$64,000. A Zonal Travel Cost Method applied to the same area however yielded an aggregate benefit estimate of \$70,000 and a Contingent Valuation question elicited aggregate maximum willingness to pay values of around \$72,000. Since the three results were remarkably close, they were a source of encouragement for the early researchers. Ulph and Reynolds (1981) also used this method to estimate the recreational value of the Warrumbungle National Park, Australia and the surplus was estimated to be around \$100 per visitor day.

Harris and Meister (1983) used the Travel Cost Method to find the value of Lake Tutira, which was also declared as a bird sanctuary in 1929, in New Zealand.

However, this lake had large areas under regular algal blooms and was threatened with eutrophication. The researchers estimated the annual monetary value of the lake to be approximately \$83,000; which was equivalent to the NPV (net present value) of \$537,328, assuming a lifespan of 25 years and a 10 per cent discount rate.

Farber (1988) also used the Zonal Travel Cost method to estimate the recreational use value of the wetlands of the Terrebonne Park, Louisiana, USA. The survey procedure used in this study was different and involved placing self-addressed stamped questionnaires on windshields of all vehicles parked in the morning at all 27 boat launch facilities in the wetlands, on various days throughout the year, including the hunting and the fishing seasons. Of the 7,837 questionnaires distributed in this manner, only 1,126 were returned, indicating a very low response rate (14.4 per cent). The annual value of the wetlands was estimated at \$1,277 million when the opportunity cost of time was assumed to be 10 per cent of the average full wage rate. This value of the wetlands, however, increased significantly to \$3,898 million when the opportunity cost of time was assumed to be equal to the full wage rate. The capitalized value of the area, however, varied by a factor of 2.67 depending on whether a 3 per cent or 8 per cent discount rate was used and whether the population using the wetlands was assumed to grow in the future. Accordingly, the average capitalized value of the wetlands varied from \$36 to \$111 per acre depending on the selection of assumptions.

The TCM has also been used by Sinden (1990) and Jenkins (1993) for the estimation of benefits obtained from water based recreational sites to facilitate the protection of those areas. Winger and Mc Kean (1991) undertook the valuation of the Mesa Verde National Park, since, over the years, visibility in the area had diminished owing to the presence of copper mining and smelting industries, coal fired power plants in the vicinity of the area as well as the pollutants of other urban industries. The researchers observed that visibility in the area was an important determinant of the visitors' behaviour and the relationship between visits was not only statistically significant but the variation in visitation rates was also dependent on the visibility of the area. The researchers were therefore able to clearly specify the need for protection of the National Park and the maintenance of the clear visibility in the area on the basis of the high positive correlation between these two variables.

Beal (1995) used the TCM to study the demand for the Giraween National Park, Queensland, Australia and estimated a choke price of \$47.23. The same year,

Beal also studied the Carnarvon Gorge National Park in Queensland, using the TCM. In 2002, Carr and Mendelsohn used the Travel Cost Method to estimate the total value of the Great Barrier Reef, Australia. For this purpose, the researchers examined the domestic and international travel to the Reef. The study estimated the annual recreational benefits in the range of US \$700 million to \$1.6 billion. The estimated domestic value of the Great Barrier Reef to Australia was approximately US \$400 million and its value to more distant countries was dependent on the functional form of the Travel Cost Method. The study conclusively demonstrated that there exist very high estimates associated with protecting high quality coral reefs, like the Great Barrier Reef in Australia.

Driml (2002) used the Travel Cost Method to estimate the recreational value of the Wet Tropics World Heritage Area (WTWHA) in North Queensland, Australia. The valuation of this area was daunting as the WTWHA not only has vast stretches of land under its purview, but there also exist diverse attraction sites in these areas. The study demonstrated the high value of the region from the high visitation rates and the results also had practical significance for those engaged in the management of the region.

Nillesen (2002) estimated the recreational-use value of hiking in the Bellenden Ker National Park, Australia by using a zonal travel cost model. In this study, multiple destination visitors have been accounted for by converting visitors' own ordinal ranking of the various sites visited to numerical weights, using an expected-value approach. The value of hiking and camping in this national park was found to be \$AUS 250,825.

2.4.2 Travel Cost Method for Valuation of Hunting Permits

In the seventies and eighties, the TCM was also used to estimate the value of hunting permits and licenses. Bishop and Heberlein (1979) attempted to estimate the value of the early season goose hunting permits in the Horicon Zone, East-Central Wisconsin, USA. Instead of asking for an exact dollar amount, they developed a discrete choice (referendum) questioning strategy, i.e. they asked if an individual was willing to accept a pre-specified dollar amount for the permit. Using a standard logistic regression model, they found that the WTA estimate derived from a sub-sample with hypothetical valuation questions was significantly different from that

derived from a sub-sample with real travel cost assumptions. The differences in the results generated by the TCM and the discrete choice method may be attributed to the unusual contingent valuation question that relied on the respondents' willingness to accept compensation for the loss of their deer-hunting permit within both the real and the hypothetical framework.

Loomis (1982) also conducted another valuation of hunting permit fees in the Utah region of the USA. He examined the hunting permit fees using the Travel Cost Method and concluded that the fees fixed at low levels could lead to undervaluation of the species. He also used the modified TCM to estimate the losses associated with lottery rationed hunting permits. The results suggested that the minimum permit fee for big horn sheep was \$172 compared to the then prevailing fee of \$100 and \$188.50 for buffalo compared to the then prevailing fee of \$88.50. These new values indicated the differences between average and maximum willingness to pay for the hunting permits and gave a better estimate of the value of the two species – big horn sheep and buffalo, which were being hunted. The study also estimated the total personal and business income generated in the state of California for deer hunting and viewing as well as the total employment impact due to the deer hunting and viewing in the region.

Von Buren et al (1996) also applied the TCM for studying the value of recreational fishing in Western Australia and obtained an individual consumer's surplus of \$60.30 and an aggregate consumer's surplus of \$1.87 million per year.

2.4.3 Valuation of Historical Monuments

The TCM can also be used for studying the value of historical sites and one of the earliest studies in this context was conducted in 1978 by Aylen to estimate the value of Ballston Hall, Staffordshire, UK. This study attempted to estimate the benefit that members of the society could enjoy if the building was restored and compared these values with the cost of restoration of the building itself.

Tohmo (2004) collected information by Contingent Valuation survey from a sample of 800 residents of 18 years and above and then used the logistic regression method to estimate the willingness to pay of the local populace for the preservation and maintenance of a local historical museum in Central Finland. The study revealed that even the residents who do not visit the museum were willing to pay for its

maintenance, which was an indication of its non-use value to the local inhabitants and consequently legitimised the use of public funds for the maintenance of the same.

2.5 Valuation Studies in the Developing Countries

The Travel Cost Method has also been used extensively in the developing countries for the valuation of their forests and water resources. For instance, in 1986, Grandstaff and Dixon used the Zonal Travel Cost Method to value the Lumpini Park in Bangkok and obtained a consumer's surplus of 13 million baht per year. Dixon and Sherman (1990) also used the Travel Cost Method to conduct a valuation of the three protected areas - Khao Yai, Thale Noi and Khao Dao in Thailand and obtained estimates of the consumer surplus of these three areas. Again, Tobias and Mendelsohn (1991) estimated the ecotourism value of the Monteverde Cloud Forest Reserve, a tropical rain forest in Costa Rica by using the TCM. The value of the forest was estimated to be approximately US \$35 per domestic visit. In 1996, Menkhaus and Lober estimated the ecotourism value of the same forest to US visitors to be US \$1150 per visit. Notwithstanding the appreciation of prices between 1991 and 1996, these results indicate a marked variation in the WTP values of domestic tourists from Costa Rica and foreign tourists from the USA. This difference is primarily due to the variations in the travel expenditures of these two groups of tourists which is again a function of their average income and their knowledge of and desire to visit the concerned area.

Navrud and Mungatana (1994) used a combination of the Contingent Valuation and Travel Cost Methods to estimate the economic value of flamingos in relation to the total tourist inflow to the Lake Nakaru National Park in Kenya. The results of the CVM survey indicated that the visitor's consumer surplus was approximately \$75 million annually, and one-third of this surplus was generated mainly due to the presence of the flamingos in the Park. The survival of the flamingos in the Park was threatened since the lakes of the park were becoming increasingly contaminated from the discharge of industrial effluents. This study therefore provided an economic argument for regulating the emission of pollutants in the lake in order to preserve the flamingos.

The researchers also obtained a significantly higher economic value of the birds by using the Travel Cost Method. However, since the travel costs of

international tourists were higher, the resultant estimated values were much inflated. Therefore only the estimates of the CVM survey were accepted as valid and used for policy purposes.

Himayatullah (2003) undertook the economic valuation of the Ayubia National Park in Pakistan by using the individual travel cost method. The researcher applied this method to individual household data in order to estimate the willingness to pay for park visitation. In addition to estimating the consumer surplus and total recreational value of the park, the study also yielded estimates of the price and income elasticities of visitors' demand for park visitation. Data for this study were obtained from a 2002 survey of 300 park visitors. The results indicated that the travel cost, household income, and the quality of the park were significant determinants of the WTP for ANP. The estimated total consumer surplus was equal to Rs 24.2 million, and the total recreational value was 200.6 million. Since the recreational value of the Park was considerably high, the author suggested that an Entry Fee could be imposed and the additional finance could be used for the development of the Park. The researcher also compared the present consumer surplus and total recreational value with those in the new scenario and concluded that if the quality of the park was to be improved, it would yield yearly consumer surplus and total recreational value to the tune of Rs 35.01 million and Rs 209 million, respectively.

Seenprachawong (2004) undertook the valuation of coral reefs in the tropical island of Koh Phi Phi, Thailand in order to improve planning for coral reef management in the area. The annual benefit from the recreational services of Phi Phi was estimated by a travel cost method to be 8,216.4 million baht (equivalent to US \$205.41 million). Thus the value of Phi Phi was calculated to be about 249,720 baht (US \$6,243) per hectare per year (since the reef area at Phi Phi is about 32,900 hectares). The researcher assumed the real value of this recreational benefit of 8,216.4 million baht (US \$205.41 million) a year to remain the same over 30 years and using a real interest rate of 5 per cent, the present value of recreation of Phi Phi island was estimated to be 126,280 million baht (US \$3,157 million). The researcher also used a contingent valuation method to estimate the utility values associated with coral reef biodiversity at Phi Phi. The mean willingness to pay (WTP) per visit was estimated to be 287 baht (US \$7.17) for domestic visitors and 286 baht (US \$7.15) for international visitors. From this the total value of Phi Phi's coral reefs was estimated to be 5.89 million baht (USD 0.147 million) a year for domestic visitors and 49.6

million baht (USD1.24 million) a year for international visitors. This study also used the CVM to calculate the mean willingness to pay of domestic vicarious users – 634 baht (US \$15.85) – and from this the total value (use and non-use) of the reefs was estimated to be 19,895 million baht (US \$497.38 million) a year, which was an average of 604,720 baht (US \$15,118) per hectare per year. Taking these values into consideration, the researcher recommended that a benefit capture instrument be implemented to target tourists' consumer surpluses. Based on the value that people obtain from visiting Phi Phi reef site - 286-287 baht (US \$7.15-7.17) per visit, this study suggested a basic entrance fee of 40 baht (US \$1) per person per visit and also recommended the implementation of additional user charges, when visitors received additional services from the variety of recreational sites offered at the island.

Becker et al (2004) also used the Travel Cost Method to estimate the value of viewing threatened Eurasian griffon vulture *Gyps fulvus* by the public at Gamla Nature Reserve, Northern Israel. The researchers generated a visit-distance function based on 143 questionnaires in order to derive the demand function for the site, from which, a monetary value was estimated. The potential annual benefit of Gamla was estimated to be NIS 5.5–6.0 million (equivalent to US\$ 1.1–1.2 million). The annual economic value of Gamla to the visiting public was estimated to be approximately five times higher than the estimated revenue, and 85 per cent of the visitors to Gamla were primarily interested in viewing the vultures. These results provided a strong case for further investment in Gamla Nature Reserve and in particular provided an incentive for investment in the protection of vultures in the area.

Gurluk and Rehber (2007) investigated the recreational economic value of bird watching in the Kuşçenneti National Park (KNP) at Lake Manyas, one of the Ramsar sites of Turkey and an important endangered species habitat. Although the lake and KNP provided considerable benefits for the region, they were facing many environmental conflicts due to diverse stakeholders' needs. As such, a valuation of these sites was considered imperative for resolution of conflicts among stakeholders and preservation of the sites. The travel cost method was used to estimate recreational demand for the KNP and the recreational value of the KNP was found to be US\$ 103,320,074 annually. Since this calculated value was considerably higher than the annual investment and operation expenditures of the KNP, the researcher concluded that the sustainability of the important species around the lake could be achieved if the region's inhabitants were compensated by KNP visitors.

Asafu-Adjaye et al (2008) attempted to study the economic benefits associated with scuba diving in the Mu Ko Similan Marine National Park, Thailand, by using a single and double-bounded dichotomous choice contingent valuation survey design. The results indicated that the divers were willing to pay about US \$27.07 to US \$62.64 per person per annum on an average, resulting in aggregate benefits between US \$932,940 and US \$2.1 million per annum. The present value of these aggregate benefits was estimated to be in the range of US \$31 and US \$71 million, by using a social discount rate of 3 per cent.

Yacob, Radam and Shuib (2009) applied the dichotomous choice survey design contingent valuation method (CVM) to investigate empirically the willingness to pay (WTP) of the visitors for eco-tourism resources in two selected marine parks in Peninsular Malaysia – the Pulau Redang and the Pulau Payar. The researchers used the Logit and Probit models to estimate the visitor's WTP responses for conservation of the marine parks for ecotourism. The studies were based on a sample of 215 respondents in Pulau Redang and 153 respondents in Pulau Payar, who were randomly interviewed for data collection in both the islands in April-July 2007. The results in Pulau Redang indicated that local visitors were willing to pay for conservation approximately RM7.8 and international visitors were willing to pay about RM10.6 per year. In Pulau Payar, the results showed that local and international visitors were willing to pay about RM7.30 and RM8 respectively. These values provided a guideline to marine parks to develop management policies for the enhancement of ecotourism, sustainable development and conservation of marine parks in Malaysia.

Nuva et al (2009) undertook a study to estimate the visitors' willingness to pay for the conservation of natural resources at Gunung Gede Pangrango National Park (TNGP), Indonesia and also to determine their satisfaction of the use of the ecotourism resources of the park. The researchers employed the dichotomous choice Contingent Valuation Method to determine the willingness to pay (WTP) of the tourists. A total of 423 respondents were interviewed in 2004 and the results showed that most visitors were satisfied with the ecotourism resources in TNGP and many of the visitors had come to TNGP more than once. In order to sustain the benefits derived from the resources at the park, the visitors agreed that various organization involved must cooperate to conserve and protect the ecotourism resources. The economic benefit of conservation of the ecotourism resources at TNGP was measured

using the visitors' WTP for higher entrance fee to the park and a logit regression model was used to determine visitors' willingness to pay. The results indicated that income, gender (male) and place of residence (urban/rural) were the significant factors, which influenced the visitors' WTP for the entrance fee to TNGP. The mean WTP was estimated to be RP 7629.77 per tourist per visit. It was also established that in 2004 the benefits of conservation of the ecotourism resources in TNGP was RP 452 million.

2. 6 Valuation Studies in India

Indian economists started conducting valuation studies of environmental goods and services only in the last decade of the twentieth century and unfortunately, most of these studies have not been well documented. However, the Environmental Information System Centre of Madras School of Economics (sponsored by the Ministry of Environment and Forest, Government of India) has a well-documented record of the various valuation studies conducted in India, over the past two decades. The valuation studies mentioned below have been conducted for 'Natural Areas' and bear a significant similarity to this present work.

Brandon et al (1993) undertook the earliest reported valuation study in India and used the Dose Response Function in Delhi to estimate the value of the river flowing through the city and the effects of pollution due to unplanned and increased industrialisation. The results of the study indicated that the estimated value of total environmental damage due to pollution was Rs 31,101 crores per year or 4.5 per cent of the GDP at constant price in 1991-92. The health impact of water pollution was estimated to be Rs. 18,512 million, the agricultural output loss due to soil degradation was estimated to be Rs. 62,959 million and the health impact of air pollution was estimated to be approximately Rs. 42,469 million during that year. The loss of live-stock carrying capacity due to rangeland degradation was approximated to be Rs. 10,634 million during the same period. The cost of deforestation was Rs. 9,638 million and the loss of international tourism was estimated to be Rs. 6,905 million in the same year.

Murty and Menkhau (1994) used the Contingent Valuation Method for studying the value of Bharatpur Bird Sanctuary in Rajasthan. The study showed that the total recreational WTP estimates for domestic tourists were approximately Rs.7791 million and for international tourists was approximately Rs. 1,159 million in

a year. A very significant observation of this study was that the benefits of wildlife preservation were disproportionately attributed to higher income tourists, while lower income local populations actually incurred the costs of preservation.

Chakraborty et al (1997) used a combination of Contingent Valuation Method and Cost Benefit Analysis to identify and estimate the values of various goods and services provided by the 2800 hectares of submergible forests in Kerala. The vast forestlands were under the threat of submergence due to the construction of a hydro electric power plant in the Puyankutty tributary of the Periyar River in the area. The main benefit of the project was obviously power generation (with an installed capacity of 240 MW), in addition to the construction of a bridge and roads in the project area and creation of more runoff in the river during the summer months. The researchers recorded thirty-five timber varieties and more than 2,000,000 trees of various sizes and height classes in the submergible forests, the estimated volume of which was approximately 1.7 million cubic metres. The annual loss of fuel wood from submergible forests was estimated to be 287.7 tonnes, which was equivalent to a monetary loss of Rs. 2, 87,700 (based on opportunity cost). The potential loss of reed due to the proposed project was 14,000 metric tonnes per annum and this loss was equivalent to Rs 24.1 million (at 1997 prices). The net loss of carbon intake per annum from the whole submergible forest was calculated to be 5140 tonnes, which was equivalent to a loss of Rs 22.1 million per annum. The destruction and submergence of these resource rich forests were therefore likely to release about 735800 tonnes of carbon and this was equivalent to a loss of Rs. 316.3 million. These losses were in addition to the monetary cost of the project, which was estimated to be Rs. 820 million. In addition, Rs. 565 million (at 1994 prices) was earmarked for environmental management, of which Rs 320 million was for compensatory afforestation, Rs. 173 million was for catchment area treatment, Rs. 25 million was for rehabilitation and Rs.47 million for environmental safeguards and monitoring.

Hadker et al (1997) conducted a valuation study of the Borivli National Park, (BNP) situated in the outskirts of Mumbai. The researchers used Contingent Valuation Method for the study and surveyed nearly 600 families from different localities in the city for estimating the WTP of residents for the preservation and improvement of the BNP. The results indicated that, Mumbai households had a strong interest in environmental conservation and were willing to pay exclusively for BNP on an average Rs. 7.5 per family per month for the next five years. By extrapolating

this amount, it was estimated that approximately Rs. 20 million per month could be collected for the next five years from the Mumbai city alone for the preservation of the BNP.

Chopra et al (1998) used the Ordinary Least Squares Method (OLS), Three Stage Least Squares Method (3SLS) and Logit model to study the factors influencing the migration of rural workforce from selected areas in Rajasthan. The study indicated that proper specification of group/common property rights, the existence of non-governmental organisations contributes in the reduction of migration, since a household's decision to migrate and/or to participate in common property rights is interrelated to its labour force allocation decisions. The ownership of cattle was also found to motivate people to participate in the protection and conservation of common land resources.

Chopra (1998) also conducted a valuation study of the Keoladeo National Park in Bharatpur, Rajasthan using the Travel Cost Method. A total of 305 tourists were interviewed for the study, of whom 235 were domestic tourists and 70 were foreign tourists. Data regarding tourists' travel expenditure, lodging and other allied expenditures and various other socio-economic factors were collected. The consumer's surplus was estimated from the semi-log form of the travel-cost function by relating the visitation rates with the travel costs incurred in both its total and local variants. Although the consumer surplus estimated by the Travel Cost Method was higher, yet considering the joint product nature of the services provided by the reserve, it was considered more appropriate to estimate consumer's surplus from local travel cost estimates. The consumer surplus for domestic tourists was estimated at Rs. 427.04 per visit per family and for foreigners at Rs. 432 per visit for an individual. The study also indicated that the demand was not affected when a redistribution of the benefits and costs was attempted through an increase in the Entry Fee for the reserve.

Mitra (1998) conducted a valuation study of the gradual depletion and misuse of the forest resources in India, using the Opportunity Cost Method. The resultant Economic Value could be used as an indicator of the foregone benefits due to the depletion of these resources. The results estimated the loss due to foregone production of industrial wood at Rs. 45 billion annually and due to forgone fuel wood production at Rs. 12 billion annually. The total loss due to forest degradation was estimated at a staggering Rs. 57 billion per year.

Ninan (2000) used the Cost Benefit Analysis, Contingent Valuation and the Opportunity Cost Methods to undertake a valuation of the conservation of forest resources in Mysore, Karnataka. The survey results indicated that the forgone benefits of biodiversity conservation as a result of increase in coffee plantation, in terms of net present value (NPV) was about Rs.19353 per acre at 8 per cent discount rate and over Rs.57076 at 10 per cent discount rate at time horizon of 25 years. A very significant observation of the study was that 96 per cent of the villagers were ready to spare 85 hours in a year for activities related to elephant conservation.

Using secondary data and the Total Economic-Ecology Value (TEEV) approach, Nayak (2001) showed that the average annual flow of Direct Use Value of the Paralekhamundi Forest Division, Orissa was Rs. 900 per hectare. The Indirect Use Value of the study area was estimated to be Rs. 65099 lakhs (at 2000 prices) that is Rs. 26622 per hectare. The Option Value was estimated at Rs.14806 lakhs or Rs.6055 per hectare while the Existence Value of one hectare of the forest was estimated to be Rs. 30555. The Total Economic-Ecological Value (TEEV) assessed was Rs. 156823 lakhs i.e., at the rate of Rs. 64132 per hectare.

Applying the CVM and the TCM, Choudhury (2004) estimated that the total annual recreational (use) value of the various tourist sites of Chandigarh city (based on 2002-03 prices), to be approximately Rs.12.00 crores. The mean willingness to pay (WTP) of each reasonably earning family residing in the city, for the betterment of existing green landscape features and for creating new parks/gardens in the city was Rs.153 per year for a period of five years. The annual recreational use value of the city's urban forestry assets was estimated at Rs. 2.75 crores (Rs.27.50 millions) at 2002-03 prices. The Travel Cost Method was also used for estimating the recreational use value on the part of the domestic tourists, which was calculated at Rs. 9.24 crores (Rs.92.40 millions).

Chopra and Adhikari (2004) also conducted a valuation of the Keoladeo National Park, Rajasthan using the Travel Cost and Opportunity Cost Methods. The result of this study showed that the direct and indirect income obtained from the Park was more responsive to ecological health indices. The ecological health was more at higher values of the indices, indicating that once efforts at conservation increase attractiveness of the Park above a certain level, the impact would be cumulative and returns in terms of income would rise more than proportionately. The consumer

surplus was estimated to be about Rs. 202 per visit per person, when average local travel cost was taken as the reference point.

Imandoust and Gadam (2007) undertook a contingent valuation study in Pune, Maharashtra to estimate people's willingness to pay for the improvement of the water quality of the Pavana River flowing through the city. Although the water quality of the river had deteriorated due to uncontrolled sewage disposal by different industries, yet the water was being used by the households for bathing and washing clothes, as well as by farmers and fishermen. The authors interviewed all the different categories of the river water users along a one kilometre (both banks) stretch of the river, and estimated that the mean willingness to pay for improved water quality per family per month was Rs. 17.6 and the average annual willingness to pay for improved water quality was approximately Rs. 59 lakhs. This study therefore revealed the importance that ordinary citizens lay on clean and healthy environment and underlined the immediate need for conservation of natural resources, in this case the Pavana River.

In the North-Eastern part of India, very few valuation studies have been conducted till date, primarily due to the fact that until very recently the vast forest resources in this part of the country were carefully nurtured and preserved. However, with the gradual industrialisation and inflow of tourists to this region, the valuation of forest reserves and other allied tourist sites have become imperative for their protection and conservation.

Mitra (2003) conducted the first valuation study in this region. He used the Travel Cost Method for estimating the recreational value of selected tourist sites in Arunachal Pradesh. The study also estimated the consumer surplus per visit for a domestic tourist at Rs. 995.51 and the consumer surplus for a foreign tourist was estimated to be Rs. 1,232.48.

Using Contingent Valuation Method, Maharana et al (2000) sought to estimate the recreational value of Khecheopalri, a lake situated in the West District of Sikkim, which has recreational biodiversity and sacredness values. It was observed that the demand curve for recreation increased with decreases in travel cost and distance for Sikkimese visitors. The willingness to pay for maintenance and preservation of the lake by all types of visitors ranged from US\$ 0.88 for members of the local community to US\$ 7.19 for international tourists. The authors rightly concluded that a large number of lakes in the Hindu-Kush Himalayan region, if properly managed and

marketed for ecotourism, could bring economic development to the region and also provide an economic incentive for conservation.

Another significant study in this region was undertaken by the officials of the State Council of Science and Technology, under the aegis of the state Government of Sikkim in the year 2004. In this study both the Travel Cost and Contingent Valuation Methods were used and local community members were interviewed for estimating the recreational value of the Khangchendzonga National Park and the sacred Khecheopalri Lake.

The state of Meghalaya, also situated in this region is popularly known as the Scotland of the East, for its vast undulating green valleys and hills. However, the precious forests are fast disappearing as these hills are intensively mined for coal, limestone, boulder etc. In spite of this scourge, the state has been witnessing an ever-increasing flow of tourists from different parts of this country and from different countries of the world. As such, there is an urgent need of policy implementation for conservation of the 'green wealth' of this region and valuation of different forest reserves, wildlife sanctuaries and other natural areas of tourist interest in the state is imperative for conservation and sustainable use of these resources.

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Chapter-3

Data and Methodology

- 3.1 Introduction**
- 3.2 Effect of Tourism on Income and Employment**
- 3.3 Effects of Different Factors on the Number of Visits and Estimation of Demand Function**
- 3.4 Collection of Data**

Chapter 3

Data and Methodology

3.1 Introduction

The study on the valuation of three chosen tourist sites in Meghalaya has been completed in successive steps. First of all, the economic effect of tourism in terms of generation of employment and income is discussed. Thereafter, the effects of the diverse socio-economic characteristics of the visiting tourists on their visiting decision and frequency of visits to the different sites are examined. Then, the visit demand functions for the three sites are derived for different groups of tourists and their willingness to pay for the maintenance and development of the sites is estimated. From these analyses, we tried to bring out some policy implications for the purpose of sustainable utilisation of such resources.

3.2 Effect of Tourism on Income and Employment

Development of tourism in any area/region generates both positive as well as negative impacts. Positive effects of tourism activities and utilisation of tourism resources is observed through rising employment and income in the transport, hotels and restaurants or in general hospitality sectors, local arts and crafts producing sectors, people directly involved in tourism activities e.g., in the promotion of tourism, tourist guides, tour operators, local vendors selling various needy products including tea and beverages, orchids etc; people in the maintenance of parks etc. Also it has the beneficial impact through the cultural exchange, improvement of health and knowledge, which is very difficult to measure in monetary terms. Moreover, the producers of raw or semi-finished items, who supply those to the hotels and restaurants for meeting the requirements of the visitors, are benefitted from the rising tourism activities. However, unplanned utilisation of tourism resources in many cases causes environmental and resource damages. Therefore, development of tourism has both positive and negative impacts and the policies should be directed to minimise the

negative impacts so as to obtain net positive impact. The present study however concentrated only on the analysis of impacts of tourism activities on the employment and income in and around the sites.

It is generally believed that, income and employment generated from any tourist site depends on its capability to satisfy the desires of the visitors i.e., the services provided by the concerned site. These come from the notion of user value as used in the consumer's valuation exercises. The services provided by a tourist site therefore depends on the attributes attached to the particular site. Attraction of a site and frequency of visitors and thereby the employment and income generated are positively associated with the improvement of the concerned sites. In order to examine the nature and level of contribution towards employment and income, 50 individuals were interviewed in the selected tourist sites who have been earning their livelihood in various capacities from those sites. From the survey, information relating to the socio-economic characteristics of these individuals, nature of their employment and their monthly income during lean and peak tourists seasons were collected and tabulated. The survey results have been used to establish the linkages between variation in employment and income generation with the 'lean' and 'peak' tourist seasons. Based on the employment opportunities created in the different tourism related sectors in the 'lean' and 'peak' seasons the potential variation in income and employment with the changes in tourist arrival has been estimated. In other words, the effects of increased tourist inflow on different stakeholders of this industry have been examined. Moreover, the changes in conditions or tourism infrastructure that affects number of tourists visiting the area in many cases have been studied from the opinion of those visited multiple number of times. This would ultimately help in understanding the necessity for the adoption of policies towards proper maintenance and sustainable utilisation of the sites. That would ensure long term viability of the popular tourist destinations as well as social and economic welfare of the local populace through tourism related activities. Also using the information collected from the major hotels and restaurants in the area, employment and income generated due to tourism activities in the hospitality sectors and from the information on number of vehicles operates in the sites (from number of parking of cars in the sites) employment and income generated in the transport sector can be estimated. Here it should be mentioned that the long distance tourists use other mode of transports (trains, air transports, package tour buses or normal bus services etc), all

of which is very difficult to consider in the study due to lack of information. But their total expenditure (transport, food and lodging in hotel, local car hiring, entry and guide fees etc) can provide an idea of revenue generated by different agents involved in various tourism related activities and associated with their visits to the site. This is because the total expenditure incurred by the tourists actually goes to different agents involved in tourism related activities as their revenues. As there also employment and income generated in various indirect ways and that are not possible to capture, the present estimate will provide the least possible level of employment and income generated through the tourism activities or utilisation of tourism resources in the area, i.e., the lower bound of its impact on the employment and income.

3.3 Effects of Different Factors on the Number of Visits and Estimation of Demand Function

The stalwarts in the field of the economics of tourism and recreation propound a multitude of theories for valuation purposes. However, in practice, not even a single method can be applied satisfactorily for an entire analysis. There is also no unanimity amongst the researchers and environmental economists on the appropriateness of the methods of valuation. This has created a wide gap between theoretical frameworks and pragmatic approaches of valuation studies.

Since environmental goods and services (like tourist resources) are not traded in the usual markets, the benefits derived from these commodities are external to the market. Even when some expenditure is incurred for the consumption of these goods, for instance, the travel expenditure involved in reaching a tourist site, it is difficult to have proper pricing for the good. A significant number of environmental goods are public goods and as such do not involve any 'out-of-pocket expenses' for their consumption. Consequently, these goods are increasingly exploited beyond their 'carrying capacity' and are invariably associated with the 'free rider's problem'. In such a scenario, non-market valuation (NMV) of environmental goods and services is undertaken to ascertain the individual's preferences for the various non-marketable environmental goods.

NMV is the process of placing a monetary value on goods and services that do not have out-of-pocket costs or are directly sold in the market (Bateman et al. 2002). The estimated values from NMV yields a monetary value of individual preferences

for such goods and are used in cost-benefit analyses to calculate the value of changes in environmental quality which is finally used by the policy makers (Boardman et al. 2006; Bockstael and Freeman 2005). Over the years, NMV has evolved as an important tool in both developed and developing countries for obtaining *more realistic* estimates of the values of environmental goods and services and also for environmental policy decision making, particularly for project evaluation, environmental impact assessments, regulatory reviews and environmental accounting (Carson et al. 1994; Navrud and Pruckner 1997, Freeman 2003, Adamowicz 2004, Kahn 2005).

The primary environmental valuation techniques that enable the preferences of individuals to be elicited for non-market goods and services are:

Revealed Preference Approaches which includes the Hedonic Pricing and Travel Cost Methods (TCM) that determine preferences for a given environmental good by observing the behaviour of individuals in markets that are related to that good.

The Stated Preference Approaches which includes the Contingent Valuation (CVM) and Choice Experiment Techniques that are used to measure individual preferences through ‘hypothetical’ or ‘simulated’ markets.

Also, there is **Benefits Transfer Approach** that involves application of monetary estimates provided by existing studies to a new context of a study for which a monetary valuation is required. Such, valuation results may be ‘transferred’ from one location to another location or from one point in time to another or both.

Valuation studies are therefore conducted by one or a combination of these methods, based on the specific goals to be achieved by the concerned study. Since the present study attempts to obtain the recreational value of three tourist sites in Meghalaya, both the TCM (both variants of the method Zonal as well as the Local travel costs) has been used to estimate the ‘demand curve’ for the three sites and the CVM has been used to elicit WTP of the surveyed tourists for the maintenance and upgradation of recreational facilities and other infrastructure in these sites.

The three chosen tourist sites under study have the unique characteristics of non-marketable environmental goods and the type of recreation derived from these sites are such that they cannot be the substitute sites. Here nominal fees are charged for entry and utilisation of scenic beauty as well as other facilities within these sites. However, individuals need to purchase a private good, namely, transport without

which they cannot have access to the recreation sites. Thus the demand for these recreation sites can be estimated by examining how the number of visits by surveyed tourists varies according to the differences in cost of transportation, opportunity costs of travellers and various other expenses, such as cost of accommodation, charges of tour guides, etc incurred by tourists for visiting a site.

In this study, the most commonly expressed preference method; the Contingent Valuation Method (CVM) has been used for the estimation of people's willingness to pay for the maintenance and improvement of the concerned sites. This method attempts to measure the value of a non-marketed good holistically. Under this method, the good to be valued is defined in detail, its attributes listed and the environmental component to be protected is clearly specified. The CVM utilizes the contingent valuation questions with dichotomous choices, open-ended, iterative bidding and payment card formats, each of which has different merits and demerits, along with the numerous variations in the way in which they are applied. Both dichotomous and multiple choice questions have been used in the survey in order to obtain data from the tourists.

After the completion of the collection of primary data, the distribution of all the surveyed tourists according to their zones of origin has been tabulated. Thereafter, the zone-wise distribution of the surveyed tourists according to their social, economic and demographic characteristics has also been described by tabular method. It is observed that the surveyed tourists were visiting from the twenty three major states of India. These states have grouped into nine different zones depending upon the central distances of the respective states from the sites. Since only a few foreign tourists were found in the survey from a limited number of countries with diverse distances from the sites, all of them were grouped into a particular zone, zone-10. Similarly, zone-wise distribution of the sampled tourists has also been done for the three chosen sites separately in order to know the variation in the distribution and socio-economic characteristics of the surveyed tourists. Of course, a few of the sample tourists have been found who were visiting in a package tour and thus visited all the three sites together. However, their main attraction was the Cherrapunjee (Nohkalikai Falls and other neighbouring areas) and thus at the time of estimation of demand function by the travel cost method the long distance cost has been considered in case of Cherrapunjee while the local travel cost is considered in case of the other two sites. Here it should also be mentioned that the data for Cherrapunjee has been collected at

Nohkalikai Falls, which is the main attraction of Cherrapunjee (for being the wettest place on the Earth). But almost all the visitors of Cherrapunjee visit some other adjacent spots (like Thangkhrang Park, Seven Sister Falls, Ramakrishna Mission and Mwasmai Cave etc) only with little more expenditure and that has been considered in the data. Hence the demand and value calculated for Nohkalikai Falls will represent for the Cherrapunjee as a whole.

The impact of different factors on the frequency of visits by the sampled tourists was examined by regression method. The **individual travel cost** method has been used for this purpose. For the respondents, who were visiting a site with the sole objective of recreation, total travel and other related expenditures incurred for the purpose have been considered. However, if the respondent is found to have other motives in addition to recreation from the site, for instance, any business meetings (for earning profit) or conference sponsored by their employers or host then **only the local travel and other related costs and the opportunity cost of the extra time spent on the tour** have been considered. Otherwise, there would be an overestimation of the expenditure incurred and thus overvaluation of the sites. Again, some tourists were visiting this area as a part of a package tour as mentioned earlier but their main objective was to visit the Cherrapunjee (Nohkalikai Falls and the adjacent spots). The other sites were 'bonus' deals for them and they would not have visited those sites without the former one. Hence for them, the main travel expenditure to visit Cherrapunjee (Nohkalikai Falls) and the related expenditures on food and lodging, opportunity costs etc were considered for the site and only the extra local travel cost, food and lodging costs, entry fees, cost of extra time spent were considered for the other two sites.

The impacts of various socio-economic factors including travel expenditure and other related expenditures, income of the visitor, age, education, gender, nature of employment, marital status, family size and the total distance travelled on the frequency of visit to a site by the visitors are examined by using multivariate regression method. The opportunity cost of time spent in travelling is also considered here, however, as most of the tourists surveyed were job-holders (in both the private and public sectors) and have a steady and fixed income, only a minimum daily wage (Rs. 100) like that of self-employed casual workers was taken as representative of the opportunity cost of the working hours lost in course of travel. In fact, many of the tourists' had actually received travel allowances to facilitate their journey and the time

spent on travelling was in no way hampering their income and as such using the minimum wage per day (as determined by the Government of India) is justified. The tourists who were self-employed had in most cases delegated their supervisory and managerial roles to a trusted deputy and as such were not incurring major financial losses except the daily wage.

The stochastic linear regression equation can be specified as follows:

$$V_i = \alpha_0 + \alpha_1 TC_i + \alpha_2 Y_i + \alpha_3 DT + \alpha_4 A_i + \alpha_5 E_i + \alpha_6 NE_i + \alpha_7 FS_i + \alpha_{7+k} \sum D_k + e_i \dots (1)$$

where, V_i = number of visits by the i^{th} individual to a site,

TC_i = total cost for one round-trip to a site per individual,

Y_i = total household income of i^{th} respondent (Rs./month) or per capita monthly income

DT_i = total one-way distance travelled by i^{th} respondent to reach a site

A_i = age of i^{th} respondent

E_i = level of education of the i^{th} respondent

NE_i = nature of employment of i^{th} respondent

FS_i = family size of i^{th} respondent

D_1 = gender of respondent; ($D_1 = 1$ if female, 0 otherwise)

D_2 = marital status of respondent; ($D_2 = 1$ if married, 0 otherwise)

However, researchers agree that the semi-log model involving the regression of the logarithmic value of the visitation rate against the ordinary value of the variables yields the best results (Bann, 1998). After using the linear specification the estimated results have been found to unsatisfactory due to poor R^2 , F statistics of regression and multicollinearity among some explanatory variables that is shown in the two-way correlation tables for the different sites. Thus finally the model in semi-logarithmic form has been estimated, which is specified as:

$$V_i = \alpha_0 + \alpha_1 \ln TC_i + \alpha_2 \ln Y_i + \alpha_3 \ln DT_i + \alpha_4 \ln(A_i - \mu)^2 + \alpha_5 E_i + \alpha_6 J_i + \alpha_7 \ln FS_i + \alpha_8 D_{1i} + \alpha_9 D_{2i} + e_i, \dots (2)$$

where, logarithmic values of the total travel costs, total monthly income, total distance travelled and family size are considered. It has also been observed that if the age of all the sample respondents are plotted against their number of visits, an inverse U-shaped curve is obtained, signifying that as individuals advance in age, they tend to travel more, but this trend slowly diminishes after the individual reaches the middle age of 40 to 45 years. Generally, beyond this age, most individuals do not have the

tendency to travel more, although in recent years, the growth of salaries of middle-level executives, have boosted their numbers. However, as individuals grow older, they abstain from long distance travel and the curve slopes down steadily. Therefore, in the regression equation, we have considered the natural logarithmic value of the term $(X - \mu)^2$, where X represents the age of respondent and μ represents the mean age of the sample respondents. The logarithmic values of the visitation rate is not considered here as for many of the tourists this was their first visit to the site/s.

