CHAPTER-II

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2.1. Introduction

The chapter provides a theoretical framework drawn from a wider range of review of literature to study about Carrying Capacity and Community Participation for Sustainable Nature-Based Tourism in Ooty. Broadly, pertinent factors related to carrying capacity, mass tourism impact, community participation and sustainable nature-based tourism are figured in the literature with a view to developing an instrument to capture the quantitative and qualitative data from the respondents. As such, Ooty is known for heavy inflow of tourists during peak season leading to the problem of carrying capacity beyond its natural limit to accommodate the visitors and their demands. Hence, it is the ‘need-of-the-hour’ to evaluate the impacts of the environmental degradation owing to the tourism development.

In this regards, this chapter has been divided into four major sub-themes. The first part of this chapter begins with a discussion of mass tourism and its effects on tourism destinations. In the second part of this chapter, it provides detailed insight about carrying capacity and its consequences in the natural environment. In the third part of this chapter, it presents the review of community participation pertaining to their associations with the tourism business. Finally, it covers the need for alternative tourism and its implication on the natural environment. A review of these studies would be relevant in identifying the gaps of the present study as it could reveal the impact of mass tourism and highlight the necessary steps and policies to be designed and implemented in Ooty in order to conserve the natural environment. The literature was collected from international, national and regional journals, books, government reports and documents in the area of mass tourism, carrying capacity, community participation, sustainable nature-based tourism and
alternative tourism. The chapter concludes with a theoretical framework that represents the gap in the study and the relationship of the key concepts discussed in the study.

2.2. Mass Tourism and Its Effects

Tourism is one of the growth-led and economic-driven industries worldwide and the number of international tourists across the countries has been increasing steadily owing to the rising disposable income, affordable organized holiday packages, hassle-free travel formalities, online travel portals, web technology, etc. The mass travel has created the concept of mass tourism that is as old as the emergence of industrialization in the Western Europe and North America. The history of mass tourism may be traced back to the industrial period in the 18th and 19th Century. As a result, the concept of annual paid holidays was introduced for the workers and their family members. Further, Transport and Communication System induced people to undertake long travel as per their preferences. More particularly, the invention of Jet Engine and fast-train travel contributed significantly to the growth of mass tourism worldwide (Sharma, et al 2004). Mass tourism traditionally means a large scale travel undertaken for the purpose of leisure, pleasure and recreational activities. The popular mass tourism destinations were the Southern Europe, the Caribbean Islands and North America region in the 1960s and 1970s. In nutshell, mass tourism creates a form of development that is short-term and free-market in principles with a huge amount of employment creation.

Mass tourism is defined as the occurrences of assembly or congregation of a large number of tourists at a particular point of time, thereby causing maximum damages to the quality of air and water and creating noise and radioactive pollution. To deal with the mass tourism menaces, the popular and potential destinations with all possible qualities attract a large volume of tourists in a short period of time. These destinations generally witness the
massive development of infrastructure and superstructure to cater to the needs of visitors. Nonetheless, there is every possibility of overutilization of facilities and amenities when the inflow of tourists into the destinations increases and vice-versa due to the seasonal factor and other uncontrollable factors. In many cases, the mass tourism becomes a nuisance factor when it is not regulated in a planned way.

There are different forms of mass tourism, but the most common of them comprise sunshine/seaside tourism and winter sports tourism. Fink (1970) has classified mass tourism into four categories such as participation of large number of people, collective organization of travelling, collective accommodation and conscious integration of the holidaymakers in a travelling group. The construct of “mass tourism” is used in contrast to the limited participation of people in some specialized forms of tourist activities such as yachting, river rafting and scuba diving. Mass tourism is proportion to the total populations who participate in tourism or the volume of tourist’s activity.

According to the UNWTO (2003) (cited in Robinson and Novelli 2005, p, 2), the term “mass tourism” is known for its development over the past 40 years in terms of the growth of tourist resorts, hotel, airports and larger aircrafts. Mass tourism creates both positive and negative impacts on the ecology and environment of the destinations (http://www.planeta.com, 1997). Majority of the research works are focused and centered on the negative impacts of mass tourism on natural resources. Tourism is often blamed to be a key consumer for resource degradation (Farrell and McLellan, 1987). Thus, it is difficult to document the process of environmental change resulting from the tourism activities. While there are also environmental benefits associated with tourism, including appreciation for the environment.
Oram (2001) viewed that mass tourism is an important source of significant economic benefits, particularly to less developed countries, but these are mostly distributed unequally. It has also generated uncongenial and sometimes, destructive environmental, social and cultural consequences at the popular destinations, which threaten the sustainability of local tourist industries. Small countries and fragile mountain destinations, island states and mountain areas, in which tourism has become the dominant industry as compared to other sectors of the economy have remained underdeveloped and are often entirely dependent on tourism. They are often exposed to financial risks created by far-away political and economic crises. One of the studies has found out three effects of mass tourism on environment, local economy and local cultures.

Gartner (1987) conducted a study on tourism activities and its impacts on water bodies in the Mediterranean countries. More tourist attractions and recreational activities in the water bodies produce wastewater generated by tourist facilities and run-off. It also occurs on inland lakes and streams as well as in the marine environment. Much of this is non-point pollution such as septic tank seepage, lawn fertilizer, road oil and run-off from disturbed soil. An extra nutrient in the water system results in eutrophication of lakes and streams which in turn influence other aquatic life. Lakes choked with weeds and beaches with algae intensified by human influence have become common in some areas. Further, inadequately treated effluent or raw sewage discharged into water resources is a health hazard as well.

Deng et al., (2007) made an assessment on visitor’s perception on the environmental impacts of nature tourism in Zhangjiajie National Forest Park, China. This study examines trampling impacts on vegetation and soil in the park. Visitor usage is proportionate to trampling impacts with the two most used trails–Yellowstone Village Trail
and Gold Whip Stream Trail–having the highest values in Soil Impact Index (SII) and the highest rate of scarred trees. Carrying capacity values relating to a political-economic component could be expressed as the level of specialization of tourism, the loss of human labor in other sectors due to attraction of tourism, income distribution issues at local level from tourism and level of tourism employment in relation to local human resources is some of the typical issues of tourism (Harry and Alexandra, 2004, p. 61).

Hamele (1988) studied about air pollution and its impact on natural environment. In this study, air pollution is a result of emissions from vehicles and airplanes. Although tourism likely accounts for a very little of the overall emissions problem, the recent issues of ozone destruction, the green house effect and global warming make the tourism industry related to air pollution. Further, negative impacts on air resources are greater in areas with high concentrations of traffic. In rural areas, air pollution as a result of tourism is minimal. In congested areas, however, emissions negatively influence vegetation, soil and visibility.

Witt (1991) mentioned that tourism infrastructure could have negative impacts on visual quality that is a direct impact on environment. Historical buildings and monuments are also the victims of the alteration in architectural styles and it causes architectural pollution. This impact is especially noticeable when any form of development trims and alters the beaches or scenic beauty. It is otherwise called as aesthetic pollution.

Tangi (1977) found that unplanned tourism growth and its consequences in the natural areas have resulted in damaging the natural environment in the form of repercussions on the man-made environment and disruption of the socio-cultural environment. He proposed for adopting new approach namely alternative tourism or
alternate development strategies to help protect and preserve the quality and serenity of the environment.

Frick (2010) studied about the impacts of tourism development in the Bulgarian Black Sea Coast from a political-ecological perspective. The rapid construction of mass-tourism infrastructures in Saint Vlas suddenly brought about changes on the town’s social, economic and environmental conditions in the mid 2000s. In many destinations, mass tourism has exploited the natural and social resources and the situation is no different in Saint Vlas. Most locals currently feel that tourism development has so far been a good thing and even though they do not have any role in decision-making. However, those locals confine complains with the corruption in decision-making bodies. As a result of which, illegal constructions had made much negative impact on the environment.