During the analysis of the collected data, it was also observed that the wide variation in the income levels of domestic and foreign tourists often yielded poor regression results. Therefore, the impacts of factors on the visitation rate have been examined separately for domestic and foreign tourists.

For the purpose of estimating demand curve of the visitors, Clawson's zonal travel cost method has been followed. In this particular study, many of the visitors from other zones with the exception of Zones-1 and 2 visited the sites only once and hence for them, there existed very little variation in the frequency of individual visits. When this individual visit rate was regressed on the other exogenous variables, it yielded very poor R^2 and regression F statistics, and therefore became highly insignificant. In order to overcome such problem, the 'zonal' visit rate was used for the tourists from a particular zone and the estimated visit rate obtained by this method was adopted finally to estimate the visit demand function. The values of R^2 and regression F statistics were found to be highly significant. The method of zonal travel cost involves the following steps:-

- a. Division of sampled visitors according to their zone of 'origin' (zone on the basis of political boundary/state).
- b. Computation of number of visitors from each zone and its relative share to total sample visitors.
- c. Calculation of annual visits by zone (multiplying relative share with the total annual visit).
- d. Calculation of average visit rate (dividing calculated annual visit by the zonal population).
- e. Estimation of demand function and then average visitors' consumer surplus and estimation of total recreation benefit.

Since the area under the estimated demand curve over the average expenditure incurred on a single visit provides an estimate of the 'value' of the recreation that a

tourist on an average obtain by visiting the site, it can be extrapolated for the relevant visiting population in order to estimate the total recreation benefits obtained from the site during a particular period. This method has been adopted in order to obtain the total 'consumer surpluses' of tourists visiting the three chosen sites. The tourists surveyed in each of the three different sites were also grouped into two categories - domestic tourists and foreign tourists. The 'domestic tourists' were visitors from different states of India who had travelled to Shillong and the chosen sites primarily for recreational activities and were staying here for at least 24 hours. The 'foreign tourists' were visiting India and the selected sites from different countries, though most of them were from the UK and the USA. The socio-economic characteristics of these two groups of tourists for each of the three sites were examined separately, in order to obtain an idea of the effect of these factors on the 'demand' for the different recreational sites.

The following structural equations in implicit form have been used for the purpose:

$$V_i = f(TC, Y, D, E, EQ, A, G, \text{Error}) \dots \dots \dots (3)$$

$$TC = g(D, Y, V_i, \text{Error}) \dots \dots \dots (4)$$

where, V_i = visit rate, TC = total cost for round-trip to a site per tourist, Y = per capita NSDP, D = central distance of the zone from the site, E = nature of employment, EQ= literacy rate of the zone, A = age of tourist, G = Sex of tourist, Error= random disturbance term with classical regression properties.

Therefore equations 1 and 2 represent a system of simultaneous equations where the variables TC and V_i are both found to be endogenous and simultaneously related and the inverse demand function represented by the equation-2 is over-identified. Again, V_i in the second equation is correlated with the other explanatory exogenous variables, giving rise to the problem of multicollinearity.

Although it is commonly accepted that the state of infrastructure of an area (transport and communication networks), purpose of visit and information available also significantly affects the visiting decisions of the tourists, however due to the lack of usable information these could not be introduced as explanatory variables here and their impact may be presumed to be reflected in the error term.

In order to obtain proper and consistent estimates, 2-stage least square method (2SLS) was applied. Although in case of individual travel cost explanation, all the variables in the first equation were considered (as obtained from the survey), in case of the use of zonal travel cost for the estimation of the demand function, only three

observed explanatory variables viz distance, literacy and per-capita NSDP were included and the visit rate was regressed on these three variables. The predicted visit rate was then substituted for the actual visit rate and used for the estimation of the demand curve as well as the consumer surplus.

3.4 Collection of Data

For the purpose of analysis both primary and secondary data have been used. Secondary data on the population of different regions from which the tourists visited the three sites, per capita income/NSDP, literacy rates, events of holidays and festivals, data on domestic and foreign tourist arrivals were collected from different secondary sources such as the reports of the Ministry of Tourism, Government of India, basic statistics of North-Eastern region and different other states, Census Reports etc.

Primary data was collected by survey method through direct interview using schedules from 600 tourists (200 from each site). Most of the tourists visit Shillong during the peak tourist season from the months of April to October each year (owing to the pleasant weather conditions in the state as well as summer and puja vacations in other parts of the country). However, owing to the non-availability of any month-wise distribution of tourist arrival in the state from any secondary source, an idea of the same was formed from the record of a few famous hotels in Shillong and finally seventy per cent of the primary survey was made during this period in the year 2008 (in equal proportion per month) and the other thirty per cent was collected during the five lean months of the year. One may suggest for using the information on the number of car parked in different months in the selected sites and to collect sample in that proportion, but that is also not proper due to the fact that all the cars do not carry in full in all the seasons and hence number of car may not be proportional to the number of visitors. Of course, one may also contradict the principle of using the month-wise information on guests of the hotels on the ground that many of the visitors from the neighbouring area do not stay in the hotels. Moreover, all the guests of the hotels are not the tourists visiting the sites. Here, it should be noted that majority of the visitors are from outside the North-Eastern zone who have to stay overnight in various hotels or resorts. Moreover, the proportion of visitors in different months remains same on the assumption of identical proportion of tourists and other guests in the hotels unless there is any exceptional event.

From the surveyed tourists, information about their socio-economic and demographic characteristics, frequency of their visits to the site, purpose of their visit (specifically for recreation or combined with business motives), mode of travel and travel expenditure, accommodation and food expenditures, loss of working days and their monetary value if any (opportunity cost), local travel and other expenses including parking and entry fees, willingness to pay additional fees for the maintenance and improvement of the site etc were collected. Here, contingent valuation technique was adopted for the collection of information related to willingness to pay. For the survey, iterative bidding was adopted through direct interview of the respondents to minimize different types of biases that may arise in such a study. The interview started with a very low bid (which was higher than the existing fee) and the respondent was asked if s/he would be willing to pay this amount. If the respondent agreed to pay the amount, the bid value was increased until the level was reached at which the respondent denied to pay the particular amount. On the other hand, if the respondent denied to pay the amount quoted at the first instance, the bid value was lowered till the level at which s/he finally agreed to pay the amount.

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Chapter-4

Effects of Tourism on Employment and Income

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 - 4.6.4 Distribution of the Surveyed Respondents According to their Level of Total Monthly Income during the Peak Season**
- 4.7 Conclusion**

Chapter 4

Effects of Tourism on Employment and Income

4.1 Introduction

There is no doubt that Travel and Tourism industry holds a tremendous potential for the Indian economy, as indicated by the Travel and Tourism Competitiveness Report 2009 published by the World Economic Forum. According to this Report, India is ranked 11th in the Asia Pacific region and 62nd overall on the list of the world's attractive destinations. It is ranked the 14th best tourist destination for its natural resources and 24th for its cultural resources, with many World Heritage sites, both natural and cultural, rich fauna, and strong creative industries in the country. India also bagged the 37th rank for its air transport network. The India travel and tourism industry ranked 5th in terms of expected long-term (10-year) growth and is expected to be the second largest employer in the world by 2019. This Report also estimated the contribution of travel and tourism to the gross domestic product (GDP) to be about 6.0 per cent (US\$ 67.3 billion) in 2009 and indicated that this could increase to US\$ 187.3 billion by 2019. Moreover, it was expected that the travel and tourism sector would contribute 6.4 per cent of total employment (i.e., 1 in every 15.6 jobs) in 2009 and that is expected to generate 40037000 jobs i.e. 7.2 per cent of total employment (1 in every 13.8 jobs) in the country by 2019 (IBEF Report, 2009).

A recent report of the ASSOCHAM shows that an investment of Rs. 10 lakhs in tourism in India can generate 89 jobs, as against 45 jobs in agriculture and 13 in manufacturing industry (BSE, 2003). By 2020, Tourism in India may contribute Rs 8.5 crores to the GDP and in the process enable every man, woman and child to become richer by Rs 7000 (WTTC, 2005).

According to the Tourism Statistics, 2008, India's occupied the 41st rank in World Tourism Arrivals and the 23rd rank in terms of World Tourism Receipts. The latest Tourism Satellite Accounting (TSA) research, released by the World Travel and Tourism Council (WTTC) and its strategic partner Oxford Economics in March 2009 indicates that:

- The demand for travel and tourism in India is expected to grow by 8.2 per cent between 2010 and 2019 and will place India at the third position in the world.
- India's travel and tourism sector is expected to be the second largest employer in the world, employing 40037000 by 2019 (same as IBEF Report, 2009).
- Capital investment in India's travel and tourism sector is expected to grow at 8.8 per cent between 2010 and 2019.
- The report forecasts India to get capital investment worth US\$ 94.5 billion in the travel and tourism sector in 2019.
- India is projected to become the fifth fastest growing business travel destination from 2010-2019 with an estimated real growth rate of 7.6 per cent.

For many developing countries, tourism has become one of the major contributors to social and economic development, whereas for many others, tourism is the prime source of foreign exchange revenue. For example, it contributes nearly 70 percent of the GDP in Maldives. However, the benefits of tourism may be outweighed by the damages done to local environment, and the repatriation of profits by the foreign investors. Therefore, maintenance of tourism resources has become an important issue in the context of development of tourism activities for its sustainable progress.

All these reports validate the immense tourism potential of India; however, the country is yet to realize its full potential as a popular tourist destination. Till now, India has not been able to utilise the tourism with full potential and at present it contributes only about 5 per cent of country's GDP (GoI). In 2007, India could attract only 1.25 per cent of the total tourists visiting different countries in the world. Looking at the prospects of tourism a New Tourism Policy was formulated in 2002, which was built around the 7S mantra of *Swagaat* (welcome), *Soochaana* (information), *Suvidhaa* (facilitation), *Surakshaa* (security), *Sahyog* (cooperation), *Sanrachnaa* (infrastructure) and *Safaai* (cleanliness). This new policy thus envisaged making tourism a catalyst in employment generation, wealth creation, development of remote and rural areas, environment preservation and social integration. The policy also aims to spruce up economic growth and promote India's strengths as a tourism destination that is both safe and at the same time exciting. To achieve all these, the policy proposes the inclusion of tourism in the Concurrent List of the Indian Constitution so as to enable both the central and the state governments to participate

in the growth of this sector. The Central Government of India has also given special emphasis to boost this sector and in 2007-2008 had sanctioned nearly Rs.146 crores for 86 projects involved in the creation of better tourism infrastructure. In the 2006-07 annual budget also, it had allocated about Rs.350 crores for the creation of better tourism facilities.

The North-Eastern region of India in general and Meghalaya in particular has also witnessed a steady increase in the inflow of tourists over the past decade. But even now the state also has not been able to utilise the full potential of its tourism resources for the generation of employment and income and the transport and tourism sectors contribute only about 5-6 per cent of NSDP.¹ However, hotel, trade and restaurants together contribute around 12 per cent of the NSDP. Yet, there is huge scope of increasing employment and income through the development of tourism in the state. However, looking at its potential and to boost the tourism sector in the state, Government of Meghalaya also targeted to allocate Rs 35 crores in the 11th five year plan of which, Rs 3.75 crores were allocated in 2008-09 budget and Rs 20 crores are expected to be spent in 2009-10 year budget alone for the development of tourism.

4.2 Trend of Tourist Inflow in Meghalaya and some Other North-Eastern States

The temporal variation in tourist inflow in Meghalaya and some other states for which data were available have been presented in table-4.1. The table shows that total number of tourists visiting the state of Meghalaya has increased significantly from 136183 to 457685 during 1996 to 2007; while the numbers of foreign tourists have increased from 1573 to 5267. But it was shown in chapter-1 that the percentage share of Meghalaya to total number of tourists visiting North-East India as a whole declined over time, which may be attributed to the fact that in the early years, Meghalaya was the preferred destination of most of the tourists visiting North-Eastern India. However, with the emergence of new tourist destinations, particularly in the states of Assam and Arunachal Pradesh, the percentage of tourist inflow to Meghalaya as compared to the other North-Eastern states is decreasing. The table also shows that though the annual exponential rate of growth of number of tourist arrivals in Meghalaya has been much higher than another popular destination, Sikkim; it has

¹ It is calculated by the author from the industry-wise division of NSDP obtained from *Statistical Abstract* of Meghalaya.

Year	Meghalaya			Manipur			Sikkim			Assam			Nagaland		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
1996	136183	1573	137756	84,025	288	84,313	145256	8642	153898	348532	2575	351107	NA	NA	NA
1997	115563	1071	116634	87,074	219	87,293	116500	8068	124568	327160	5885	333045	NA	NA	NA
1998	136952	1055	138007	91,620	173	91,793	133158	6111	139269	842656	4194	846850	NA	NA	NA
1999	159730	1971	161701	95,897	294	96,191	139085	8563	147648	939721	3843	943564	NA	NA	NA
2000	169929	2327	172256	99,399	335	99,734	144203	8794	152997	964939	5218	970157	13268	551	13819
2001	178697	2390	181087	NA	NA	NA	146923	7757	154680	1015077	5959	1007536	29952	920	30872
2002	268529	3191	271720	NA	NA	NA	160789	8539	169328	1010651	6171	1016822	13543	526	14069
2003	371953	6304	378257	NA	NA	NA	176759	10926	187685	1953915	6409	1960318	14870	870	15740
2004	433495	12407	445902	NA	NA	NA	230719	14646	245365	2156675	6613	2163288	10056	1084	11140
2005	375911	5099	381010	NA	NA	NA	251697	16517	268214	2286630	7285	2293915	17470	883	18353
2006	400287	4259	404546	NA	NA	NA	302486	18049	320535	1786823	8404	1795227	15030	1002	16032
2007	457685	5267	462952	NA	NA	NA	331182	17837	349019	NA	NA	NA	NA	NA	NA
β			13.8					8.86				18.36			-2.4

Source: Directorate of Tourism of Assam, Manipur, Meghalaya and Sikkim.
Note: (i) β represents annual exponential growth rate, (ii) NA means data are not available.

been much lower than that of Assam. It is due to the development of some tourist sites including Kaziranga and diversion of tourists towards those areas in recent past. Nagaland has never been a popular tourist destination due to insurgency as well as the problem of inner line permit and the transportation problem as well. Thus the figures of last few years do not show any significant trend of tourist inflow in the state.

4.3 A Brief Overview of the Tourism Infrastructure in Meghalaya

Growth of tourism in any area depends not only on the diversity of tourist sites but also on several other factors including transport and communication facilities, availability of hotels and restaurants, expansion of information network, condition of security of the people etc. Growth of a few of those indicators has been presented in table-4.2. Except the road length and its density information on others are not available for all the years. The table shows that annual exponential growth of number of registered hotels in Meghalaya during 1999-00 to 2007-08 was 6.8 per cent, while the rate of growth of registered taxis was over 29 per cent and that of road density per 100 sq. km. was 1.7 per cent.

Year	No. of Registered Hotels	No. of Registered Taxis	Road Length in K.M.	Road Density per 100 Sq. Km.
1996-97	NA	NA	6491	28.94
1999-00	29	1209	7117	31.73
2000-01	--	NA	7328	32.67
2001-02	--	NA	7598	33.88
2002-03	--	NA	7490	33.39
2003-04	--	5985	7682	34.25
2004-05	--	7150	7877	35.12
2005-06	--	8338	7978	35.57
2006-07	--	9387	7960	35.49
2007-08	51	NA	8164	36.39
Annual Exponential Growth Rate (%)	6.8	29.28	1.7	1.7

Sources: (i) PWD (R&B), Meghalaya and Directorate of Tourism, Government of Meghalaya.
(ii) Directorate of Statistics, Government of Meghalaya.
Note: NA means not available.

Though the number of hotel does not indicate the exact capacity of boarding and various hotels have different capacities including their variation in facilities for the guests, yet in the absence of full information; it provides a rough idea of over time rising capacity to meet the requirements of rising tourists. Except the number of taxis, the growth of road network and hotels are found to be not sufficient to meet

the demand of rising incoming tourists in the state. From the practical experience of the researcher, it has also been found that it is very difficult to get a booking in a good hotel in Shillong even a month advance especially during the months of vacation in other parts of the country when the number of visitors multiply by several times (as the peak tourist season) every year. Sometimes, these factors along with road blockade, political strike in the adjoining transit states etc cause adverse impact on the number of visitors.

4.4 A Brief Description of Impacts of Tourism

It has already been mentioned that growth of tourism in any area has both positive and negative impacts. It is observed that the rapid growth of tourism in the twentieth century has produced both problems and opportunities on a vast scale for societies and its impact has been manifold - economic, socio-cultural, environmental and political. Governments have become aware that tourism is not merely a useful means of adding to a nation's wealth but also brings with it serious long-term problems which, without careful control and planning, can escalate to a point where they threaten the society.

4.4.1 The Economic Effects of Tourism

As in the case of any other industry, tourism has important bearing on the economy of the area in which it is undertaken. Notwithstanding the size of an area affected by tourism, its economic effects can be categorised into four groups: Income, Employment, Balance of Payments and Investment and Development (Holloway, 1985).

Income: In a labour-intensive industry such as tourism, the greatest proportion of income is likely to be generated in wages and salaries and the higher the number of labour employed greater the income generated. The income generated is highest in the region where wage levels are also high indicating the existence of other high-wage job opportunities and minimal unemployment in the concerned region. However, tourism may be of relatively greater value in areas where there are few other jobs and where employable youths are otherwise unemployed. For instance, in North-East India, due to the absence of significant industrial development and having the attraction of tourists can utilise the unemployed youths in various tourism related activities and generated income in different ways. Although the tourism industry is

often plagued with low wages, in many areas this industry is the only source of employment for the local populace.

Income is also generated from interest, rent and profits on tourism businesses, which might range from the interest paid on loans to an airline in order to buy aircrafts to rent paid to a landowner for a car park or a campsite near the sea. Taxation on tourism activities, such as VAT on hotel bills or direct taxation which some countries or regions impose on tourism also help to raise additional public income through tourism related activities (Holloway, 1985).

Employment: Tourism also leads to the creation of more employment opportunities in an area through the employment multiplier. When tourists stay at a destination, jobs are directly created in hotels, restaurants, travel agents, tour operators and tour guides. These individuals and their families require goods and services for their own consumption as well as suppliers to provide them the basic raw materials for their work, which indirectly leads to more employment in shops, small business establishments, schools, hospitals and the transport sector.

Balance of Payments: Tourism activities significantly influence a country's balance of payments. A foreign tourist purchases 'services' from the country s/he visits and consequently makes payments for 'invisibles'. Also the tourists make payment for the commodities they buy and the government of the host country earn in the form of taxation on various items that raises its revenue to improve the balance of payment. For a state government also when the people from other region of the country or from abroad visit the state, it can raise revenue in various ways to meet a part of its budget.

Investment and Development: Tourism activities often acts as a catalyst to the development process by opening up new avenues for lucrative business ventures, the success of which, invariably draws larger numbers of both private and public players. Thus, if tourism booms in an area leading to a high tourism income multiplier, rapid expansion in business activities can lead to yet more investment in tourism and allied sectors. This phenomenon can be explained by the concept of the 'accelerator' and has been observed in the growth and development of countries such as Hawaii.

4.4.2 The Environmental Effects of Tourism

It has been observed that, rapid tourism growth in small regions of a country, not only influences the economic life through the generation of employment and

income opportunities in the area, but also has visible social and environmental effects, which can have both political and economic consequences. These effects are significantly compounded in the case of international tourism. Recognising this aspect of tourism, the OECD in its report on the impact of tourism on the environment (1982) commented, "A high quality of environment is essential for tourism. On the other hand, the quality of the environment is threatened by tourist development itself which is promoted...because of its economic importance". Therefore, there exists a paradox between tourism development and the environment quality of an area.

One of the important environmental impacts is pollution caused due to large-scale tourist movement by road, air and water. All these three forms of travel lead to the emission of poisonous gases, unacceptable amounts of noise in pristine natural conditions and the over-use of precious natural resources. In some cases, increased tourism activities permanently scare the aesthetic quality of an environmental recreation site. For instance, the development of resorts in rural natural areas involve construction of lodges, restaurants and other catering amenities, toilet and parking facilities which permanently alter the environment of the concerned area. The increase of directional signs and promotional materials also reduce the visual appeal of a resort. Again, loss of foresight in planning leads to a loss of harmony and scale in the construction of new buildings for tourists.

Tourists also contribute to the visual pollution of an area by littering and dumping plastic wastes, and desecrating monuments with graffiti. Many historically significant monuments in India have been vandalised in this manner and in the UK, earlier direct access to the Stonehenge is prohibited, owing to the irresponsible actions of certain groups of tourists (Holloway, 1985). Proliferation of mass tourism activities also leads to 'congestion' in the tourist sites. The congestion in a site may affect the quality of the concerned site by affecting its physical, psychological and ecological aspects.

4.4.3 The Socio-Cultural Effects of Tourism

The cultural and social impacts of tourism are not only dependent on the number of tourists visiting a region but also on the 'nature' of tourism provided by the area. For instance, a tourist whose primary motive is to learn about new cultures will fully accept and acclimatise to the foreign customs and traditions, and will also

attempt to explore the region independently in order to be 'less visible' in the area. However, tourism operators today are increasingly 'packaging' recreational sites for wealthy tourists, who visit an area with specific expectations for facilities that they are accustomed to using in every day life. Since many recreational sites, situated in remote areas do not normally have access to such resources, the surrounding areas have to be permanently altered for meeting the visitors' requirements. This often involves displacing local indigenous people and interference in their ordinary lives, which is not surprisingly strongly resented by them, and at times viewed as a new form of 'colonialism' by the richer sections of society. The comparatively wealthy tourists who visit the less developed areas/countries also attract petty thieves and in certain countries of the Mediterranean, Caribbean and Latin American regions, tourist safety is a serious concern. In areas, where gambling is integral to the growth of tourism, prostitution and organised crime are also common, which results in the erosion of the value system of the indigenes (Holloway, *op. cit.*).

Since the growth of tourism in an area also leads to the growth of employment opportunities in that area, workers from agricultural and rural communities, who normally have very low income levels, abandon their families to earn their living in a completely different area. This often leads to the erosion of their value system and at times the complete breakdown of their marriages and families.

In addition to these, the absence of any common language often creates barriers for proper cultural exchanges and at time may even cause misunderstandings between tourists and the local populace. The increasing demand for local handicrafts by tourists also leads to the mass production of poorly crafted articles by locals which are also known as 'airport art'. This not only results in the tourist being duped, but also affects the local craftsmen adversely by robbing them of their traditional knowledge.

However, the growth of tourism in an area also has positive social impacts, since it not only opens up new avenues for earning income, but also leads to a regeneration of awareness and pride in one's traditions and cultures. In many areas, tourism has led to the revival of interest in tribal culture and traditions, regeneration and growth of cottage industries catering to tourist needs and has also opened up new avenues for knowledge and learning.

4.5 Scope and Method Adopted to Analyse the Impact of Tourism on Employment and Income

This chapter analyses the actual and potential economic effects of tourism in Shillong and the areas of selected sites, the results of which can provide the necessary impetus for implementation of much-required sustainable tourism development policies in the state. In order to understand the potential of tourism for the generation of income and employment a primary survey has been conducted. Data were collected from 50 individuals by simple random sampling, from those who have been engaged in different categories of tourism related activities and earn their livelihood in various capacities from the/vicinity of three selected sites. The data were collected over the span of year 2008 in order to obtain reliable income estimates from the respondents in the lean as well as peak season. After calculating their variation in income and generation of working days in the peak and lean seasons, total variation in income and employment generated can be estimated by taking into account the variation in number of visitors in the selected sites. It would then be possible to infer about the changes in employment and income due to a certain change in tourist arrival in the area. It can safely be assumed that the variation in number of tourists faced by the surveyed individual of different categories is proportional to the variation in tourists visited the sites in lean and peak season and hence the generalization of variation in income and employment generated due to variation in arrival of tourists from the estimated results would not be an exaggeration.

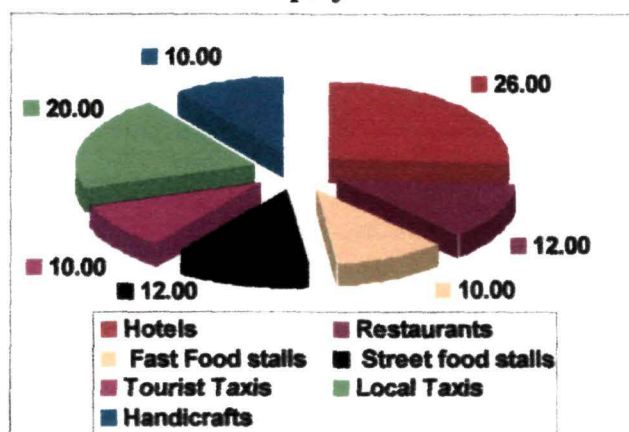
First of all the socio-economic characteristics of the surveyed individual are presented. The distribution of the total number of respondents according to the category of their employment is shown in table-4.3 and also in the pie-diagram-4.1

Table-4.3: Distribution of Respondents According to the Nature of their Employment	
Category	Number of Individuals
Hotel	13 (26.00)
Restaurant	6 (12.00)
Fast Food stall	5 (10.00)
Street Food stall	6 (12.00)
Tourist Taxi	5 (10.00)
Local Taxi	10 (20.00)
Handicraft	5 (10.00)
Total	50

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Out of those 50 surveyed individuals 13 respondents (26 per cent) were hotel owners, 10 respondents (20 per cent) were local taxi owners. Two groups of 6 respondents each (12 per cent of the sample) were restaurant owners and street food stall owners respectively. The smallest three groups comprising 5 respondents each (10 per cent) were fast food stall owners, tourist taxi owners and handicraft sellers. Though employment in various other ways are generated due to tourist activities (e.g., those who are engaged in supplying vegetables, milk, meat; taxi or other tourist vehicle repairing workshop, tourist guides, employees of various tourism promotion offices etc), here only those seven categories of respondents have come under the survey. Thus the estimated figure will provide the idea of minimum employment generated than the actual and potential capacity of it, i.e. the estimate will be the minimum guaranteed level of employment and hence the income.

Diagram-4.1: Distribution of Respondents According to the Nature of their Employment



During the survey of these 50 individuals, questions pertaining to their social and economic aspects of life like their age, gender, marital status, level of his/her education, family size, number of dependants, number of employees/assistants and total monthly income in the lean and peak tourist seasons etc have been asked and their distribution according to those characteristics are presented below.

4.5.1 Distribution of the Surveyed Respondents According to their Age Groups

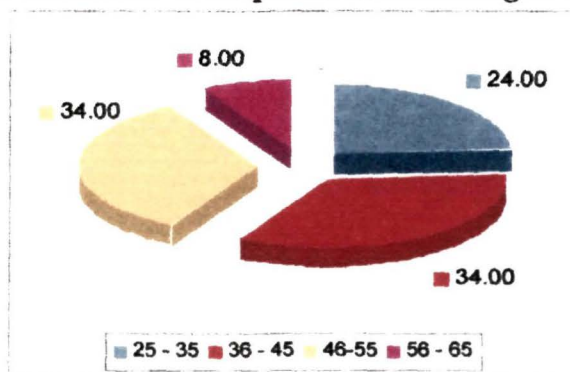
The distribution of respondents according to their age-groups is displayed in table-4.4 and pie-diagram-4.2. It is observed that the largest two groups of 17 respondents each (34 per cent) were in the age-groups of 36-45 and 46-55 years respectively. The second largest group of 12 respondents (24 per cent) was in the age-

group of 25-35 years and the smallest group of 4 respondents (8 per cent) was in the oldest age-group of 56-65 years. It indicates that about two-third of the respondents belong to 36-55 years age group, who are the major workers in the various hospitality sector except a few who are engaged in driving taxis and work in hotels.

Category	Age (Year)				Total
	25 – 35	36 - 45	46-55	56 - 65	
Hotel	0	3	6	4	13 (26.00)
Restaurant	1	3	2	0	6 (12.00)
Fast Food stall	1	2	2	0	5 (10.00)
Street Food stall	3	2	1	0	6 (12.00)
Tourist Taxi	2	2	1	0	5 (10.00)
Local Taxi	5	3	2	0	10 (20.00)
Handicraft	0	2	3	0	5 (10.00)
Total	12(24.00)	17(34.00)	17 (34.00)	4(8.00)	50 (100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-4.2: Distribution of Respondents According to their Age Group



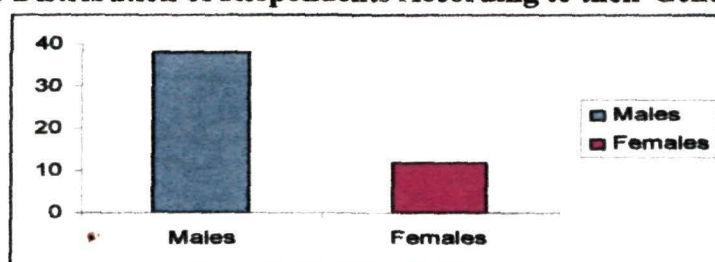
4.5.2 Distribution of the Surveyed Respondents According to their Gender

The distribution of the surveyed respondents according to their Gender is displayed in table-4.5 and diagram-4.3. The results indicate that the larger group of 38 respondents (76 per cent of the sample) constituted of male and only 12 respondents (24 per cent) were female. In Meghalaya, presence of women is abundant in almost all the social and economic activities excepting the political filed, taxi or bus drivers and in the hotels and restaurants. In the sample, thus, though females were present, they were very few in all the categories of activities related to tourism compared to their male counterpart especially in hospitality sector and transportation.

Category	Male	Female	Total
Hotel	10	3	13 (26.00)
Restaurant	5	1	6 (12.00)
Fast Food stall	2	3	5 (10.00)
Street Food stall	4	2	6 (12.00)
Tourist Taxi	5	0	5 (10.00)
Local Taxi	10	0	10 (20.00)
Handicraft	2	3	5 (10.00)
Total	38 (76)	12 (24)	50 (100)

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total

Diagram-4.3: Distribution of Respondents According to their Gender



4.5.3 Distribution of the Surveyed Respondents According to their Marital Status

The distribution of the respondents according to their marital status as shown in table-4.5 indicates that all the respondents irrespective of their differences in gender and nature of employment were married. In fact, in many cases, the respondents (especially the women) had started working only after marriage to support their extended families.

Category	Marital Status		Total
	Married	Unmarried	
Hotel	13	0	13 (26.00)
Restaurant	6	0	6 (12.00)
Fast Food stall	5	0	5 (10.00)
Street Food stall	6	0	6 (12.00)
Tourist Taxi	5	0	5 (10.00)
Local Taxi	10	0	10 (20.00)
Handicraft	5	0	5 (10.00)
Total	50 (100)	0	50 (100)

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total

4.5.4 Distribution of the Surveyed Respondents According to their Level of Education

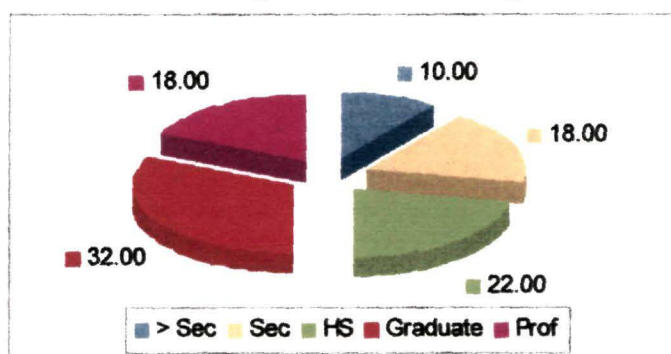
The distribution of respondents according to their level of education is shown in table-4.7 and diagram-4.4. The survey results indicate that the largest group of 16 respondents (32 per cent) were Graduates that was followed by a group of 11 respondents (22 per cent) who were Higher Secondary passed. Out of 50 respondents, Secondary and professionally qualified were 9 each (18 per cent) respectively. The smallest group of 5 respondents (10 per cent) had the lowest qualification of less than secondary level. The results also indicated a high correlation between the level of education and level of monthly income of the respondents.

Table-4.7: Distribution of the Surveyed Respondents According to their Level of Education

Category	Level of Education					Total
	Below Sec.	Sec. but below HS	HS but below Graduation	Graduate & above	Professional	
Hotel	0	0	0	6	7	13 (26.00)
Restaurant	0	0	1	3	2	6 (12.00)
Fast Food stall	0	2	2	1	0	5 (10.00)
Street Food stall	3	2	1	0	0	6 (12.00)
Tourist Taxi	0	0	2	3	0	5 (10.00)
Local Taxi	2	3	3	2	0	10 (20.00)
Handicraft	0	2	2	1	0	5 (10.00)
Total	5 (10)	9 (18)	11 (22)	16 (32)	9 (18)	50 (100)

Source: Field Survey by the researcher during 2007-08.
 Note: Figures in the parentheses represent percentage to total.

Diagram-4.4: Distribution of Respondents According to their Level of Education



4.5.5 Distribution of the Surveyed Respondents According to their Family Size

From the table-4.8 and diagram-4.5, it is observed that the largest group of 20 respondents, constituting 40 per cent of the sample had large family size of 7

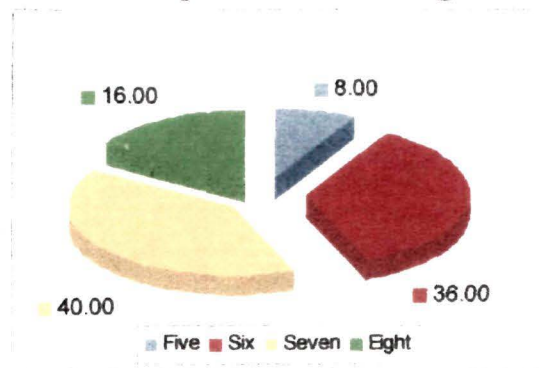
members. The second largest group of 18 respondents (36 per cent) had family size of 6 members and only 4 respondents (8 per cent) had the smallest family size of 5 members. However, 8 respondents (16 per cent) reported the largest family size of 8 members. Here most of the respondents reported very large family sizes, since they were living in 'joint-families'. Moreover, since in those cases, multiple income earners are observed, the true nature of their economic welfare may be observed from the number of 'dependants' (as shown in the following section) in their families.

Table-4.8: Distribution of the Surveyed Respondents According to their Total Family Size

Category	Total Number of Family Members				Total
	Five	Six	Seven	Eight	
Hotel	2	4	5	2	13 (26)
Restaurant	0	3	2	1	6 (12)
Fast Food stall	0	2	2	1	5 (10)
Street Food stall	0	2	3	1	6 (12)
Tourist Taxi	2	2	1	0	5 (10)
Local Taxi	0	3	5	2	10 (20)
Handicraft	0	2	2	1	5 (10)
Total	4 (8)	18 (36)	20 (40)	8 (16)	50(100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-4.5: Distribution of Respondents According to their Family Size



4.5.6 Distribution of the Surveyed Respondents According to the Total Number of their Dependants

In order to obtain a correct estimate of the economic empowerment of these 50 individuals, information regarding the number of 'dependants' in their homes was also obtained and tabulated in table-4.9 and also presented in diagram-4.6. It is observed that out of 50 individuals, 9 respondents (18 per cent) had the largest 5 dependants. 40 per cent of the sample had 4 dependants in their families, which was followed by 16 respondents (32 per cent) having 3 dependants in their families. The

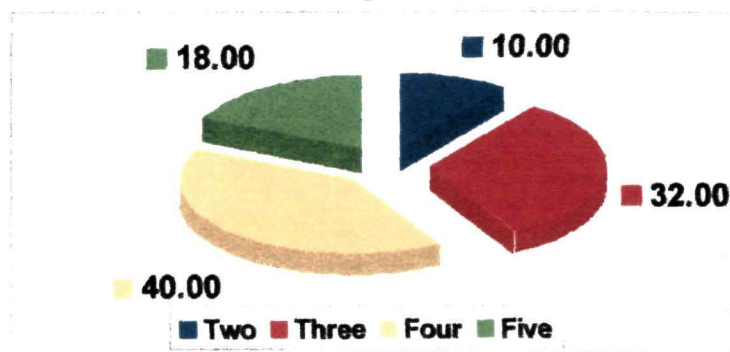
smallest group of 5 respondents (10 per cent) had smallest number of 2 dependants within their families. These results clearly indicate the importance of the respondents' jobs to their families. Thus the level of activities related to tourism is much relevant for the economic welfare of that local populace who have been earning their livelihood from such activities.

Table-4.9: Distribution of the Surveyed Respondents According to their Total Number of their Dependants

Category	Total Number of Dependants				Total
	Two	Three	Four	Five	
Hotel	1	6	4	2	13 (26)
Restaurant	0	1	4	1	6 (12)
Fast Food stall	0	0	3	2	5 (10)
Street Food stall	0	1	3	2	6 (12)
Tourist Taxi	0	2	2	1	5 (10)
Local Taxi	2	4	3	1	10 (20)
Handicraft	2	2	1	0	5 (10)
Total	5 (10)	16 (32)	20 (40)	9(18)	50 (100)

Source: Field Survey by the researcher during 2007-08.
 Note: Figures*in the parentheses represent percentage to total.

Diagram-4.6: Distribution of Respondents According to the Total Number of their Dependants



4.6 Economic Characteristics of the Respondents

In addition to the level of the total monthly income of the respondents, the total number of employees/assistants hired by them also provides an idea of their actual economic condition. Here, the variations of these two important factors in the lean and peak tourist seasons are computed from the different categories of respondents.

4.6.1 Distribution of Respondents According to the Total Number of their Employees in their Respective Businesses during Lean Season

It has been observed from hotel booking record in the city, that tourist inflow in the state is significantly lower in the months from December to April. These five

months are therefore characterised as the 'lean' tourist season in the state. Since the respondents were mostly dependant on the tourist inflow to these three sites for their activities, the number of employees/assistants that they hired in the different months of the year may indicate the nature of their economic gains from tourism in different months. The distribution of the respondents according to the number of their employees is shown in table-4.10 and diagram-4.7.

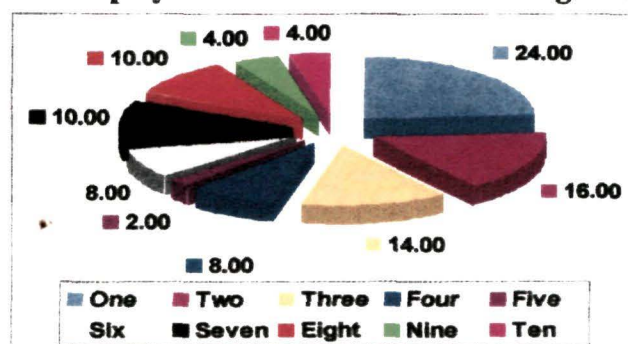
Category	Total Number of Employees										
	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten	Total
Hotel	0	0	0	0	0	2	3	4	2	2	13 (26)
Restaurant	0	0	0	0	1	2	2	1	0	0	6 (12)
Fast Food stall	0	1	2	2	0	0	0	0	0	0	5 (10)
Street Food stall	1	3	2	0	0	0	0	0	0	0	6 (12)
Tourist Taxi	4	1	0	0	0	0	0	0	0	0	5 (10)
Local Taxi	7	2	1	0	0	0	0	0	0	0	10 (20)
Handicraft	0	1	2	2	0	0	0	0	0	0	5 (10)
Total	12 (24)	8 (16)	7 (14)	4 (8)	1(2)	4(8)	5 (10)	5 (10)	2 (4)	2 (4)	50 (100)

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

The largest group of 12 respondents (24 per cent) were found to hire only one employee in the lean season. Of these 12 respondents, 11 were taxi owners, who owned two taxis, and therefore employed one person to drive their second vehicle. The only other respondent to hire just one worker was a street food-seller, operating from a small unlicensed shack in Sohra. The second largest group of 8 respondents (16 per cent) hired two employees during this season. Most of these respondents owned small food stalls and were almost totally dependant on the tourist inflow to the site in the vicinity of which they were working. A couple of these respondents (3 in number) were well-to-do taxi owners, who owned three taxis and therefore employed two workers. One of the respondents in this group however owned a small handicraft souvenir shop, and was also completely dependent on the tourist inflow to the site for the generation of his income. The third largest group of 7 respondents (14 per cent), consisting of 4 small food stall owners, 2 handicraft store owners and 1 taxi driver hired three employees in the lean season. Only 4 respondents (8 per cent) hired four employees each and two of these respondents were fast-food sellers and the other two were handicraft store owners. Again, only 1 respondent (2 per cent), a restaurant owner, employed the next higher number of five employees in the lean season.

Another 4 respondents (8 per cent), 2 of whom were hotel owners and the other 2 were restaurant owners hired the next highest number of 6 employees in the lean season. The next two groups of 5 respondents each (total 20 per cent of the sample), constituting a total of 7 hotel and 3 restaurant owners, hired seven and eight employees respectively in this season. The last two groups of 2 respondents each (total 4 per cent of the sample), were all hotel owners and they employed a total of nine and ten employees respectively in the lean season, since their business condition was not completely dependant on the inflow of tourists alone.

Diagram-4.7: Distribution of the Surveyed Respondents According to the Total Number of Employees in their Businesses during Lean Season



4.6.2 Distribution of Respondents According to the Total Number of their Employees in the Peak Season

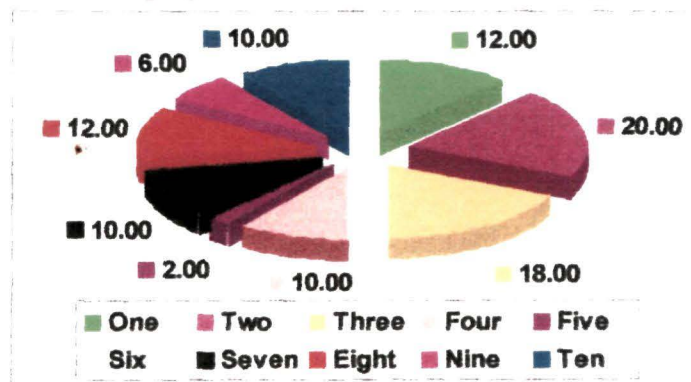
Beginning from the month of May to early November, each year, most of the major hotels in the town or tourist sites show 'full' occupancy. Therefore, these seven months can be considered as the 'peak' tourist season of the year. As expected, most of the respondents also reported higher income in these months and also employed a significantly greater number of people in this season. This 'peak' season also opened up new income avenues for the 'seasonal' workers, such as the ice-cream sellers, corn cob sellers, and other individuals hired as 'extra helps'. The distribution of the respondents according to the total number of employees hired by them in the peak season including the regular and temporary workers is shown in table-4.11 and diagram-4.8.

Table-4.11: Distribution of the Surveyed Respondents According to the Total Number of Employees in their Businesses during Peak Season

Category	Total Number of Employees										
	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten	Total
Hotel	0	0	0	0	0	0	2	3	3	5	13 (26)
Restaurant	0	0	0	0	0	0	3	3	0	0	6 (12)
Fast Food stall	0	0	2	3	0	0	0	0	0	0	5 (10)
Street Food stall	0	2	4	0	0	0	0	0	0	0	6 (12)
Tourist Taxi	2	3	0	0	0	0	0	0	0	0	5 (10)
Local Taxi	4	5	1	0	0	0	0	0	0	0	10 (20)
Handicraft	0	0	2	2	1	0	0	0	0	0	5 (10)
Total	6 (12)	10 (20)	9 (18)	5 (10)	1 (2)	0	5 (10)	6 (12)	3 (6)	55 (10)	50 (100)

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

Diagram-4.8: Distribution of the Surveyed Respondents According to the Total Number of Employees in their Businesses during Peak Season



From the table-4.11, it is observed that only 6 respondents (12 per cent), all taxi drivers employed just one employee for their one additional vehicle. The next group of 10 respondents (20 per cent), constituting of 8 taxi drivers and 2 street food vendors employed two workers in the peak season. This shows an increase in the incomes of the taxi drivers in the peak season, since in the lean season, only 3 taxi drivers employed two workers, whereas in the peak season, a total of 8 taxi drivers (indicating almost double the original respondents) employed two workers. The next group of 9 respondents (18 per cent), consisting of 6 fast-food stall owners (as against 4 in the lean season), two handicraft store owners and one taxi driver employed three workers in this season. A total of 5 respondents (10 per cent), consisting of 3 fast-food sellers (as against 2 in the lean season) and 2 handicraft sellers hired four employees in this season. Only 1 respondent (2 per cent), a handicraft seller, employed five workers in this season. The next group of 5 respondents (10 per cent), consisting of 2 hotel owners (as against 3 in the lean season) and 3 restaurant owners (as against 2 in the lean season) hired seven employees in this season. Another 6 respondents (12 per

cent) consisting of 3 hotel owners (as against 4 in the lean season) and 3 restaurant owners (as against 1 in the lean season) hired eight employees, indicating a higher inflow of income in this season. Another group of 3 respondents (6 per cent), all hotel owners (as against 2 in the lean season) hired nine workers, and the final group of 5 respondents (10 per cent), again all hotel owners (as against 2 in the lean season) hired the largest number of ten workers, as their activities and thus income increased significantly in this season, with the increase in the inflow of tourists into the city.

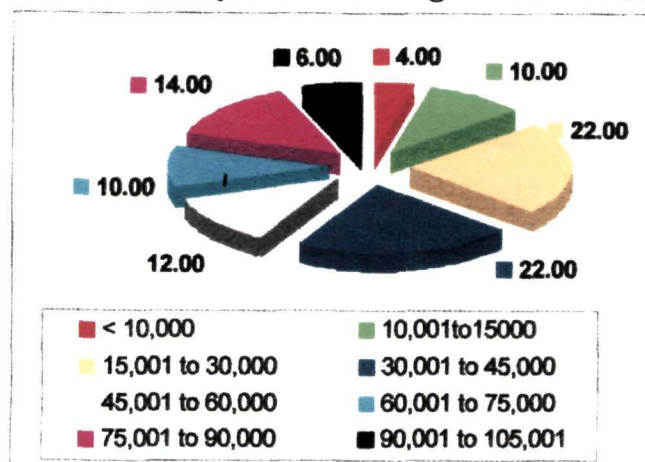
4.6.3 Distribution of the Surveyed Respondents According to their Level of Total Monthly Income during the Lean Season

Like the number of employees hired by the respondents during the 'lean' tourist season, total monthly incomes earned by them during these months can be computed and presented. From the variation in income during peak and lean season one can forecast about the variation in income due to variation in number of tourists faced by them. Here, the respondents have been divided into eight income groups starting from below Rs. 10,000 category to Rs. 105,000. The distribution of the respondents by their total family income during lean season is shown in table-4.12 and diagram-4.9. It is observed that two largest groups of 11 respondents each (22 per cent) reported their monthly income in the ranges of Rs.15001 to Rs. 30,000 and Rs.30001 to Rs.45000. The third largest group of 7 respondents (14 per cent) reported income in the range of Rs. 75001 to Rs. 90,000, followed by a group of 6 respondents (12 per cent) who reported income in the range of Rs. 45,001 to Rs. 60,000.

Category	Level of Income During Lean Season								Total
	10000 Or Less	10001-15000	15001 - 30000	30001- 45000	45001- 60000	60001- 75000	75001- 90000	90001 - 105001	
Hotel	0	0	0	0	0	3	7	3	13 (26)
Restaurant	0	0	0	2	2	2	0	0	6 (12)
Fast Food stall	0	0	3	1	1	0	0	0	5 (10)
Street Food stall	2	3	1	0	0	0	0	0	6 (12)
Tourist Taxi	0	0	0	3	2	0	0	0	5 (10)
Local Taxi	0	2	5	2	1	0	0	0	10 (20)
Handicraft	0	0	2	3	0	0	0	0	5 (10)
Total	2 (4)	5 (10)	11 (22)	11 (22)	6 (12)	5 (10)	7 (14)	3 (6)	50(100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-4.9: Distribution of the Surveyed Respondents According to their Level of Total Monthly Income during the Lean Season



The next two groups of 5 respondents (10 per cent) had monthly income in the ranges of Rs. 10001 to Rs. 15000 and Rs. 60001 to Rs. 75000 respectively. Only 3 respondents (6 per cent), all hotel owners reported the highest monthly income in the range of Rs. 90001 to Rs. 105000 and the smallest group of 2 respondents (4 per cent), both vendors (street food sellers) reported monthly income under Rs.10000.

4.6.4 Distribution of the Surveyed Respondents According to their Level of Total Monthly Income during the Peak Season

In order to know the effect of increased tourist inflow in the total monthly income of the respondents, income generated by the respondents during the peak season is computed and presented in table-4.13 and also in diagram-4.10. For the convenience, they have been divided into eight income groups as shown in the table. The largest group of 10 respondents (20 per cent) reported total monthly income in the ranges of Rs. 45,001 to Rs. 60,000, followed by the two second largest groups of 9 respondents each (18 per cent) who reported total monthly income in the ranges of Rs.30,001 to Rs. 45,000 and the highest income level of greater than Rs. 115,000. The third largest group of 6 respondents (12 per cent) reported monthly income in the range of Rs. 60,001 to Rs. 75,000, followed by a group of 5 respondents (10 per cent) who reported very high monthly income between Rs. 90001 and Rs. 105000.

Table-4.13: Distribution of the Surveyed Respondents According to their Level of Total Monthly Income during the Peak Season (Rs)

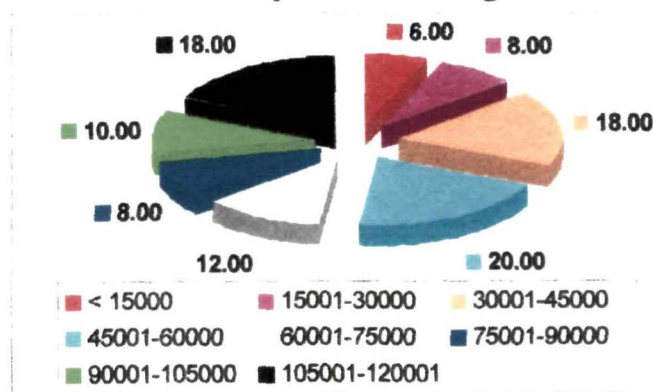
Category	Level of Monthly Income During Peak Season								Total
	15000 or Less	15001-30000	30001-45000	45001-60000	60001-75000	75001-90000	90001-105000	More than 115000	
Hotel	0	0	0	0	0	3	2	8	13 (26.0)
Restaurant	0	0	0	0	1	1	3	1	6 (12.0)
Fast Food stall	0	0	2	2	1	0	0	0	5 (10.0)
Street Food stall	3	2	1	0	0	0	0	0	6 (12.0)
Tourist Taxi	0	0	1	2	2	0	0	0	5 (10.0)
Local Taxi	0	2	4	3	1	0	0	0	10 (20.0)
Handicraft	0	0	1	3	1	0	0	0	5 (10.0)
Total	3 (6)	4 (8)	9 (18)	10 (20)	6 (12)	4 (8)	5 (10)	9 (18)	50

Source: Field Survey by the researcher during 2007-08.

Note: Figures in the parentheses represent percentage to total.

The next two groups of 4 respondents each (8 per cent) had monthly income in the ranges of Rs. 15,001 to Rs. 30,000 and Rs. 75,001 to Rs. 90,000 respectively and only 3 respondents (6 per cent), all street food sellers and vendors reported the lowest monthly income below Rs. 15,000. From this analysis, it is observed that of the 50 respondents, a total of 14 individuals, constituting 28 per cent of the total sample reported total monthly income between Rs. 90,001 to Rs. 115,000 and thus, it is evident that the greater inflow of tourists into the state during the months of the 'peak' season significantly increases the income levels of the various stakeholders of tourism activities.

Diagram-4.10: Distribution of the Surveyed Respondents According to their Level of Total Monthly Income during the Peak Season



The effect of variation in arrival of tourists on the employment has been estimated from the table-4.10 and 4.11. First of all, total and average employment generated from different activities by the sample respondents have been calculated

during both the seasons. Then comparing these two, the changes in employment is calculated, which is presented in table-4.14.

Table-4.14: Percentage Variation in Employment and Tourist Inflow from Lean to Peak Season as Observed from the Sample Survey

Category	Employees in Lean Season	Employees in Peak Season	Percentage Variation in Employment	Tourists in Lean Season	Tourists in Peak Season	Percentage Variation in tourist Inflow
Hotel	103	115	11.65	55	100	81.82
Restaurant	39	51	30.77	50	120	140
Fast Food stall	16	18	12.5	60	170	183.33
Street Food stall	13	16	23.08	30	80	166.67
Tourist Taxi	6	8	33.33	30	60	100
Local Taxi	14	17	21.43	40	90	125
Handicraft	16	19	18.75	30	80	166.67
Total	207	244	17.87	295	700	137.29

Source: Field Survey by the researcher during 2007–08.

It is evident from the table that an increase in the tourist inflow to the state is always accompanied by an increase in the employment opportunities for the local populace. For an increase of 137.29 per cent tourist inflow, about 18 per cent increase in approximate total employment is observed. Here, due to absolute increase in tourist inflow by 405 there was an increase in employment of 37 working days; that means 91 working days increment is possible for one thousand increases in tourist flow.

From secondary sources, it has been observed that most of the popular hotels in Shillong² have on an average 50 rooms, of which 10 are for ‘single’ occupancy and the remaining are for ‘double’ occupancy. In the ‘lean’ season, when the hotels do not have full occupancy, on the average, about 55 individuals reside in a single major hotel in a day and this number nearly doubles in the ‘peak’ season. The primary survey results also indicate that in the ‘lean’ season, the hotels hire 6 to 8 full time workers on an average, while in the ‘peak’ season they hire about 9 full time workers. Assuming that, on an average, for 55 individuals, a large hotel hires 8 permanent workers and therefore for every 100 individual visitors about 15 workers are employed. Thus, in the year 2008, when a total of 462952 tourists visited different sites of Meghalaya throughout the year, approximately 69442 working days of employment was generated. During the peak seasons, everyday employment in the

² One may argue that in those hotels, both the tourists as well as other visitors (for official or business activities) stay and thus the variation in the number of guests may be due to any of them. But here, we may assume that flow of other visitors remain more or less uniform over time (except a few days in winter when some people remain out of station) and the variation in the number of guests is primarily due to the visitors for recreation purposes. Moreover, most of the visitors for business and official purposes also enjoy recreation facilities in the area of and on.

hotels alone increase by over 100 in Shillong and the selected sites. These workers are employed at different positions such as waiters, bell boys, guards, receptionists, booking clerks, cleaner and cooks. Since these workers spend their incomes on various consumer goods and services, thereby providing new employment opportunities for individuals in other segments of the market. Therefore, with the increase in number of tourists visiting in an area, employment opportunities in different sectors including transport, hotels, restaurants and eateries; agricultural farms, cottage industries that produce local handicraft and handloom products; travel agents, tour operators and tour guides in the concerned area rises significantly.

Table-4.15 reveals that due to increase in tourist inflow recorded by the sample activities during peak season over lean season of the year by 137.29 per cent, monthly income of those respondents increased by about 48 per cent. In other words, due to increase in 405 tourists there was an approximate increase in income of those people of Rs 133103 i.e. for an absolute increase of 1000 tourists in such type of areas, income of the stakeholders together increased by around Rs 328650. That is an indication of tremendous potential of tourism to increase revenue or income of the people involved in tourism related activities.

Table-4.15: Percentage Variation in Monthly Income and Tourist Inflow from Lean to Peak Season as Observed from the Sample Survey

Category	Total Income in Lean Season	Total Income in Peak Season	Percentage Variation in Income	Tourists in Lean Season	Tourists in Peak Season	Percentage Variation in tourist Inflow
Hotel	82500.62	103270.04	25.175	55	100	81.82
Restaurant	52500.5	92500.58	76.19	50	120	140
Fast Food stall	31500.5	49500.5	57.14	60	170	183.33
Street Food stall	11667	17500.25	50.00	30	80	166.67
Tourist Taxi	43500.5	55500.5	27.59	30	60	100
Local Taxi	26500.5	42000.5	58.49	40	90	125
Handicraft	31500.5	52500.5	66.67	30	80	166.67
Total	279669.62	412772.87	47.59	295	700	137.29

Source: Field Survey by the researcher during 2007-08.

4.7 Conclusion

The overall analysis of this chapter clearly reveals that there is significant positive impact of tourism on employment and income in the areas of tourist sites. Therefore the management of tourism is very important for an area like North-East India especially Meghalaya where there is dearth of other opportunities, to raise scope for employment and income to boost the economy of the area. It thus provides a

guideline for undertaking tourism promotion programmes with proper care for environment, infrastructure and other social and cultural factors in the area, which would definitely improve welfare of the people who are engaged in tourism related activities in the long run.

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Chapter-5

Socio-Economic, Demographic and Regional Status of the Sample Tourists

- 5.1 Geographical Characteristics of the Surveyed Tourists
 - 5.1.1 Distribution of Tourists Visiting Meghalaya and also of the Surveyed Tourists in the Selected Sites by Nationality
 - 5.1.2 Distribution of the Surveyed Tourists According to their Zone of Origin
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- 5.7.2.1** **Distribution of the Surveyed Tourists According to their Age**
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- 5.7.3.1** **Distribution of the Surveyed Tourists According to their Nature of Employment**
- 5.7.3.2** **Distribution of the Surveyed Tourists According to their Total Monthly Family Income**
- 5.8** **Conclusion**

Chapter 5

Socio-Economic, Demographic and Regional Status of the Sample Tourists

The pursuit of any recreational activity by an individual is constrained by many socio-economic factors such as personal as well as family income, family size, educational status and knowledge, nature of employment, age of the individual, the distance which the individual has to travel to reach the site and the recreational facilities/options available in a particular site. The travel costs and opportunity cost of visiting the site/s, social and ethnic disturbances in the area of interest are also supposed to influence the decision of a potential tourist to visit a site. In this chapter, socio-economic, demographic and geographical characteristics of the surveyed tourists have been analysed.

5.1 Geographical Characteristics of the Surveyed Tourists

The location of a tourist site is an important factor that determines the inflow of tourists into the site as well as the frequency of their visits. It has been observed that often tourists are willing to spend a considerable amount of money to visit a site if it has some unique significance, but in such cases the frequency of visit is invariably lower. Since the North-Eastern part of the country especially Meghalaya is relatively underdeveloped and lacks proper railway network, the tourist inflow in the region is not very encouraging. The capital of the state, Shillong is connected with the country's mainland through Guwahati by a national highway, which also faces blockades many a time of each year owing to natural calamities, political disturbances and the like. In addition to these, the tourist inflow in the state is also affected at the time of natural and political disturbances in Assam, northern West Bengal through which majority of the visitors travels to reach Meghalaya.

However, the state of Meghalaya has been witnessing a steady increase in the inflow of tourists over the past few years (as shown in table-5.1), which indicates that with the exception of the year 2005, the inflow of tourists in the region has been

increasing since 1989. This can be attributed primarily to the unique natural and climatic beauty and calmness of the area, absence of terrorist attacks and reduction in other violent activities in recent years in the state. The North-East specific Tourism Promotion Package of the Ministry of Tourism, “India’s North-East Paradise Unexplored”, launched in the year 2006, was also responsible to a certain extent for the proliferation of tourism in the region. The rising disturbances and insecurity in some other tourist zones like Jammu and Kashmir, Manipur etc, absence of inner-line permit system which is prevalent in Arunachal Pradesh, Nagaland etc also caused diversion of tourists towards the tourist sites in and around Shillong, which is clear from the remarkable increase in tourist inflow into Meghalaya during the last two years 2005–06 and 2006–07. The air travel allowed to the employees on LTC by the Government of India in recent years also raised tourist inflow in recent past.

Year	Domestic	Foreign	Total	Increase over previous year (%)
1998	136952 (99.23)	1055 (0.76)	138007	--
1999	159730 (98.78)	1971 (1.22)	161701	14.65
2000	169929 (98.65)	2327 (1.35)	172256	6.13
2001	178697 (98.68)	2390 (1.32)	181087	4.88
2002	268529 (98.83)	3191 (1.17)	271720	33.36
2003	371953 (98.33)	6304 (1.67)	378257	28.17
2004	433495 (97.22)	12407 (2.78)	445902	15.17
2005	375911 (98.66)	5099 (1.34)	381010	-17.03
2006	400287 (98.95)	4259 (1.05)	404546	5.82
2007	457685 (98.86)	5267 (1.14)	462952	12.62

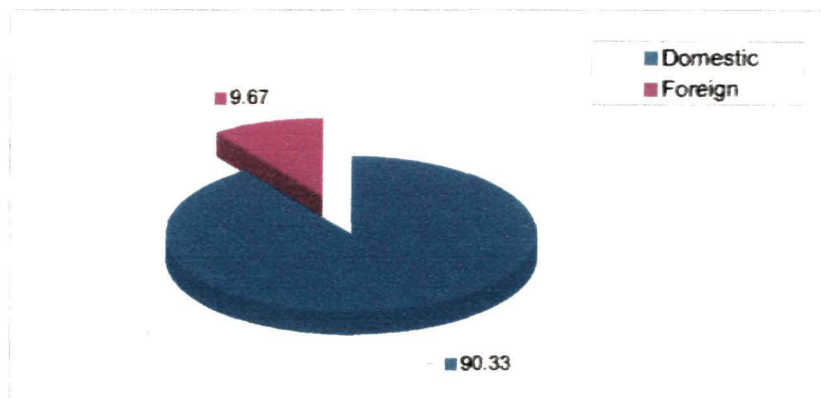
Source: Directorate of Tourism, Government of Meghalaya (2009).
Notes: (i) Figures in the last column represent the annual percentage change in tourist inflow to the state. (ii) Figures in the parentheses represent percentage to total tourists in the state.

5.1.1 Distribution of Tourists Visiting Meghalaya and also of the Surveyed Tourists in the Selected Sites by Nationality

From table-5.1, it is observed that there has been a steady increase in both domestic and foreign tourists visiting the state of Meghalaya. The number of domestic tourists in the state has increased by about 334 per cent and that of foreign tourists by about 499 per cent during 1998 to 2007. However there has been very insignificant change in the distribution of tourists between domestic and foreign origin. Though number of foreign tourists has increased significantly over the years, yet it contributes merely one per cent of the total tourists visiting the sites in the state. The personal sample survey of the 600 tourists, during December 2007 to December 2008, revealed that about 90 per cent (542) of them were from different parts of India i.e., domestic

tourists and only about 10 per cent of them i.e., 58 were foreign tourists. Diagram-5.1 also displays the distribution of sample tourists in the selected sites of the state.

Diagram-5.1: Percentage Distribution of the Surveyed Tourists by Nationality



5.1.2 Distribution of the Surveyed Tourists According to their Zone of Origin

Although the state witnessed the arrival of domestic tourists from all parts of the country, yet it was found from the survey that, majority of tourists came from one or two states in any particular region. This may be due to the proximity of those states to the tourist sites, the success of tourism promotion programmes of the Meghalaya government in those states and the socio-economic profile as well as the 'affinity for travelling' of the people of the concerned states. The surveyed tourists have been grouped into nine different 'zones' depending on the distance travelled by the tourists from their 'home states' to reach the selected tourist sites in Meghalaya. The foreign tourists were grouped into one zone i.e., Zone-10 as they were very few in number. Since the socio-economic status of this category of tourists, differ widely from the domestic tourists; the characteristics of this group of tourists has been discussed in a separate section. However, the distribution of all the 600 respondents into the ten different zones is shown in table-5.2.

The survey indicates that most of the tourists visit either with their family members or in a group and there is wide variation in the number of visitors in a group. As such, one senior member from each group was interviewed for the collection of data. That is why, although the survey includes 542 respondent domestic tourists, a total of 2522 domestic tourists were included in the sample. Similarly, of the 209 foreign tourists, only 58 were interviewed in the present survey. On an average, a group of domestic tourists included 4 to 5 people, whereas a group of foreign tourists included 3-4 individuals.

Table-5.2: Distribution of the Surveyed Tourists According to the Zone of Origin

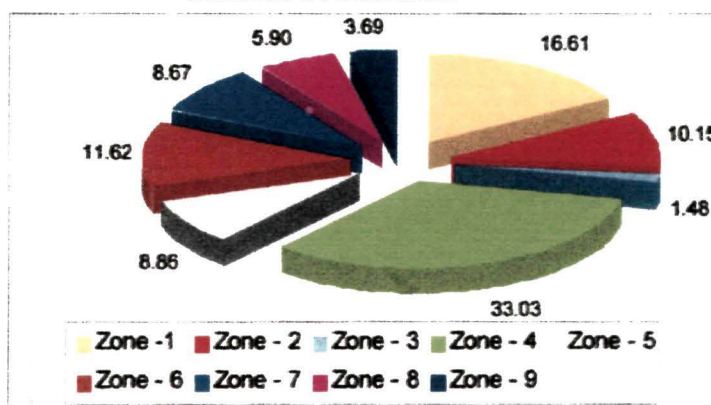
Sl. No.	Zone	States included in the Zone	Average Distance of the Zone from Shillong (km)	Total Number of Sample Respondents				Total Number of Sample Tourists			
				LHP	SP	NF	Total	LHP	SP	NF	Total
1.	Zone-1	Meghalaya	Less than 100	26	25	39	90 (15)	114	119	207	440 (16.11)
2.	Zone-2	Assam	101 to 400	19	18	18	55 (9.17)	87	85	91	263 (9.63)
3.	Zone-3	AP, Tripura, Manipur, Nagaland, Mizoram	401 to 1000	1	0	7	8 (1.33)	5	0	32	37 (1.35)
4.	Zone-4	West Bengal, Bihar	1001 to 1500	70	65	44	179 (29.84)	307	289	233	829 (30.36)
5.	Zone-5	Chattisgarh, MP, Orissa, UP	1501 to 2000	14	16	18	48 (8)	67	78	90	235 (8.6)
6.	Zone-6	Andhra Pradesh, Delhi, HP, Haryana, Punjab, Rajasthan	2001 to 2500	20	22	21	63 (10.5)	86	94	104	284 (10.4)
7.	Zone-7	Gujarat, Maharashtra	2501 to 3000	16	16	15	47 (7.83)	62	61	67	190 (6.96)
8.	Zone-8	Karnataka, TN	3001 to 3500	12	12	8	32 (5.33)	51	51	43	145 (5.31)
9.	Zone-9	Kerala	3501 to 4000	3	11	6	20 (3.33)	10	51	38	99 (3.63)
Domestic Total				181	185	176	542 (90.33)	789	828	905	2522 (92.35)
10.	Zone-10	Foreign countries	800 to 16000	19	15	24	58 (9.67)	61	51	97	209 (7.65)
				200	200	200	600	850	879	1002	2731

Source: Field Survey by the researcher during 2007–08.

Notes: (i) The zones have been formed on the basis of the approximate average distance travelled by the surveyed tourists to reach Shillong and the selected sites (ii) Figures in the parentheses represent percentage to total, (iii) AP indicates Arunachal Pradesh, (iv) As most of the tourists visited the surveyed sites in a group, number of individuals in each group is considered for the computation of the total number of sample tourists, (v) LHP => Lady Hydari Park, SP => Shillong Peak and NF => Nohkalikai Falls in Cherrapunjee.

Among the 542 surveyed domestic tourists 90 (16.61 per cent) were day visitors from Zone-1, i.e., from different parts of Meghalaya and a few of them were from the city of Shillong and the nearby other towns and villages. Thus, those people instead of calling tourists may be called only *visitors*¹. 55 respondents (10.15 per cent) were from Zone-2 i.e., the state of Assam and only 8 respondents (1.48 per cent) were found to visit from different parts of other North-Eastern states, except Assam and Meghalaya (Zone-3), which was also the lowest among all the zones. The maximum number of 179 respondents (33.03 per cent) was from Zone-4 which included the states of West Bengal and Bihar. The percentage of respondents from Zone-5 (Chhattisgarh, Madhya Pradesh, Orissa and Uttar Pradesh), Zone-6 (Andhra Pradesh, Delhi, Haryana, Himachal Pradesh, Punjab and Rajasthan), Zone-7 (Gujarat and Maharashtra), Zone-8 (Karnataka and Tamil Nadu) and Zone-9 (Kerala) were 8.86, 11.62, 8.67, 5.9 and 3.69 respectively. The percentage distribution of surveyed domestic tourists according to the zone of origin has also been shown in diagram-5.2.

Diagram-5.2: Percentage Distribution of the Surveyed Domestic Tourists into Zones based on the Distance Travelled by them to reach Through Shillong the Selected Tourist Sites



The table-5.2 also indicates the distribution of surveyed tourists in addition to the distribution of respondents across zones. The zonal distribution of total sampled tourists also showed a similar pattern as that of the respondents. Out of total 2522 number of tourists, 440 (17.45 per cent) were from Zone-1 (Meghalaya). They visit these sites in order to have some relaxation and escape from the ordinary humdrum of life. In this process they also contribute significantly to the revenue of the small entrepreneurs in and around the sites. As some of those people frequently visit from

¹ According to the standard definition of tourists, they may not be called tourists. But they are the genuine visitors to the sites and they also spend for enjoying recreation benefits from the tourist sites. Thus, they are also considered in the study for the purpose of analysis.

Shillong and the surrounding areas, the nearby Lady Hydari Park within the town or Shillong Peak for a few hours who are not the tourists in the conventional sense. But they are the visitors and considered in the study for valuation as they place some value on those sites and derive pleasure/recreation by visiting there. The tourists from Assam (Zone-2) primarily prefer to visit these sites frequently, due to the proximity of these areas from their homes. A large number of these families also had their wards studying in various educational institutions in Shillong or had some near relations employed here and hence visit the sites along with them frequently.

The least number of tourists from the other North-Eastern states may be due to the lack of communication facilities and socio-economic conditions of the people of those states. The responses of the tourists from the other six North-Eastern states also revealed that most of them felt that these states share similar flora and fauna and natural topographical features owing to similar climatic conditions and the general public of those areas was actually not very much aware of the unique topographical features, natural bounty and ethnic cultural variations of each individual state. Most of these tourists were not aware of the tourism promotion programmes undertaken by the government of Meghalaya. So if information is disseminated in these states at regular intervals, a marked improvement in the tourist inflow may be witnessed owing to the proximity of these states to the tourist sites.

The largest number of tourists was from the states of West Bengal and Bihar. Most of the respondents from this state were very knowledgeable about the unique characteristics of Meghalaya. A significant number of tourists from West Bengal also had business interests in the region (mostly in handicrafts) and these trade and business relations between the two states have positive effect on the development of tourism in Meghalaya. Another important factor contributing to the significant tourist inflow from the region may be due to the fact that every year hundreds of students from Meghalaya relocate to West Bengal for pursuing higher education, and the interaction between the people from these two different areas has developed an interest in the mind of the people of that zone about Meghalaya which is finally translated into a large number of tourists visiting Meghalaya from West Bengal. The lesser number of tourists from other regions may be due to the lack of campaign and fear of people to visit the remote North-East and the communication gap.

Of the 542 respondents among the domestic tourists, the majority comprising 74.17 per cent (402 in total) came with the sole intention of visiting this area, but for

the other 25.83 per cent (140 respondents) it was a 'business-cum-pleasure' trip. This second category of tourists, mainly from distant states was in some cases totally ignorant of the natural wealth of the state and had decided to tour these sites only after coming to Shillong and having information from the local sources through interaction. This is a clear indication that tourism promotion programmes have not yet penetrated all the farthest and remotest corners of the country and a lot more needs to be done before *Tourism* can emerge as a substantial contributor to the state's revenue and employment. The zone-wise distribution of surveyed domestic tourists according to their purpose of visit is shown in table-5.2a and the total distribution as per the purpose is also described in pie diagram-5.2a. The table revealed that none of the visitors from Zone-1 had business cum pleasure motive as they were all day visitors from the neighbouring areas for enjoyment. Also, none of the international visitors from Zone-10 had such motive and were here on purely recreational purpose.

Table-5.2a: Distribution of the Surveyed Tourists According to their Purpose of Visit

Zone	Purpose of Visit						Total
	Recreation	Health Improvement	Speleology	Educational Tour	Rock Concerts	Business	
Zone-1	83	4	3	0	0	0	90 (15.00)
Zone-2	28	9	7	2	5	4	55 (9.17)
Zone-3	3	0	0	2	2	1	8 (1.33)
Zone-4	133	19	11	0	7	9	179 (29.83)
Zone-5	27	6	3	0	7	5	48 (8.00)
Zone-6	41	3	9	0	3	7	63 (10.5)
Zone-7	33	5	4	0	0	5	47 (7.83)
Zone-8	20	7	3	0	0	2	32 (5.33)
Zone-9	13	3	1	0	0	3	20 (3.33)
Zone-10	54	0	2	2	0	0	58 (9.67)
Total	435 (72.50)	56 (9.33)	43 (7.17)	6 (1.00)	24 (4.00)	36 (6.00)	600 (100)

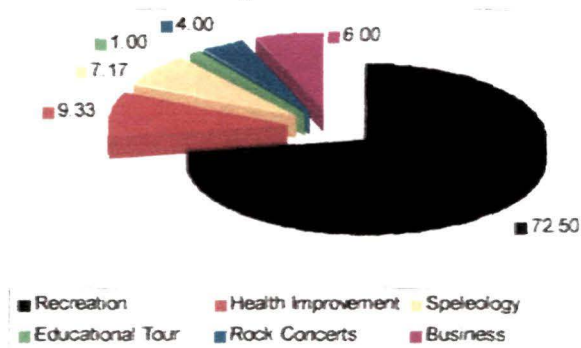
Source: Field Survey by the researcher during 2007-08.

Note: Figures in the parentheses represent percentage to total.

Tourism in the state is therefore dependent not only on the natural beauty of the state but also on the educational, health and business prospects that it has to offer. However, the limitation of 'individualised' tour package is a major deterrent for senior and serious visitors to the state. This is evident from the fact that of the 542 respondents among the domestic tourists, only 147 individuals (27.12 per cent) had come with pre-decided package deals. However, the other 395 respondents (72.88 per cent) of the interviewed tourists, were dependent totally on their own knowledge or friends and relatives (in certain cases) to determine their tour itinerary to the state.

The major hotels in the state were however well equipped with brochures, booklets (designed by the Meghalaya Tourism Development Corporation (MTDC)) containing detailed information about the various sites in and around the city.

Diagram-5.2a: Percentage Distribution of the Surveyed Tourists According to their Purpose of Visit



In the case of the foreign tourists, more than 90 per cent of them were visiting the state as a part of a larger package tour which also included visits to the different other states of the North-Eastern region. They gathered detailed knowledge about the tourist sites primarily from the travel books, magazines and documentaries and in certain cases from the overseas tourism promotion programmes of the Ministry of Tourism, Government of India.

5.2 Demographic and Social Characteristics of Surveyed Domestic Tourists

During last few decades, mass tourism activities all over the world have been increased by leaps and bounds. This is often attributed to the following important factors:

1. Improvements in technology that allow the transport of large numbers of people within a short span of time to places of interest and
2. Higher levels of disposable income and increased leisure time for a sizeable portion of the population.

The tourists today are also better educated and have more sophisticated tastes and desire different forms of tourism such as Adventure Tourism, Agro Tourism, Bookstore Tourism, Cultural Tourism, Ecotourism, Garden Tourism, Heritage Tourism, Medical Tourism, and Space Tourism; which are broadly referred to as *niche tourism*. This requires tourism service providers to constantly upgrade their services and provide better quality and diversified products to the tourists.

However, social factors like age profile of the tourists, their gender, marital status and the family size also significantly affect the nature of recreational products and services sought by them. Therefore, a detailed examination of the socio-economic characteristics of the tourists visiting the tourist sites of Meghalaya is essential to establish the nature of tourist inflow into the region; which in turn can help in the development of *niche* products and services with respect to the 'needs' of the tourists visiting the state. Therefore the social and economic characteristics of the surveyed tourists have been examined in detail. Among the social characteristics, the following quantifiable factors have been considered: Age, Gender, Marital Status, Level of Education and Family Size.

5.2.1 Distribution of the Surveyed Tourists (Domestic) According to their Age

An important factor that merits serious consideration in the development of tourism in any area is the age profile of tourists visiting the area. The age profile of tourists in an area dictates the recreational facilities in addition to the compulsory amenities that need to be made available for proper growth of tourism in that area. The knowledge of age profile is also important for knowing the kind of hospitality required by the potential tourists and hence the development of the hospitality sector.