Sarkar (2009) was concerned about tourism impacts in Malaysian highlands with special reference to Cameron Highlands. There are several negative impacts such as superstructure constructions, littering, deforestation, trampling, noise and sound pollution affecting the Cameron’s natural environments.

Mathieson and Wall (1982) presented that impact of consumptive activities such as hunting, poaching and trampling of the vegetation at the wildlife area creates the destruction of wildlife for souvenirs such as elephant tusks and lion-claw necklaces. Poaching is a major threat to wildlife, especially in African countries.

Sedimentation is also one of the additional impacts associated with tourism. It is a result of soil erosion and it is related to deforestation of plant. It is especially a large problem when tourist facilities are developed at the destinations at the cost of plant resources. Water pollution and sedimentation are directly linked to development.
Sedimentation reduces the purity of water and gravely affects the aquatic life in the lakes and reservoirs for long time. On the other hand, tourism industry requires the heavy use of water for washing, swimming pools, lawn water and other uses. This is particularly problematic in areas where fresh water is scarce (Hamele, 1988; Goldman, 1989).

Priskin (2001) studied about physical environment impact of Western Australia Coastal areas, particularly, negative impact on costal environment and vulnerability. Adverse impacts can create degradation of dunes, loss of biodiversity, erosion, eutrophication and littering. He gave remark that when the resource declines, then the potentiality to attract visitors also diminishes. Therefore, determining the level of environmental degradation of a resource is essential and should constitute a part of the nature-based tourism resource assessment framework. Adverse physical impacts may be reduced if the relationship between the nature-based tourism and conservation is symbiotic leading to ecologically sustainable tourism.

Oram (1995) suggested for an educational technique for effective means of reducing negative impacts when the nature-based tourism is implemented at any destinations. He argued that the interpretation may be an effective mechanism for managing nature-based tourism and education and self- regulation is rarely sufficient to achieve appropriate standards. However, understanding the reason would be inappropriate to discount interpretation as a possible solution to manage nature-based tourism without having sufficient empirical evidence. He vouched for the nature-based tourism as a non-degrading and non-damaging sustainable form of tourism. Williams and Shaw (1998) found out that the mass tourism witnessed a short-term variation in demand in Spain in the early 1990s. Even though, the much-vaunted decline of mass tourism was contrasted with some other forms of tourism.
Sarkar (2009) discussed the negative environmental impact on the nature-based tourism resources in the Cameron Highlands in Malaysia. He found that there are two major impacts in the highland. One is environmental impacts such as growing tourism superstructure construction, littering, deforestation, trampling and noise pollution and other one is socio-cultural impacts such as loss of cultural heritage, loss of traditional livelihood and influence of urban culture as the major threatening factors affecting in the highland region. To eradicate these problems from Cameron Highland region, the authority should incorporate sustainable and responsible tourism practices, or else, Cameron would face the consequence of mass tourism what Ooty, Shimla and Darjeeling have already experienced in India.

Jordan (2000) highlighted the questionable sustainability of the Post-Yugoslav war return to mass tourism along the Croatian Coast in order to streamline the coastal tourism product by giving priority to the niche development and abandoned rural hinterlands can be exhibited as tourism product.

Hjalager et al. (2002) found that tourism destinations are swamped with visitors with the increase in tourist arrivals. Some of the world’s most famous sites are in the brink of damage due to heavy inflow of tourist arrivals. An eminent Climatologist, Prof. David Viner predicted that by 2080 intense heat, forest fires and shoals of stinging jellyfish would be the common features in the Mediterranean region. There will be more malaria in southern Spain by 2020 and Athens has already experienced the temperature more than 40C. Further, the movements of cruise ships are damaging the coral reefs and there is more impact from the coral bleaching caused by climate change.
Venugopal (2003) conducted a study on the soil erosion and its impacts on Ooty’s natural environment. The amount of soil loss that has occurred due to the plantation of tea for the last ten years is proportionately more and tea has become a dominant monoculture. The study conducted by the GSI (Geological Survey of India) on shola forest reduction revealed that 80 per cent of the forest has been cleared over the years, causing deforestation, erratic rainfall and hydrological cycle. Most of the spring and stream waters supply to the entire Nilgiris region get dried up. This study has further accused the increasing industrialization in the Nilgiri district for deforestation and soil erosion.

A study carried out by the Price Water House (1997) indicted the unplanned growth of tea plantation as one of the major ecological hazards in district of Nilgiris. As suggested in the report, the Blue Mountain of Ooty will be transformed into “Green Desert” when this rampant tea plantation prevails around the ecological fragile region. Nevertheless, tea plantations are better than the annual crop lands in controlling soil erosion provided the plantations are well managed. As recommended in the report, eco-relevance of tea regulation of plantation on slopes and scientific farm management practices needs to be enforced sincerely.

Pranesh (2001) refereed to the IRS (Indian Remote Sensing) report and identified the poor vegetation status that the Nilgiri region witnesses for more than ten years. The study has attributed various factors like biotic pressure on forest resources due to human and cattle population, diversion of wood lands to non-forest uses leading to severe depletion of the forest cover and various other types of damages like felling, encroachment, pest, diseases and damages by natural calamities like cyclone, fire etc.
http://cpree.org/ (2002) outlined the importance of an increase of two lakh visitors on an average in a year since 2000 in the Nilgiri hill region. In order to accommodate the growing number of tourists, many hotels, clubs, resorts and public gardens have been developed in the hill station. This unplanned infrastructure development has obviously made direct impact on the environmental pollution and garbage disposal problems in this ecologically fragile region in the recent times. Rao (2003) analyzed the physic-chemical characteristics of the storm weather water channel and its impacts on Ooty’s lake and surrounding areas in order to evaluate their impacts on growth productivity of phytoplankton algae and critically assessed the impact of domestic wastes on microbial population. The Lake at Ooty is one of the artificial lakes attracting major chuck of the visitors. Urban sewage flowing through the storm water empties into the lake with a voluminous load of silt and organic matter. The silting, dredging macrophysics, the noxious water hyacinth and sewage should be minimized and the organic load flowing into the lake is essential. The study suggests that the storm water channel should be regulated with proper planning to protect the self-purification properties of the lake.

Kothandanraman (2003) assessed the nature of industrial wastes and quality of river waters carrying the effluents from the industries. For instance, Cordite Factory, Hindustan Photo Film and other factories in the Nilgiris produced enormous amount of solid waste. This study analyzed soil, water and other effluents accrued from the factories. The total solids, BOB and COD for all the parameters were high and other parameters like sodium absorption ratio, residual carbonate and potentials were within the safe limits. The results of the study indicated that effluent waters of cordite (explosive power) factory and Hindustan Photo Film (HPM) can be used for irrigation with proper treatment.
Namasivayam and Aubuselvam (2003) identified the impact of more tourist arrivals on the natural environment of Ooty. The excessive tourist arrivals generally create major problems on the natural environment at Ooty. Hence, four major suggestions are given to avoid problems of environmental degradation in the fragile destination at Ooty. These suggestions include the role of the Government to strictly enforce the environmental rules and regulations to stop the illegal deforestation activities, protection and conservation of the natural environmental with the help of local community participation, regulatory framework to control the rapid growth of constructions activities by the municipality and town planning authorities and periodical conduct of environmental awareness camp.