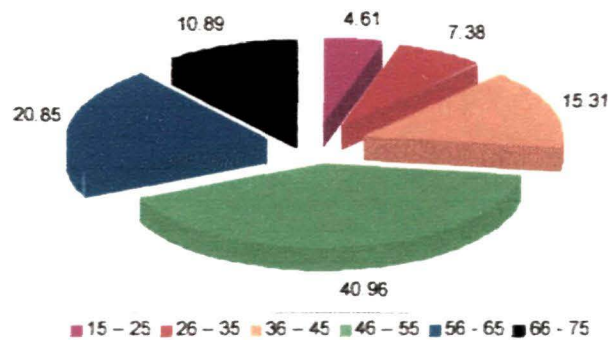
Zone	Age Group (Year)						Total
	15-25	26-35	36-45	46-55	56-65	66-75	
Zone-1	14 (15.56)	11 (12.22)	24 (26.67)	28 (31.11)	13 (14.44)	0 (00)	90
Zone-2	7 (12.73)	5 (9.09)	9 (16.36)	25 (45.45)	5 (9.09)	4 (7.27)	55
Zone-3	1 (12.50)	1 (12.50)	1 (12.50)	2 (25.00)	2 (25.00)	1 (12.50)	8
Zone-4	3 (1.68)	11 (6.15)	25 (13.97)	76 (42.46)	37 (20.67)	27 (15.08)	179
Zone-5	0	2 (4.17)	5 (10.42)	27 (56.25)	12 (25.00)	2 (4.17)	48
Zone-6	0	3 (4.76)	4 (6.35)	23 (36.51)	27 (42.86)	6 (9.52)	63
Zone-7	0	2 (4.26)	6 (12.77)	19 (40.43)	11 (23.40)	9 (19.15)	47
Zone-8	0	3 (9.38)	6 (18.75)	13 (40.63)	4 (12.50)	6 (18.75)	32
Zone-9	0	2 (10.00)	3 (15)	9 (45.00)	2 (10.00)	4 (20.00)	20
Total	25 (4.61)	40 (7.38)	83 (15.31)	222 (40.96)	113 (20.85)	59 (10.89)	542 (100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

From table-5.3 and the pie Diagram-5.3 it is observed that maximum 40.96 per cent of the respondents belong to the age group of 46-55 years, which is followed by respondents in the age groups of 56-65 and 36-45 years respectively. A major portion of the respondents were government employees (shown later) who enjoy the Leave

Travel Concession (LTC) facility and many of them also avail free air travel provided by the government for visiting especially to North-East India. Hence, many of the government employees visit different sites of Meghalaya (along with other North-Eastern states) especially the chosen sites which are well-connected from Shillong and having a number of good hotels and restaurants. The youngest group of 15–25 years constituted only 4.61 per cent of the total sample domestic tourists and majority of them were day visitors from Zone-1 i.e., from the nearby areas.

Diagram-5.3: Percentage Distribution of the Surveyed Tourists (Domestic) According to their Age Group



Over all, about 77 per cent of the surveyed respondents belong to the age group of 36 to 65 years. Since these respondents were mostly accompanied by their families and young children, the tourist sites need to be more children friendly providing a variety of recreational facilities in addition to facilities for restrooms, food courts and maintain minimum safety and security standard.

5.2.2 Distribution of the Surveyed Tourists (Domestic) According to their Gender

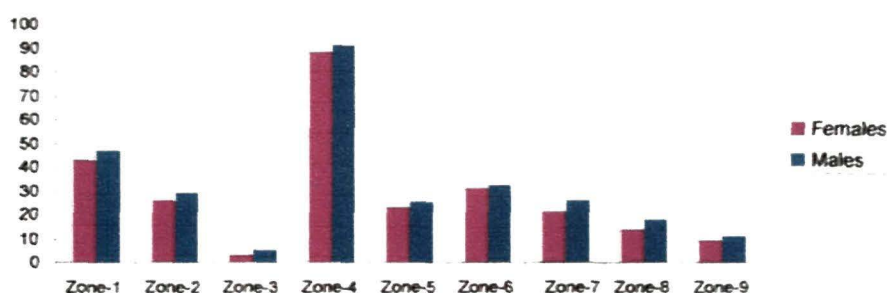
The gender-wise distribution of surveyed tourists is displayed in table-5.4. The table shows a more or less even gender-wise distribution of the respondents, since 47.6 per cent (258) of the respondents were females and 52.4 per cent (284) were males. The number of male tourists exceeded the number of female tourists by a small margin only, which is an indication of the empowerment of women who are now no longer confined within the four walls of their houses. However, many women do not find it feasible to take vacations owing to their responsibilities towards their families and their domestic chores. Moreover, women from other regions especially the plain areas of the country in general, do not opt for sales and marketing jobs, so most of the tourists visiting this region on 'business cum pleasure' trips were males. In spite of all

these encumbrances, a large number of female respondents in the sample indicate that many women are now free to travel for pleasure. Table-5.4 also shows that the gender-wise distribution of surveyed tourists is very nearly the same across all the regions of the country.

Zone	Female	Male	Total
Zone-1	43 (47.78)	47 (52.22)	90
Zone-2	26 (47.27)	29 (52.73)	55
Zone-3	3 (37.50)	5 (62.50)	8
Zone-4	88 (49.16)	91 (50.84)	179
Zone-5	23 (47.92)	25 (52.08)	48
Zone-6	31 (49.21)	32 (50.79)	63
Zone-7	21 (44.68)	26 (55.32)	47
Zone-8	14 (43.75)	18 (56.25)	32
Zone-9	9 (45.00)	11 (55.00)	20
Total	258 (47.6)	284 (52.4)	542

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.4: Gender-wise Distribution of Surveyed Domestic Tourists



5.2.3 Distribution of Surveyed Tourists (Domestic) According to their Marital Status

The marital status of tourists is considered to have a significant effect on the demographic profile of the tourist inflow to a region. It is commonly understood that young couples with children under 5 years of age are not inclined to travel long distances. They prefer short vacations to areas near their homes or mostly opt for day trips to recreational sites. In general, it is observed that, unmarried individuals prefer to undertake long distance trips to places that hold the promise of adventure sports, nature exploration and wildlife tours. Again older couples having grown children also indulge in long distance travel and exploration. The tourist sites of an area therefore

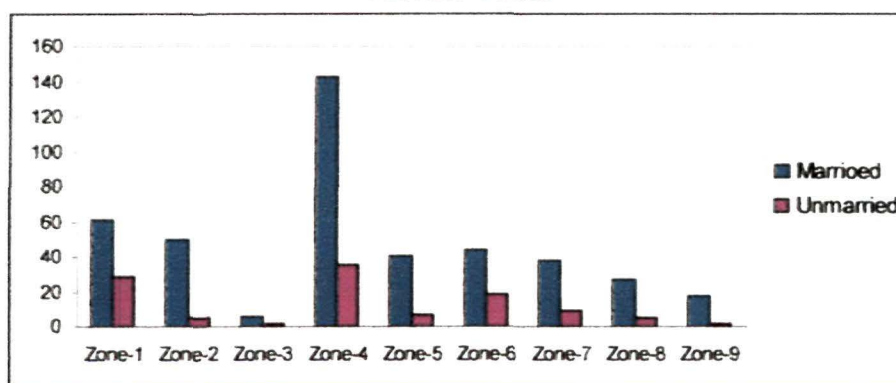
need to be well-equipped with the recreational facilities to suit the demands of tourists of all the different age groups. However, certain regions witness the arrival of a large number of tourists from one particular age group compared to others and therefore need to develop unique packages to cater to such specific requirements.

The zone-wise distribution of marital status of respondent tourists is displayed in table-5.5. It is observed that, of the 542 respondents, 428 (78.97 per cent) were married and only 114 (21.03 per cent) were unmarried. The larger group of the married respondents were in most cases accompanied by all their family members, and were naturally incurring more expenses despite many of them availing LTC facility. This group of tourists were also found to be keener on discovering local handloom products and artefacts.

Zone	Married	Unmarried	Total
Zone-1	61 (67.78)	29 (32.22)	90
Zone-2	50 (90.91)	5 (9.09)	55
Zone-3	6 (75.0)	2 (25.0)	8
Zone-4	143 (79.89)	36 (20.11)	179
Zone-5	41 (85.42)	7 (14.58)	48
Zone-6	44 (69.84)	19 (30.16)	63
Zone-7	38 (80.85)	9 (19.15)	47
Zone-8	27 (84.38)	5 (15.63)	32
Zone-9	18 (90.0)	2 (10)	20
Total	428 (78.97)	114 (21.03)	542

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total

Diagram-5.5: Distribution of Surveyed Tourists (Domestic) According to their Marital Status



Of the 114 unmarried respondents, 30 (26.32 per cent) were students and their visit to the areas was related to some educational requirements. 49 (42.98 per cent) of

those respondents were here for attending business conferences or work-related seminars and symposiums. Most of these tourists were travelling alone and their host institution had arranged the visit to the different tourist sites. The final 35 (30.7 per cent) of those respondents were visiting to those sites with their friends and/or relatives. The distribution of respondents according to their marital status is however associated with high degree of inter-zonal variation. The married respondents varied from about 68 per cent from Zone-1 to over 90 per cent from Zone-2.

5.2.4: Distribution of the Surveyed Domestic Tourists According to their Educational Qualification

Another factor, which has significant impact on the tour and travel plans of an individual, is his/her level of education. It has always been observed that individuals with higher education have a natural inclination towards travel and adventure, owing to the better exposure and information that they have. A higher level of education also implies that the individual has a stable, well paying job and therefore a larger amount of disposable income that can be utilised for enjoying vacations in hitherto unexplored areas by the individual. Also they are more mobile in connection with their activities and thus have better scope to visit places. The survey also validates the same and the results are shown in table-5.6.

The pie-chart (Diagram-5.6) clearly indicates that less than 1 per cent of the respondents had the least qualification of Secondary level. These (two) respondents were in fact students and were visiting the different sites with their respective families. Another 25 respondents (4.61 per cent of the respondents) were Higher Secondary passed. Most of the members of these two groups were from Zone-1 and the respondents were invariably students and were pursuing further education.

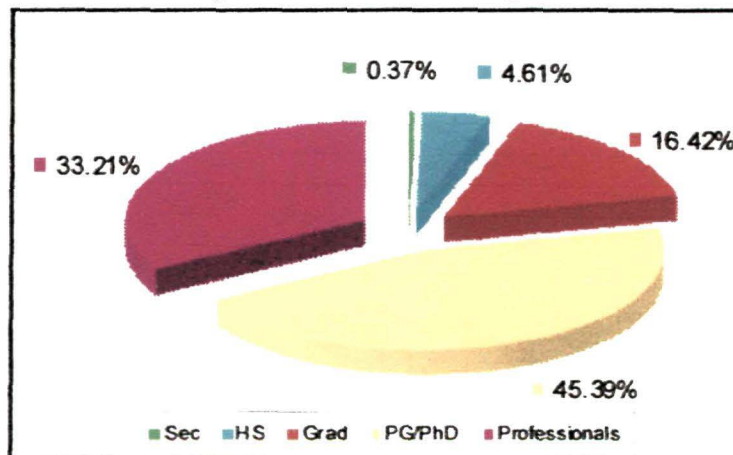
Majority of the respondents constituting 47.05 per cent of the domestic sample tourists were Post Graduates and/or PhD holders and about 33.28 per cent were other professional degree holders, which is followed by the graduate respondents comprising 15.69 per cent of the sample respondents. The section of tourists having public sector job and belonging to 30-45 years age group is found to have keen interest in adventure sports, eco-tourism and in exploring the ethnic diversity of different cultures. This group was also the most environmentally conscious and most willing to pay extra for the preservation and maintenance of the tourist sites.

Zone	Secondary and below	Higher Secondary	Graduate	Post Graduate/ PhD	Professionals	Total
Zone-1	2 (2.22)	12 (13.33)	27 (30.00)	23 (25.56)	26 (28.89)	90
Zone-2	0 (00)	7 (12.73)	15 (27.27)	24 (43.64)	9 (16.36)	55
Zone-3	0 (00)	1 (12.50)	2 (25.00)	3 (37.50)	2 (25.00)	8
Zone-4	0 (00)	3 (1.68)	21 (11.73)	96 (53.63)	59 (32.96)	179
Zone-5	0 (00)	0 (00)	7 (14.58)	25 (52.08)	16 (33.33)	48
Zone-6	0 (00)	2 (3.17)	11 (17.46)	27 (42.86)	23 (36.51)	63
Zone-7	0 (00)	0 (00)	2 (4.26)	28 (59.57)	17 (36.17)	47
Zone-8	0 (00)	0 (00)	0 (00)	18 (56.25)	14 (43.75)	32
Zone-9	0 (00)	0 (00)	0 (00)	11 (55.00)	9 (45.00)	20
Total	2 (0.37)	25 (4.61)	85 (15.69)	255 (47.05)	175 (33.28)	542 (100)

Source: Field Survey by the researcher during 200 –08.
Note: Figures in the parentheses represent percentage to total.

The professional degree holders were here primarily from the fields of Medicine, Information Technology, Engineering, Media and Journalism. Being well-educated they possessed an in-depth knowledge of the unique natural, socio-cultural and economic characteristics of the state and had pre-planned itineraries. They were also well conscious about the environmental impacts of tourism and also showed remarkable willingness to pay for the conservation and maintenance of the tourist sites in their pristine stage. Here it is to be noted that the higher and professional educated group form the major part of the sample tourists in all the respective zones despite their variation in percentages. However, the proportion of respondents with higher qualification increases with the distance of the zone.

Diagram-5.6: Percentage Distribution of the Surveyed Tourists (Domestic) According to their Educational Qualification



5.2.5 Distribution of the Surveyed Domestic Tourists According to their Family Size

The family size of an individual is one of the important factors, which affects his/her spending capacity. It has been commonly observed that individuals with large families do not normally undertake long distance trips, since they have to incur heavy travel, food and lodging expenditures. Such families normally travel only short distances as day tourists. The public sector employees of course use LTC for long distance travel, but for them also due to other expenses, high opportunity cost and other obstacles large family size affects their tour plan. The more frequent travelers normally have smaller families and often travel with similar family friends. The survey results presented in table-5.7 and pie-Diagram-5.7 also indicate the similar pattern.

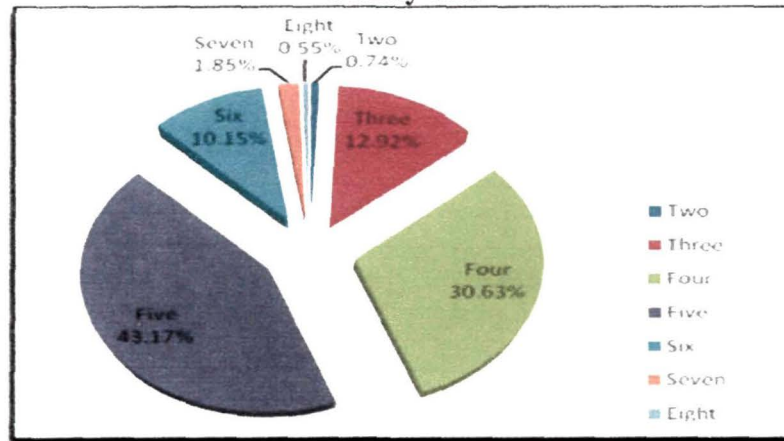
Zone\ Family Size	2	3	4	5	6	7	8	Total
Zone-1	0	8 (8.89)	24 (26.67)	32 (35.56)	19 (21.11)	5 (5.56)	2 (2.22)	90
Zone-2	0	5 (9.09)	19 (34.55)	15 (27.27)	13 (23.64)	2 (3.64)	1 (1.82)	55
Zone-3	0	0 (00)	1 (12.5)	4 (50.00)	1 (12.5)	2 (25.00)	0	8
Zone-4	0	27 (15.08)	56 (31.28)	84 (46.93)	12 (6.70)	0 (00)	0	179
Zone-5	0	7 (14.58)	17 (35.42)	21 (43.75)	3 (6.25)	0 (00)	0	48
Zone-6	0	4 (6.35)	19 (30.16)	38 (60.32)	2 (3.17)	0 (00)	0	63
Zone-7	0	6 (12.77)	17 (36.17)	22 (46.81)	1 (2.13)	1 (2.13)	0	47
Zone-8	3 (9.38)	7 (21.88)	6 (18.75)	12 (37.50)	4 (12.50)	0 (00)	0	32
Zone-9	1 (5.00)	6 (30.00)	7 (35.00)	6 (30.00)	0 (00)	0 (00)	0	20
Total	4 (0.74)	70 (12.92)	166 (30.63)	234 (43.16)	55 (10.33)	10 (1.85)	3 (0.55)	542 (100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Among the 542 interviewed domestic tourists, only 4 respondents constituting 0.74 per cent of the total sample had a family size of just 2 members. Of these 4 respondents, 3 were senior couples and the fourth couple was newly married. 234 respondents with family size of 5 members constituted the largest group of 43.16 per cent of the entire sample. It is followed by the respondents with family size 4, which

constitutes of 30.63 per cent of the total sample respondents. 70 respondents constituting 12.92 per cent of the sample have a family size of 3 members. Most of these respondents were also in the age group of 36–45 years. Whereas, 10.15 per cent of the respondents have a family size of 6 members and 10 respondents (1.85 per cent) of the whole sample have a family size of 7 members and finally 3 respondents (0.55 per cent of the sample respondents) have the largest family size of 8 members. Over all family size of the sample tourists varies from 2 to 8 across the regions. However, majority of the respondents have family size in between 4 and 5 across all the regions. One interesting feature is noticed from the table that proportion of large family size decrease with the increase in distance of the zone i.e., an indication of the decline in probability of the larger family visiting an area with the increase in distance.

Diagram-5.7: Distribution of the Surveyed Domestic Tourists According to their Family Size



5.3 Economic Characteristics of the Surveyed Domestic Tourists

The most important determinant of an individual's socio-economic standard is the level of his/her income, which is directly related to the nature of his employment. A stable job with an assured income not only provides reassurance to an individual but also gives him the opportunity to opt for vacations and also empowers an individual to spend his money on recreational activities. Many employers, including the Government of India, actually offer special incentives to their employees for undertaking long distance travels within and outside the country. Also nature of jobs also affects the individual's scope and opportunity to visit different places. Sometimes, people who attend some meetings or conferences outside their home; they simultaneously get a chance to manage and visit the places of tourist importance in

the nearby area of meeting or conference venue. In the process they visit those places with lesser time and expenditure. Therefore, a detailed examination of these characteristics of the tourists in the sample is provides some essential clue for determining the factors affecting demand for tourism and also to identify the specific 'needs' of the tourists visiting these sites of concern.

5.3.1 Distribution of the Surveyed Tourists (Domestic) according to their Nature of Employment

The nature of employment (as noted earlier) of an individual is one of the most important determinants of the use of his disposable income and leisure time. In other words, it is not only the level of income but also the nature of job that significantly affects the type and duration of visit of the tourists. The zone-wise distribution of surveyed tourists in accordance with their type of employment is shown in table-5.8. The table shows that the largest percentage (52.21 per cent) of the respondents was public sector employees. A government job not only ensures stability and security, but many government policies in fact, help its employee's to take vacations. The LTCs (Leave Travel Concessions) offered by the Government of India and some state level governments to all its employees is one of the principle reasons enabling the consistent growth of the domestic tourism sector in past decades.

Most of these government employees were visiting the region with their families. However, about 5 per cent of the sample tourists falling in this group had come in 'business-cum-pleasure' trips with their families. In case of such tourists, the tour expenses were officially funded and therefore they were keener on shopping and collecting the unique products of the region with the help of their tour budget.

The second largest group of visitors were private sector employees with about 20 per cent of the sample respondents. Individuals employed in the Multinational Corporations (MNCs), foreign banks and investment houses, the information technology sector, the health and medical care industry and in different engineering sectors, in general, receive a very high level of income in addition to many perquisites in the form of travel and shopping allowances. These factors definitely empower these individuals to afford to travel tourist places during their leisure time.

These private sector employees however showed keen interest in exploring the region, learning about the various tribes and their cultures and sampling traditional savouries. They were also found to be very interested in purchasing the handicrafts and ethnic handloom products of this region. Since Shillong is also reputed as the

‘fashion capital of the North-East’, these tourists were also found keen on purchasing western garments and accessories from the various shopping centres in the city.

Table-5.8: Distribution of the Surveyed Domestic Tourists According to Their Nature of Employment

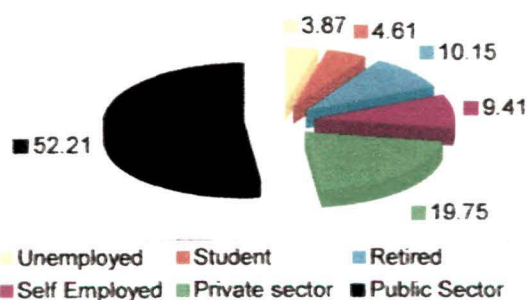
Zone	Un-employed	Student	Retired	Self-Employed	Private Sector	Public Sector	Total
Zone-1	4 (4.44)	12 (13.33)	4 (4.44)	10 (11.11)	17 (18.89)	43 (47.78)	90
Zone-2	2 (3.64)	7 (12.73)	3 (5.45)	5 (9.09)	11 (20.00)	27 (49.09)	55
Zone-3	1 (12.50)	1 (12.50)	1 (12.50)	2 (25.00)	1 (12.50)	2 (25.00)	8
Zone-4	3 (1.68)	3 (1.68)	9 (5.03)	19 (10.61)	28 (15.64)	117 (65.36)	179
Zone-5	2 (4.17)	0 (00)	9 (18.75)	4 (8.33)	7 (14.58)	26 (54.17)	48
Zone-6	0 (00)	2 (3.17)	6 (9.52)	5 (7.94)	21 (33.33)	29 (46.03)	63
Zone-7	3 (6.38)	0 (00)	9 (19.15)	4 (8.51)	12 (25.53)	19 (40.43)	47
Zone-8	2 (6.25)	0 (00)	9 (28.13)	2 (6.25)	7 (21.88)	12 (37.50)	32
Zone-9	4 (20.00)	0 (00)	5 (25.00)	0 (00)	3 (15.00)	8 (40.00)	20
Total	21 (3.87)	25 (4.61)	55 (10.15)	51 (9.41)	107 (19.75)	283 (52.21)	542(100)

Source: Field Survey by the researcher during 2007– 08.

Note: Figures in the parentheses represent percentage to total.

The third largest group of respondents were individuals who had retired from their active work-life and were enjoying their time in recreational activities. Most of them (about 2.5 per cent of the total sample) had come as ‘couples’ with friends of the similar age group. A few were travelling in the company of their extended families. This group of visitors can be classified as the ‘wellness tourists’ and were visiting the region for relaxation and recuperation. Although, this is considered to be a very new trend, yet the significant number of respondents in this group, which is about 10 per cent, indicate that the state of Meghalaya, with its healthy climate can be projected as a wellness destination, to target larger number old aged tourists.

Diagram-5.8 Percentage Distribution of the Surveyed Tourists (Domestic) According to their Nature of Employment



Unemployed, students and self-employed respondents were much less in number which may be due to the lack of scope and opportunity of these categories of individuals. Though approximately one-tenth of the sample tourists were self-employed who had sufficient earning, they visited the sites mostly in connection with their other business activities which were their prime objectives. The type of activities does not allow them to take off most of the time as the loss of working days means a loss of earning for many of them and hence the opportunity cost of time was very high for them as compared to any public sector employee who has to forfeit only their LTC facility (but not earning) unless it is utilised within a certain period of time. Therefore, very few people in this category were found to visit the tourist sites.

These individuals were visiting the state primarily to find ways of extending their business activities in this region. Their trips to the recreation sites were in such cases a coincidental as mentioned earlier. However, they were also enthralled by the natural beauty of the pristine hills of the state and vowed to include the region in their vacation itinerary in future. As most of those respondents were visiting the region for business purposes, their opportunity cost for travel will be considered as nil. In very few cases, the respondents replied that they did not have any business commitments and they were here mainly for health improvement. In such cases also, the opportunity cost of travel would be considered as zero as those respondents were benefited physically and rejuvenated mentally by their visit to these sites.

A group of 21 respondents, constituting 3.87 per cent of the total sample, who were found to be unemployed, were mostly housewives and a few were students who had just completed their education and were in search of proper employment. Of the 4.61 per cent respondent students (25 in number), 1.61 per cent were on educational and study tours. The other 3 per cent were accompanying their respective families on their vacation. This latter group of students were among the most knowledgeable of all the interviewed tourists and had in almost all cases influenced their families to take a trip to this region. The wilderness of this region, which offers much scope for 'adventure', was the main attraction for this group of young tourists. These students were also keen on 'discovering' the state for themselves, and in most cases expressed intense desire to participate in Adventure Sports, Nature Treks, Rock Climbing and Cave Exploration.

Table-5.8 also shows that though there was significant inter-zonal variation in percentage distribution of sample tourists, the variation in intra-zonal distribution of

sample tourists according to their nature of employment was insignificant. The overall distribution of sample respondents according to their nature of employment is also presented in diagram-5.8.

5.3.2. Distribution of the Surveyed Domestic Tourists According to their Total Monthly Income:

Here, total monthly income of a family from all sources is taken into consideration. The respondents' were asked to include monetary income from all sources such as earnings from salary, rents, shops and small business establishments, agriculture, profits and dividend if any. From the report of the sample domestic respondents it is found that the monthly total family earning varies from Rs. 18000 to Rs. 1 lakh. These respondents were divided into nine different income groups and the distribution of families is shown in table-5.9 and subsequently in diagram-5.9.

From the table it is observed that out of 542 domestic tourists, just 12 respondents' (2.21 per cent) had a total monthly income from all sources Rs. 20,000 or less. These respondents were mostly from Zone-1 and had come from the different villages surrounding Shillong. Of course none of the respondent was found whose monthly income was less than Rs. 10,000. The largest group of 22.52 per cent respondents reported monthly family income in between Rs 70001 and Rs 80000, which is followed by the income group of Rs 60001 to Rs 70000, whose percentage was 20.48. It is followed by 16.42 per cent responds whose average monthly family income was in between Rs 50001 and Rs 60000. Therefore, about 60 per cent of the respondents belong to the range of monthly family income of Rs 50 thousand to Rs 80 thousand. About 26 per cent had monthly income in between Rs 20 thousand to 50 thousand. Barely three per cent were found whose monthly family income was over Rs 90,000, the second lowest group in the distribution.

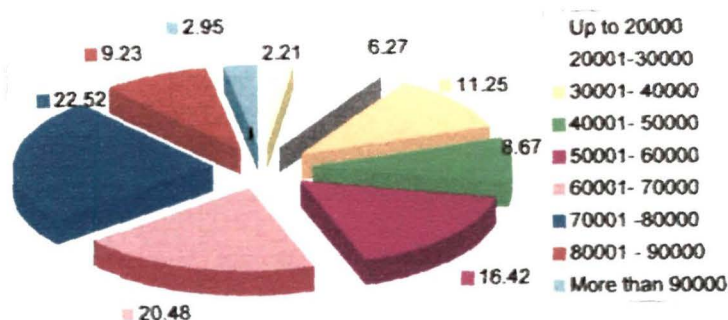
The distribution of respondents according to the income varies significantly across the zones. Larger percentage in the lower income group were found to visit from the Zone-1 and neighbouring states while percentage of respondents in the higher income group was found to increase with the distance of the zones. Maximum 35 per cent of the respondents were from Zone-4 i.e., West Bengal and Bihar who belong to the monthly income group of over Rs 50 thousand to Rs 70 thousand. 50 per cent of the respondents from Zone-5 belong to the same income group and 40 per cent from the same Zone belong to the immediately next higher income group.

Table-5.9: Distribution of the Surveyed Domestic Tourists According to Their Total Monthly Family Income

Zone	Monthly Income from all sources (Rupees)									Total
	Up to 20000	20001-30000	30001-40000	40001-50000	50001-60000	60001-70000	70001 - 80000	80001 - 90000	More than 90000	
Zone 1	12 (13.33)	33 (36.67)	39 (43.33)	3 (3.33)	0	1 (1.11)	1 (1.11)	1 (1.11)	0	90 (16.61)
Zone 2	0	1 (1.82)	20 (36.36)	12 (21.28)	18 (32.73)	2 (3.64)	1 (1.82)	1 (1.82)	0	55 (10.15)
Zone 3	0	0	2 (25.00)	2 (25.00)	3 (37.50)	1 (12.50)	0	0	0	8 (1.48)
Zone 4	0	0	0	25 (13.97)	59 (32.96)	60 (33.52)	15 (8.38)	11 (6.15)	4 (2.23)	174 (32.10)
Zone 5	0	0	0	5 (10.42)	7 (14.58)	3 (6.25)	5 (10.42)	0	0	20 (3.69)
Zone 6	0	0	0	0	2 (3.17)	27 (42.86)	50 (79.37)	11 (17.46)	2 (3.17)	92 (16.97)
Zone 7	0	0	0	0	0	14 (29.79)	24 (51.06)	9 (19.15)	4 (8.51)	51 (9.41)
Zone 8	0	0	0	0	0	2 (6.25)	19 (59.38)	8 (25.00)	3 (9.38)	32 (5.9 0)
Zone 9	0	0	0	0	0	1 (5.00)	7 (35.00)	9 (45.00)	3 (15.00)	20 (3.69)
Total	12 (2.21)	34 (6.27)	61 (11.25)	47 (8.67)	89 (16.42)	111 (20.48)	122 (22.52)	50 (9.23)	16 (2.95)	542 (100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.9: Percentage Distribution of the Surveyed Tourists (Domestic) According to their Total Monthly Income



About 84 per cent of the respondent from Zone-6 i.e., Andhra Pradesh, Delhi, HP, Haryana, Punjab, Rajasthan belong to the income group of over Rs 70 thousand to Rs 80 thousand and about 75 per cent of the responds from Zone-8 belong to the same income group. Also 84 per cent of the respondents from Zone-7 i.e., Gujarat and Maharashtra belong to the monthly income group of Rs 80 thousand one and Rs 90 thousand, while 95 per cent of the respondents from Zone-10 had monthly income over Rs 70 thousand and 60 per cent from the same Zone had income over Rs 80 thousand per month. Thus, from the survey results, we can conclude that mostly married individuals in the age group of 46–55 years, with a family size of about 5 members, having a higher level of education (PG/PhD) and stable public sector jobs with monthly salary in the range of Rs. 70,001 to Rs. 80,000 are the most common visitors to the state. These tourists being well educated are more interested in making their holiday, ‘a learning experience’ and hence more facilities for Adventure Sports, Nature Treks, Rock Climbing and Heritage Tours should be increased in the sites.

5.4 Foreign Tourists

5.4.1 Geographical Characteristics of the Surveyed Foreign Tourists

The 58 foreign respondents comprised both Asian and Non Asian tourists and most of these travellers had not come to Shillong directly. Since measuring exact distance travelled by these tourists was not possible, they were categorised according to the countries based on their nationalities. These foreign tourists were also divided into two broad zones – Asians and Non Asians.

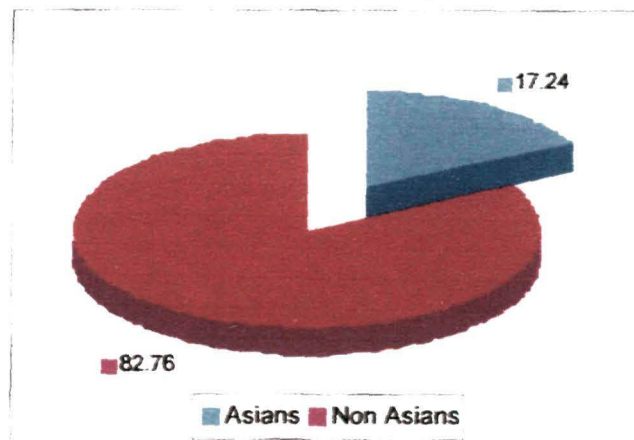
5.4.1.1 Distribution of Surveyed Tourists (Foreign) according to their Nationality

Out of 600 sample tourists interviewed in all the three sites, 58 were found to be foreign origin some of whom were visiting individually the rests were in groups. Of these 58 respondent foreign tourists, 10 (17.24 per cent) were Asian, mostly from Bangladesh, Bhutan and Nepal. The other 48 (82.76 per cent) respondents were Non-Asians, mostly from Australia, the UK and the USA. Country-wise distribution of surveyed foreign tourists from all the three sites has been displayed in table-5.10 as well as by diagram-5.10. Among the 17.2 per cent Asian tourists, 3.45, 5.17 and 8.62 were from Bangladesh, Bhutan and Nepal respectively. Of the 82.76 per cent Non-Asian sample tourists 18.97, 29.31 and 34.48 per cent were from Australia, UK and USA respectively. Thus in the sample, the largest number of Asian tourists was from Nepal and the largest number of Non Asian tourists was from the USA.

Countries	Bangladesh	Bhutan	Nepal	Australia	UK	USA	Asians	Non-Asians	Total
Site							Sub-total	Sub-total	
LHP	2	1	3	3	4	6	6 (31.58)	13 (68.42)	19
SP	0	2	0	2	4	7	2 (13.33)	13 (86.67)	15
NF	0	0	2	6	9	7	2 (8.33)	22 (91.67)	24
Total	2 (3.45)	3 (5.17)	5 (8.62)	11 (18.97)	17 (29.31)	20 (34.48)	10 (17.24)	48 (82.76)	58 (100)

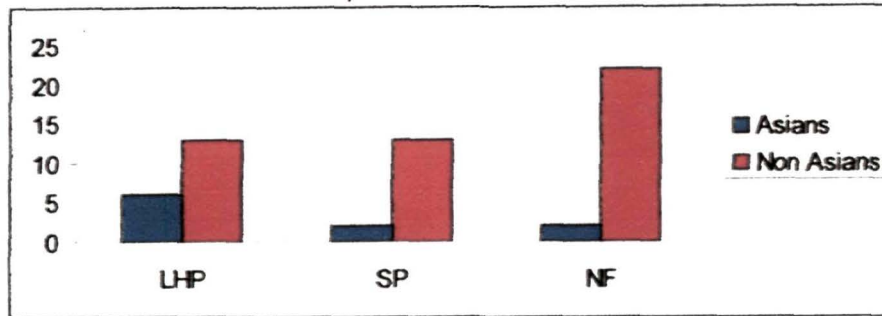
Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.10 Percentage Distribution of Surveyed Foreign Tourists according to their Nationality



For the three sample sites, distribution of foreign tourists is shown in diagram-5.11. It was observed that ratio of Non-Asians to Asian foreign sample respondents was significantly higher in Cherrapunjee (Nohkalikai Falls) than in the other two sites and it was the lowest in Shillong Peak.

Diagram-5.11: Site-wise Distribution of Surveyed Foreign Tourists According to their Asian and Non-Asian Origin



Here LHP, SP and NF indicate Lady Hydari Park, Shillong Peak and Naokalikai Falls respectively.

5.4.2 Demographic and Social Characteristics of Surveyed Foreign Tourists

As in the case of domestic tourists, the diverse social characteristics of the foreign tourists are also examined in order to have an idea of the social and demographic characteristics of the tourists visiting the selected sites in Meghalaya.

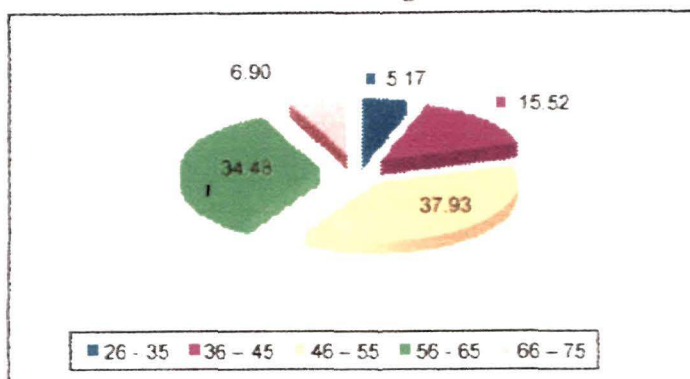
5.4.2.1 Distribution of Surveyed Foreign Tourists According to their Age

The distribution of the 58 foreign respondents according to their age is shown in table-5.11 and the subsequent pie diagram-5.12. It was observed that maximum 37.93 per cent of the sample foreign tourists were in the age group of 46 to 55 years, which was followed by the age group of 56 to 65 years (34.48 per cent). The lowest 5.17 per cent was in the age group of 26 to 35 years. Whereas, 15.52 and 6.9 per cent were found to be in the age group of 36 to 45 years and 66 to 75 years respectively. The pattern of age distribution remained more or less identical in all the three sample sites.

Site	Age Group (Years)						Total
	15-25	26-35	36-45	46-55	56-65	66-75	
LHP	0	3	4	8	4	0	19
SP	0	0	2	7	6	0	15
NF	0	0	3	7	10	4	24
Total	0	3 (5.17)	9 (15.52)	22 (37.93)	20 (34.48)	4 (6.9)	58

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.12: Percentage Distribution of Surveyed Foreign Tourists According to their Age



5.4.2.2 Distribution of Surveyed Foreign Tourists According to Their Gender

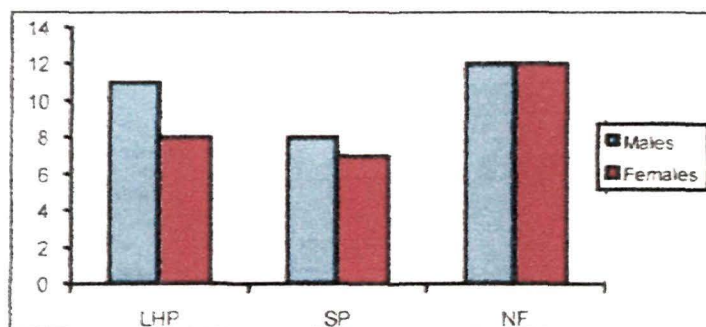
The site-wise distribution of the 58 respondents according to their gender is shown in table-5.12 and subsequently in diagram-5.13. From the table, it is observed that 46.55 per cent of the sample foreign tourists were females and 53.45 per cent were males. Most of these respondents were travelling with their respective family members and hence the difference in number between the male and the female tourists is not very much. In case of Naokalika Falls in Cherrapunjee it was evenly distributed, whereas the distribution was slightly skewed towards the male in case of Lady Hydari Park and Shillong Peak.

Table-5.12: Site-wise Distribution of Surveyed Foreign Tourists According to their Gender

Site	Female	Male	Total
LHP	8 (42.00)	11 (58.00)	19
SP	7 (47.00)	8 (53.00)	15
NF	12 (50.00)	12 (50.00)	24
Total	27 (46.55)	31 (53.45)	58

Source: Field Survey by the researcher during 2007-08.
 Note: Figures in the parentheses represent percentage to total.

Diagram-5.13: Site-wise Distribution of Surveyed Foreign Tourists According to their Gender



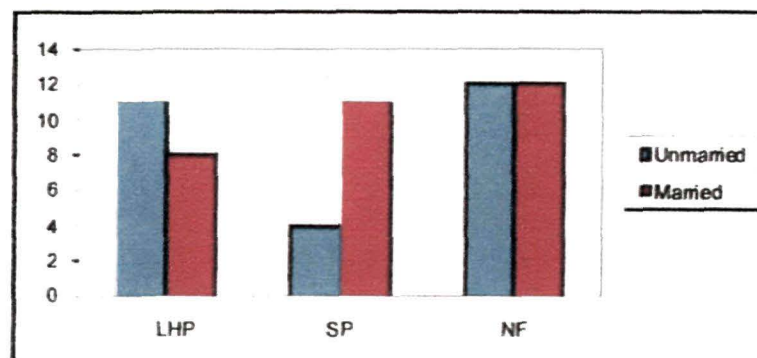
5.4.2.3 Distribution of Surveyed Foreign Tourists According to their Marital Status

The 58 respondents were also divided into two groups based on their marital status. From table-5.13, it is observed that 31 respondents constituting 53.45 per cent of the total sample were married, and 27 respondents constituting 46.55 per cent of the sample were unmarried. In case of Naokalika Falls at Cherrapunjee it was evenly distributed between married and unmarried. Whereas, in Lady Hydari Park percentage of unmarried is comparatively higher and in Shillong Peak percentage of married sample is significantly higher than the unmarried one.

Site	Married	Unmarried	Total
LHP	8 (42.00)	11(58.00)	19
SP	11(73.00)	4 (27.00)	15
NF	12 (50.00)	12 (50.00)	24
Total	31 (53.45)	27 (46.55)	58

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.14: Site-wise Distribution of Surveyed Foreign Tourists According to their Marital Status



5.4.2.4 Distribution of Surveyed Tourists (Foreign) According to their Educational Qualification

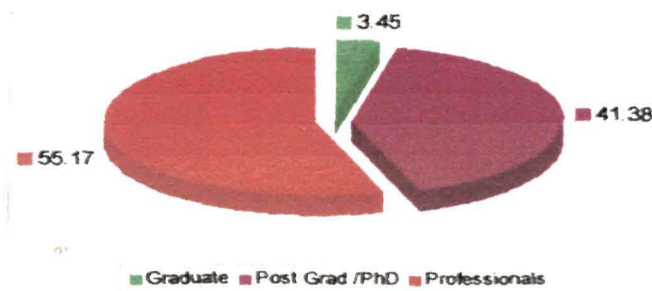
The distribution of the 58 foreign respondents according to their educational qualification indicates that, the minimum educational qualification of this category of tourists was Graduation. Table-5.14 shows that, only 2 respondents, constituting 3.45 per cent of the total sample had this minimum qualification. The largest group of 32 respondents (55.17 per cent) were professionally qualified and mostly employed in various branches of Engineering. It was followed by the group of 24 respondents, (41.38 per cent) who were Post Graduates and in most cases PhD degree holders. The

Non Asian tourists mainly constituted this group of respondents. Here it is noticed that the professional degree holders were dominant among the visitors to those sites.

Sites	Graduate	Post Grad /PhD	Professionals	Total
LHP	2	7	10	19
SP	0	7	8	15
NF	0	10	14	24
Total	2 (3.45)	24 (41.38)	32 (55.17)	58

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.15: Percentage Distribution of the Surveyed Tourists (Foreign) According to their Educational Qualification



5.4.2.5 Distribution of Surveyed Tourists (Foreign) According to their Family Size

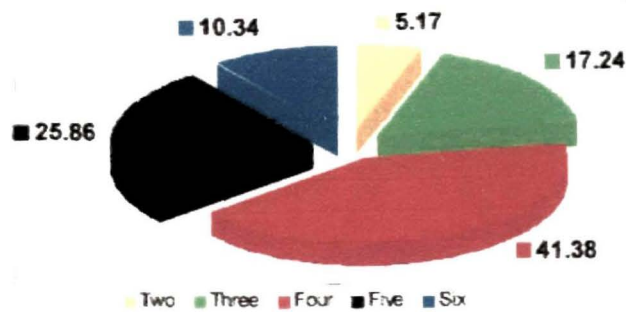
Like domestic sample tourists, the foreign respondent tourists were also classified into 5 different groups based on the size of their respective families. It is observed from the table-5.15 that 3 respondents, constituting 5.17 per cent of the total sample had the smallest family size of just 2 members and 10 respondents, constituting 17.24 per cent of the sample had a family size of 3 members. The largest group of 24 respondents (41.38 per cent) of the sample had family size of 4 members which was followed by 25.87 per cent of the sample with family size 5. Only 10.34 per cent of the sample had the largest family size of 6 members and all of them were Asians and half of them were visiting Shillong as well as these sites for ‘business-cum-pleasure’ purposes.

Table-5.15: Distribution of Surveyed Tourists (Foreign) According to their Family Size

Site	Family Size					Total
	2	3	4	5	6	
LHP	0	3	9	5	2	19
SP	1	2	6	4	2	15
NF	2	5	9	6	2	24
Total	3 (5.17)	10 (17.24)	24 (41.38)	15 (25.87)	6 (10.34)	58

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.16: Percentage Distribution of Surveyed Tourists (Foreign) According to their Family Size



5.4.3 Economic Characteristics of the Surveyed Foreign Tourists

Since the nature of employment and income of individuals is perceived to significantly affect their travel decisions, the distribution of respondents according to economic characteristics is also examined.

5.4.3.1 Distribution of the Surveyed Tourists (Foreign) According to their Nature of Employment

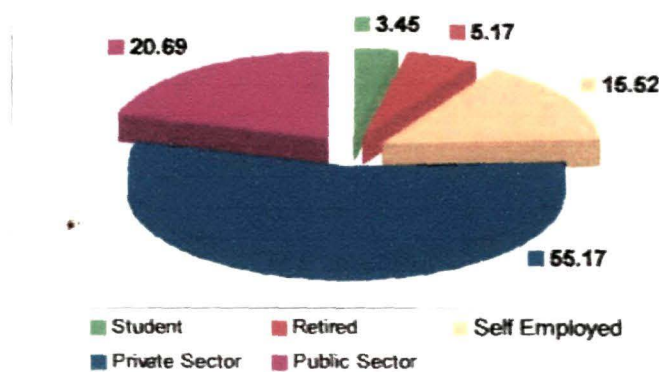
The survey results indicate that of the 58 respondents only 2 (3.45 per cent) were students and unemployed students. These two respondents were in fact American researchers working in Central India and were visiting Shillong for recreational purposes. It was also observed that only 3 respondents (5.17 per cent) were retired individuals. The largest group of 32 respondents, consisting of mostly Non-Asian tourists (55.17 per cent) were employed in the private sector. They were the citizens of western nations like the UK and the USA. It was followed by 12 respondents (20.69 per cent) who were public sector employees. The next group in the order were business owners and entrepreneurs (15.52 per cent) and they were classified as 'self-employed'. Respondents of this category were mostly Asians, and most of them had business interests in the region (table-5.16). The distribution

remained more or less similar in all the selected sites in the state except Nohkalikai Falls at Cherrapunjee where a few students and retired tourists were also found.

Sites	Unemployed Student	Retired	Self Employed	Private Sector	Public Sector	Total
LHP	0	0	4	12	3	19
SP	0	0	2	11	2	15
NF	2	3	3	9	7	24
Total	2 (3.45)	3 (5.17)	9 (15.52)	32 (55.17)	12 (20.69)	58

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.17: Percentage Distribution of the Surveyed Tourists (Foreign) According to their Nature of Employment



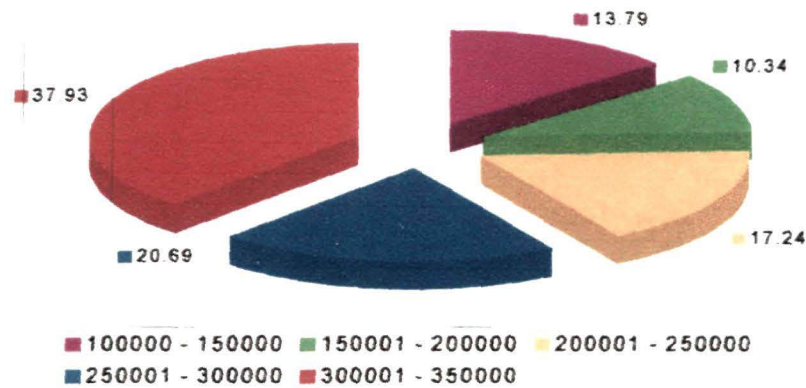
5.4.3.2 Distribution of the Surveyed Foreign Tourists According to their Total Monthly Income

Table-5.17 displays the distribution of the respondents of foreign origin according to their total monthly family income. Since the money income of these foreign tourists widely varied from the money incomes of the domestic tourists, the income categories used here are different from that of the domestic tourists. From the data it was observed that the monthly family income of these tourists varied from Rs one lakh to Rs three lakh and fifty thousand in Indian currency.

About 38 per cent of the total sample who were also non-Asians declared that their monthly income was in the range of Rs. 300001 to Rs. 350000, which was followed by the group of 20.69 per cent respondents whose monthly family income was in the range of Rs. 2.5 lakh to Rs. 3 Lakh. A total of 8 Asian respondents, constituting 13.79 per cent of the sample had monthly income in the range of Rs one lakh to Rs.1.5 lakh and 10.34 and 17.24 per cent of the respondents were in the Rs.150001 to Rs.2 lakh and Rs. 2 lakh one to Rs. 2.5 lakh monthly income group respectively.

Sites	Total Monthly Family Income (in Rupees)					Total
	100000 - 150000	150001 - 200000	200001 - 250000	250001 - 300000	300001 - 350000	
LHP	5	1	3	3	7	19
SP	1	2	4	2	6	15
NF	2	3	3	7	9	24
Total	8 (13.79)	6 (10.34)	10 (17.24)	12 (20.69)	22 (37.93)	58

Figure-5.18: Distribution of the Surveyed Foreign Tourists According to Their Total Monthly Family Income (Rs)



The study of the socio-economic characteristics of the foreign tourists therefore indicates that mostly married individuals in the age group of 46–55 years, with an average family size of 4 members, having a higher level of education (professional or otherwise) and a well-paying employment in the private sector visit the state. Like the Domestic Tourists, this category of Foreign Tourists are also inclined to spend more on ‘niche’ services and products unique to the region.

5.5 Site-wise Description of the Surveyed Visitors:

The three different sites considered in this study are significantly different from each other in terms of their topographical and natural features, in terms of location, accessibility and attractiveness to the tourists. Owing to these, the tourists visiting these sites often display marked differences in their socio-economic characteristics. As such these socio-economic characteristics of the respondents from each site are examined separately, to understand the variation in nature of tourists visiting the three different sites.

5.5.1 Lady Hydari Park

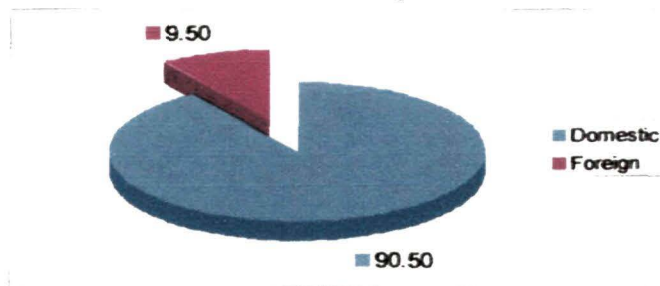
The Lady Hydari Park is situated in the heart of the city and is a favourite haunt of the local populace and other tourists. It houses the only mini-zoo of the state and has a wonderful collection of the unique orchids of the state. In addition to these, it also has a section of joy rides and games for children. Because of the proximity of this site to the Shillong city, it witnesses more visits by the local people, although tourists from outside the city also visit this Park for its famed orchid collection.

5.5.1.1 Geographical Characteristics of the Surveyed Tourists

5.5.1.1.1 Distribution of the Surveyed Tourists by Nationality

A total of 200 tourists were interviewed inside the premises of the Lady Hydari Park during the period from December 2007 to December 2008. Of the 200 respondents, 181 (90.5 per cent) were domestic tourists a few of whom were local visitors and 19 (9.5 per cent) were foreign tourists. The distribution of the surveyed tourists according to their nationality is shown in diagram-5.19.

Diagram-5.19: Percentage Distribution of Surveyed Tourists According to their Nationality



5.5.1.1.2 Distribution of the Surveyed Tourists According to their Zone of Origin

The surveyed respondents at the Lady Hydari Park were distributed into nine different zones depending on the distance travelled by them to reach Shillong and the site. The zone-wise distribution of the respondent visitors is displayed in table-5.18 and also in the subsequent pie diagram-5.20.

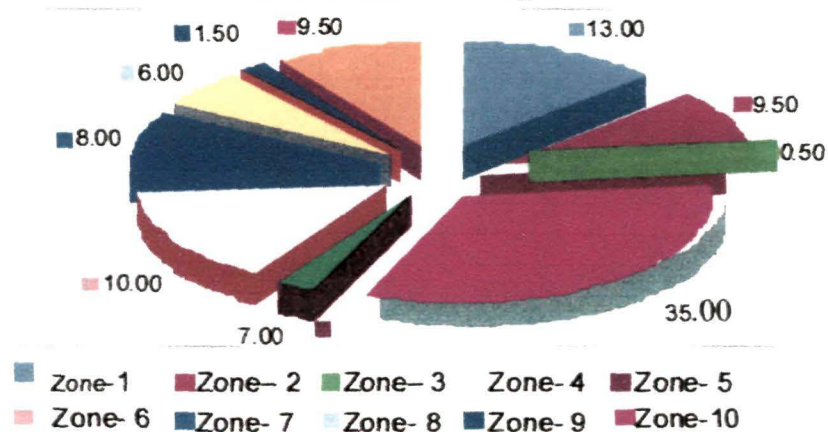
The survey results indicate that of the 200 respondents among the total 850 tourists included in the sample, maximum 35 per cent were from Zone-4 i.e., West Bengal and Bihar. Also number of sample tourists was the highest from that zone. It was followed by the visitors from Meghalaya itself (13 per cent) i.e., Zone-1. Percentage of respondents and the tourists were about 10 from Zone-2 (Assam), while Zone-10 (Foreign) and Zone-6 (Punjab, Haryana, Delhi, Rajasthan, HP, Andhra

Pradesh) recorded 9.5 and 10 per cent respectively. Zones-7, 5 and 8 respectively shares the sample by 8, 7 and 6 per cent. Only 0.5 per cent of the sample were recorded from other North-Eastern states (Zone-3). Also the Zone-wise distribution of total number of tourists surveyed which was 850 (all of whom were not interviewed) followed the similar pattern as that of 200 respondents.

Sl. No	Zone	States included in the Zone	Average Distance of the Zone from Shillong (kms)	Number of Respondents in the Sample	Number of Tourists in the Sample
1	Zone-1	Meghalaya	0 to 100	26 (13)	114 (13.41)
2	Zone-2	Assam	101 to 400	19 (9.5)	87 (10.24)
3	Zone-3	AP, Tripura, Manipur Nagaland, Mizoram	401 to 1000	1 (0.5)	5 (0.59)
4	Zone-4	West Bengal, Bihar	1001 to 1500	70 (35)	307 (36.12)
5	Zone-5	Orissa, Chattisgarh, UP, MP	1501 to 2000	14 (7)	67 (7.88)
6	Zone-6	Punjab, Haryana, Delhi, Rajasthan, HP, Andhra Pradesh	2001 to 2500	20 (10)	86 (10.12)
7	Zone-7	Gujarat, Maharashtra,	2501 to 3000	16 (8)	62 (7.28)
8	Zone-8	Karnataka, TN	3001 to 3500	12 (6)	51 (6)
9	Zone-9	Kerala	3501 to 4000	3 (1.5)	10 (1.18)
10	Zone-10	Foreign countries	800 to 16000	19 (9.5)	61 (7.18)
Total				200	850

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.20: Distribution of Tourists According to the Distance Travelled by them to reach Shillong



5.5.2 Social and Demographic Characteristics of the Surveyed Tourists

The Zone-wise distribution of sample respondents according to the following five characteristics are examined here: age, gender, marital status, level of education and family size.

5.5.2.1 Distribution of Surveyed Tourists According to their Age

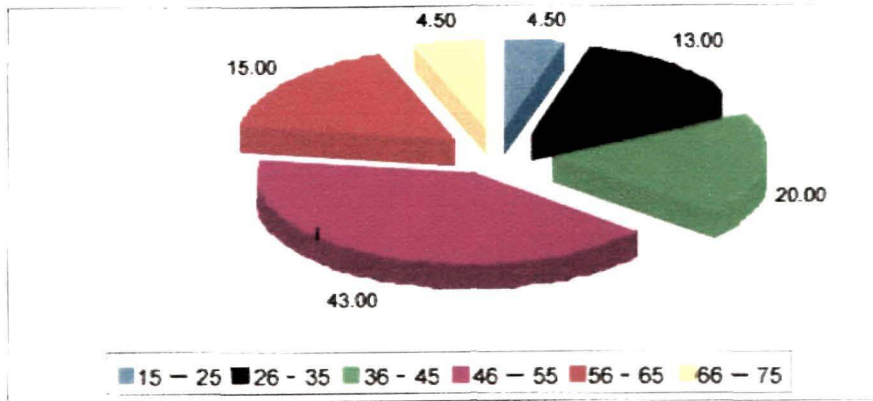
The distribution of the respondents according to their age is displayed in table-5.19 and also shown in pie-chart-5.21. The table indicates that the largest section of the respondents (43 per cent) was in the age group of 46–55 years, which was followed by the age group 36–45 years (20 per cent) and then by the age group of 56–65 years (15 per cent). The least number of 4.5 per cent respondents belong to the age group of 15–25 and 66–75 years. The age-wise distribution of sample tourists from all the zones also shows the similar pattern.

Zone	Age Group (Years)						Total
	15–25	26–35	36–45	46–55	56–65	66–75	
Zone-1	4	5	6	7	4	0	26
Zone-2	3	3	2	8	2	1	19
Zone-3	0	0	0	1	0	0	1
Zone-4	2	6	17	31	9	5	70
Zone-5	0	1	3	8	2	0	14
Zone-6	0	1	2	11	4	2	20
Zone-7	0	2	1	9	3	1	16
Zone-8	0	3	4	3	2	0	12
Zone-9	0	2	1	0	0	0	3
Zone-10	0	3	4	8	4	0	19
Total	9 (4.5)	26 (13)	40 (20)	86 (43)	30 (15)	9 (4.5)	200

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

It is thus observed that, although the Park offers more attraction for younger people, yet the largest group of respondents visiting the Park was in the middle age group (46–55 years). This paradox can be explained by the fact that many young adults as well as children together with their parents visit the Park. But many of those young people were too involved in their recreational activities and thus were reluctant to participate in the survey. In such cases, their senior guardians and parents were interviewed and hence most of the respondents were elderly. If the age distribution of all the members of a tourist group would be considered, the results would have shown the presence of the younger tourists in much larger numbers.

Figure 5.21: Percentage Distribution of Surveyed Tourists According to their Age



5.5.2.2 Distribution of Tourists According to their Gender

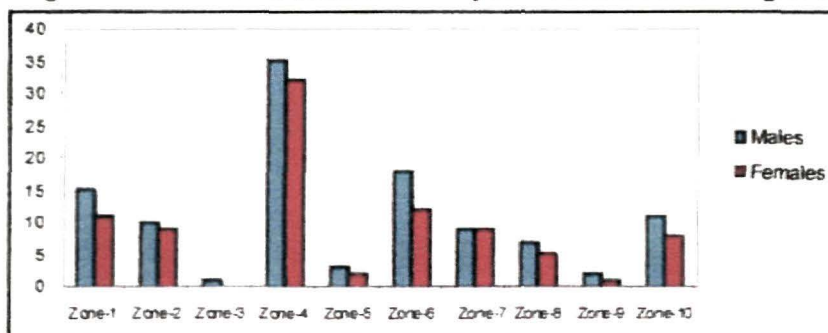
Gender-wise distribution of the respondents is presented in table-5.20. It is observed that out of 200 respondents, 90 were female (45 per cent) and 110 were male (55 per cent). Also in case of all the zones the distribution was in favour of male with minor variation in percentage.

Table-5.20: Distribution of Surveyed Tourists According to their Gender

Zone	Female	Male	Total
Zone-1	11 (42.31)	15 (57.69)	26
Zone-2	9 (47.37)	10 (52.63)	19
Zone-3	0 (00)	1 (100)	1
Zone-4	33 (47.14)	37 (52.86)	70
Zone-5	6 (42.86)	8 (57.14)	14
Zone-6	9 (45.00)	11 (55.00)	20
Zone-7	8 (50.00)	8 (50.00)	16
Zone-8	5 (41.67)	7 (58.33)	12
Zone-9	1 (33.33)	2 (66.67)	3
Zone-10	8 (42.11)	11 (57.89)	19
Total	90 (45.00)	110 (55.00)	200

Source: Field Survey by the researcher during 2007-08.
 Note: Figures in the parentheses represent percentage to total.

Diagram-5.22: Distribution of Surveyed Tourists According to their Gender



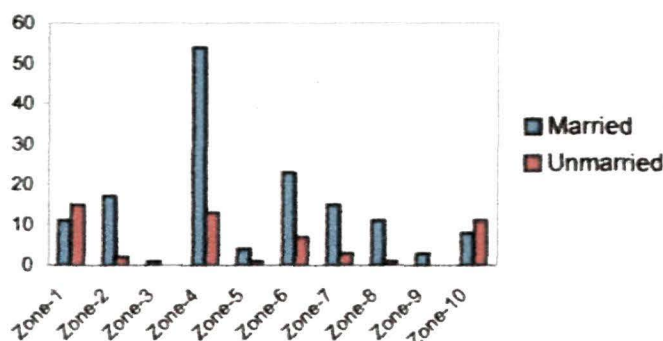
5.5.2.3 Distribution of Surveyed Tourists by Marital Status

The survey results also indicate that of the 200 respondents, 146 individuals, (73 per cent) were married and the remaining 27 per cent i.e., 54 respondents were unmarried, which is shown in table-5.21. The distribution is skewed towards married individuals with varying proportions except the Zone-1 and Zone-10.

Zone	Married	Unmarried	Total
Zone-1	11(42.31)	15(57.69)	26
Zone-2	17 (89.47)	2 (10.53)	19
Zone-3	1 (100)	0 (00)	1
Zone-4	56 (80.00)	14 (20.00)	70
Zone-5	11 (78.57)	3 (21.43)	14
Zone-6	15 (75.00)	5 (25.00)	20
Zone-7	13 (81.25)	3 (18.75)	16
Zone-8	11 (91.67)	1 (8.33)	12
Zone-9	3 (100)	0 (00)	3
Zone-10	8 (42.11)	11 (57.89)	19
Total	146 (73)	54 (27)	200

Source: Field Survey by the researcher during 2007 – 08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.23: Distribution of Surveyed Tourists According to their Marital Status



5.5.2.4 Distribution of the Surveyed Tourists according to their Educational Qualification

The distribution of the 200 respondents according to their educational qualification is shown in the table-5.22 and the diagram-5.24. The survey results indicate that only 2 respondents, constituting 1.00 per cent of the sample had the lowest educational qualification of Secondary passed. Majority of 41 per cent respondents were either Post Graduates or had Doctoral degrees in their respective

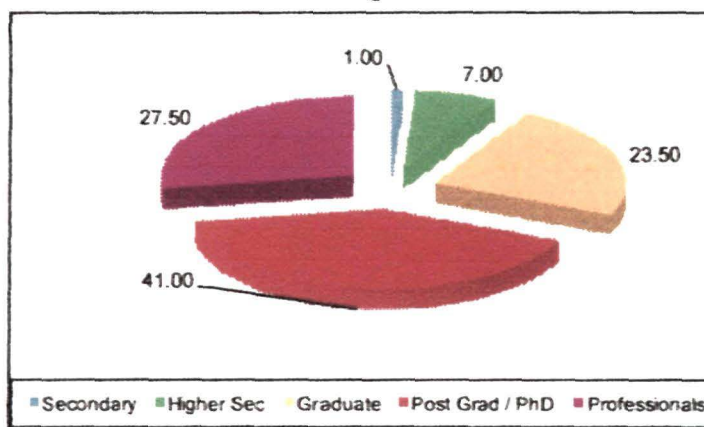
fields, which was followed by the 27.5 per cent professionals and then 23.5 per cent graduates. It is thus evident from the survey reports that the largest number of tourists visiting the Park had higher education degrees like PG/PhD or Professional qualifications and the same was true for all the representative zones.

Table-5.22: Tabular Distribution of the Surveyed Tourists according to their Educational Qualification

Zone	Secondary	Higher Sec	Graduate	Post Grad/PhD	Professionals	Total
Zone-1	2	7	12	3	2	26
Zone-2	0	3	7	7	2	19
Zone-3	0	0	0	0	1	1
Zone-4	0	3	18	29	20	70
Zone-5	0	0	3	9	2	14
Zone-6	0	1	3	8	8	20
Zone-7	0	0	2	10	4	16
Zone-8	0	0	0	8	4	12
Zone-9	0	0	0	1	2	3
Zone-10	0	0	2	7	10	19
Total	2 (1.00)	14 (7)	47 (23.5)	82 (41)	55 (27.5)	200

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.24: Distribution of the Surveyed Tourists according to their Educational Qualification



5.5.2.5 Distribution of the Surveyed Tourists According to their Family Size

The distribution of the tourists according to their family size is shown in the table-5.23 and the subsequent diagram-5.25. It was observed that 41.5 per cent of the sample respondents had family size 5, which was followed by 35.5 per cent respondents having family size 4. That is, majority of the families have size in between 4 and 5. Here lowest family size was observed to be of 3 members while the family of 7 or 8 members were only one per cent each of the total sample and they

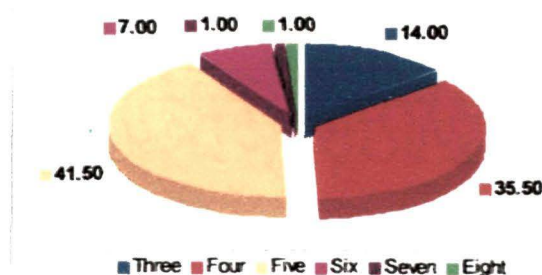
were from zone-1 i.e., Meghalaya. Respondents from all other zones have more or less similar pattern of distribution with respect to family size.

Table-5.23: Distribution of the Surveyed Tourists According to their Family Size

Family Size	3	4	5	6	7	8	Total
Zone-1	2	8	9	4	1	2	26
Zone-2	2	10	5	1	1	0	19
Zone-3	0	0	1	0	0	0	1
Zone-4	11	20	35	4	0	0	70
Zone-5	2	4	8	0	0	0	14
Zone-6	2	6	11	1	0	0	20
Zone-7	3	9	3	1	0	0	16
Zone-8	2	3	6	1	0	0	12
Zone-9	1	2	0	0	0	0	3
Zone-10	3	9	5	2	0	0	19
Total	28 (14)	71 (35.5)	83 (41.5)	14 (7)	2 (1)	2 (1)	200

Source: Field Survey by the researcher during 2007– 08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.25: Distribution of Tourists According to their Family Size



5.5.3 Economic Characteristics of the Surveyed Tourists

5.5.3.1 Distribution of the Surveyed Tourists According to their Nature of Employment

The distribution of the tourists according to their nature of employment is displayed in table-5.24 and also in pie-diagram-5.26. The survey results indicated that 48 per cent of the visitors were government employees and 20 per cent were private sector employees. Whereas, 13 per cent of them were self-employed visitors specifically *entrepreneurs and small business owners* and 8.5 per cent were students and mostly from zone-1 and 2 i.e. Meghalaya and Assam. Only 5 per cent were unemployed and visited from zones-1, 2, 4, 8 and 9. However, majority of the visitors from all zones are government or private sector employees which may be due to the

facilities extended by the employers for the benefit of the employees in this respect as mentioned earlier.

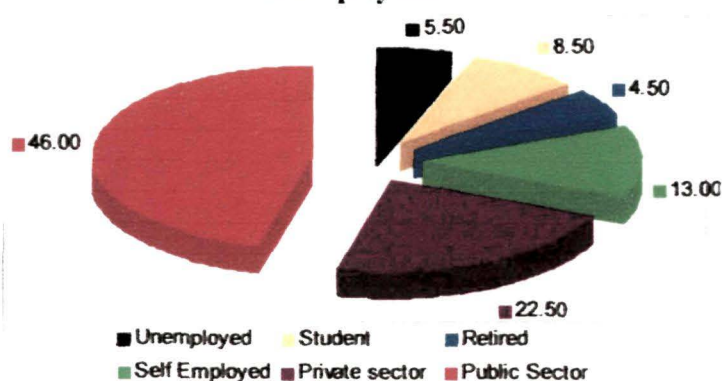
Table-5.24: Tabular Distribution of the Surveyed Tourists According to their Nature of Employment

Zone	Unemployed	Student	Retired	Self Employed	Private sector	Public Sector	Total
Zone-1.	4	8	0	5	3	6	26
Zone-2.	1	4	0	3	4	7	19
Zone-3.	0	0	0	0	0	1	1
Zone-4.	2	3	2	8	9	46	70
Zone-5.	0	0	0	1	4	9	14
Zone-6.	0	2	4	3	2	9	20
Zone-7.	0	0	3	2	3	8	16
Zone-8.	2	0	2	0	3	5	12
Zone-9.	1	0	0	0	0	2	3
Zone-10	0	0	0	4	12	3	19
Total	10 (5)	17 (8.5)	11 (5.5)	26 (13)	40 (20)	96 (48)	200

Source: Field Survey by the researcher during 2007 – 08.

Note: Figures in the parentheses represent percentage to total.

Diagram-5.26: Distribution of the Surveyed Tourists According to their Nature of Employment



5.5.3.2 Distribution of the Surveyed Tourists According to their Total Monthly Family Income

The survey result shows that maximum 21.5 per cent have monthly family income in the range of Rs 60 to 70 thousand and most of them were from zone-4, 5 and 6 respectively. Next in the order was 15.5 per cent whose monthly income was above Rs 70 thousand and up to 80 thousand, majority of which were from zone-7, 6 and 4 respectively. Percentage of respondents in the higher income group increases with the distance of the zone. Percentage of respondents in the monthly income group below 20 thousands and between 20 to 30 thousands were 4.5 each and they were mainly from Meghalaya and a few were from Assam i.e. zone-1 and 2 respectively.

Thus percentage of respondents increases with the income and reach a peak at monthly income range of Rs 60 thousand to 70 thousand. Thereafter, the percentage starts falling as only few people having higher income level from distant zones visit the site. The distribution looks like an inverted U shaped.

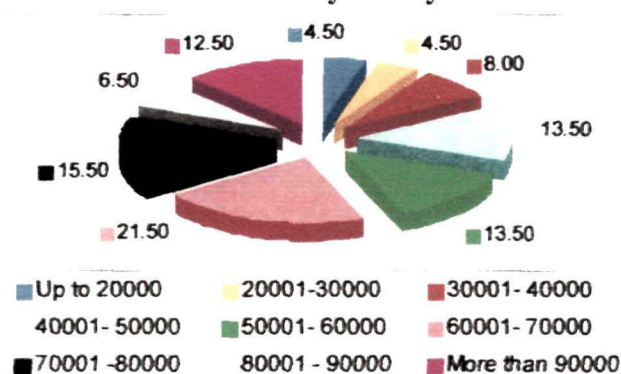
Table-5.25: Distribution of the Surveyed Tourists According to their Total Monthly Family Income

Zone	Monthly Income from all sources (Rupees)									
	Up to 20000	20001-30000	30001-40000	40001-50000	50001-60000	60001-70000	70001-80000	80001-90000	More than 90000	Total
Zone-1	9	8	7	1	0	1	0	0	0	26
Zone-2	0	1	9	5	3	1	0	0	0	19
Zone-3	0	0	0	0	0	1	0	0	0	1
Zone-4	0	0	0	19	21	18	5	5	2	70
Zone-5	0	0	0	2	2	9	1	0	0	14
Zone-6	0	0	0	0	1	7	8	2	2	20
Zone-7	0	0	0	0	0	3	9	3	1	16
Zone-8	0	0	0	0	0	2	7	2	1	12
Zone-9	0	0	0	0	0	1	1	1	0	3
Zone-10	0	0	0	0	0	0	0	0	19	19
Total	9	9	16	27	27	43	31	13	25	200
	(4.5)	(4.5)	(8)	(13.5)	(13.5)	(21.5)	(15.5)	(6.5)	(12.5)	(100)

Source: Field Survey by the researcher during 2007-08.

Note: Figures in the parentheses represent percentage to total.

Diagram-5.27: Percentage Distribution of the Surveyed Tourists According to their Total Monthly Family Income



5.6 Shillong Peak

The Shillong Peak, at a height of 1961 metres above sea level is the highest peak in the state of Meghalaya. It is a lush green area and provides a wonderful view of the entire town on cloudless days. It is therefore a much frequented tourist site.

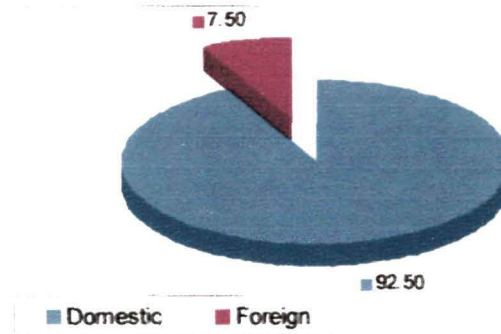
5.6.1 Geographical Characteristics of the Surveyed Tourists

5.6.1.1 Distribution of the Surveyed Tourists by Nationality

A total of 200 tourists were interviewed inside the premises of the Shillong Peak during the period from December 2007 to December 2008. Of the 200

respondents, 185 (92.5 per cent) respondents were domestic tourists and only 15 (7.5 per cent) were foreign tourists. The distribution of the surveyed tourists according to their nationality is shown in the diagram-5.28.

Diagram-5.28: Percentage Distribution of Surveyed Tourists According to their Nationality



5.6.1.2 Distribution of the Surveyed Tourists According to their Zone of Origin

The 200 tourists interviewed in the Shillong Peak were again distributed into ten different zones depending on the distance travelled by them to reach the site. The distribution of the respondents based on the distances travelled by them is shown in table-5.26 and the subsequent pie diagram-5.29.

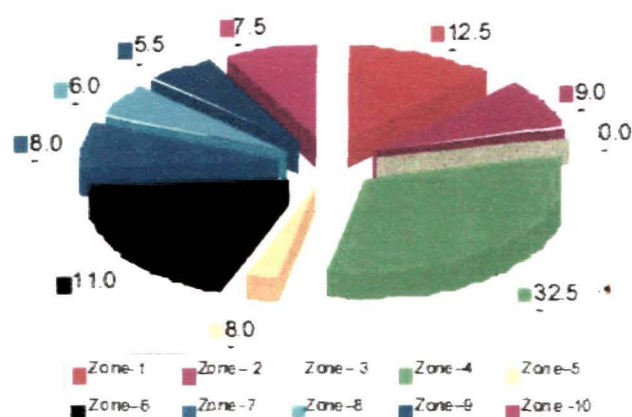
The survey results indicate that, 25 respondents i.e. only 12.5 per cent of the sample were local tourists from Meghalaya (zone-1) and 9 per cent were from Assam i.e. zone-2. Maximum about one-third of the sample visited from zone-4 i.e. West Bengal and Bihar. No sample tourist was found from zone-3 i.e., other North-Eastern states. A total of 16 respondents, constituting 8 per cent of the sample respondents were from the states of Chhattisgarh, Madhya Pradesh, Orissa and Uttar Pradesh (zone-5) and 11 per cent were from the states of Andhra Pradesh, Delhi, Haryana, Himachal Pradesh, Punjab and Rajasthan, included in zone-6. Thereafter the percentage declined with the distance of the zone within the country.

The table-5.26 also indicates that out of 879 tourists represented by 200 respondents; 119 were from zone-1 (13.54 per cent) i.e., from Shillong and other areas of Meghalaya. The zone-wise distribution follows the same pattern as that of the respondents. Maximum about one-third of the sample were from the zone-4 and followed by Meghalaya and then zone-6 and zone-2 in the descending order.

Sl. No.	Zone	States included in the Zone	Average Distance of the Zone from Shillong (kms)	Number of Respondents in the Sample	Number of Tourists in the Sample
1.	Zone-1	Meghalaya	0 to 100	25 (12.5)	119 (13.54)
2.	Zone-2	Assam	101 to 400	18 (9)	85 (9.67)
3.	Zone-3	AP, Tripura, Manipur Nagaland, Mizoram	401 to 1000	0 (0)	0 (0)
4.	Zone-4	Bihar, West Bengal	1001 to 1500	65 (32.5)	289 (32.88)
5.	Zone-5	Orissa, Chattisgarh, UP, MP	1501 to 2000	16 (8)	78 (8.88)
6.	Zone-6	Punjab, Haryana, Delhi, Rajasthan, Andhra Pradesh, HP	2001 to 2500	22 (11)	94 (10.69)
7.	Zone-7	Gujarat, Maharashtra,	2501 to 3000	16 (8)	61 (6.94)
8.	Zone-8	Karnataka, TN	3001 to 3500	12 (6)	51 (5.80)
9.	Zone-9	Kerala	3501 to 4000	11 (5.5)	51 (5.80)
10.	Zone-10	Foreign countries	800 to 16000	15 (7.5)	51 (5.80)
Total				200	879

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.29: Distribution of the Surveyed Tourists According to their Zone of Origin



5.6.2 Social and Demographic Characteristics of the Surveyed Tourists

Like the earlier cases, the following demographic and social characteristics have been examined: age, gender, marital status, level of education and family size.

5.6.2.1 Distribution of Surveyed Tourists According to their Age

The distribution of the tourists according to their age indicates that majority of the respondents belong to the age group of 46-55 years (36 per cent) and followed by the age group 56-65 years (21 per cent). 17 and 16 per cent of the respondents were in the age group 36-45 years and 66-75 years respectively. Only 6 respondents (4.5 per

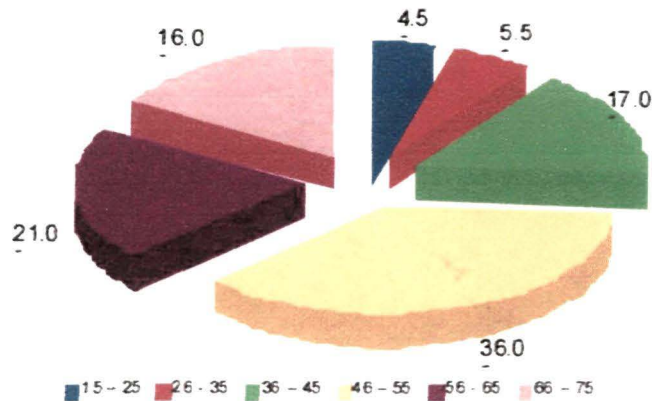
cent of the respondents) were in the age group of 15–25 years. Also 5.5 per cent of the respondents were in the age group of 26–35 years. The distribution remains more or less same for all the zones except zone-1 and 2 from where most of the tourists in the lower age group visited the site compared to other zones.

Table-5.27: Distribution of the Surveyed Tourists According to their Age

Zone	Age Group (years)						Total
	15–25	26–35	36–45	46–55	56–65	66–75	
Zone-1	6	4	9	4	2	-	25
Zone-2	2	2	5	8	1	0	18
Zone-3	0	0	0	0	0	0	0
Zone-4	1	2	5	23	19	15	65
Zone-5	0	1	4	8	2	1	16
Zone-6	0	2	3	8	6	3	22
Zone-7	0	0	3	5	4	4	16
Zone-8	0	0	2	4	1	5	12
Zone-9	0	0	1	5	1	4	11
Zone-10	0	0	2	7	6	0	15
Total	9 (4.5)	11 (5.5)	34 (17)	72 (36)	42 (21)	32 (16)	200

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.30: Distribution of the Surveyed Tourists According to their Age



5.6.2.2 Distribution of Surveyed Tourists According to their Gender

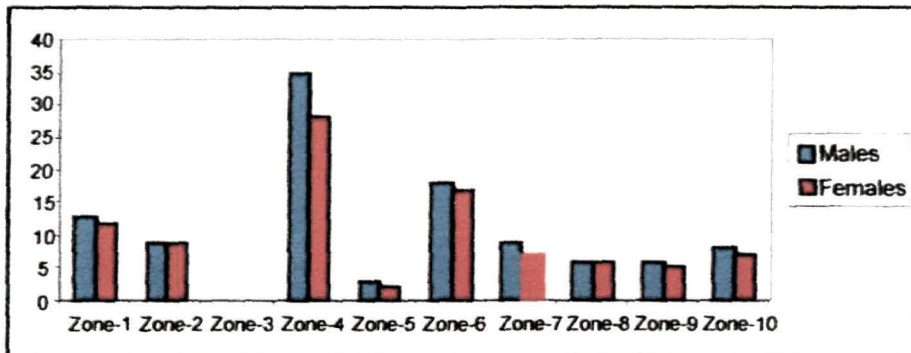
The distribution of the tourists according to their gender revealed that of the 200 respondents, 93 (46.5 per cent) was female and 107 individuals (53.5 per cent) were male. In case of some zones it was evenly distributed and in some other cases it was in favour of males with minor variations (table-5.28).