In general, the impact of mass tourism always creates more positive impacts than negative impacts from natural, cultural, economic and environmental perspectives in any destination. However, it leads to creating massive negative impacts as it could be revealed from the review of literature. Therefore, majority of the studies have discussed extensively on the negative impacts of mass tourism and suggested for alternative approach or sustainable tourism to strike a balance between positive and negative impacts in the ecologically fragile places. More importantly, the studies so far carried out with reference to Ooty and Nilgiri region are focused on the negative impacts of mass tourism since Ooty, being the finest hill stations of India, has faced severe environmental and ecological problems in the wake of the rampant construction of hotels, connecting roads and recreations facilities for the comfort of visitors, thereby making the study of alternative or sustainable tourism.

2.3. Carrying Capacity

Increasing interests of academia, environmentalists and ecologists in embracing sustainable tourism development as a viable mechanism for estimating the carrying
capacity of mass tourism destinations and protected areas are now seen in the contemporary studies. Tourism development is determined by the Recreational Carrying Capacity or simply Tourism Carrying Capacity (TCC) (Zheng and Zheng, 2010). The concept of carrying capacity was first published by Thomas Malthus in 1798 with a broad understanding of limiting the population and economic growth and it has become the foundational concepts of current environmental movement. The phrase “Carrying Capacity” was first proposed by Verhulst (1838) who is a Belgian statistician with much interest in studying the population growth. It is now applied to a wide range of disciplines, including biology, ecology, anthropology, geography, tourism and business management.

Mathieson and Wall (1982) defined that the maximum number of people who can use a recreational environment without an unacceptable decline in quality of recreational experience. Tourism Carrying Capacity (TCC) is explained in terms of environmental and experiential impacts of tourism at a particular location. Later, it was used in the USA in 1845 for the purpose of “changes and modifications in the commercial systems of foreign nations” (Secretary of State, 1845). The World Tourism Organization (WTO) formalized the concept of carrying capacity by evolving a well-defined meaning. Hence, the carrying capacity is explained as the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic and socio-cultural environment and an unacceptable decrease in the quality of the visitors’ satisfaction” (cited in PAP/RAC 1997, p. 5).

Manning (2007) has given an alternative definition for measuring numerical carrying capacity on the basis of the level and type of recreation use that can be accommodated in a park or related area without violating standards for relevant indicator
variables. The definition is focused on the indicators that should not violate the standards and indict changes. It still focuses on the level of usages rather than tourism impacts.

Stankey et al., (1984) stated that the TCC could be measured based on the theory of Limits of Acceptable Change (LAC). It is a shift of focus from “How much use is too much?” to “How much change is acceptable.” The LAC theory moderately attempts to discover the intangible use that maximum number of visitors do at the destinations. Thus, the Theory focuses on the extent to which the changes to an area from human use are proper and tolerable.

Hunter (1995) gives a more precise definition by distinguishing four different types of carrying capacity: Physical Carrying Capacity (PCC) refers to the limit of a site beyond which wear and tear starts taking place or environmental problems arise. Psychological Carrying Capacity (PCCa) is explained as the lowest degree of enjoyment that tourists are prepared to accept before they start seeking alternative destinations. Social Carrying Capacity (SCC) is the level of tolerance of the host population for the presence of tourists and their behaviour in the destination area, and/or the degree of crowding users (tourists) is prepared to accept by others (other tourists). Economic Carrying Capacity (ECC) is the ability to attract tourism activities without displacing or disrupting desirable local economic activities.

Getz (1987) defined the TCC is the maximum number of people that use tourism site without unacceptable effect on environmental resources while meeting the demand of tourists. He also identified six different methods of determining carrying capacity: Tangible Resource Limits, Tolerance by the Host Population, Satisfaction of Visitors,

In the contemporary literature, the interest on carrying capacity has shifted from an “objectively” assessed threshold to policy useful- desired conditions providing more advantages to planning and decision-making. Alternative concepts have also been suggested in the spirit of Management-By-Objectives (MBO) approaches such as Visitor Impact Management, Limits of Acceptable Change and Visitor Experience Resource Protection Frameworks in the place of TCC. On the contrary, Maldonado et al., (1992) found four types of carrying capacity: physical, economical, ecological and recreational. The PCC deals with quantitative measures of the number of people or usage at a site that can primarily be determined by design of the site. The ECC is basically concerned with multiple uses of resources, particularly its compatibility with the site and wider management objectives for a site. The Ecological Carrying Capacity (ECCa) is primarily concerned with the maximum level of recreational use in terms of number of activities that are accommodated by an area or ecosystem before an unacceptable or irreversible decline in ecological values occur. Finally, the Recreational Carrying Capacity (RCC) is also referred to tourism and visitor carrying capacity and the maximum level of recreational use in terms of number of activities, above which there is a decline in the quality of the recreation experience from the ability of individuals and groups to tolerate others and their activities and the level of acceptability. Even then, many of the destinations have been exceeding the tourism (recreational) carrying capacity limits.

Stankey (1984) emphasized the core point of the concept of carrying capacity. In a recreational context, carrying capacity is the idea of maintenance of the integrity of the resource-base and the provision of a high-quality recreation experience to users. At this
stage, the notion of a quantitative frequentation limit related to a given surface area and to a degree of satisfaction. The core objective of maintaining the natural resources is to ensure the outdoor recreational activity for the visitor satisfaction and the preservation of the flora and fauna.

Budowski (1976) defines that as the number of visitors that produce no measurable or at least no irreparable ecological change to the ecosystems in an area, or the maximum level of recreational use in terms of numbers and activities that can be accommodated by an area or an ecosystem before an unacceptable or irreversible decline in ecological values occurs. This study is focused on the improvement of tourism measurement for strategic planning. Effective carrying capacity (ECCb) can be determined in natural areas by clearly defining the indicators and quality standards. Steele (1995) suggested different dimensions that measure the TCC. The amount of tourism damage that a site can assimilate without long-term damage can be measured against the total number of tourists visiting the site to determine whether the social optimum is exceeded and the site is over used or over utilized.

Sanal (2001) studied the stretch of Backwater Tourism in Kerala between Thiruvanthapuram and Housdurg with the help of Digraph Model to measure the TCC. The study has found that 11 factors generally influence the Environmental Carrying Capacity (ECCc) in the area. After using n/ modeling based in graph theory. Seven factors influencing the carrying capacity such as land availability, freshwater, population, infrastructure facilities, pollution, ecological sensitivity and socio-economic of the region were identified. Carrying capacity of the stretch of backwater depends on the relationship between population growth and infrastructure development, more inflows of tourists and the natural environment.
Puczko and Ratz (2000) carried out a comprehensive analysis of the actual and perceived tourism impacts in the Lake Balaton in Hungary. The lake is one of the largest and most important bodies of freshwater without having direct access to the sea in Europe. Balaton represents one of the most important mass tourism points in the Central Europe and the environmental implications of the growth of mass tourism are so considerable that the ecology of the lake is being damaged severely.

Ryan and Sterling (2001) studied impacts of visitors on Litchfield Park in the Northern Territory of Australia with regard to the maintenance of carrying capacity and sustainable development. The study has developed five clusters of visitors such as day-visitors, hedonists, generalists, four-wheel drive enthusiasts and information seekers.

The study found the steps of the park authority to limit commercial activities within the park. It suggested that the Parks and Wildlife Commission should give publicity for specific usage patterns rather than simply regard each park as an isolated unit.