Table-5.28: Distribution of Surveyed Tourists According to their Gender

Zone	Female	Male	Total
Zone-1	12 (48.00)	13 (52.00)	25
Zone-2	9 (50.00)	9 (50.00)	18
Zone-3	0	0	0
Zone-4	30 (46.20)	35 (53.80)	65
Zone-5	8 (50.00)	8 (50.00)	16
Zone-6	9 (40.91)	13 (59.09)	22
Zone-7	7 (43.75)	9 (56.25)	16
Zone-8	6 (50.00)	6 (50.00)	12
Zone-9	5 (45.45)	6 (54.55)	11
Zone-10	7 (46.67)	8 (53.33)	15
Total	93 (46.50)	107 (53.50)	200

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.31: Distribution of Surveyed Tourists According to their Gender



5.6.2.3 Distribution of Surveyed Tourists by Marital Status

Table-5.30 revealed that 148 individuals, constituting a significant 74 per cent of the sample were married and only 52 individuals, constituting 26 per cent of the sample were unmarried. Percentage of married and unmarried distribution was 56 to 44 in zone-1 and 78.46 to 21.54 in zone-4. Thereafter the ratio of married to unmarried increased with the distance of the zone.

Diagram-5.32: Distribution of Surveyed Tourists According to their Marital Status

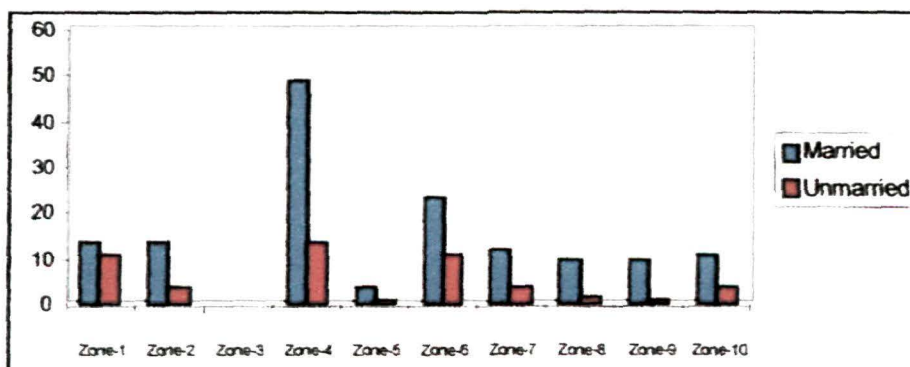


Table-5.29: Distribution of Surveyed Tourists According to their Marital Status

Zone	Married	Unmarried	Total
Zone-1	14 (56.00)	11 (44.00)	25
Zone-2	14 (77.78)	4 (22.22)	18
Zone-3	0	0	0
Zone-4	51 (78.46)	14 (21.54)	65
Zone-5	10 (62.50)	6 (37.50)	16
Zone-6	15 (68.18)	7 (31.82)	22
Zone-7	12 (75.00)	4 (25.00)	16
Zone-8	10 (83.33)	2 (16.67)	12
Zone-9	10 (90.91)	1 (9.01)	11
Zone-10	12 (80.00)	3 (20.00)	15
Total	148 (74.00)	52 (26.00)	200

Source: Field Survey by the researcher during 2007–08.

Note: Figures in the parentheses represent percentage to total.

5.6.2.4 Distribution of the Surveyed Tourists According to their Educational Qualification

The distribution of surveyed individuals according to their educational qualification is presented in table-5.30. The table revealed that, only 5 individuals (2.5 per cent) were Higher Secondary passed and 21 respondents (10.5 per cent of the sample) were Graduates. The largest group of 87 per cent were either Post Graduate or above and professional degree holders including Doctors, Engineers, Business Administration, Financial Analysts etc. Majority of the visitors from all the zones were found to be highly educated with varying degree. Diagram-5.33 also displays the aggregate distribution of tourists surveyed in Shillong Peak according to their educational qualification.

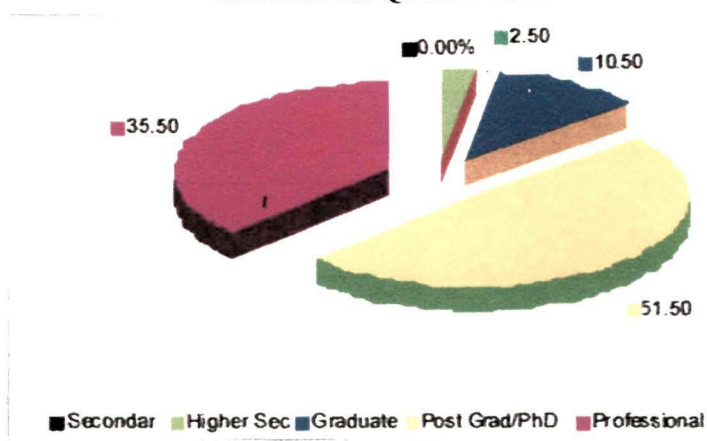
Table-5.30: Tabular Distribution of the Surveyed Tourists According to their Educational Qualification

Zone	Secondary	Higher Sec.	Graduate	Post Grad/PhD	Professionals	Total
Zone-1	0	3	10	7	5	25
Zone-2	0	2	4	9	3	18
Zone-3	0	0	0	0	0	0
Zone-4	0	0	3	37	25	65
Zone-5	0	0	2	8	6	16
Zone-6	0	0	2	11	9	22
Zone-7	0	0	0	10	6	16
Zone-8	0	0	0	8	4	12
Zone-9	0	0	0	6	5	11
Zone-10	0	0	0	7	8	15
Total	0 (0)	5 (2.5)	21 (10.5)	103 (51.5)	71 (35.5)	200

Source: Field Survey by the researcher during 2007–08.

Note: Figures in the parentheses represent percentage to total

Diagram-5.33: Distribution of the Surveyed Tourists According to their Educational Qualification



5.6.2.5 Distribution of the Surveyed Tourists According to their Family Size

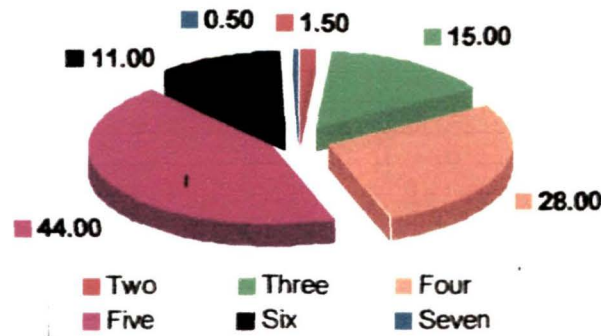
The zone-wise distribution of the tourists according to their family size is shown in the table-5.31 and the distribution of overall sample has been displayed in the subsequent pie diagram-5.34. Only 3 respondents, constituting 1.5 per cent of the total sample, reported the smallest family size of 2 members. The largest group of 88 respondents (44 per cents) reported to have family size of 5 members which was followed by 22 per cent of the respondents with family size of 4 members, which was again followed by 3 member and 6 member families with 15 and 11 per cent of the samples respectively. As usual, very few members reported to have largest family size of 7 members. Therefore, the frequency distribution of family size showed a more or less symmetric and normal distribution pattern. The intra-zonal distribution of the surveyed tourists according to family size followed a similar pattern.

Table-5.31: Distribution of the Surveyed Tourists According to their Family Size

Family Size	2	3	4	5	6	7	8	Total
Zone-1	0	2	7	13	2	1	0	25
Zone-2	0	2	4	6	6	0	0	18
Zone-3	0	0	0	0	0	0	0	0
Zone-4	0	12	17	29	7	0	0	65
Zone-5	0	1	6	8	1	0	0	16
Zone-6	0	4	7	10	1	0	0	22
Zone-7	0	1	4	11	0	0	0	16
Zone-8	1	3	1	4	3	0	0	12
Zone-9	1	3	4	3	0	0	0	11
Zone-10	1	2	6	4	2	0	0	15
Total	3 (1.5)	30 (15)	56 (28)	88 (44)	22 (11)	1 (0.5)	0	200

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.34: Distribution of Tourists According to their Family Size



5.6.3 Economic Characteristics of the Surveyed Tourists

Two economic characteristics of the 200 respondents that are supposed have important implication for the travelling have been examined here. These are type of employment and level of total monthly family income.

5.6.3.1 Distribution of the Surveyed Tourists according to their Nature of Employment

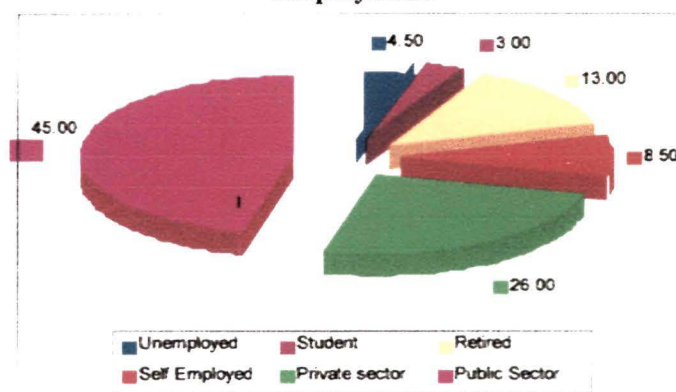
The survey results showed that only 4.5 per cent of the respondents were unemployed, 3 per cent were students and 13 per cent were retired individuals. The largest 45 per cent of the sample were public sector employees and 26 per cent were engaged in private sectors, while 8.5 per cent were self-employed. The inter-zonal distribution showed more or less similar pattern except the few students who visited only from zone-1 and 2.

Table-5.32: Tabular Distribution of the Surveyed Tourists according to their Nature of Employment

Zone	Unempl oyed	Student	Retired	Self Employed	Private Sector	Public Sector	Total
Zone-1.	0	3	2	3	6	11	25
Zone-2.	1	3	2	2	3	7	18
Zone-3.	0	0	0	0	0	0	0
Zone-4.	1	0	4	3	10	47	65
Zone-5.	2	0	2	1	5	6	16
Zone-6.	0	0	3	2	7	10	22
Zone-7.	2	0	5	2	5	2	16
Zone-8.	0	0	4	2	2	4	12
Zone-9.	3	0	4	0	3	1	11
Zone-10	0	0	0	2	11	2	15
Total	9 (4.5)	6 (3)	26 (13)	17 (8.5)	52 (26)	90 (45)	200

Source: Field Survey by the researcher during 2007 – 08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.35: Distribution of the Surveyed Tourists according to their Nature of Employment



5.5.6.2 Distribution of the Surveyed Tourists According to Their Total Monthly Family Income

The zone-wise distribution of the respondents according to their monthly family income is shown in table-5.33 and the aggregate distribution also shown in the subsequent pie-diagram-5.36. The survey results show that 22.5 per cent of the respondents had monthly family income of Rs 70 to 80 thousand while 21 per cent belong to the 60 to 70 thousand income group, followed by 15.5 per cent of the respondents with family income between Rs 50 to 60 thousand per month. Only 6 per cent had monthly income of Rs 30 thousand or less and they were all from zone-1. It is also observed from the table that the proportion of families in the higher monthly family income increases with the distance of the zone and that was an indication of strong correlation between the distance travelled by the tourists and their monthly family income which has been explained in the later part of the thesis.

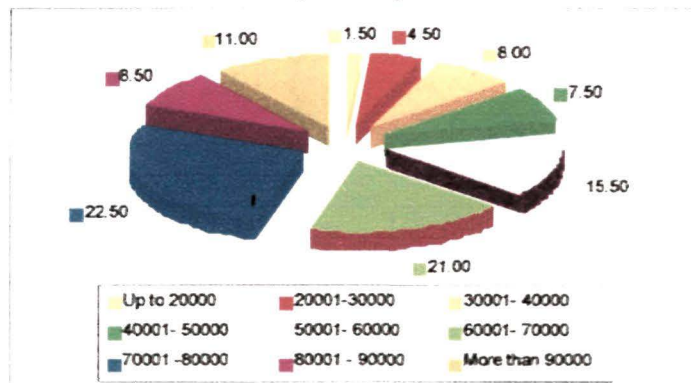
Table-5.33: Distribution of the Surveyed Tourists According to Their Total Monthly Family Income

Zone	Total Monthly Income from all sources (Rupees)									Total
	Up to 20000	20001-30000	30001-40000	40001-50000	50001-60000	60001-70000	70001-80000	80001-90000	Above 90000	
Zone-1	3	9	10	2	0	1	0	0	0	25
Zone-2	0	0	6	5	5	1	1	0	0	18
Zone-3	0	0	0	0	0	0	0	0	0	0
Zone-4	0	0	0	6	21	25	6	4	3	65
Zone-5	0	0	0	2	4	7	3	0	0	16
Zone-6	0	0	0	0	1	6	12	3	0	22
Zone-7	0	0	0	0	0	2	11	3	0	16
Zone-8	0	0	0	0	0	0	8	3	1	12
Zone-9	0	0	0	0	0	0	4	4	3	11
Zone-10	0	0	0	0	0	0	0	0	15	15
Total	3 (1.5)	9 (4.5)	16 (8)	15 (7.5)	31 (15.5)	42 (21)	45 (22.5)	17 (8.5)	22 (11)	200

Source: Field Survey by the researcher during 2007 – 08.

Note: Figures in the parentheses represent percentage to total.

Diagram-5.36: Distribution of the Surveyed Tourists According to Their Total Monthly Family Income



5.7 Nohkalikai Falls

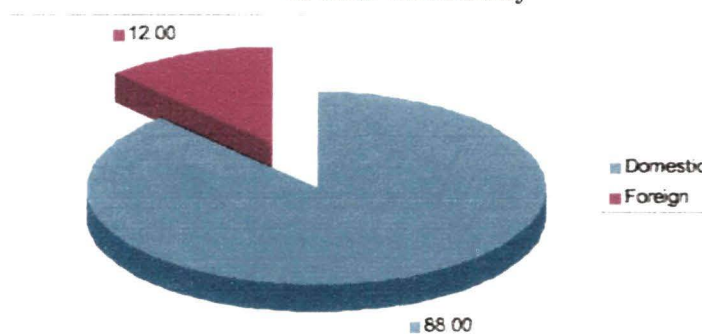
The Nohkalikai Falls at the wettest place on the Earth, Cherrapunjee, situated about 54 kms away from Shillong and is one of the most beautiful waterfalls of this region. Thousands of tourists visit this site every year. The socio-economic and demographic characteristics of the 200 respondents interviewed during December 2007 to December 2008 at the site are explained in this sub-section.

5.7.1 Geographical Characteristics of the Surveyed Tourists

5.7.1.1 Distribution of the Surveyed Tourists by Nationality

Of the 200 respondents, 176 (88 per cent) were domestic tourists and 24 (12 per cent) were foreign tourists. The distribution of the surveyed tourists according to their nationality is shown in the diagram-5.37.

Diagram-5.37: Percentage Distribution of Surveyed Tourists According to their Nationality



5.7.1.2 Distribution of the Surveyed Tourists According to their Zone of Origin

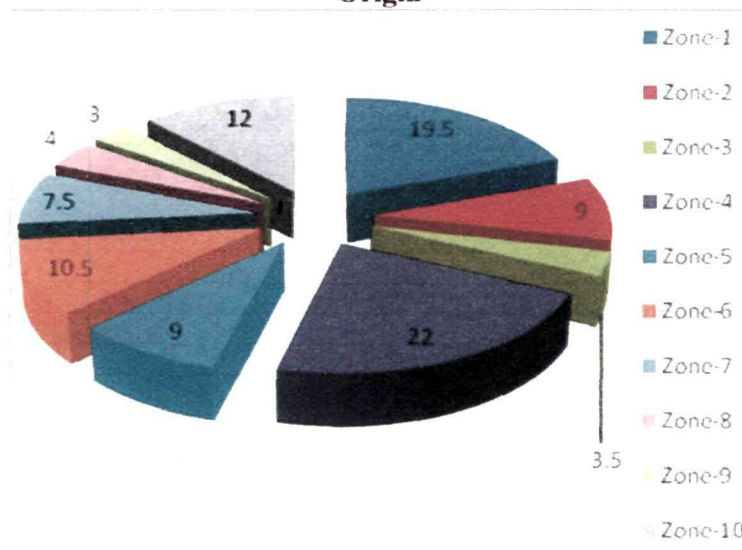
The distribution of the respondents based on the distance travelled by them is shown in the table-5.34 and the subsequent pie diagram-5.38.

The survey results indicate that of the 200 respondents among the total 1002 tourists included in the sample, 39 respondents (19.5 per cent), were from zone-1, 18 (9 per cent) were from the state of Assam (zone-2), and only 7 (3.5 per cent) were from the other North-Eastern states (zone-3). Like the other two sites, largest number of respondents (22 per cent) were from the states of West Bengal and Bihar (zone-4) that was followed by zone-5 i.e. the states of Chhatisgarh, Madhya Pradesh, Orissa and Uttar Pradesh sharing 9 per cent of the sample. 10.5 per cent of the respondents were from zone-6 that comprises of seven states Punjab, Haryana, Delhi, Rajasthan, Himachal Pradesh and Andhra Pradesh. Zones 7, 8 and 9 constitutes of the 7.5, 4 and 3 per cent of the respondents respectively. Lastly, 24 respondents (12 per cent) were the foreign tourists. It is therefore noticed that from zone-4 onwards percentage of respondents varies inversely with the distance of the respective zone.

Table-5.34 also indicated the distribution of the 1002 surveyed tourists, a part of which (200) was included in the sample respondent for the collection of relevant information. The distribution shows almost a similar pattern of distribution as observed in case of the respondents across the zones. Largest percentage of sample tourists was from zone-4 and then declined in order of the distance.

Table-5.34: Distribution of the Surveyed Tourists According to their Zone of Origin					
Sl. No	Zone	States included in the Zone	Average Distance of the Zone from Shillong (kms)	Number of Respondents in the Sample	Number of Tourists in the Sample
1	Zone-1	Meghalaya	0 to 100	39 (19.5)	207 (20.66)
2	Zone-2	Assam	101 to 400	18 (9)	91 (9.08)
3	Zone-3	AP, Tripura, Manipur Nagaland, Mizoram	401 to 1000	7 (3.5)	32 (3.19)
4	Zone-4	West Bengal, Bihar	1001 to 1500	44 (22)	233 (23.27)
5	Zone-5	Orissa, Chattisgarh, UP, MP	1501 to 2000	18 (9)	90 (8.98)
6	Zone-6	Punjab, Haryana, Delhi, Rajasthan, HP, Andhra Pradesh	2001 to 2500	21 (10.5)	104 (10.37)
7	Zone-7	Gujarat, Maharashtra	2501 to 3000	15 (7.5)	67 (6.69)
8	Zone-8	Karnataka, TN	3001 to 3500	8 (4)	43 (4.29)
9	Zone-9	Kerala	3501 to 4000	6 (3)	38 (3.79)
10	Zone-10	Foreign countries	800 to 16000	24 (12)	97 (9.68)
Total				200	1002
Source: Field Survey by the researcher during 2007-08.					
Note: Figures in the parentheses represent percentage to total.					

Diagram-5.38: Distribution of the Surveyed Tourists According to their Zone of Origin



5.7.2 Social Characteristics of the Surveyed Tourists

Like the two other sites following five quantifiable social and demographic characteristics have been examined in detail with reference to the 200 respondents interviewed within the Park premises: age, gender, marital status, level of education and the family size.

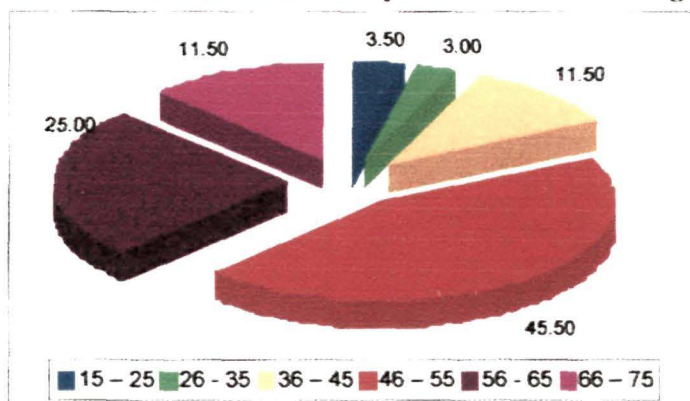
5.7.2.1 Distribution of Surveyed Tourists According to their Age

The distribution of the respondents according to their age group is shown in table-5.35. The table shows that majority 45.5 per cent of the respondents were in the age group of 46-55 years, which was followed by 25 per cent respondents from age group 56-65 years. Age groups 36-45 and 66-75 years shares 11.5 per cent each of the sample respondents; while age groups 15-25 and 26-35 years constitute of very small 3.5 and 3 per cent respectively and they were all from North-Eastern region. Apart from the zones of North-Eastern region the pattern of age distribution remained more or less same for all other zones. The less number of samples from North-Eastern zones do not necessarily mean that people from these do not visit Cherrapunjee at all. It may be due to the fact that many of the visitors from these areas do not stay much longer and thus have less scope to participate in the interview process.

Zones	Age Group (years)						Total
	15-25	26-35	36-45	46-55	56-65	66-75	
Zone-1	4	2	9	17	7	-	39
Zone-2	2	0	2	9	2	3	18
Zone-3	1	1	1	1	2	1	7
Zone-4	0	3	2	23	9	7	44
Zone-5	0	0	1	9	6	2	18
Zone-6	0	0	2	10	7	2	21
Zone-7	0	0	2	5	5	3	15
Zone-8	0	0	0	6	1	1	8
Zone-9	0	0	1	4	1	0	6
Zone-10	0	0	3	7	10	4	24
Total	7 (3.5)	6 (3)	23 (11.5)	91 (45.5)	50 (25)	23 (11.5)	200

Source: Field Survey by the researcher during 2007 – 08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.39: Distribution of the Surveyed Tourists According to their Age



5.7.2.2 Distribution of Tourists According to their Gender

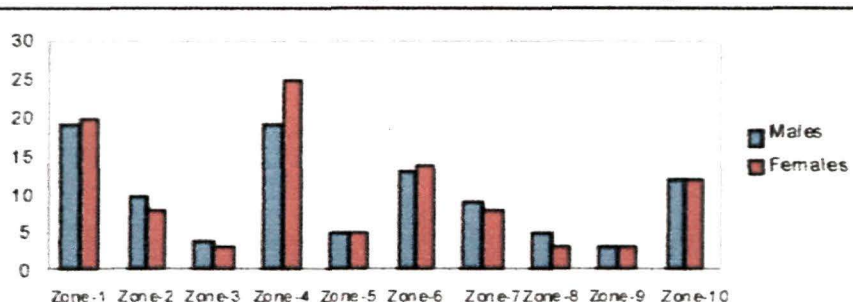
The distribution of respondents according to their gender as shown in table-5.36 indicated that 101 individuals constituting of 50.5 per cent of the samples were female and 99 respondents i.e. 49.5 per cent were male. Unlike the two other sites, here the distribution is found to be marginally in favour of female though the distribution varies significantly across the zones. Percentage of female was more from zone-1, 4 and 6; where from majority of the tourists visited the site. It also shows that women visitors are more interested in visiting Cherrapunjee compared to the other two sites though the variation is not very significant.

Table-5.36: Distribution of Surveyed Tourists According to their Gender

Zone	Females	Males	Total
Zone-1	20 (51.28)	19 (48.72)	39
Zone-2	8 (44.44)	10 (55.56)	18
Zone-3	3 (42.86)	4 (57.14)	7
Zone-4	25 (56.82)	19 (43.18)	44
Zone-5	9 (50.00)	9 (50.00)	18
Zone-6	11 (52.38)	10 (47.62)	21
Zone-7	7 (46.67)	8 (53.33)	15
Zone-8	3 (37.50)	5 (62.50)	8
Zone-9	3 (50.00)	3 (50.00)	6
Zone-10	12 (50.00)	12 (50.00)	24
Total	101 (50.50)	99 (49.50)	200

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

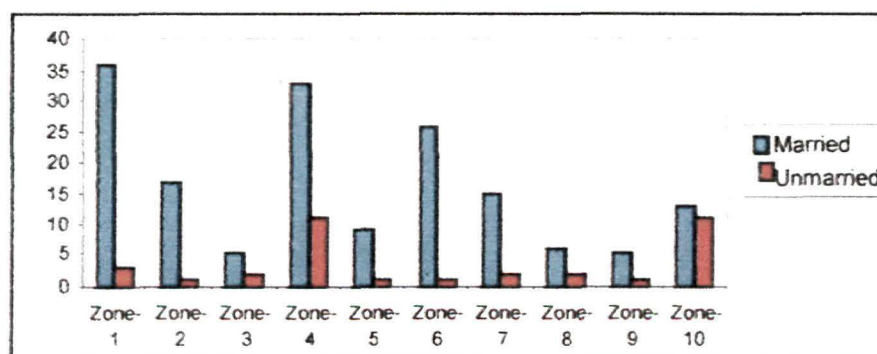
Diagram-5.40: Distribution of Surveyed Tourists According to their Gender



5.7.2.3 Distribution of Surveyed Tourists according to Their Marital Status

The distribution of respondents according to their marital status reflects that, 80.5 per cent of the samples were married and the 19.5 per cent were unmarried (table-5.37). However, married/unmarried ratio varies significantly across the zones. The ratio was very high in zones-1, 2 and 6 compared to the other zones.

Diagram-5.41: Distribution of Surveyed Tourists According to their Marital Status



Zone	Married	Unmarried	Total
Zone-1	36 (92.31)	3 (7.69)	39
Zone-2	17 (94.44)	1 (5.56)	18
Zone-3	5 (71.43)	2 (28.57)	7
Zone-4	33 (75.00)	11 (25.00)	44
Zone-5	13 (72.22)	5 (27.78)	18
Zone-6	20 (95.24)	1 (4.76)	21
Zone-7	13 (86.67)	2 (13.33)	15
Zone-8	6 (75.00)	2 (25.00)	8
Zone-9	5 (83.33)	1 (16.67)	6
Zone-10	13 (54.17)	11 (45.83)	24
Total	161 (80.50)	39 (19.50)	200

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

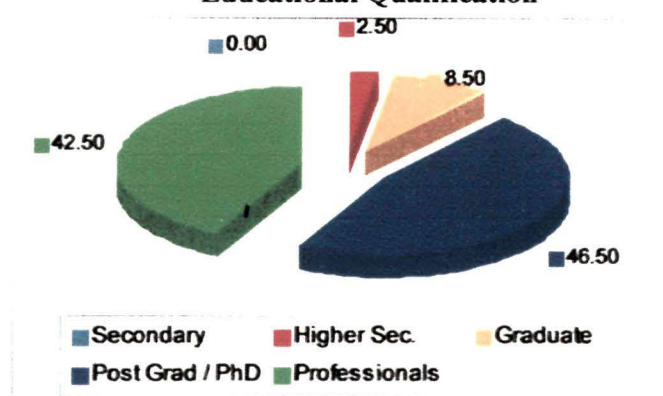
5.7.2.4 Distribution of the Surveyed Tourists according to their Educational Qualification

The distribution of the 200 respondents according to their level of education has been displayed in table-5.38. The table reflects that only 5 individuals i.e. 2.5 per cent had the lowest educational qualification of Higher Secondary level and 17 respondents i.e. 8.5 per cent were Graduates. The largest group of 93 respondents, constituting 46.5 per cent of the sample had Post Graduate or Doctoral degrees. The second largest group of 85 respondents (42.5 per cent) have professional qualification. The pattern of distribution according to the qualification remained same for all the zones, except the group of higher secondary qualification, all of whom visited from zones-1, 2, and 3 i.e. from the North-Eastern region of the country.

Zone	Secondary	Higher Sec.	Graduate	Post Grad/PhD	Professionals	Total
Zone-1	0	2	5	13	19	39
Zone-2	0	2	4	8	4	18
Zone-3	0	1	2	3	1	7
Zone-4	0	0	1	29	14	44
Zone-5	0	0	1	9	8	18
Zone-6	0	0	4	9	8	21
Zone-7	0	0	0	6	9	15
Zone-8	0	0	0	2	6	8
Zone-9	0	0	0	4	2	6
Zone-10	0	0	0	10	14	24
Total	0 (0)	5 (2.5)	17 (8.5)	93 (46.5)	85 (42.5)	200

Source: Field Survey by the researcher during 2007–08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.42: Distribution of the Surveyed Tourists according to their Educational Qualification



5.7.2.5 Distribution of the Surveyed Tourists According to their Family Size

The distribution of the sample tourists according to their family size is shown in table-5.39 and in diagram-5.43. Only 2 per cent (4 respondents) of the total sample, reported to have smallest family size of 2 members. The second group of 25 respondents, constituting 12.5 per cent of the sample had a family size of 3 members. 65 respondents (32.5 per cent) had family size of 4 members. The largest group of 74 respondents, constituting 37 per cent of the sample had family size of 5 members. The next group of 25 respondents, constituting 12.5 per cent of the sample reported to have family size of 6 members. 3 per cent of the sample reported to have family size of 7 members and only one respondent (0.5 per cent) reported the largest family size of 8 members.

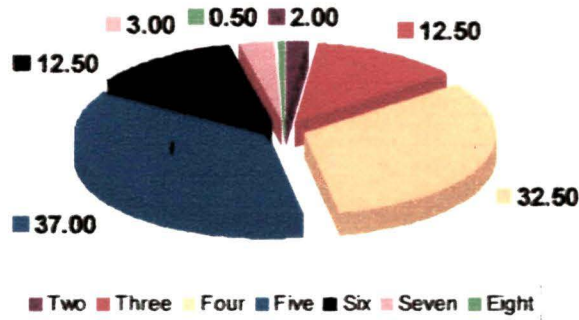
Table-5.39: Distribution of the Surveyed Tourists According to their Family Size

Family Size	2	3	4	5	6	7	8	Total
Zone-1	0	4	9	10	13	3	0	39
Zone-2	0	1	5	4	6	1	1	18
Zone-3	0	0	1	3	1	2	0	7
Zone-4	0	4	20	19	1	0	0	44
Zone-5	0	2	5	10	1	0	0	18
Zone-6	0	3	7	10	1	0	0	21
Zone-7	0	2	6	7	0	0	0	15
Zone-8	2	2	2	2	0	0	0	8
Zone-9	0	2	1	3	0	0	0	6
Zone-10	2	5	9	6	2	0	0	24
Total	4 (2)	25 (12.5)	65 (32.5)	74 (37)	25 (12.5)	6 (3)	1 (0.5)	200 (100)

Source: Field Survey by the researcher during 2007–08.

Note: Figures in the parentheses represent percentage to total.

Diagram-5.43: Distribution of Surveyed Tourists According to their Family Size



5.7.3 Economic Characteristics of the Surveyed Tourists

The nature of employment and level of monthly family income of the respondents have been examined in this sub-section.

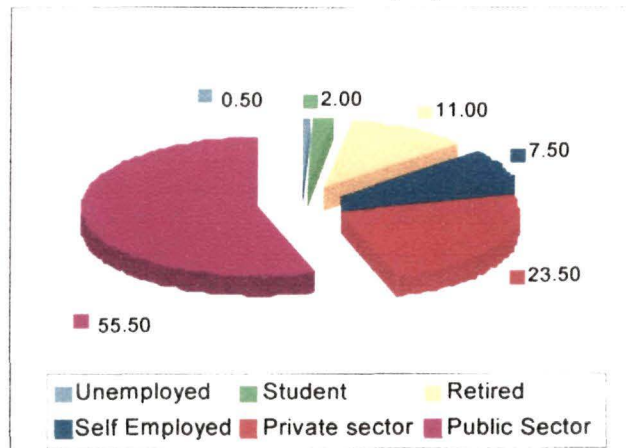
5.7.3.1 Distribution of the Surveyed Tourists according to their Nature of Employment

The survey results displayed in table-5.40 indicate that, of 200 respondents, only 1 individual (0.5 per cent) was unemployed and 4 others (2 per cent) were students, while 22 respondents (11 per cent) were retired individuals. Maximum 55.5 per cent of the sample respondents were public sector employees and 23.5 per cent were private sector employees. Finally, 15 respondents (7.5 per cent) were self-employed visitors. The employment-wise distribution pattern is almost identical for all the zones under study.

Zone	Unemp-loyed	Student	Retired	Self Employed	Private sector	Public Sector	Total
Zone-1.	0	1	2	2	8	26	39
Zone-2.	0	0	1	0	4	13	18
Zone-3.	1	1	1	2	1	1	7
Zone-4.	0	0	2	3	10	29	44
Zone-5.	0	0	1	2	4	11	18
Zone-6.	0	0	3	3	6	9	21
Zone-7.	0	0	5	0	3	7	15
Zone-8.	0	0	3	0	2	3	8
Zone-9.	0	0	1	0	0	5	6
Zone-10	0	2	3	3	9	7	24
Total	1 (0.5)	4 (2)	22 (11)	15 (7.5)	47 (23.5)	111 (55.5)	200 (100)

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.44: Percentage Distribution of the Surveyed Tourists according to their Nature of Employment



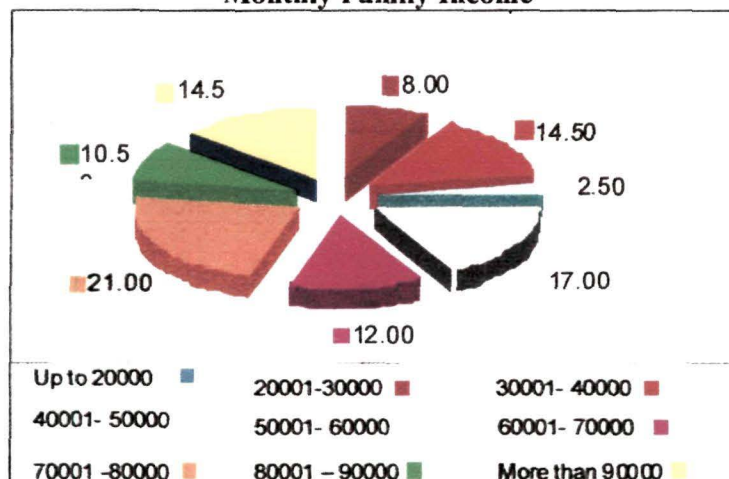
5.7.3.2 Distribution of the Surveyed Tourists According to Their Total Monthly Family Income

The zone-wise distribution of the total monthly family income of the 200 respondents is shown in table-5.41 and also in the subsequent pie diagram-5.45. From the table it was observed that none of the respondents had monthly family income less than Rs. 20,000. Maximum 21.0 per cent of respondents belong to the income range of Rs 70001 to 80000, which was followed by 17 per cent of the responds having monthly income within Rs 50001 to Rs 60,000; which was again followed by 14.5 per cent each in the income group of Rs 30,001 to 40,000 and above Rs 90 thousand. The next group of 24 respondents (12 per cent) reported consolidated monthly income in the range of Rs. 60,001 to Rs. 70,000 and 10.5 per cent have total monthly income Rs. 70,001 to Rs. 80,000. Only, 2.5 per cent of the sample had monthly income in between Rs. 40,001 to Rs. 50 thousand. The intra-zonal distribution however reflects that percentage of respondents in the higher monthly family income was positively associated with the distance of the respective zone. More percentage of respondents in the low level of income from the neighbouring zones was in parity with the level of expenditure required and the distance of the zone and hence the result.

Table-5.41: Distribution of the Surveyed Tourists According to Their Total Monthly Family Income										
Zone	Monthly Income from all sources (Rupees)									
	Up to 20000	20001-30000	30001-40000	40001-50000	50001-60000	60001-70000	70001 - 80000	80001-90000	Above 90000	Total
Zone-1	0	16	22	0	0	0	0	1	0	39
Zone-2	0	0	5	2	10	0	0	1	0	18
Zone-3	0	0	2	2	3	0	0	0	0	7
Zone-4	0	0	0	0	17	18	4	4	1	44
Zone-5	0	0	0	1	4	1	8	3	1	18
Zone-6	0	0	0	0	0	5	14	2	0	21
Zone-7	0	0	0	0	0	0	11	2	2	15
Zone-8	0	0	0	0	0	0	3	4	1	8
Zone-9	0	0	0	0	0	0	2	4	0	6
Zone-10	0	0	0	0	0	0	0	0	24	24
Total	0 (0)	16 (8)	29 (14.5)	5 (2.5)	34 (17)	24 (12)	42 (21)	21 (10.5)	29 (14.5)	200

Source: Field Survey by the researcher during 2007-08.
Note: Figures in the parentheses represent percentage to total.

Diagram-5.45: Distribution of the Surveyed Tourists According to Their Total Monthly Family Income



5.8 Conclusion

From the survey, we may conclude that majority of the visitors in all the chosen sites were domestic tourists. The numbers of foreign tourists in these sites were 19, 15 and 24 respectively. The number of male respondents was more in Lady Hydari Park and Shillong Peak, however, the gender-wise distribution of respondents was skewed in favour of female tourists in Naokalikai Falls within Cherrapunjee. Also majority of the tourists are found to visit with their families. The larger group of respondents in all the three sites were married and in the age group of 46 – 55 years. A significant number of these respondents in all the three sites were elderly (in the age

group of 66 – 75 years) and had retired from their active work life. The tourists in all the three sites were also highly educated; most of them were Post Graduates or had Doctoral degrees. In fact, the lowest educational qualification of Higher Secondary passed was declared by respondents who were college students. Another common feature observed in all the three sites, was that, the largest group of respondents among domestic tourists were employed in the public sector who in most cases receive different incentives for their travel. It was followed by the private sector employees. In the case of foreign tourists however, the maximum number of respondents (55.17 per cent) were employed in the private sector. There were very few unemployed respondents in the three sites. It was also observed that the highest number of respondents among domestic tourists reported a total monthly income in the range of Rs. 60,000 to Rs. 70,000 and the data also indicated that the level of total monthly income of the respondents increased with the increase in the distance travelled by them to reach the tourist sites. Therefore it can be concluded that most of the tourists visiting the tourist sites of Meghalaya are well-educated and actually desirous of discovering the unique features of the state. The tourists receive information about these sites from various sources and thus it may be argued that if the infrastructure of other neglected tourist sites of the state is developed, the state will definitely witness a larger inflow of tourists, which will enhance the employment opportunities for the local populace.

Chapter-6

Valuation of the Three Selected Tourist Sites and Estimation of Visit Demand Function and Consumer Surplus

- 6.1 Introduction**
- 6.2 Review of Some Relevant Valuation Studies**
- 6.3 Methodology followed in this Study**
 - 6.3.1 Effects of different Socio-Economic Factors of Tourists on the Frequency of their Visits**
 - 6.3.2 Estimation of Visit Demand Function and the Recreation Benefit**
- 6.4 Conclusion**

Chapter-6

Valuation of the Three Selected Tourist Sites and Estimation of Visit Demand Function and Consumer Surplus

6.1 Introduction

The 'value' of a 'natural/semi-natural' site is reflected from the individuals' willingness to pay for using the concerned site for recreational purposes, or for deriving utility from the site in any other form. An individual may obtain utility from the different resources present in a natural site/s in various ways, with or without visiting the site, owing to the nature of the three major economic functions performed by these environmental and natural resources. The environment is the major *resource supplier* for all economic activities; it also acts as the *assimilator of wastes* discharged during production and consumption activities and in the case of 'in situ' resources, the environment yields *direct utility* to consumers. In addition to these functions, value is also placed on such resources for their mere existence. However, majority of environmental resources have the three primary characteristics – *irreversibility*, *uncertainty* and *uniqueness*, which significantly affect the total economic value of these goods for the consumers. Many of such environmental goods are irreversible since these cannot be regenerated subject to our demands, as the regenerative and assimilative capacities of environment are dictated by the natural laws. Our limited knowledge of the precarious ecological balance also makes the availability of these goods uncertain and these goods are unique since they can neither be duplicated nor be substituted (Hanley, Shogren and White, 1997).

Based on these characteristics, environmental and resource economists categorise the total economic value of an environmental resource into *use* and *non-use* values. The use/user values are determined by the individuals' satisfaction derived from the actual or potential consumption of such environmental resources. For instance, the benefits obtained from safe drinking water, minerals or clean air. The use value of any environmental resource is also referred to as the *instrumental/*

operational/functional value and it arises out of actual current use and future potential use of the resource. The value derived from the actual consumption of a resource is known as the actual present value. When the resource is set aside with the option of use in future, the value obtained from the resource is known as option value. This option value is often perceived as an insurance against ignorance-based uncertainty of the availability of such resources in future. The option value of a resource has three components – the value obtained by setting aside the resource to ensure its availability for the same individual in future, known as the future use value; the value obtained by ensuring the availability of resource for future generations, known as the bequest value and the value obtained by ensuring the availability of the resource for others, known as the vicarious value of the resource. Also, an individual may assign value for the mere existence of an environmental resource, which is generally known as the existence value of the resource. The total economic value of an environmental resource can therefore be stated as the sum of its actual use-value, option value and existence value (Bannerjee, 2001).

However, since all the functions of the environment cannot be performed through the market, all the environmental resources also do not have proper 'prices' for their use and as such it is impossible to obtain the true 'value' of the resources through the ordinary demand-supply mechanism. In the present study, although only the recreational value of the selected sites are to be estimated, yet the neo-classical market mechanism proves to be insufficient, since the 'recreational value' of the sites is not a purely marketed good. This is primarily due to the fact that, tourists visit a particular site with diverse motives and therefore the 'value' of the site for different people varies and can be put into different categories as mentioned earlier. The amount of this value not only depends on the attributes and services provided by the concerned site, but also on the nature of motives of the different actual and potential visitors to the site. The socio-economic and demographic characteristics of individuals visiting a site also influence their desire to visit the site and thus affect the value of a site significantly. In this chapter, first of all, the effects of various socio-economic and demographic factors on the frequency of visit by the visitors to the three selected sites is analysed by regression method and the individual travel cost method has been used for the purpose. This is followed by the estimation of visit demand function through zonal travel cost method as described in detail in the later part of the chapter. Thereafter, from the estimated visit demand function, visitors'

maximum willingness to pay is estimated, which can be obtained from the estimated consumer surplus that shows the recreation benefits obtained by the visitors/tourists. Here it should be noted that, some of the visitors' visit have been guided by different other motive/s along with the recreation (as described in chapter-5) and thus one may argue that the value placed by them are for a multiple number of attributes or goods obtained from the site. But that problem has always been there in the valuation of any environmental resources because of its very nature. However, in this study, this problem has been carefully tackled in an appropriate manner to isolate only the recreation value and minimise the error of estimation. The practical applicability of the method has been addressed in the chapter on methodology.

6.2 Review of some Relevant Valuation Studies

Following the rising awareness and campaigns for saving critical natural resources; a large number of researchers involved in environmental economics all over the world have been trying to estimate the value of various natural resources for suggesting appropriate policies and measures with the objective of preservation and sustainable utilisation of those resources. Valuation studies for obtaining the recreational value of natural/semi-natural tourist sites have been conducted since the middle of twentieth century, using related market approach or hypothetical market approach. Both the Travel Cost and the Contingent Valuation methods have become more popular despite several limitations and scholars have been trying to improve those methods over the years in order to reduce the error of estimates. Some of the important studies relevant to the present one have been outlined here. Knetsch and Davis (1965) undertook the valuation of the Pittson Area Woods in Northern Maine, USA, using a variety of techniques viz. substitute cost method, zonal travel cost method as well as contingent valuation technique. In the first case, a question was asked to the individuals as to how much further they would drive to reach similar recreational facilities, if those in Pittson were not available to them and that yielded an estimated benefit of \$64,000. However, application of Zonal Travel Cost Method to the same area yielded an aggregate benefit estimate of \$70,000 while a Contingent Valuation question elicited aggregate maximum willingness to pay values of around \$72,000. Since these three results were remarkably close, those studies provided some encouragement to the early researchers who were interested in the study of valuation of such type of resources.

Farber (1988) also used the Zonal Travel Cost method to estimate the recreational use value of the wetlands of the Terrebonne Park, Louisiana, USA. The survey procedure used in this study was different and involved placing self-addressed stamped questionnaires on windshields of all vehicles parked in the morning at all 27 boat launch facilities in the wetlands, on various days throughout the year including the hunting and the fishing seasons. Of the 7,837 questionnaires distributed in this manner, only 1,126 were returned, indicating a very low response rate (14.4 per cent). The annual value of the wetlands was estimated at \$1,277 million when the opportunity cost of time was assumed to be 10 per cent of the average full wage rate. This value of the wetlands, however, increased significantly to \$3,898 million when the opportunity cost of time was assumed to be equal to the full wage rate. The capitalized value of the area, however, varied by a factor of 2.67 depending on whether a 3 per cent or 8 per cent discount rate was used and whether the population using the wetlands was assumed to grow in the future. Accordingly, the average capitalized value of the wetlands varied from \$36 to \$111 per acre depending on the selection of assumptions. Thus the values obtained by this study were considerably biased and it is very difficult to choose the particular one for the policy formulation. It should also be mentioned that the response rate of the visitors to the questionnaire distributed in the aforesaid manner in a developed country like USA was very poor and therefore the response in an underdeveloped region of India where most of the visitors come from other regions for a limited time to enjoy the sites is not unimaginable. Moreover, a considerable portion of the visitors do not place much importance on such studies which is clear from the reluctance of many visitors to participate in the survey conducted by direct interview method in the present case. It has also been observed that many respondents answer casually although they were well educated. Nonetheless, the direct interview method yields better response and information than the method followed by Farber (1988), since the direct interviews helps the enumerator to understand the respondents in a better way and also conduct the iterative bidding procedure of contingent valuation method, which cannot be obtained by any other method.

Grandstaff and Dixon (1986); Harley and Hanley (1989); Huppert (1989); Johnson (1989); Walsh, Ward and Olienik (1989); White (1989); Duffield and Neher (1990); Willis and Garrod (1990); Walsh, Sanders and McKean (1990); Richards et al (1990); Dixon and Sherman (1990); Tobias and Mendelsohn (1991); Sievslnen, Pouta

and Ovaskainen (1991); Choe, Whittington, and Lauria (1994); Navrud and Mungatana (1994) and Kaosa-ard et al (1995) conducted some of the most prominent studies to estimate the recreation value and consumer surplus through travel cost or contingent valuation or a combination of both these methods. Various statistical and econometric techniques have also been used by different scholars depending upon the nature of variables and the conditions of the study.

Navrud and Mungatana (1994) used a combination of the Contingent Valuation and Travel Cost Methods to estimate the economic value of flamingos in relation to the total tourist inflow to the Lake Nakaru National Park in Kenya. The results of the CVM survey indicated that the visitor's consumer surplus was approximately \$75 million annually, and one-third of this surplus was generated mainly due to the presence of the flamingos in the Park. The survival of the flamingos in the Park was threatened since the lakes of the park were becoming increasingly contaminated due to discharge of industrial effluents. This study therefore provided an economic argument for regulating the emission of pollutants in the lake in order to preserve the flamingos. The researchers also obtained a significantly higher economic value of the birds by using the Travel Cost Method. However, since the travel costs of international tourists were higher, the resultant estimated values were much inflated. Therefore, only the estimates of the CVM survey were accepted as valid and used for policy purposes.

Becker et al (2004) also used the **Travel Cost Method** to estimate the value of viewing threatened Eurasian griffon vulture *Gyps fulvus* by the public at the Gamla Nature Reserve in Northern Israel. The researchers generated a visit-distance function based on 143 questionnaires. to derive the demand function for the site from which a monetary value was estimated. The potential annual benefit of Gamla was estimated to be NIS 5.5–6.0 million. which was equivalent to US\$ 1.1–1.2 million. The annual economic value of Gamla to the visiting public was estimated to be approximately five times higher than the estimated revenue and 85 per cent of the visitors to Gamla were primarily interested in viewing the vultures. These results thus provided a strong case for further investment in Gamla Nature Reserve and in particular provided an incentive for investment in the protection of vultures in the area.

Nillesen (2003) estimated the recreational use value of hiking in the Bellenden Ker National Park, Australia by using a zonal travel cost model. In this study, multiple destination visitors have been accounted for by converting visitors' own

ordinal ranking of the various sites visited to numerical weights, using an expected-value approach. The value of hiking and camping in this national park was found to be \$AUS 250,825.

Economists in India started conducting valuation studies of environmental goods and services only in the last decade of the twentieth century. Hadker et al (1997) conducted a valuation study of the Borivli National Park, (BNP) situated in the outskirts of Mumbai. The researchers used Contingent Valuation Method for the study and surveyed nearly 600 families from different localities in the city for estimating the WTP of residents for the preservation and improvement of the BNP. The results indicated that Mumbai households had a strong interest in environmental conservation and they were willing to pay exclusively for BNP on an average Rs. 7.5 per family per month for the next five years. By extrapolating this amount, it was estimated that approximately Rs. 20 million per month could be collected for the next five years from the Mumbai city alone for the preservation of the BNP.

Chopra (1998) also conducted a valuation study of the Keoladeo National Park in Bharatpur, Rajasthan using the Travel Cost Method. A total of 305 tourists were interviewed for the study, of whom 235 were domestic tourists and 70 were foreign tourists. Data regarding tourists' travel expenditure, lodging and other allied expenditures and various other socio-economic factors were collected. The consumer's surplus was estimated from the semi-log form of the travel-cost function by relating the visitation rates with the travel costs incurred in both its total and local variants. Although the consumer surplus estimated by the Travel Cost Method was higher, yet considering the joint product nature of the services provided by the reserve, it was considered more appropriate to estimate consumer's surplus from local travel cost estimates. The consumer surplus for domestic tourists was estimated at Rs. 427.04 per visit per family and for foreigners at Rs. 432 per visit for an individual. The study also indicated that the demand was not affected when a redistribution of the benefits and costs was attempted through an increase in the Entry Fee for the reserve.

Applying both CVM and TCM, Choudhury (2004) estimated that the total annual recreational use value of the various tourist sites of Chandigarh city (based on 2002-03 prices), to be approximately Rs.12.00 crores. The mean willingness to pay (WTP) of each reasonably earning family residing in the city, for the betterment of existing green landscape features and for creating new parks/gardens in the city was Rs. 153 per year for a period of five years. The annual recreational use value of the

city's urban forestry assets was estimated to be Rs. 2.75 crores at 2002-03 prices. The Travel Cost Method was used for estimating the recreational use value on the part of the domestic tourists, which was calculated at Rs.9.24 crores.

In the North-Eastern part of India, very few valuation studies have been conducted till date, and most of the studies were undertaken to ensure the sustainability, protection and conservation of the tourist sites. Maharana et al (2000) tried to estimate the recreational value of Khecheopalri, a lake situated in the West District of Sikkim which has recreational, biodiversity and sacredness values by using the Contingent Valuation Method. It was observed that the demand curve for recreation increased with decreases in travel cost and distance for Sikkimese visitors. The willingness to pay for maintenance and preservation of the lake by all types of visitors ranged from US\$ 0.88 for members of the local community to US\$ 7.19 for international tourists. The authors rightly concluded that a large number of lakes in the Hindu-Kush Himalayan region, if properly managed and marketed for ecotourism, could bring economic development to the region and also provide an economic incentive for conservation. However, the authors overlooked the significance of different socio-economic characteristics of tourists and their diverse motives for visiting the Lake in this study. Mitra (2003) also used Travel Cost Method for estimating the recreational value of selected tourist sites in Arunachal Pradesh.

In this study, an attempt is made to estimate the recreational value of the three selected sites in Meghalaya by using both the Travel Cost and Contingent Valuation Methods, as the use of any one of these two methods alone cannot capture the visitors' willingness to pay for visiting the sites as well as their willingness to pay for the preservation and improvement of natural environmental conditions of those areas.

6.3: Methodology followed in this Study

6.3.1 Effects of different Socio-Economic Factors of Tourists on the Frequency of their Visits

The disposable income and leisure time of potential visitors are supposed to significantly influence their choice of touring various sites. The demographic and social factors like age profile of the tourists, their gender, marital status and their family size, also significantly affect the nature of recreational products and services sought by them. The frequency of their visits to a site is also dictated by the nature of their employment and total income. Moreover, the geographical characteristics, for

instance the location of the sites and tourism infrastructure in the area, such as transportation facilities also affect the tour decisions of the potential visitors.

Therefore, the number of visits to the chosen sites is explained as a function of multiple factors including the travel and other related expenditures, total income of visitor, his/her age, education, gender, nature of employment, marital status, family size as well as the total distance travelled by him/her. The opportunity cost of time spent in travelling is also considered here, however, since most of the tourists surveyed were job-holders (in both the private and public sectors) and therefore had a steady and fixed income, only a minimum daily wage (Rs. 100) was taken as representative of the opportunity cost of the work hours lost by them in the course of their travel. In fact, many of the tourists' had actually received travelling allowances to facilitate their journey and the time spent on such travelling was in no way affecting their daily income and hence the use of minimum wage per day (as determined by the Government of India) may be justified.

The distance travelled by tourists to reach a site is an important factor in determining the frequency of their visits to the site. Other things being identical, the distance travelled by the tourists from the place of their 'origin' to the destination site is expected to have an inverse relationship with the frequency of their visits. In other words, a greater travel distance indicates an increase in the travel expenditure, required time, higher opportunity costs, increased travel hazards, which may be assumed to have a negative impact on the frequency of visits by tourists. Therefore, in the alternative hypothesis, distance is considered to have a significant negative impact on the frequency of visits as against the zero impact of the null hypothesis.

Similarly, the travel and other related expenditures incurred by tourists are also assumed to have a significant inverse relation with the frequency of their visits as against the zero effect of the null hypothesis.

The level of education of tourists is an important factor, which is expected to increase and enhance the earning capabilities of individuals. A higher level of education also increases awareness among people and raises their inquisitiveness and desire to learn more about the natural environment of a site. This is more relevant for those individuals who have been engaged in nature related works, such as botanists, conservationists, nature photographers and wildlife enthusiasts. Therefore, the level of education of tourists is considered to have a significant positive impact on the frequency of their visits to a site.

A higher level of income also enhances the spending capabilities of an individual, as it imparts a sense of economic security. Thus, it is considered to have a significant positive impact on the frequency of visits by tourists.

The government employees in India receive many travel incentives in the form of Leave Travel Concessions (LTC), reduction in air fares for visiting the North-Eastern states and the like, which encourages them to travel more for recreation purposes. Moreover, the opportunity costs associated with public sector jobs are much less compared to jobs in other sectors. For instance, self-employed individuals like shopkeepers, small business owners have to forego their earning opportunities when they take a 'holiday', as they normally keep their business establishments closed on such occasions. Employees in the private sector also have fixed 'deadlines' and a failure to comply with those often lead to a reduction in monetary incentives. On the other hand, public sector employees enjoy a greater number of 'paid' holidays and more job security and therefore can travel more to different places without foregoing any income. They only sacrifice those holidays which they could otherwise use for some other purposes, such as obtaining knowledge or helping other family members instead of touring a new area. Therefore, the nature of employment of an individual is expected to affect their travel decisions and this effect is expected to be positive in the case of public sector employees. Hence, a dummy variable D_E is introduced as an explanatory variable in the regression analysis that takes value 1 in case of public sector employees and 0 otherwise.

It is generally observed that tourists in the middle age group of 45 to 55 years normally indulge in a lot of travel and leisure activities, since they have a considerably high level of disposable income and their physical condition also permits them to travel with families or friends. Again, individuals in their early thirties also tend to travel a lot, as they have limited family responsibilities; however, at this early age the low income level often constrains many of them from undertaking frequent visits. The older individuals on the other hand, tend to limit their travel plans owing to financial and health constraints except those who sometimes tour only for the betterment of health. Therefore, if the number of visits by the tourists visiting the concerned sites in a given time period is plotted against their age then an inverse U shaped curve is likely to emerge. Therefore, the absolute difference between the age of tourists and their mean age is likely to have a negative effect on the frequency of visits by tourists.

The gender of individuals also has a significant impact on the travel plans of the individuals. In many parts of the country, women are mostly confined to domestic duties and they have very little say in such matters. Again, most women do not prefer to engage in jobs which involve a lot of travelling. Thus the tourist population is expected to be biased in favour of the males and in order to examine this, a dummy variable, D_G is introduced which takes the value 1 if the respondent is a male and 0 if the respondent is a female.

Another important factor which may affect the travel plans of individuals is their marital status. It is generally observed that young couples tend to travel more than single individuals. Again older individuals also normally do not travel alone and the largest group of travellers are in fact made up of senior married couples (as per the survey results). Therefore, in order to ascertain the impact of gender on the frequency of visits by tourists, a dummy variable, D_{MS} is introduced which takes value 1 if the respondent is married and 0 otherwise.

The effect of the various socio-economic characteristics on the frequency of visits by the tourists is examined through regression of number of visits on the relevant explanatory variables and the individual travel cost method is used here for this purpose. Since researchers agree that the semi-log model yields better results (Bann, 1998), therefore, the model in semi-logarithmic form is considered for all the three sites and the equation is specified as:

$$V_i = \alpha_0 + \alpha_1 \ln TC_i + \alpha_2 \ln Y_i + \alpha_3 \ln DT_i + \alpha_4 \ln (A_i - \mu)^2 + \alpha_5 \text{Edu}_i + \alpha_6 \ln FS_i + \alpha_7 D_{Ei} + \alpha_8 D_{Gi} + \alpha_9 D_{MSi} + U_i \quad \dots (6.1)$$

where, V_i = number of visits by the i^{th} respondent to a site,

TC = total cost of i^{th} individual for one round-trip to a site,

Y_i = Per capita household income of i^{th} respondent,

DT_i = total one-way distance travelled by i^{th} respondent to reach a site,

A_i = age of respondent and μ = mean age of the sample respondents,

Edu_i = level of education of the i^{th} respondent,

FS_i = family size of i^{th} respondent,

D_{Ei} , D_{Gi} and D_{MSi} are the nature of employment, gender and marital status of the respondent; ($D_{Ei} = 1$ if the respondent is a public sector employee; 0 otherwise; $D_{Gi} = 1$ if male, 0 otherwise and $D_{MSi} = 1$ if married, 0 otherwise).

U_i is the random disturbance term with spherical classical linear regression properties.

The regression results are presented in table-6.1 and the table indicates that in all the three cases, the number of visit is positively affected by the per capita family income of the visitor and inversely related to the distance of the site from the area of the origin of the tourist as well as the per capita travel expenditure for a single visit to the site. Thus, the number of visit is adversely affected by the distance as well as expenditure per head required for the purpose of visit. However, the coefficient of distance is not found to be significant in case of Lady Hydari Park, as many of the visitors here are from the neighbouring areas. There is also a significant positive correlation between the distance travelled by a tourist and the travel expenditure incurred by him and thus a part of the impact of the distance travelled is already captured by the travel expenses, which is shown later (in Appendix tables-1, 2 and 3). In the case of Nohkalikai Falls in Cherrapunjee, coefficients of the level of education, age and marital status of tourists are significantly positive as evident from the basic characteristics of the surveyed respondents. However, in the case of the other two sites, the level of education is found to have positive impact but the coefficient is not significant, which may be attributed to the fact that these sites are also visited for recreational purposes by students, uneducated and under-educated people from the neighbouring areas of zones-1 and 2.

Table-6.1: Estimated Results Following Semi-Log Linear Regression Equation-6.2

N-200	Lady Hydari Park		Shillong Peak		Nohkalikai Falls	
Variables	Coeff.	SE	Coeff.	SE	Coeff.	SE
Intercept	- 9.91	40.712	- 17.35	42.274	-61.236*	25.91
Sex	1.95	1.999	0.887	2.267	- 1.424	2.26
Marital Status	- 6.82**	4.233	1.693	4.592	5.842*	3.30
Education	1.51	1.667	1.025	1.557	3.512*	0.963
Age [$\ln(x-45)^2$]	-1.084**	0.724	- 0.013	0.756	1.346*	0.727
LnDistance Travelled	- 0.70	0.660	- 6.084*	2.648	- 4.014*	1.762
LnFamily Size	4.768	6.53	11.543**	7.257	11.126*	5.11
LnPer capita Expenditure	-14.074*	1.288	- 12.187*	2.985	-14.712*	2.019
LnPer capita Income	14.822*	4.19	15.76*	3.35	19.561*	2.59
Nature of Employment	- 1.870	2.213	2.901	2.352	1.83	2.23
R ² , R(bar) ² , F	0.711, 0.697, 51.96		0.731, 0.718, 57.043		0.721, 0.708, 54.574	

Notes: (i) * and ** represent that the coefficient is significant at 1 and 5 per cent level by one tail test. (ii) SE denotes Standard Error of the coefficient.

6.3.2 Estimation of Visit Demand Function and the Recreation Benefit

The visit demand function is estimated by using the Zonal Travel Cost Method. The derivation of the demand function from the optimisation of visitors' objective function (utility) subject to their budget constraint can be drawn from the

neoclassical analysis as followed by Nillesen (2002) and Himayatullah (2003). A visitor may be considered as a representative consumer who allocate her/his income for the consumption of a marketable good (X) as well as an environmental good (V), which in this case is visit to the tourist sites. S/he maximises her/his utility subject to the budget constraint imposed by his/her income. Therefore, the problem can be mathematically written as:

$$\text{Maximize: } U(X, V) \dots \dots \dots (6.2)$$

$$\text{Subject to: } WL = P_x X + P_o V \dots \dots (6.3)$$

Where U = utility of the consumer, X = quantity of the market good, V = number of visit to the site for recreation, W = hourly wage rate, L = hours of wage labour, P_x = price of market good X, P_o = out-of-pocket expenses incurred for visiting the sites. Himayatullah (*op cit*) used WL as the income of the visitor. However, the individual has a variety of sources of income and many of the visitors are government employees, who have a fixed monthly salary. Therefore, for the sake of simplicity, in the present study, it is replaced by total monetary income, Y.

In addition to the travel and out-of-pocket expenses, the consumer also has to consider the opportunity cost of the time (as mentioned earlier) spent in recreational activities in the sites. The time that a consumer spends for visiting a recreational site could have been devoted to any income generating activity. Himayatullah (*op cit*) thus considered the consumer's utility maximisation subject to a time-budget constraint. The time constraint can be symbolically written as:

$$T = L + H.V \dots \dots \dots (6.4)$$

where, T = total household time available, H = time spent in a single round-trip to a site including the time spent on the site, L = hours of wage labour, V = number of visits to the sites.

The maximisation problem then takes the following form:

$$\text{Maximize: } U(X, V) \dots \dots$$

$$\text{Subject to: } WT = P_x X + [P_o + W.H] V = P_x X + P_o V \dots \dots (6.5)$$

The price of a visit to a tourist site therefore, not only includes the travel and out-of-pocket expenses, but also the incomes foregone on the days spend in travelling to and from the site and staying in the area. So, the consumer maximizes his utility subject not to the hours of paid work, but to the total household time available. This is known as the 'full income concept'.

Solving the problem in this case by constrained optimisation yields the demand function for visits to the site as $V = f(P_x, P_o, H, W)$, where T is fixed.

In the present case, the opportunity cost is also added to the other travel expenditures (travel, local transport, entry and guide fee if any, food¹ and lodging etc) for a round trip to the site, which is represented as P_o . This simplifies the problem and it can be written as:

$$\begin{aligned} &\text{Maximize: } U(X, V) \\ &\text{Subject to: } Y = P_x X + P_o V \quad \dots(6.6) \end{aligned}$$

Solving this gives the Marshallian visit demand function as $V = g(P_x, P_o, Y)$. The demand function indicates that the consumer demand for a visit to a tourist site depends on the price for a visit, related expenditure, income of the household and other socio-economic variables (not shown explicitly here). For given P_x and Y , V is a function of P_o only. The price of visiting a substitute site is not considered in this case, owing to the uniqueness of each site with respect to fulfilling different kind of desires of the visitors. Although India is blessed with many other hill stations, yet Shillong occupies a unique place in a traveller's itinerary, and the three chosen sites have distinct characteristics. The Lady Hydari Park is situated in the heart of the city and is a favourite getaway of the local populace. It also has a mini-zoological garden within its premises, which houses a few species of fauna endemic to this part of the country, and hence draws tourists from other places as well. The Shillong Peak is the highest peak in the state and offers a panoramic view of the entire city. The area is also heavily forested and has religious significance for followers of the local indigenous 'nature' religion and therefore occupies a distinct mention in every visitor's itinerary. The Nohkalikai Falls is one of the most beautiful waterfalls in this area and the pristine beauty of this site is unmatched, and hence thousands of visitors flock to this site every year to enjoy this unique spectacle of nature.

The visit demand function is estimated by using Clawson's Zonal Travel Cost Method (ZTCM). First of all, the 'zonal' visit rate for the tourists from different zones has been estimated and this value has been used to estimate the visit demand function. The steps followed for this purpose also have been described in chapter-3:

- a. The first step involves the division of the surveyed visitors according to their zones of 'origin' (unlike the zones considered in chapter-5 to describe

¹ Although the person would also consume at home, yet some extra expenditure on food is incurred during the tour and that has actually been considered here.

socio-economic characteristics of the tourists; here zones are considered on the basis of the political boundary i.e., the various states in the country. (This is done due to the fact that information on many of the variables is available state-wise only).

- b. Secondly, the number of visitors from each zone and its relative share to the total surveyed visitors to a site is computed.
- c. Thereafter, the annual number of visits from each zone is calculated by multiplying the relative share of each zone with the total annual visit to the site from all the zones.
- d. Then average visit rate is estimated by dividing the calculated annual visit from each zone by the respective zonal population.
- e. Lastly, using the estimated average visit rate, demand function and then average visitors' consumer surplus as well as total recreation benefit is estimated.

Since the area under the estimated demand curve over the average expenditure incurred on a single visit provides an estimate of the 'value' of the recreation that an average tourist obtains by visiting the site, it is extrapolated for the relevant visiting population in order to estimate the total recreation benefits obtained from the site during a particular year.

The system of structural equations used here is presented in implicit form as:

$$V_i = f(TC, Y, D, E, EQ, A, G, \text{Error}) \dots\dots\dots(6.7)$$

$$TC = g(D, Y, V_i, \text{Error}) \dots\dots\dots(6.8)$$

where, V_i = visit rate, TC = total cost for round-trip to a site per tourist, Y = per capita NSDP, D = central distance of the zone from the site, E = nature of employment, EQ= literacy rate of the zone, A = age of tourist, G = Gender of tourist, Error= random disturbance term with classical regression properties.

Therefore equations 6.7 and 6.8 represent a system of simultaneous equations where the variables TC and V_i are both found to be endogenous and simultaneously related and the inverse demand function represented by the equation-6.8 is over-identified. Again, V_i in the second equation is correlated with the other explanatory exogenous variables, giving rise to the problem of multicollinearity.

Although it is commonly accepted that the state of infrastructure of an area (transport and communication networks), purpose of visit and information available about the unique features of a site significantly affects the visiting decisions of the

tourists, however due to the lack of usable information these could not be introduced as explanatory variables here and their impact may be presumed to be reflected in the error term.

In order to obtain consistent estimates, 2-stage least square method (2SLS) has been applied. Although in case of individual travel cost explanation, all the variables in the first equation were considered (as obtained from the survey), in case of the use of zonal travel cost for the estimation of the demand function only three observed explanatory variables viz distance, literacy and per-capita NSDP (proxy for income) have been included and the visit rate is regressed on the log values of these variables. The predicted visit rate is then substituted for the actual visit rate and used for the estimation of the demand curve as well as the consumer surplus. Although, we have conducted survey and collected information at Nohkalikai Falls in Cherrapunjee, which is the most important attraction for the visitors, actually all those tourists also visit other sites (such as the limestone Mawsmi caves, the Thangkarang and Saimika parks, Ramakrishna Mission and a few minor falls) in the town and the costs for all these are considered together. Hence the consumer surplus estimated in this particular case is not only for the Nohkalikai Falls alone but for the whole Cherrapunjee area.

The analysis is done separately for the domestic and the foreign visitors. The result of first stage regression for the domestic tourists is presented in table-6.2. The table shows that distance has significant negative impact on the visit rate, while literacy and per capita NSDP have positive impact which is not found significant in this case, which may be due to the correlation among the explanatory variables, as shown in Appendix tables-4, 5 and 6.

Variable	Lady Hydari Park		Shillong Peak		Nohkalikai Falls	
	Coeff.	Std Error	Coeff.	Std Error	Coeff.	Std Error
Constant	0.048	2.48	-0.658	2.11	5.524	5.154
Ln Distance	-0.562*	0.078	-0.613*	0.069	-0.858*	0.148
Ln Literacy	0.112	1.083	0.199	0.27	0.929	0.573
Ln PCNSDP	0.378	0.348	0.796	0.908	1.96	1.568
R², R(bar)², F	0.083, 0.757, 17.65		0.872, 0.84, 27.22		0.713, 0.651, 11.57	

Note: * and ** represent that the coefficient is significant at 1 and 5 per cent level by one tail test.

The semi-log demand functions in case of domestic tourists for three sites are estimated in the second stage. These are:

$$\text{Ln TC} = 9.817^* - 1.7476^* \quad [R^2=0.878, R(\text{bar})^2 = 0.827, F = 77.516, n = 17]$$

$$(0.127) \quad (0.198) \dots\dots(6.9)$$

$$\text{Ln TC} = 9.995^* - 1.646^* \quad [R^2=0.889, R(\text{bar})^2 = 0.791, F = 53.621, n = 16]$$

$$(1.51) \quad (0.225) \dots\dots(6.10)$$

$$\text{Ln TC} = 9.645^* - 0.6416^* \quad [R^2=0.796, R(\text{bar})^2 = 0.783, F = 62.4, n = 18]$$

$$(0.102) \quad (0.109) \dots\dots(6.11)$$

The figures in the parentheses represents standard errors of the corresponding coefficients and * indicates that the coefficient is highly significant at 1 per cent level of significance by the two-tail test. The equations 6.9, 6.10 and 6.11 are for the Lady Hydari Park, Shillong Peak and Nohkalikai Falls in Cherrapunjee respectively. All the demand functions show an inverse relationship between the visit rate and log of total travel expenditure per head per visit. A demand curve representative of the demand for the three sites is shown in diagram-6.1.

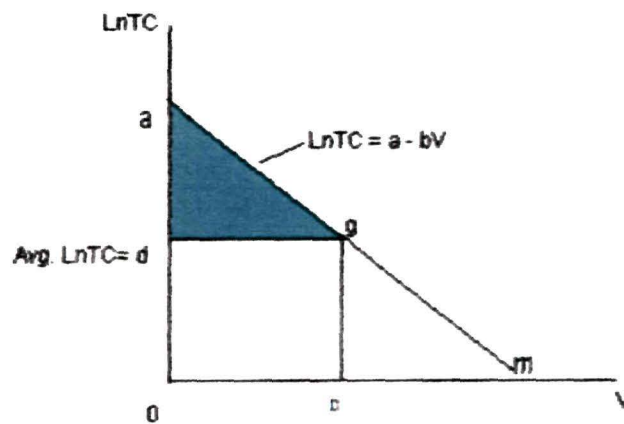


Diagram-6.1

Having estimated this demand function the consumer surplus (for all the three cases) is estimated corresponding to the average Travel Cost per visitor per trip, which is nothing but the value of triangle *adg* (shaded area). It is obtained by integrating the function i.e. $\int \text{LnTC}$ over the range *o* and *a* and subtracting from it the area *odg* i.e. (*od* X *oa*). This is therefore the consumer surplus of an average visitor to the corresponding site and by extrapolating it to all the visitors to the site in a year, total recreation benefit obtained by the tourists can be estimated.

The estimated surplus per individual per visit is Rs 3459.75, Rs 4295.57 and 1787.46 for Lady Hydari Park, Shillong Peak and Nohkalikai Falls (Cherrapunjee) respectively.

Now considering the additional willingness to pay (WTP) of the visitors over the actual present expenditure in the form of higher entry fee, parking fee and entertainment tax, separate regression equations have also been constructed for all the three cases and the revised demand functions are:

$$\text{Ln WTP} = 9.817^* - 1.726^* [R^2=0.835, R(\text{bar})^2 = 0.824, F = 75.92, n = 17] \\ (0.126) \quad (0.197)\dots\dots(6.12)$$

$$\text{Ln WTP} = 9.997^* - 1.6016^* [R^2=0.783, R(\text{bar})^2 = 0.768, F = 50.67, n = 16] \\ (0.151) \quad (0.225)\dots\dots(6.13)$$

$$\text{Ln WTP} = 9.67^* - 0.8536^* [R^2=0.808, R(\text{bar})^2 = 0.796, F = 67.37, n = 18] \\ (0.098) \quad (0.104)\dots\dots(6.14)$$

The figures in the parentheses represent standard error of the corresponding coefficient and * indicates that the coefficient is highly significant at 1 per cent level of significance by two tail test. The equations 6.12, 6.13 and 6.14 are for the Lady Hydari Park, Shillong Peak and Nohkalikai Falls in Cherrapunjee respectively. The revised consumer surpluses estimated in all three cases are Rs 3459.19, Rs 4319.81 and Rs 1933.15. Therefore, there is an increment of consumer surplus in case Shilling Peak and Nohkalikai Falls by Rs 24.24 and Rs 145.69 respectively, while it is insignificantly reduced by Rs 0.56 in the case of Lady Hydari Park. This is an indication that the visitors are willing to pay more for Shillong Peak and Nohkalikai Falls and the WTP is highest for Nohkalikai falls representing visitors' enjoyment and recreation value is much larger than in the other two sites. However, in the case of Lady Hydari Park, a large number of the visitors are local day visitors and most of them are reluctant to pay more and some of them even opined for the reduction in entry charge as they could not visualise any enhancement in entertainment due to the reduction in the number of animal species housed within the Park in the recent past. Although many non-local visitors expressed their willingness to contribute more, yet this is neutralised significantly by the negative responses of the local visitors. On an average, the responses of the domestic visitors showed that they are willing to contribute more by Rs 26.74, Rs 51.34 and Rs 283 for the three sites respectively.

Most foreign visitors were visiting this region as a part of a national package tour and therefore spent for all three sites together, although their primary intention was to visit the Cherrapunjee area. Hence only a single demand function is estimated for all the three sites, for the foreign tourists. Moreover, since most of them were

already travelling in different parts of India for several days, only their local travel cost was considered to avoid errors in calculation of their actual travel expenditures.

The estimated demand functions for the foreign tourists' are-

$$\text{Ln TC} = 13.352^* - 0.625\text{Ln}\hat{v}^{***} \quad [R^2=0.27. R(\text{bar})^2 = 0.23. F = 3.2. n = 6]$$

(1.35) (0.29)

$$\text{Ln WTP} = 14.32^* - 0.853\text{Ln}\hat{v}^{***} \quad [R^2=0.32. R(\text{bar})^2 = 0.28. F = 3.1. n = 6]$$

(1.65) (0.233)

Here *** indicates that the coefficient is significant at 20 per cent level of significance by one tail test only. It should be noted that, the foreign visitors were only from 6 different countries which had wide variations in distances as well as travel expenditures and hence the result. The estimated combined consumer surplus for all the three sites is Rs. 15872 and Rs. 17292 corresponding to actual travel cost and willingness to pay for all the three sites.

Thus the consumer surplus for all the three sites together is much higher in the case of foreign visitors and their willingness to pay is also much higher than an average domestic tourist and this can be primarily attributed to their significantly higher monthly incomes. Considering the zonal visit rate and verifying with the entry tickets sold in the sites, the numbers of visitors to those three sites have been estimated for the year 2007-08, which is shown in table-6.3. This is done because the zone-wise/state-wise number of visitors to each site is not available from any secondary sources. Using the estimated number of visitors, total consumer surplus or recreation benefit generated in that particular year is estimated for all the three sites, which is presented in table-6.4.

Site	Domestic	Foreign
Lady Hydari Park	143185	1462
Shillong Peak	150263	1222
Nohkalikai Falls	164237	2325

Note: These are the minimum number of visitors as visit of many are not recorded especially the children.

Site	Estimated Surplus Generated (Crore)		Surplus as per WTP (Crore)		Expressed Variation (Crore)	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Lady Hydari Park	49.54		49.53		-0.008	
Shillong Peak	64.55		64.91		0.3642	
Nohkalikai Falls	29.36		31.75		2.3928	
Total	143.44	7.95	146.19	8.66	2.749	0.7113
Grand Total	151.39		154.85		3.4603	

The table-6.4 reveals that although the number of domestic visitors is much more in case of Nohkalikai Falls or Cherrapunjee than the other two sites, the total consumer surplus or recreation benefit generated is the highest in case of Shillong Peak, followed by Lady Hydari Park and then Cherrapunjee. The overall annual recreation benefit of the three sites derived by the foreign tourists was about Rs 7.95 crores. Therefore, in total approximate annual gain was about Rs 151.39 crores, which could be increased to Rs 154.85 crores, if the WTP of the visitors for the purpose were considered i.e, by about Rs 3.46 crores. Besides, there are many other benefits derived in various ways from the development of tourism in the sites and so the actual benefit from the sites is much more the currently estimated recreation benefit. Therefore, if the available resources used for the purpose of tourism are utilised in a proper way, there is ample scope for increasing the benefits from the same and consequently enhancing the welfare of the people associated with it.