McCool and Lime (2001) found that the TCC is a part of sustainable management of tourism development. Increased interest in the sustainability of tourism development initiatives has triggered expanding concerns about the capability of both tourism destinations and protected areas to accommodate recreational use. In many cases, planners and scientists turned to the concept of tourism or the RCC as a way of formulating problem of definitions and management actions. The concept of a tourism or recreation carrying capacity is evolved from a Neo-Malthusian perspective of resource limitations. A variety of planning frameworks such as Visitor Experience and Resource Protection (VERP) and the LAC were developed to address the issues of visitor impacts.
Farrell and Marion (2002) studied on the protected area visitor management framework for ecotourism and protected area visitation in Central and South America. Managers have addressed the issue of the management of ecotourism in the protected areas by employing VIM frameworks. In this study, the Protected Area Visitor Impact Management (PAVIM) framework is an alternative to carrying capacity and LAC. A set of evaluation criteria was employed to compare the relative positive and negative attributes of carrying capacity, other decision-making frameworks and the new framework within the context of their actual and potential use. Positive attributes of PAVIM include simplicity, flexibility, cost effectiveness, timeliness and incorporating input from stakeholders and local residents. Negative attributes include diminished objectivity and cultural sensitivity issues.

Ward et al., (2002) discussed about the framework for managing biological effects of tourism on the natural environment in New Zealand. Tourists in New Zealand often impact on the natural environments and manage those natural environments to help ensure that tourism is an environmentally sustainable activity. To assist that management process, it is to establish an overarching classification of framework for enforcing consistent guidelines and environmental performance standards.

Subba (2002) argued that unplanned promotion of tourism beyond the carrying capacity of fragile mountains and hills of Sikkim might be disastrous. All levels of biodiversity were required for continued survival of species and natural community. Ethnic village in each district should be developed in 5 to 10-hectare of land for construction of traditional houses.
Yang et al., (2004) conducted a study using the Environmental Sciences Research Institute (ESRI), Arc Geographic Information Systems (AGIS) to integrate with various island policies, traffic flows, island characteristics, resources allocations, and/or spatial spread functions to demonstrate the value of AGIS for decision-makers and planners in the Island. Jennings (2004) carried out landscape sensitivity and its relationship with tourism development with regard to the carrying capacity. He found that carrying capacity is not the most effective way to analyze the relationship between the natural environment and tourism pressure. These concepts are embedded within Geomorphology, namely ‘Lag Time’, ‘Environmental Thresholds’ and ‘Dynamic Metastable Equilibrium’ and all may provide a better approach to examine feedback between tourism and the environment. The study has found the use of LAC as a way of managing the interplay between tourism and the environment.

Lindberg et al., (1997) criticized that there are three major limitations to calculate numerical carrying capacity. First, the concept lacks specific criteria that account for the objective or desired condition. Second, it is considered to be a scientific and objective concept, but it is actually subjective in nature. Third, it focuses on the use levels, which differ from the MBO to maintain desired conditions.

Sharama (2004) made a detailed study about the positive and negative impacts of the Mountain Tourism Impact in Annapurna Conservation Area (ACA). This study has classified the following factors such as land use litter, pollution, forest, socio culture, income, employment and other impacts. The first problem is the use of land followed by non-bio degradable rubbish and pollution as a result of tourism development in the form of water, air, noise and soil pollution. The degradation of forests and local culture has occurred due to irresponsible tourist behavior as well as the operational flaws of tourist
lodges and hotels. At the same time, the socio-cultural changes have direct fallout on the local people’s behavior, dress, lifestyle, family and social structure. Employment opportunity in the mountain areas, generally jobs like porters, kitchen boys and guides have been provided by the tourism industries to the local people. The aggressive tourism activities in such areas without proper management of mountain resources have created serious environmental threats. The result of this study reveals that the ACA has already crossed TCC limit beyond its sustainable level.

Tran et al., (2007) conducted the study to calculate the environmental carrying capacities on three basic components: ecological, economic and social impacts for Phong Nha Tourism Center in Vietnam. The findings of the study have presented that Dong Hoimcenter have the highest TCC, about 71,000 visits per day. The main tourism activities are beach recreation, sand bar sightseeing and ecotourism. Phong Nha National Park has a lower TCC than other centers in Quang Binh, with 11,000 visits per day. There are many tourism activities in this area, such as cave sightseeing, adventure tourism, cable car ridding, mountain climbing, ecotourism, forest hiking in National park and geo-top. Singh and Mishra (2004) defined the carrying capacity of a hill resort town that it refers to the threshold elements of the natural environment and infrastructure, emerging out of lifecycle, population growth, land use succession, ecosystem and ecological process for sustaining the urban development load.

Venugopal (2004) examined the reason for landslides in Nilgiri district. The findings of this study revealed that rainfall, human intervention, deforestation and monoculture of tea plantation are the prime causes for the landslides. This study based on the global land cover facility data revealed that there is a drastic reduction in forest
cover and human interventions in the form of unplanned tea estates, resulted in the loss of natural ecosystem of Nilgiris, which is causing massive and frequent landslides.

Narasimmaraj (2010) applied carrying capacity method to calculate PCC of nature-based tourism destination in Ooty. According to the TTDC, there are 16 identified tourism spots in and around Ooty. Out of these spots, three spots attract more visitors such as (Botanical Garden, Rose Garden and Boat House). Therefore, researcher has included these three destinations for this study. The actual tourist arrivals of these three spots accounted for 29, 89,002, 20, 48,695 and 21, 42,000 in 2008 respectively. The method of physical carrying method model was adopted to calculate PCC of these three tourist spots (Maldonado et al, 1992). The results of the study showed that 19, 81,002, 15, 44,694 and 2, 52,000 tourist arrivals are found to be excess or beyond the PCC of Botanical Garden, Rose Garden and Boat House respectively.

The concept of carrying capacity has been debated and discussed with reference to tourism development in the last three decades. However, it is very difficult to practice it universally. Therefore, it has been in practice for operational purpose and it varies from destination to destination. Many studies were focused on the quantitative operationalisation of the concept, thereby neglecting the qualitative aspects. In addition, the concept has sometimes been related to the concept of sustainable development (Coccossis & Parpairis, 1992, Hunter, 1995). Only selected attempts have been made to operationalise the concept by taking into account the economic, ecological and social aspects. Too often, the carrying capacity is determined by only one of these three dimensions such as physical social and economic carrying capacity (Williams, 1998).
In general, mass tourism accumulates more uses of physical, ecological, sociological resources environment than the other forms of tourism. Hence, the negative consequence of mass tourism creates several destructions in socio-economic, cultural, environmental, losing their recovery capacities and destroying the basic functionalities of ecosystem within tourism areas (Tran Nghi et al., 2007). Hence, the planners, policymakers, protected area managers and environmentalists have taken the policy initiatives to measure the ill-effects of tourism impacts on the tourist destinations with the help of the estimation mechanism of carrying capacity (Narasimmaraj & Parida, 2009).

2.4. Community Participation

The word ‘community’ means individuals with some kind of collective accountability and the ability to make decisions by representative bodies. Samuel (1986) delineated objectives of community participation process in the broadest sense, and pointed out for community participation as an instrument of empowerment. Development should lead to a reasonable sharing of power and higher level of political awareness and strength amongst people, in particular among the weaker sections in the society. Marisa & Ghogaill (1996) argued that community participation should be seen as a means to enable local people to influence decision in the political arena about the issues that affect them, but as a means to development through mutual-help initiatives. Friedman (1992) identified four level of community empowerment in his framework, namely, psychological, social, political and economical empowerment. This framework can be applied in the context of both developed and developing countries. It takes it as a central concern for the concept of empowerment. It may be applicable in case of indigenous people or other depressed groups who are benefited from the ecotourism.
Scheyvens (2000) made a study on the empowerment of women in the ecotourism development. The number of local communities seeking involvement in ecotourism ventures has increased in the last decade in many parts of the Third World countries. This study discussed both positive and negative ways in which women are engaged with ecotourism enterprises in the Third World countries. Such examples could help guide agencies facilitating local level empowerment of both men and women through ecotourism.