6.4 Conclusion

In this chapter, the effect of the various socio-cultural characteristics of the surveyed tourists on the frequency of their visits to the three selected sites is analysed. The results obtained indicate that of the various factors, the monthly incomes of the respondents have a strong positive impact and the distance travelled by them to reach the sites along with the expenditure incurred in the process have a strong negative impact on the frequency of their visits. Thereafter, the Zonal Travel Cost method has been used to estimate the visit-demand function for the three sites, and the consumer surpluses have been derived for domestic and foreign tourists. The estimated surplus per individual per visit is Rs 3459.75, Rs 4295.57 and 1787.46 for Lady Hydari Park, Shillong Peak and Nohkalikai Falls (Cherrapunjee) respectively.

In the survey, the WTP values of the respondents have been obtained using the iterative bidding process, and when these values are added to the total expenditure incurred by the respondents, revised recreation values of the three sites are obtained. . The revised consumer surpluses estimated in all three cases are Rs 3459.19, Rs 4319.81 and Rs 1933.15 and it indicates that there is an increment of consumer surplus in case Shilling Peak and Nohkalikai Falls by Rs 24.24 and Rs 145.69 respectively, while it is insignificantly reduced by Rs 0.56 in the case of Lady Hydari Park. Again most foreign visitors were visiting this region as a part of a national package tour and therefore spent for all three sites together and hence only a single

demand function is estimated for all the three sites, for the foreign tourists. The estimated combined consumer surplus for all the three sites is Rs. 15872 and Rs. 17292 corresponding to actual travel cost and willingness to pay for all the three sites, which indicates that the consumer surplus for all the three sites together is much higher in the case of foreign visitors and their willingness to pay is also much higher than an average domestic tourist and this can be primarily attributed to their significantly higher monthly incomes. Thereafter, using the estimated number of visitors, total consumer surplus or recreation benefit generated in that particular year is estimated for all the three sites, to be about Rs 151.39 crores, which could be increased to Rs 154.85 crores, if the WTP of the visitors for the purpose were considered i.e, by about Rs 3.46 crores. In conclusion, it can be said that, since this study captures only the recreational values of the three sites, the actual total economic value of the sites are much higher, therefore proper policies need to be implemented in order to have sustainable development of these sites, which will also have positive economic impacts for the local populace

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Appendix:

Two-Way Correlation Tables among the relevant Explanatory Variables

Appendix-1: Lady Hydari Park

	Sex	Marstat	Edu	Age2	LnDist	LnFsize	LnPCE	LnPCI	DEmp
Sex	1	-.057	-.093	.054	-.008	.053	-.027	-.060	.021
Marstat	-.057	1	.621(**)	-.487(**)	.432(**)	-.208(**)	.477(**)	.359(**)	.321(**)
Edu			1	-.294(**)	.398(**)	-.240(**)	.419(**)	.372(**)	.288(**)
Age2				1	-.147(*)	.158(*)	-.135	-.195(**)	-.307(**)
LnDist					1	-.093	.445(**)	-.003	.312(**)
LnFsize						1	-.267(**)	-.571(**)	-.123
LnPCE							1	.736(**)	.132
LnPCI								1	-.030

Notes: ** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix-2: Shillong Peak

	Sex	Marstat	Edu	Age	LnDist	LnFsize	LnPCE	LnPCI	DEmp
Sex	1	-.101	-.005	.070	.031	-.102	.052	.084	-.107
Marstat		1	.314(**)	-.338(**)	-.063	-.141(*)	-.001	-.006	.168(*)
Edu			1	-.212(**)	.221(**)	-.059	.226(**)	.168(*)	.082
Age				1	-.031	-.037	-.018	.024	.077
LnDist					1	-.118	.958(**)	.526(**)	-.212(**)
LnFsize						1	-.220(**)	-.651(**)	-.108
LnPCE							1	.523(**)	-.181(*)
LnPCI								1	-.046

Notes: ** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix-3: Nohkalikai Falls (Cherrapunjee)

	Sex	Marstat	Edu	Age2	LnDist	LnFsize	LnPCE	LnPCI	DEmp
Sex	1	.099	.032	.058	.037	-.196(**)	.056	.107	.082
Marstat		1	.218(**)	-.414(**)	-.021	-.292(**)	-.002	.104	.144(*)
Edu			1	-.295(**)	.024	-.060	.079	.081	-.055
Age2				1	.036	.215(**)	.002	-.054	-.080
LnDist					1	-.157(*)	.935(**)	.672(**)	.010
LnFsize						1	-.257(**)	-.519(**)	-.057
LnPCE							1	.731(**)	.000
LnPCI								1	.024
DEmp									1

Two-Way Correlation Tables among the relevant Explanatory Variables used in the First Stage of Estimation of Visit Demand Function

Appendix-4: Lady Hydari Park

Variables	Visitation Rate	Ln Distance	Ln Literacy	Ln PCNSDP
Visitation Rate	1	-0.86*	-0.062	0.017
Ln Distance		1	0.312	0.166
Ln Literacy			1	0.838*
Ln PCNSDP				1

Appendix-5: Shillong Peak

Variables	Visitation Rate	Ln Distance	Ln Literacy	Ln PCNSDP
Visitation Rate	1	-0.892*	-0.102	-0.027
Ln Distance		1	0.389	0.308
Ln Literacy			1	0.836*
Ln PCNSDP				1

Appendix-6: Nohkalikai Falls (Cherrapunjee)

Variables	Visitation Rate	Ln Distance	Ln Literacy	Ln PCNSDP
Visitation Rate	1	-0.811*	-0.137	-0.042
Ln Distance		1	0.125	0.235
Ln Literacy			1	0.659**
Ln PCNSDP				1

Note: Appendix tables-4, 5 and 6 shows the correlation among the relevant explanatory variables. * and ** indicate that the value is significant at 1 and 5 per cent level of significance by two tail test

Chapter-7

Conclusions and Policy Implications

- 7.1 Summary of Observations**
- 7.2 Conclusions and Policy Implications**
- 7.3 Scope for Further Research**

Chapter 7

Conclusions and Policy Implications

7.1 Summary of Observations

The importance of tourism in the present day world is undeniable and it is now accepted as one of the most important catalysts of economic development in most countries endowed with precious natural resources as well as places of archaeological importance. In India, the tourism sector began to flourish in the last quarter of the twentieth century, as a result of the gradual integration of the Indian economy with the world economy and the Government of India accorded infrastructure status to this industry in 2003, in recognition of its importance to the society. It is now accepted that the tourism industry can provide impetus to other industries, create millions of new jobs and generate enough wealth to help pay off international debts. This can be supported by the fact that in terms of World Tourism Receipts India's rank improved from 34th in 1998 to 20th in 2007 and the average Indian foreign exchange earning per tourist in 2005 was \$1462, which was second in the world, next to that of USA which stood at \$1698 (MOT, GOI, 2008).

The state of Meghalaya, endowed with vast swathes of pristine evergreen forests and silvery mountain streams is one of the most beautiful areas of the country. Although owing to poor transport infrastructure in this state, the initial growth of tourism in this area was slow, yet the number of domestic as well as foreign tourists who visited the different tourist sites of Meghalaya has increased significantly over the years (Meghalaya Tourism Statistics, 2008-09). In fact, the growth of tourism in the state has been accentuated in the last decade due to increasing developmental activities undertaken by the central and state governments and the tourism industry is now a major contributor to the revenue not only of the state government but also of many individuals engaged in various tourism related activities.

The present study has been undertaken primarily to estimate the recreation values of three selected tourist sites in Meghalaya, in order to know the emphasis given by the visitors and that would be reflected through their willingness to pay. It

provides some important guideline for the preservation of the unique and untarnished beauty of these areas, for the sustainable growth of tourism in the concerned area. The three sites Lady Hydari Park, Shillong Peak and the Nohkalikai Falls (Cherrapunjee), chosen for this study are unique in terms of their natural characteristics and therefore cannot be substituted by other similar sites. These sites are also well-connected to the heart of the city and are therefore accessible by all types of tourists from the city of Shillong. These sites can be considered as unique natural recreational resources, which are not traded in the ordinary market and thus the non-market valuation methods have been adopted in the study.

An in-depth analysis of the socio-economic characteristics of the individuals earning their livelihood directly from tourism related activities in and around the three selected sites is incorporated in chapter-4. The potential contribution of tourism to employment and income is also examined here. The survey results indicate that about 68 per cent of the respondents who have been engaged in tourism related activities were in the age-group of 36-55 years and about three-fourths of them were male, while all the respondents were married and approximately half were undergraduates. However, only a mere 18 per cent of the sample had professional qualification. Moreover, three-fourths of the respondents had family size between 6 and 7 members; while 72 per cent of them had 3 to 4 dependants. The results therefore indicate that the larger group of respondents were not well-educated and also had large family size. Thus, they were very much dependent on the tourist inflow for their employment and income. This is also evident from the fact that approximately 54 per cent of the respondents hired between 1 and 3 workers in the lean tourist season and only 8 per cent of the population comprising of established hotel owners employed between 9 and 10 workers during this season. However, in the peak tourist season, beginning from April and extending to early November, only 25 per cent of the respondents employed between 1 and 3 workers and 16 per cent of the sample employed between 9 and 10 workers. These figures indicate that as a direct consequence of the increase in the inflow of tourists in the peak tourist season, the opportunities and income of various stakeholders in this sector increase significantly. Thus, in general, the growth of tourism has significant positive impacts for the local populace of the state.

However, the growth of tourism in an area also adversely affect the invaluable natural resources including flora and fauna due to over-exposure, irresponsible behaviour of tourists and unplanned development of the concerned area, which may

affect the future growth of tourism in the area and thereby the long term growth of employment and income from tourism. Therefore, the maintenance of pristine natural recreational resources may be given due importance in the policies for the sustainable development of tourism in such areas.

In chapter-5, the survey results of the six hundred respondents have been described in order to have an idea of the socio-economic characteristics of the tourists visiting the state in general and the chosen sites in particular. It is observed that, majority of the visitors in all the chosen sites were domestic tourists and the number of foreign tourists was very few (about 10 per cent). The number of male respondents was more in Lady Hydari Park and Shillong Peak, however, the gender-wise distribution of respondents was skewed in favour of female tourists in Nohkalikai Falls in Cherrapunjee. Also, majority of the tourists were found to visit with their families. The larger group of respondents in all the three sites were married and in the age group of 46 – 55 years. However, a significant number of these respondents in all the three sites were elderly (in the age group of 66 – 75 years) and had retired from their active work life. The tourists in all the three sites were educated and most of them were Post Graduates or had Doctoral degrees. In fact, the lowest educational qualification of Higher Secondary level was declared by a few respondents who were college students. Another common feature observed in all the three sites was that, the largest group of respondents among domestic tourists were employed in the public sector, who in most cases received different incentives for their travel and that was followed by the private sector employees. In the case of foreign tourists however, the maximum number of respondents (55.17 per cent) were employed in the private sector. There were very few unemployed respondents in the three sites. It was also observed that the highest number of respondents among domestic tourists reported a total monthly income in the range of Rs. 60000 to Rs. 70000 and the data also indicated that the level of total monthly income of the respondents increased with the increase in the distance travelled by them to reach the tourist sites. Therefore it can be argued that most of the tourists visiting the tourist sites of Meghalaya were well-educated and actually desirous of discovering the unique features of the state.

Chapter-6 dealt with the effect of the various socio-economic and cultural characteristics of the surveyed tourists on their frequency of visits to the three selected sites. The regression results indicated that among the various factors, the monthly income of the respondents had a strong positive impact and the distance travelled by

them to reach the sites as well as the expenditure incurred in this regard had a strong negative impact on the frequency of their visits to the selected sites. Thereafter, the Zonal Travel Cost method was used to estimate the visit-demand function for the three sites and the consumer surpluses or recreation benefit generated by the visitors have been derived for domestic and foreign tourists separately. The estimated surplus per individual per visit obtained were Rs 3459.75, Rs 4295.57 and 1787.46 for Lady Hydari Park, Shillong Peak and Nohkalikai Falls (Cherrapunjee) respectively.

In the survey, the WTP values of the respondents have been obtained using the iterative bidding process and when these values were added to the total expenditure incurred by the respondents, revised recreation values of the three sites were obtained. The revised consumer surpluses estimated for those three sites were Rs 3459.19, Rs 4319.81 and Rs 1933.15 and that indicates that there are possibilities of increasing recreation surplus through better maintenance and improvement of recreation items in case Shilling Peak and Nohkalikai Falls by Rs 24.24 and Rs 145.69 respectively, while the visitors did not expect any improvement in the case of Lady Hydari Park.

Again most of the foreign visitors were visiting this region as a part of a national package tour and therefore spent for all three sites together. Hence only a single demand function is estimated for all the three sites for them. The estimated combined consumer surplus for all the three sites is Rs. 15872 and Rs. 17292 corresponding to actual travel cost and total willingness to pay for all the three sites. It indicates that the consumer surplus for all the three sites together and thus willingness to pay is much higher in the case of foreign visitors than an average domestic tourist and this can be primarily attributed to their significantly higher monthly income. Using the estimated number of visitors, total consumer surplus or recreation benefit generated in that particular year is estimated for all the three sites, to be around Rs 151.39 crores, which could be further increased to Rs 154.85 crores, if the WTP of the visitors for the purpose were considered i.e, an increase of about Rs 3.46 crores. Thus, it can be argued that as there are other social and economic benefits (through employment and income generation tourist activities); the actual benefit is much more than the estimated recreational values of the three sites that provides important policy implications.

7.2 Conclusions and Policy Implications

Although people from different zones visit Shillong with multiple objectives, most of the visitors primarily visit this region for recreation. Therefore, the importance of tourist sites in Meghalaya can be gauged more from their recreation values than any other values. From the overall analysis, it is also observed that there is significantly higher demand for recreation especially during the summer months, when people from other regions visit this region to get some relief from the sweltering heat and simultaneously enjoy their summer vacation.

From the individual travel cost analysis, it is evident that the levels of income and education have significant positive impact on an individual's visiting rate whereas the distance travelled to reach the recreation site and the travel expenditure incurred in the process have significant negative impact on the frequency of visit. Moreover, since most of the visitors to the selected sites especially Nohkalikai Falls in Cherrapunjee and Shillong Peak were from outside the host zone, their local expenditure is insignificant compared to their total expenditure per visit. The survey also indicated that these visitors enjoyed significantly larger recreation benefit by visiting the sites, which is several times higher than the existing entry and parking fees that varies from Rs 5 to Rs 10 per individual in the different sites.

As travel and other opportunity cost has significant negative impact, it calls for an improvement in transportation facilities with rationalised transport charges, which would enable the potential visitors to visit places of interest at least possible time and opportunity cost as it will attract more tourist and enhance employment generating tourism activities.

Due to the larger total travel expenditure for the Nohkalikai Falls in Cherrapunjee consumer surplus per visitor of this site is much lower than that of Lady Hydari Park. In the case of the Lady Hydari Park the percentage of visitors from the neighbouring areas of the city is more than the other two sites. Although these visitors enjoyed maximum benefit due to very low expenditure required for visiting the park, they were not inclined to pay extra for the preservation, maintenance and improvement of the facilities in the park, which is clear from the very low average willingness to pay in case of Lady Hydari Park compared to Nohkalikai Falls in Cherrapunjee and the Shillong Peak. These visitors also visualized very little improvement of the park, even if the required capital could be generated through the enhancement of entry charges. It may be due to the fall in number of animal species in

the zoo in the recent past. Many of these visitors were of the opinion that since the other recreational facilities like, Children Park facilities could easily be enjoyed in other tourist sites an increase in the Entry Fee would be unjustified. From this, we can conclude that most of the local visitors failed to realise the value of the scenic empty space with recreational facilities for children within the heart of the town.

For the visitors from distant zones whose main purpose was to primarily visit the main attractions like Nohkalikai Falls in Cherrapunjee, the Lady Hydari Park was an additional benefit, but it cannot be considered as a substitute of the other two sites due to the very nature of the services provided by these sites. Hence these visitors do not hesitate to spend a little extra for its proper maintenance.

From the additional willingness to pay as well as enhanced consumer's surplus in the revised estimates, it is evident that the visitors value Nohkalikai Falls in Cherrapunjee very highly, followed by the Shillong Peak and the Lady Hydari Park. The foreign visitors however showed higher willingness to pay for the maintenance and improvement of the sites compared to the domestic tourists. Therefore the policy implication of this study is in favour of enhancement of 'entry' and 'recreation' fees in the descending order of Nohkalikai Falls in Cherrapunjee, Shillong Peak and Lady Hydari Park. In case of the last site, discriminatory charges may be applied depending upon the type of visitors, such as children and adults, student and non-students, local and outside tourists (as already in practise for some basic categories). The 'entry fees' for all the three sites can be higher for the foreign visitors, since they have higher monthly incomes and the increased revenue may be used for better management and improvement of the sites.

The study also indicates the need for better maintenance and preservation of the diverse flora and fauna species within the premises of the Lady Hydari Park. The provision of better recreational amenities within the park area will definitely enhance the number of visitors in a significant manner.

Secondary data sources indicate that the number of visitors to Shillong has been increasing over time and the survey indicates that these visitors are also willing to spend more for recreational purposes. In this scenario, the examination of the growth of tourist infrastructure, such as, transport facilities, hospitality sector including hotels and restaurants, which may/may not have been at par with the increase in their demand in terms of quality and quantity, is imperative, since this will not only enable the various stakeholders to identify the 'gap' between demand and

supply of tourist resources, but will also help in the development of better amenities, which can attract more visitors to this area.

Of the 600 respondents, only 184 individuals (30.67 per cent) had visited Shillong and the sites at least once earlier, within past twenty years. This implies that approximately 70 per cent of the tourists to the state did not 'repeat' their visit. Since the majority of tourists visit from West Bengal, Bihar, Assam and the travel costs associated with the visit from these states are not very high. Yet the revisit of low number of individuals to this region may be attributed to the unsatisfactory state of the tourism infrastructure in this area or their motive to know diverse places of different region. Many of the visitors came repeatedly for their children who could not make it earlier, or for others in their group and in some cases associated with the other purpose of visit (business, conference etc) and sometimes purely for enjoying the natural beauty again. The perceptions of the 'repeat' visitors regarding the state of growth of tourist infrastructure in the state can provide valuable insight into some basic problems associated with the tourism in the area.

Table-7.1: Distribution of the Repeated Visitors According to their Perception of Changes in and around the Selected Sites							
	Roads	Transport System	Recreational Facilities	Forests	Day Temperature	Size of Population	Overall Condition
Minimal Improvement	136 (73.91)	141 (76.63)	156 (84.78)	0	118 (64.13)	87 (47.28)	117 (63.59)
Noticeable Improvement	32 (17.39)	29 (15.76)	20 (10.87)	0	66 (35.87)	97 (52.72)	41 (22.28)
Minimal Degradation	16 (8.70)	14 (7.61)	8 (4.35)	64 (34.78)	0	0	26 (14.13)
Noticeable Degradation	0	0	0	120 (65.22)	0	0	0
Total	184	184	184	184	184	184	184

Source: Field survey.
Notes: For day temperature and population size, improvement means increase in temperature and vice versa.

Table-7.1 reflects the opinion of the repeated visitors about the changes in some conditions required for the development of tourism in and around the vicinity of the sites since their last visit that may provide some idea about the steps to be taken for attracting more tourists in the region. However, perception differs from person to person due to the variation in time of their earlier visit or variation in their contact with the people who arranged their visit, hospitality etc though the later part has not been considered here.

A significant 73.91 per cent of the respondents felt that there was improvement in the road network of the state, although according to them, this improvement was not sufficient. 76.63 per cent of those respondents felt that the condition of the transport system in the state recorded insignificant improvement over their past states.

The availability of diverse recreational facilities in a tourist site not only attracts more tourists to the site, but also increases its popularity amongst the potential visitors. The enhancement of such facilities is therefore critical for the long term viability of the site as a popular recreational area. Here, about 85 per cent of the respondents perceived insignificant improvement in the standard of the recreational facilities in the three selected sites. However, in case of evergreen forests, which is the actual 'magnet' for tourists to this area, has witnessed steady deforestation primarily due to unplanned mining and industrial activities. The loss of these invaluable forests is not only disastrous from an ecological point of view, but also do not bode well for the tourism sector of this region. Over 65 per cent of those respondents also validated this as they felt that there was a serious decline in the forest resources in the vicinity of the selected sites though 34.78 per cent felt that although there was a perceptible decline since their earlier visit, it was minimal.

It is clearly observed that the maximum tourist inflow in to this region occurs in the summer months, since this area has a cool, temperate climate. Though 64.13 per cent of those respondents felt a minor increase in day temperature, about 36 per cent of them perceived significant increase in day temperature and almost all the respondents complained about considerable insufficient 'rain' in the 'Abode of Clouds' despite the 'near normal' monsoon in India in 2008 (UN Report, 2008), This underlines the need for immediate actions to conserve the forests of this region, since the increase in temperature, reduction in rainfalls and overall change in climate future of tourism. Population growth in and around the areas may be one of the reason for such change and here 52.72 per cent of those respondents felt significant increase in population while the other 47.28 per cent respondents felt this increase in population is not very high compared to that of other such areas of the country. Since overcrowding of any area, makes it less favourable for tourism activities, new industries may be opened in rural areas to retain the local population in the area and also provide fresh employment opportunities to them. Tourism activities may also be developed on the basis of such areas and mention may be made here of one of the most significant

success stories of this nature in Meghalaya - the development of Mawlynnong as the 'Cleanest Village in Asia' (awarded by Discover India Magazine in 2005) and its transformation into a popular tourist destination in the state. Here, majority of 63.59 per cent felt that there was minimal improvement of the overall tourist facilities in the area and only 22.28 per cent felt that this improvement was significant. However, 14.13 per cent of those sample respondents felt that the overall condition of tourist facilities had in fact declined in this area over the years due to mis-management of natural resources, lack of up-gradation of recreational facilities and the lackadaisical attitude of the various stakeholders. This negative perception regarding the tourism facilities of this region may adversely affect the frequency of visitors from outside and that shows the need for implementation of sustainable development policies and tourist friendly programmes before the condition become worse.

The need for a proper evaluation of the growth of tourism related activities is also evident from the table-7.2. The table clearly indicates that the largest groups of visitors from the distant states were spending at least 5 days in Shillong. This indicates that these tourists are attracted to spend a significantly period of time here, owing to the natural conditions. The development of better hotels, resorts and guest houses will therefore witness a greater inflow of tourists to this area.

Table-7.2: Distribution of Tourists According to their Days of Stay in Shillong

	LHP					SP					NF					
	Day V	Three	Five	Seven	Total	Day V	Three	Five	Seven	Total	D	Day V	Three	Five	Seven	Total
Zone-1	26	0	0	0	26	25	0	0	0	25	39	0	0	0	0	39
Zone-2	0	7	7	5	19	0	8	7	3	18	0	6	8	4	4	18
Zone-3	0	0	1	0	1	0	0	0	0	0	0	1	4	2	2	7
Zone-4	0	3	59	8	70	0	4	54	7	65	0	3	36	5	5	44
Zone-5	0	2	8	4	14	0	2	10	4	16	0	0	14	4	4	18
Zone-6	0	2	14	4	20	0	0	16	6	22	0	0	17	4	4	21
Zone-7	0	1	12	3	16	0	0	11	5	16	0	0	10	5	5	15
Zone-8	0	1	8	3	12	0	0	8	4	12	0	0	6	2	2	8
Zone-9	0	0	1	2	3	0	0	6	5	11	0	0	3	3	3	6
Zone-10	0	0	0	19	19	0	0	0	15	15	0	0	0	24	24	24
Total	26 (13)	16 (8)	110 (55)	48(24)	200	25 (12.5)	14 (7)	112 (56)	49 (24.5)	200	39 (19.5)	10 (5)	98 (49)	53 (26.5)	200	200

Source: Field Survey by the researcher during 2007-08.
Note: (i) Figures in the parentheses represent percentage to total; (ii) Day V means only a day visit.

The survey also underlines the necessity of more far-reaching tourism campaigns from different segments including the government, NGOs, hotels and restaurant owners and transport sector. Table-7.3 reflects that approximately 48 per cent of the visitors were dependent on the information from friend and relatives before making their decision to visit these sites. Due to the lack of proper institutionalised information, many potential visitors who would otherwise visit are

not able to visit the many beautiful sites in the state. Therefore, the various stakeholders of this sector need to adopt better tourism promotion policies. Still now there are only a few package tour operators playing in the area and many more should come in with a business motive.

Table-7.3: Distribution of Tourists According to their Source of Information about Shillong

Zones	TV	Travel Guides	Advertisements	Friends/ Relatives	Tour Agents	Package Tour	Total
Zone-1	0	0	0	90	0	0	90
Zone-2	0	0	0	51	2	2	55
Zone-3	2	0	0	6	0	0	8
Zone-4	7	16	15	91	17	33	179
Zone-5	1	2	2	15	12	16	48
Zone-6	0	2	2	19	17	23	63
Zone-7	0	0	0	7	13	27	47
Zone-8	0	2	0	6	7	17	32
Zone-9	0	0	0	3	6	11	20
Zone-10	3	2	30	0	5	18	58
Total	13 (2.17)	24 (4.00)	49 (8.17)	288 (48.00)	79 (13.17)	147 (24.50)	600

Source: Field Survey by the researcher during 2007-08.
 Note: Figures in the parentheses represent percentage to total.

The survey also indicates that of the 510 outside tourists (excluding the 90 visitors from zone-1), 471 respondents (92.35 per cent) opined that they would again visit this area though many of them do not have good impression about the various tourism infrastructures available in the area, 33 respondents (6.47 per cent) were not completely sure of their 'repeat' visit and only 6 respondents (1.18) refused to visit this area again. This indicates that, the unique natural beauty of this area has a very strong appeal for tourists from different parts of the country and the world. Therefore, if proper steps are taken to develop the tourism infrastructure of this area, without compromising the pristine natural conditions, tourism can develop by leaps and bounds and in the process also contribute to the economic development of this area in a sustainable manner.

7.3 Scope for Further Research

This study is not without any shortcoming and thus there is much scope for further research in this field. One of the most important difficulties encountered during this research was the scarcity of data related to tourism. Therefore, proper documentation is required to examine the growth of different tourism related activities over the years. The effect of the 'tourism income multiplier' can also be studied across different consumer goods and services sector, in order to capture the 'full'

effect of tourism in this area. Also, the impact of tourism on income and employment can be examined on unit investment, which has not been possible here due to paucity of information and reluctance of many respondents to disclose their expenditure on various items and actual employment of labour. Surveys on the various newly developed tourist sites in other areas of the state can be undertaken to establish the viability and effect of tourism in those areas. A serious important problem threatening the very existence of tourism in the state is the destruction of forest resources and pollution of water bodies due to improper limestone and coal mining in the state. A valuation of the natural limestone caves in this area will undoubtedly create awareness of their economic value and also help in the preservation of these unique cave systems.

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ANNEXURE-1

SCHEDULE FOR THE EVALUATION OF SELECTED TOURIST SITES

Dear Tourist,

Welcome to Shillong the capital city of the Abode of Clouds – Meghalaya. Located in the foothills of the mighty Eastern Himalayas, this state can still offer you the pristine beauty and solitude of green hills and scenic streams. However the never-ending wants of mankind has been a constant threat for the very survival of precious flora and fauna. Reckless deforestation and denudation of hills has already caused irreparable damage to the ecosystem and in some cases the extinction of several species.

The root cause of this problem is the severe poverty that common people confront in their day-to-day existence. The sheer hope of getting two square meals a day for the entire family compels naïve villagers to be a party to the illegal timber smuggling racketeers and poachers. If only, some honest and stable means of livelihood could be provided to these people, there would surely be a decrease in the illegal activities as evident from the success of JFM (Joint Forest Management) schemes in tribal areas.

This survey is being conducted to procure data which will be used to ascertain the feasibility of developing recreational sites for tourists and also the income generating potential of such sites.

We will try our best to share the results of our research with you once we have completed our study. We will be extremely grateful if you agree to collaborate with us and give some of your time to answer a set of questions we have. We thank you for your time and eagerly hope for your co-operation.

Would you like to participate in the interview?

Yes

No

If yes, proceed to Section 1

Tourist Site:.....Date of Interview: S.No.

SECTION 1: PERSONAL DETAILS

1. Name:

2. Age: 3. Sex:

4. Marital status:

5. Nationality:

6. Place of residence:

7. Distance of your home from this site (in kms.\ miles):

8. Educational Qualification*

0	1	2	3	4	5
---	---	---	---	---	---

 :

Please specify in case of No.5:

9. Employment

0	1	2	3	4	5
---	---	---	---	---	---

 *:

Please specify in case of No.5:

* For Nos. 8 & 9 please refer to the table given below:

0	Illiterate	Unemployed
1	Less than Sec. level	Daily wage earner
2	Secondary	Self Employed
3	Higher Secondary	Private Service
4	Graduate	Public Service
5	Any other	Any other

10. Number of family members:

Total	Adult		Children	
	Male	Female	Male	Female

11. Approximate monthly family income (from all sources):

Up to Rs. 20000

Rs. 20001 to Rs. 30,000

Rs. 30,001 to Rs. 40,000

Rs. 40,001 to Rs. 50,000

Rs. 50,001 to Rs. 60,000

Rs. 60,001 to Rs. 70,000

Rs. 70,001 to Rs. 80,000

Rs. 80,001 and above

SECTION II – PARTICULARS ABOUT YOUR TRAVEL

1. Did you undertake a direct journey from your home?

Yes

No

2. How much did you spend on transportation to reach this place from your place of residence?

Less than Rs. 1000

Rs. 1001 to Rs. 5000

Rs. 5001 to Rs. 15,000

Rs. 15,001 to Rs. 25,000

Rs. 25,001 to Rs. 35,000

Rs. 35,001 to Rs. 45,000

Rs. 45,001 to Rs. 55,000

Rs. 55,001 and above

3. Have you come on a package tour?

Yes

No

4. If yes, please specify:

Total number of days spent here:

Total cost of package Rs:

Number of places you are visiting on this tour:

5. Please specify the type of this tour:

Educational

Business cum Pleasure

Health improvement

Pilgrimage

Rock concerts

Adventure sports

Any other (please specify):

6. You are travelling with:

Family members

Friends

Both

Alone

7. Number of members traveling in this trip:

8. Is this your first visit to the site?

Yes

No

9. If not, when did you first visit this place:

10. Over the years how many times have you visited this place:

11. How did you come to know about this site?

Travel programmes in TV

Travel magazines and Guide books

Newspaper Advertisements

Tour Agents

Friends & relatives

Part of the package tour

Any other

12. What attracted you to this place?

Natural beauty

Archaeological interest

Natural caves

Shopping hub

Just a stop on your itinerary

Any other (please specify):

13. If you have visited this place before, what are the changes you have noticed over time in:

Roads

Transport system

Recreation facilities

Overall condition

Forests of this place in particular and the town in general

Day temperatures

Size of population

Any other:

Put 1 for minimal improvement / increase

Put 2 for serious improvement / increase

Put -1 for minimal deterioration / decline

Put -2 for serious deterioration / decline

14. Where are you staying during this trip?

Tourist lodges

Hotels

Guest houses

Youth hostels

With relatives or friends

Any other (please specify):

15. Who arranged for your stay during this trip?

Self arranged

Host institution

Friends & relatives

Package tour

Any other (please specify):

16. How much are you spending for lodging purposes per day?

Rs. 500 to Rs. 1000

Rs. 1001 to Rs. 1500

Rs. 1501 to Rs. 2000

Rs. 2001 to Rs. 2500

Rs. 2501 and above.....

Not applicable

17. How much would you like to spend per day for lodging?

Rs. 200 to Rs. 500

Rs. 501 to Rs. 800

Rs. 801 to Rs. 1000

Rs. 1001 to Rs. 1200

Rs. 1201 and above

18. Your lodge is:

Not comfortable ()

Moderately comfortable ()

Good ()

Needs to install better facilities ()

Excellent ()

19. How long do you plan to stay here:

.....

SECTION-III – YOU AS A TOURIST

1. Do you think that the existing Entry Fee is justified?

Yes

No

2. If your answer to No. 1 is no, what in your opinion should be the Entry Fee Rs.

3. Do you think there are enough recreational facilities in this site?

Yes

No

4. What do you expect from a recreational site without having to pay extra for it:

Scenic environment

Basic restrooms for both sexes

Fun zones with games for children

Clean, shady sitting areas

Transportation within these areas for the aged and infirm

5. Would you like to pay extra charges for?

Amenities	Yes	No	If Yes, how much
Transportation within tourist spots (for aged and infirm)			
Proper restrooms for ladies and gents			
Traditional food courts and beverage joints (non-alcoholic)			
Joy rides and sports			
Maintenance charges (for gardens and clean water bodies)			

6. If all the desired changes are incorporated, how much would you like to pay in addition to the existing Entry Fess: Rs. 0 / 5/10/15/20/25/30/35/40/45/50 (per person)

7. Local cuisine is:

Easily available

Very hard to find

Not my type

Do not know about it

8 . Transportation within the city limits is:

Poor

Moderate

Needs to improve

Good

Very good

9. Transportation to tourist spots outside city limits is:

Poor

Moderate

Needs to improve

Good

Very Good

10. Do you think there are sufficient facilities for:

Rock climbing

Water sports

Angling

Cave exploration

Historical tours

Games for children

11. Would you visit this place again?

Yes

No

May be

11a. If yes, why ?

11b. If no, why not ?

12. Are you happy with the services of the local tourist guides in this site?

Yes

No

Services not available

The guides need more training

13. Did you find sufficient tourist guide books and maps for this site:

Yes

No

The available guidebooks are not of good quality

14. What benefits are you going to derive by visiting this site:

Only recreation

Recreation and knowledge

Improvement of health

Enjoy the uniqueness of this place

Just a stop on your itinerary

Any other :

15. What are the items you would like to purchase from here?

Bamboo artifacts

Handloom products

Edibles like honey, jams, squashes, pickles

Traditional dresses and Accessories

Medicinal herbs and plants

Other usual goods like dress materials and denims

16. Your reasons for purchasing these products because:

Product unique to this place

Comparatively cheaper here

To collect as Souvenirs

Promised to get for a friend or relative

For health reasons

Products too good to resist

FOR LOCAL TOURISTS ONLY

1. You visit this place:

Every weekend

Once in every month

Once in every two months

Occasionally

On most holidays

2. You come here because:

It is near to your home

It is far but has more amenities

It is where your other friends meet

You have no other choice

3. Are you happy with the existing facilities available here?

Yes

No

4. If not, please give some suggestions for improvement of the site:

.....
.....
.....

5. Would you like to pay more for any improvements?

Yes

No

6. If yes, how much: Rs.

7. Do you bring your friends and relatives here?

Always

Sometimes

Never

Thank You for your cooperation!!!!!!!!!!

ANNEXURE-2

SCHEDULE FOR DETERMINING INCOME GENERATION POTENTIAL OF SELECTED TOURIST SITES

PERSONAL DETAILS

1.Name:

2. Age:3. Gender:

4. Marital status:

5. Work profile of the respondent:

6. No. of years in this job:

7. Number of days in a year that you are engaged in this job:

8. Level of Education:

Illiterate

Less than Middle School

Secondary

Higher Secondary

Graduate

9. Medium of Education:

English

Hindi

Vernacular

Any others

10. Number of family members:

	Adult		Children	
	Male	Female	Male	Female

11. Number of dependants:

Total	Adult		Children	
	Male	Female	Male	Female

Date of Interview:..... S.No.

20. Do you own a job card or a license?

Yes

No

21. If you do not have a license do you pay some illegal charges to any group?

Yes

No

Regularly

Sometimes

To more than one group

22. Can you take any action against such people?

Yes

No

Not interested

Do not have any organization to help them

23. Do your customers complain to you about your services?

Yes

No

Sometimes

Never

24. Is there any means by which you can address their problems:

Yes

No

Not interested

TOURIST LODGES AND HOTELS

1. Name of the lodge \ hotel:

2. Location of the lodge \ hotel:

3. Nearest tourist site:

4. What are the categories and rates of your rooms?

a)

b)

c)

d)

e)

f)

15. How do you dispose your daily garbage?

Municipality collection trucks

Private collection vehicles

Dump in drains

Burn the wastes

Recycle

Throw in open pit

16. You advertise your institution through:

Tie-ups with government tour operators

Tie-ups with private tour operators

Local dailies and regional magazines

Distribute pamphlets, hoardings in the city

Do not advertise at all

17. Are you happy with the facilities given to you by the government?

Yes

No

Some of the facilities

All the facilities

18. What are the areas in which the government should take immediate action?

Roads

Water supply

Rain water harvesting

Sanitation and Garbage disposal

Limiting construction of buildings in city areas

Regulating vehicles

Security measures

19. What is the amount of tax that you pay to the government annually: Rs. ...

20. Anything unique to your organisation?

.....
.....
.....

21. Any suggestions that you may have:

.....
.....
.....

.....

RESTAURANTS AND FAST FOOD STALLS

1. Name of the eatery :

2. Location of the eatery:

3. Nearest tourist site:

4. What are the types of cuisines that you offer:

Continental

Chinese

Western

South Asian

Local

Any other

5. The type of cuisine that is most sought after:

6. Which are the peak and lean seasons for your business:

a) Period of lean season: from to

b) Period of peak season: from to

c) Irregular peaks observed during last 3 years:

7. How many tourists (approx.) visit your eatery in a day during the peak season:

8. How many tourists (approx.) visit your eatery in a day during the lean season:

9. Number of employees in your institution during:

Lean season:

Peak season:

Festival or any other occasions:.....

10. How many suppliers cater to your demands for cooking ingredients :

Ingredients	Lean season		Peak season		Festive occasion		Any other	
	*NS	**Q	NS	Q	NS	Q	NS	Q
Milk								
Fish								
Mutton								
Chicken								
Pork								
Beef								
Vegetables								
Spices								
Water								

*NS: Number of suppliers, **Q : Quantity supplied

11. Do you get sufficient water supply from the authorities:

Yes No

Sometimes

Always during the lean season

Always during the peak season

Sometimes during the peak season

Never during the peak season

12. When you do not get proper water supply, you get water from:

Private suppliers Use harvested rain water

Own deep bore wells

Natural spring in the premises of the institution

Any other:

13. How do you dispose your daily garbage?

Municipality collection trucks

Private collection vehicles

Dump in drains

Burn the wastes

Recycle

Throw in open pit

14. You advertise your institution through:

Tie-ups with government tour operators Tie-ups with private tour operators

Local dailies and regional magazines

Distribute pamphlets, hoardings in the city

Do not advertise at all

15. Are you happy with the facilities given to you by the government:

Yes No

Some of the facilities All the facilities

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Roads

Water supply

Rain water harvesting

Sanitation and Garbage disposal

Limiting construction of buildings in city areas

Regulating vehicles

Security measures

17. What is the amount of tax that you pay to the government annually: Rs...

18. Any thing unique to your organization:

.....
.....
.....
.....

BIO-DATA

Name: Amrita Devi

Date of Birth: 19-11-1983

Educational Qualification: M.A. (Economics), North Eastern Hill University, Shillong

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