Zeepel (1997) explains about the advantages of participation of local community people in the tourism business. Tour operators can gain access to local villages for conducting the organized tours and the community members take it as a pride in exhibiting indigenous knowledge and cultures. The primary purpose of local community members is to secure income and employment opportunities. In this way, tourists can experience the local community culture & custom, traditional way of life, etc. At the same time, local community people can improve the quality of their lives and enjoy the self-esteem by maintaining social, cultural, environmental and aesthetic values.

Synergy (2000) criticized the ways that the tourism development is taking place in many rural communities in Southern Tip of South Africa. The problem in this region was identified as lack of basic maintenance of the existing resources as they are exerting negative impacts on the community-based tourism in the rural areas. Whereas Gurrusinghe (2002) studied on the local community participation in Sri Lankan tourism industry in which local people were not given opportunity to participate in the direct and indirect decision-making process due to lack of recognition of community-based tourism enterprises in Sri Lanka. More or less, majority of local people play a passive role in tourism as they do not receive any tangible benefits from the tourism industry.
The term community-based ecotourism ventures must be used to distinguish those initiatives that are environmentally sensitive, but must also aim to ensure that members of native must get a significant amount of the benefits.

Godde (1998) defines that community-based tourism is planned and managed by a group of individuals/households comprising the community as a communal enterprise. It may also be managed by private entrepreneurs whose activity and agenda are set by the community members as they accountable to their activities. Hausler & Strasdas (2003) define that Community-Based Tourism (CBT) is a form of tourism in which a significant number of local people have substantial control over and involvement in its tourism development and management. The major proportion of the benefits remains within the local economy. Scheyvens (2000) emphasized that a community-based approach to ecotourism should include the need for quality of life of local people and conservation of natural resources. Sprout (2000) outlined that local community participation is a medium for giving the local people more opportunities to participate effectively in developmental activities and empowering people to mobilize their own capacities as social actors rather than passive subjects.

Kiss (2004) focused on Community-Based Ecotourism (CBET) benefits for the local community development and it must be an effective tool for biodiversity conservation based on the principle of biodiversity for the generation of economic benefits particularly for local people.

Australian Capital Territory (2000) outlined that nature-based tourism can provide range of environmental, social and economical benefits to the local communities and visitors. Several benefits can be accrued by the local people and visitors when the CBT is
effectively implemented in the remote areas. Several initiatives include environmental awareness programme, promotion of environmental and cultural values, generation of revenue for conservation and preservation, promotion of natural and cultural heritage, community and visitor satisfaction, employment opportunities and utilization of local knowledge and facilities. In addition, the nature-based tourists tend to be high yield tourists, spending more and staying longer in a destination than general tourists. Importantly, the nature-based tourism is essentially about the environment in which tourists live, work and play.

The Mountain Institute (2002) outlined that tourism is an activity based on the natural, cultural, heritage and environment attraction. More particularly, this form of tourism seeks to be environmentally and socially responsible manner and it is not only an ethical option for tourist, but also a part of product and service development of tourism market. The CBT with a focus on small-scale, locally designed and operated business activity by local resident and both the tourists and service providers should get benefited as a strategy for sustainable development. Allan and Marsinko (2003) underlined that the nature-based tourism is an integral part of the community economy. Tourism must be sustainable only on a seasonal basis. It must be properly planned and managed to ensure a high quality outdoor experience for the visitors.

Garrod (2003) made a qualitative study on the participation of local community in the process of planning and management of ecotourism. Ecotourism is increasingly an advanced strategy to help address economic and social problems in local communities. It is an appropriate and effective tool of environmental conservation. The study found that effective participation of local communities in the planning and management of ecotourism is rarely a feature of ecotourism projects.
Newsome et al., (2003) studied on the natural area tourism and the VIM. Environmental performance reporting is increasingly demanded by many sectors of society, including those responsible for managing natural area tourism. The approaches include corporate reporting, state-of-the-environment reporting and environmental management systems.

Reddy and Rao (2003) criticized the development of road and rail network, tea and coffee plantation introduced by British in the Nilgiri hill station. Due to these developments, Nilgiri has been facing destruction of shola forest and cultural destination. As a result, a large scale migration of people has taken place from plains to hills areas for employment opportunities, resulting which local tribes, particularly Kurumba and Irula, have lost their dependence in their native lands. The impact of fertilizer and pesticides usage in the tea plantation and commercial vegetable at Nilgiri district has also led to the harmful effects on the soil and water regime and percolating into the water sources. Indigenous communities have been suffering from various skin and water borne diseases (nilgirihillswater.pantoto.org, 2010).

Li (2004) defines that community tourism needs a sustainable approach of developing tourism in such a way that beneficiaries are encouraged to participate in the development through mobilizing their own resources after defining their own needs and making their own decisions about meeting their own needs. Keshav (2005) suggested that there are two types of community development, namely general and ad-hoc. General programmes are mostly social in nature and have a long-term perspective, whereas the ad-hoc type programmes are problem specific and have a short-term perspective.
Rinne and Saastamoinen (2005) examined the economic role of nature-based tourism on a local municipality level in Kuhmo in the Eastern Finland. The Nordic Model was applied to quantify direct, indirect and induced income and employment impacts. The model was developed to find the income leakage of this region. The nature-based tourism employed 53 man-year-units in Kuhmo and accounted for 48 per cent of tourism jobs and 1.6 per cent of total employment as compared to general tourism, thereby eradicating heavy structural unemployment problem. There were no significant differences in the daily expenditure spent by nature-based tourists as compared to common tourists.

Li (2004) discussed on community tourism in Nanshan Cultural Tourism Zone in Sanya, Hainan Province, China. As a sustainable development approach, community tourism can be implemented in a modernized civil society when individuals confront the opportunities and responsibilities of citizenship. The findings indicate that tremendous barriers exist to such a democratic approach in the development of the zone despite glimmers of hope. There must be enough contribution to the much-needed discussion of community tourism in developing countries.

Choi and Sirakaya (2005) studied empirically the sustainable tourism scale by measuring residents’ attitude toward sustainable tourism. The study developed and validated scale assessing residents’ attitude toward sustainable tourism in a smaller community in Texas in USA after examining the 800-household responses through a structured five point scale questionnaire with 51 items. When assessing development progress, most governments prefer objective indicators that include income level, employment rate and the wage gap between the tourism industry and their industries, whereas subjective indicators are concerned with opinions. It is suggested that objective indicators, such as assessing resident’s preferences, attitudes, and satisfaction may not
provide sufficient information. In this regard, subjective indicators can adequately reflect resident’s preferences.

Carol and Pillai (2006) identified the significance of ethnicity of two communities, namely Placencia and Seine Bight for tourism attitudes in Belize, Central America. Factors such as environmental awareness and intensity of contact on tourism attitudes were included with an analysis of 110 households. Results revealed that there is no significant difference between the two communities in terms of tourism attitudes and ethnic identities. These two communities differ in terms of their contributions to the tourism industry. The roles of communities in tourism industry also differ from each other. However, both Placencia and Seine Bight have been brought together under the same economic system with the rise of tourism industry. Placencia established the Placencia Tourist Association to assist businesses and to gain political strength within the Belize Tourist Association. Whereas, Tosun (2006) studied about community participation in tourism development in Urgup, Turkey. The study examined the nature of community participation expected by various interest groups with special references to a local destination in Turkey. A conceptual framework was developed by examining typologies of community participation. It was found that different interest groups expected different types of community participation to achieve own aims conflict each other. Expected nature of community participation by interest groups varies from non-participation to spontaneous participation.

Li (2004) studied that active local participation in decision-making is a precondition for disbursing benefits to the communities. In developing countries, this paradigm is, however, difficult to put into practice owing to various constraints. Based on the study, Jiuzhaigou Bio Sphere Reserve of China, the local community members can be benefited sufficiently from tourism despite their weak participation in decision-making processes.
The modes of participation are related to the institutional arrangements and the different stages of tourism development present in a community. The survey revealed that local community members received satisfactory benefits from tourism.

Desbiolles (2008) carried out a case study on indigenous ecotourism of Camp Coorong in South Australia where some indigenous communities are sincerely practicing ecotourism as a tool for preservation of indigenous values, customs and culture of this region. Larson and Herr (2008) outlined the significance of sustainable tourism development in a self-drive tourist destination in the remote regions in the Northern Australia. Differences between data collected and available secondary data imply that tourism planning should include collection of region-specific tourism information to guide and mitigate potential environmental changes. The study found that natural landscape features are the key attraction for visitors to the region. Visitor satisfaction levels are high, while local residents reported perceived negative impacts of tourism, in particular on amenities and the ecology of landscape.

The CBT is promoted in active cooperation with the local residents whether they are poor or economically marginalized people. At the same time, it offers an opportunity to the tourists to visit the host communities with the provision of overnight accommodation and other entrainment activities. In this process, the local residents can earn income and get employment opportunities from tourist expenditures while providing services and facilities. Further, it also facilitates the tourists to feel and experience the local environment, wildlife, traditional cultures, customs and rituals, fairs and festivals, local peoples’ habits and their day-to-day lifestyle.
Spenceley (2008) revealed that the development of tourism not only generated revenues for conservation and monitoring of rhino in Namibia, but also generated profit for tourism enterprises, despite small number of tourists. Thampi, (2008) found that the success of eco-development project in the Periyar Tiger Reserve reflected the concern for achieving a balance between conservation of the sanctuary and livelihood of people living around the sanctuary.

Sustainable nature-based tourism is promoted in cooperation with local residents and authorities, tourism firms and other organizations. These principles for sustainable nature tourism are not simply a list of “dos and do not’s, but rather represent jointly agreed practical guidelines to help promote sustainability as per the local conditions (www.metsa.fi/).

Barkin (2006) suggested that unless sustainable nature-based tourism actively incorporates the local society into service planning and provision, the programmes to meet the fundamental needs for income and employment for all people in the region may not be realized. Further, the spatial qualities of the site and its flora and fauna may be irreparably damaged.

Rai (2007) reported that the implementation of Community-Based Natural Resource Management in two eco-cultural landscapes in Demazon in Sikkim and Apatani in Arunachal Pradesh is unique in their approaches to manage the resources. He illustrated the utility value of traditional ecological knowledge in sustainable natural resource management. Indigenous knowledge and adaptation was handed over from generation to generation as two important forms of collective information. Both qualitative and quantitative analysis suggested that both systems are unique and viable for natural resource
management in the mountain region. The study suggested that there was a greater consciousness of the value of using traditional ecological knowledge as a tool towards better conservation of natural resources in the context of rapidly depleting biodiversity in the developing tropic regions. Thus, the concept of eco-cultural landscape plays a significant role in ensuring community participation in sustainable management.

All the above studies have revealed that community participation, community-based tourism, community-based ecotourism, community-based sustainable nature tourism, etc are interchangeable in nature when the paradigm of community participation is essential for striking a balance between tourism development and socio-economic benefits. Generally, local community participation in the context of tourism development is one of alternate forms of tourism (Brandon, 1993). Nonetheless, this concept is not well clarified in the developing counties due to lack of well-defined policy framework. Significant numbers of studies have been carried out from the western or developed countries perspectives. At the same time, underdeveloped or developing counties such as South Africa, Botswana, Namibia, Tanzania and Zimbabwe have identified the CBT as an alternative ways for diversification of economic development and community development (Rozemeijer et al., 2000). However, the CBT in the context of India is at a nascent stage and it needs more comprehensive and intensive studies for the sustainable tourism development.

2.5. Alternative Tourism and Its Implications

The growth of mass tourism reached at its peak towards the end of 20th century and the beginning of 21st Century. The issue of mass tourism was debated seriously due to the rise of environmental movement across the world. Increasingly inflow of visitor arrivals to natural areas demands for facilities, amenities and connectivity for safe travel and comfortable stay. These forms of development can go to the extent of damaging
environment and ecology. In an effort to address the chronic problems, the World Commission on Environment and Development (WCED, 1987, p.87) published a report titled “Our Common Future”. It is generally called as the ‘Brundtland Report’ chaired by the former Norwegian Prime Minister, Gro Harlem Brundtland. ‘The Commission defines that development that meets the needs of the present without compromising the ability of future generations to meet their own needs’. Thus, the Report laid the basic foundation of the concept of alternative tourism to counter the mass tourism, causing irreparable damage to the ecosystem. Basically, alternative tourism is one of the broadest concepts coined to help safeguard the fragile ecology and environment of destinations heading towards the mass tourism.

The Commission thoroughly examined the world’s critical environment and developmental problems and suggested for the sustainable use of environmental resources for long-term economic growth. Hence, alternative sustainable tourism development is advocated for economic use of all resources in such a way that it can fulfill economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes and biological diversity and life support systems.

Alternative Tourism is contrary to the nature of mass tourism. The former is concerned for ecological conservation and the later is destructive to the flora and fauna. Alternative tourism is seen in the practices of small or medium companies, created and operated by families, friends, and local communities. There is every possibility of more contact with the communities and there is a respect for the natural and cultural environment.
Some of the important studies have defined alternative tourism as a tourism that gives emphasis to the contact and understanding between the local community and the tourist, as well as the natural environment. It is also a form of tourism that is in consistent with the natural, social and community values. It allows a positive relationship among locals and tourists (Wearing, 1999). Alternative tourism includes micro and small companies of local inhabitants’ property cited in Newsome et.al., 2002). Other characteristics of alternative tourism are smaller impacts in the natural and social environments, links with other sectors of local economy and retention of earnings in the region (Newsome et.al., 2002).

Butler (1990) inferred that numerous types of tourism are considered as an alternative tourism such as: scientific tourism, bio-tourism, academic tourism, farm and ranch tourism, nature or environmental tourism, ecotourism, community-based tourism, sustainable tourism, green tourism and village tourism as the forms of special interest tourism. One new trend in environmentally responsible or alternative tourism development has recently emerged as ‘ecotourism or nature-based tourism’. It is linked with gaining the economic advantages of tourism development and minimal environmental impact. Among the alternative forms of tourism, sustainable nature-based tourism (ecotourism) has played significant role in minimizing environmental impact, respecting host cultures, maximizing the benefits to local people, and maximizing tourist satisfaction across the world.

Lindberg (1991) categorized nature tourists based on the amount of time spent, the type of nature experience and the means of travel to a destination. The hard-core nature tourists include scientific researchers or members of tours specifically designed for education, removal of litter or similar purposes, while dedicated nature tourists include people who take trips specifically to see protected areas and want to understand local
natural or cultural history. They are more likely to travel great distances to reach at their preferred destinations than mainstream and casual nature tourists. On the lighter side of the concept, the mainstream nature tourists include people who visit destinations primarily to take an unusual trip, for example to the Amazon, while casual nature-tourists experience nature incidentally or part of a broader trip.

Drumm (1991) conducted a study about an integrated impact assessment of nature tourism in Equator’s Amazon region to find out the difference between nature tourism and ecotourism. Ecotourism has different kinds of procedures for visiting the natural areas, whereas nature tourists do not follow the kind of norms while visiting the natural areas.

Luzar et al., (1995) studied about nature-based tourism in Louisiana, USA. The study analyzed the decision to participate in nature-based tourism. The results suggested that ethnicity and gender may be important considerations for future nature-based tourism marketing to reinforce an existing interest in nature-based tourism.

Orams (1995) concerned about increasing tourist arrivals on the natural environment that results in several negative impacts on the natural environment. The study introduced a technique called ‘educational technique’ for interpretation of programme at the ecotourism sites as a best model to overcome the negative impacts if it is implemented in any nature-based tourism destinations. Furthermore, the interpretation is an effective mechanism for managing nature-based tourism and is the ways of exhibiting the coexistence of organisms in natural ecosystem. Education and self-regulation is rarely sufficient to achieve appropriate standards. However, it is suggested that understanding the reason for this doubt would be inappropriate to discount interpretation as a possible solution to manage nature-based tourism without having sufficient empirical evidence to do.
so. It is suggested that it is essential to protect and preserve the natural environment for future generation, resulting which nature-based tourism can be a non-degrading and non-damaging sustainable form of tourism.

McKercher and Robbins (1998) conducted a detailed study on Australian nature-based operators to find the differences between the two questions: “what they wished to know before they entered the sector?”, or alternatively, “what they feel” every new operator must know before entering into the business?”. The study revealed that the problem of running a nature-based tour business in Australia was very similar to the generic problems faced by small business enterprises. The operators must be multi-skilled and they must possess the right personal qualities, business planning and management skills. They must also have appropriate operational skills to be able to deliver the products. A lack of ability in any of these skill or attribute areas may have an adverse effect on the success of business.

Kreg et al., (1998) explained that the concept of alternative tourism is not only an appropriate framework, but also may be more accepted by the tourism industry as the focus on conditions rather than numbers encourage management actions that reduce negative impacts per visitors rather than the number of visitors. Ross & Fennel (2003) explained that alternative tourism is a generic term that encompasses a whole range of tourism strategies (e.g. appropriate, eco-soft, responsible, people-to-people, controlled, small-scale, cottage and green tourism). All of them are closely associated to the alternative rather than the conventional mass tourism at certain type of destinations. Most of the alternative forms tourism has been eventually fascinated by the tourism industry to adopt and deliver services to the particular needs and preferences of alternative tourists. Rather than seeking alternatives to the industry, environmentalists, researchers and respective individuals have
sought to collaborate with the industry to ascertain the sustainability of tourism development projects.

Newsome et al., (2002) divided tourism into two major categories: one is mass tourism and other one is alternative tourism. The alternative tourism is further classified into four categories: nature, culture, event and others. The nature tourism has various forms such as Adventure- Emphasising on activity, Nature-based-primarily viewing of natural landscape, Wildlife-primarily viewing of wildlife and Ecotourism- promoting educative and conservative supporting elements. Thus, alternative tourism ideally results in less severe impacts while providing positive economic effects to the society.

GLOBE 90 (1990) defines that the goals of sustainable tourism are
- To develop greater awareness and understanding;
- To make environment and the economy more friendly;
- To promote equity in development;
- To improve the quality of life of host community;
- To provide a high quality of experience for visitors; and
- To maintain the quality of environment on which the foregoing objectives depend.

Hunter and Green (1995) defined that sustainable tourism is developed and maintained in such a manner and scale that it remains possible in the long run and does not degrade the environment in which it exists to such an extent that it prohibits the successful development of other activities. Beeton et al., (1997) considered the attitudes of Victorian tourism enterprises towards adoption of environmentally sustainable practices in Australia. These in-depth interviews provided ample information relating to perceived benefits and barriers to adopting environmentally sustainable practices. The study concludes with a number of recommendations to assist the industrial bodies supporting operators in the take-
up of environmentally focused practices. The final recommendation is to develop a knowledge bank in this field of sustainable tourism practices.

Coccossis and Nijkamp, (1999) pointed out that sustainable tourism development refers to allowing tourism growth and simultaneously preventing degradation of environment as this may have important consequences for the quality of life. Environment Act (2000) stipulated that nature-based tourism is defined as visitation to natural or near natural areas that include ecotourism, adventure tourism and rural tourism. The visits include natural areas, wildlife sanctuaries, national parks, cultural and heritage sites and simple- sightseeing and recreation as the components of nature-based tourism. Thus, ecotourism is a niche component of nature-based tourism with a focus on education and interpretation of natural and cultural environment.

Aaronson (2000) clarified that there is no absolute sustainable development rather sustainability can be seen as a process towards achieving economic, social, cultural, political, geographical and ecological aspects through adopting interdisciplinary approach. Sustainability is a characteristic of a process or state that can be maintained at a certain level indefinitely. Thus, it is a process that takes care of “tomorrow” as well as “today” conserving resources wherever necessary to ensure continuity. Sustainable tourism thus attempts to make minimal impact on the environment and local culture while helping generate income and employment for locals as well as to promote the conservation of local ecosystems. It is responsible tourism which is both ecologically and culturally sensitive.

Charles et al, (2002) identified four critical premises of sustainable development viz. the relevant population / community, the time horizon, the dimensions of sustainability and the values underlying sustainable development. Holtman et al., (2003) conducted a
study on Monarch Butterfly in west-centre Mexico and suggested for local society participation. Further, unless ecotourism activity incorporates the local society into service planning and preservation and includes programs to meet the functional needs for income and employment for all people in the region, the special qualities of the site and its flora and fauna may be irreparably damaged.

Waitt (2003) reported on how tourists to the Kimberley region of Australia were discriminated between their perceptions of human artifacts as attractions (including Lake Argyle, the Argyle Dam and irrigated agriculture) and the region’s gorges, rivers, billabongs and flora and fauna. The Argyle Dam is perceived in a similar fashion to physical, geological and biological attractions. However, the irrigated agriculture is perceived quite differently as domesticated. Policy implications for the region’s nature-based tourism are explored by the tourists.

McNeely et al., (2008) illustrated the risks associated with nature-based tourism and examined that tourism has experienced rapid growth over the past 50 years and is expected to continue to develop particularly in biodiversity ‘hotspots’. Ecosystems constitute the main capital not only for nature-based tourism but also for other critical resource ‘services’. Watershed management and local climate regulations, on which societies and other economic activities rely on, can thrive for long time. The challenge for developing nature-based tourism is to make it symbiotic with conservation.

Floyd et al., (2006) undertook an interdisciplinary approach to investigate nature-based tourism and wild land recreation and identified the perceptions of nature-based tourists in Florida. After using observational and survey methods, the study identified the number and desires of nature-based recreation visitors and agencies and gradually changed
the type of recreation facilities and services offered. The majority of research projects highlighted the need for local decision-makers and managers of public lands to incorporate the views, opinions and attitudes of local residents into planning. It was recommended for the country officials to actively engage the county’s youth and minority groups, who generally do not support large-scale county efforts like tourism development.

Mehmetoglu (2006) developed a typology of nature tourists based on the trip activities on the basis of primary date analysis in the Northern Norway. The results indicated that the trip activity segmentation criterion enabled the classification of nature-based tourists into three clusters such as culture and pleasure activity oriented, nature activity oriented and low activity oriented. The main finding was that other two-trip motivations were distinguished from the nature activity oriented segment.

Luo and Deng (2007) conducted a study about nature-based tourism impacts from business managers’ perceptions in economic, cultural and environmental aspects and understood the relationship among socio-demographic characterizes, type and level of motivation and participant’s perception of impact. The Social Exchange Theory was used to explain the cost benefits in each aspect. Several indicators including social-demographic characteristics, attitudes towards the government and types and level of involvement were used to make cost benefits analysis of tourism impact. They found that the nature-based tourism had moderate impact on participant’s business contributing approximately 30 per cent of their annual sales and 31 per cent of customer’s satisfaction.

Sarah et al., (2007) examined the effects of climate change on the nature-based tourism outdoor recreation and forestry activities in Ontario. The study was divided into two periods: one is short-term impact, in which climate change primarily affects supply and
suppliers and another one is the long-term impact, in which climate change affects all components of demand, supply, governance, technology and social values. As far as the nature-based tourism and climate change is concerned, these are the following suggestions: climate change is expected to have a net positive effect on nature-based tourism and outdoor recreation activities in Ontario. As social and economic analysis unveils new opportunities, such as carbon capture and storage opportunities, it would be useful to determine the benefits to local communities from these programmes.

Siikamaki et al., (2007) conducted a study about the perceptions of local communities as the central issue in the sustainable management of conservation areas in Finland during 2002–2003. The study revealed that almost equal proportion of residents living in close proximity to conservation areas in Kuusamo has positive and negative opinions about nature conservation. Negative opinions and a lack of commitment to the planning process may hinder local development.

Schianetz and Kavanagh (2008) discussed the necessity for complementing linear sustainability assessment tools which disregard the complex and dynamic nature of tourism with Complex Adaptive Systems (CASs) approaches. This framework takes the interrelatedness of socio-cultural, economic and environmental issues into account. The Systemic Indicator System (SIS) methodology has tested using a case study of a holiday eco-village project near Lamington National Park in Queensland, Australia. The results show that tourism destinations need to be viewed and studied as CASs and that sustainability indicator systems need to be applied in the context of an adaptive management approach. Special attention should be given to the capability of the SIS methodology as a decision aid for resort developers and planners to improve the effectiveness of measures for pollution, prevention and mitigation. The SIS methodology is
a means of beginning the collaborative learning process of tourism stakeholders within the context of an adaptive management approach.

Luo and Deng (2008) examined the relationship between environmental attitudes as measured by the New Environmental Paradigm (NEP) and Nature-Based Tourism (NBT) motivations based on the data gathered from a national forest park in China. The results indicate that the tourist’s environmental attitudes are heterogeneous across all four tourism motivations. Specifically, those who are more supportive of limits to growth and those who are more concerned about eco-crisis, tend to have a higher desire to be close to nature, to learn about nature and to escape from routine and issues associated with cities. In addition, those whose motivations are oriented to develop skills and abilities or seek to experience new things, environments and social contact tend to be more supportive of the notion of human over nature. Thus, it can be concluded that environmental attitudes and NBT motivations are closely and positively related.

Landorf (2009) identified the relationship between heritage tourism and sustainable development with special reference to World Heritage Sites (WHSs). It notes that while the WHS status is not necessarily linked to tourism growth as all WHSs must implement a management plan to mitigate tourism impacts and sustain site significance. It emphasizes on a planning process that is long-term holistic and multiple stakeholder participation. Qualitative content analysis is used to determine the extent to which these principles are integrated into the tourism planning process at six WHSs. The process lacked a comprehensive and holistic approach to the wider issues of sustainable development and genuine engagement with local community stakeholders.
Cole and Ilum (2005) investigated the impact of service quality dimension, as proposed by Parasuraman, Berry and Zeithaml (1988) on tourists’ revisit intentions in a nature-based tourism setting. Adapted from SERVQUAL four dimensions of service quality (Conservation and Education, Information, Staff and Amenities) were generated. The results showed that refuge effort in conservation and education contributed the most to nature tourists’ revisit intentions. While information provided by the refuge and refuge’s staff also accounted for revisit, comfort and amenities provided by the refuge contributed the least to tourists’ revisit intentions. This study suggests that nature tourist perceptions of quality of services provided by the wildlife refuge have a direct impact on their intentions to revisit.

Lindberg, (1991) distinguishes between nature-based tourism and sustainable nature-based tourism. Nature-based activities can include kayaking down along the backwater, hiking along mountain trails, bird-watching in old rice fields and paddling through white-water rapids, or fishing in freshwater lakes. Nonetheless, a sustainable nature-based tourism requires the acceptance and practice of several key principles such as conserving the natural resource base; providing a participatory and enlightening experience; educating all parties involved communities, governmental groups, industry, and visitors; promoting understanding and partnerships among the different players and advocating moral and ethical responsible.

All the studies reviewed so far seem to have demonstrated that alternative tourism concept was surfaced between the end of 20th Century and the beginning of 21st Century. Most of the studies have dwelled on the alternative tourism as the best tool for eradicating the ill-effects of mass tourism or conventional forms of tourism (Orams, 1995). At the same time, alternative tourism is still infancy in many developing countries. Though
several definitions have outlined the importance for practicing this concept in tourism activity and explain the difficulty in implementing the principles of alternative tourism. Since there is no clear-cut policy, rules and regulation and geographical location, political setup etc, it is imperative to protect and preserve our natural, cultural and aesthetic environment for our future generation without delay (WCED, 1987). In the 21st Century, several studies have figured out the various alternative forms of tourism such as ecotourism, nature-based tourism, sustainable tourism, community-based tourism, green tourism and pro-poor tourism (Fennel, 2000).

Finally, all the above studies have been carried out at different period time and places. Though mass tourism provides economic benefits and employment opportunities to the people, but it has created several destructions to the natural, cultural and environmental elements. While comparing the positive and negative impacts, the negative impacts are more than the positive impacts. Therefore, sustainable nature-based tourism and alternative tourism have been suggested.

2.6. Synthesis of Review Work

With the advent of science and technology, travel has become easier and cheaper, naturally paving way for the promotion of mass tourism. Though mass tourism generated huge wealth to the tourism entrepreneurs, but benefits to the native people through the inflow of tourist remain less. Excessive focus on tourism development is laid on the neglected environmental preservation, especially in developing nations where tourism is a vital engine for economic growth and development.

Tourism destinations in India, especially hill destination in Ooty are not exempted from the onslaught of mass tourism. Absence of idea about sustainable nature-based
tourism development policies has led to environmental degradation. Contemporary research studies have revealed that achieving tourist satisfaction is an ultimate aim to ensure tourism business generating profit. In order to increase visitor’s satisfaction, knowingly or unknowingly, policies are designed with short vision eventually leading to environmental degradation. Tourism entrepreneurs have created wealth and expanded their areas of operation in Ooty to attract the nature lovers, but benefits from tourism development do not seem to have trickled down in the local economy.

The Queen of hill station Ooty receives heavy tourists every year and the nature is disturbed to maximum extent as all types of carrying capacity have reached at an unbearable stage during the peak season. Though native populations want to preserve nature of the Ooty, huge tourist inflow makes it impossible to take steps in the right direction. Destination specific nature-based tourism approach for Ooty in particular is missing for long time. In view of the above, there arises a need for assessing potential for nature-based tourism in Ooty to get rid of the negative impacts of mass tourism by involving native population in policy designing for tourism growth, equitable distribution of benefits generated by tourism to all stakeholders involved and to achieve maximum visitors’ satisfaction without disturbing nature further. Though various researchers tried for developing such ideas in other global destinations, an in-depth study focusing on tourism in Ooty is yet to be given a formal and concrete shape. This research is undertaken by the researcher to fulfill this existing gap. FIGURE 1.1 illustrates the conceptual framework to understand the theoretical gap so as to carry out the study in a more scientific and organized way.
FIGURE 2.1
Conceptual Framework

Impacts of Mass Tourism

- Exceeding Carrying Capacity
- Environmental Degradation, Deforestation, Soil, Air, Noise and Visual Pollutions
- Visitors Dissatisfaction
- Socio – Cultural Distraction

Local Community Participation

Scope of Promoting Alternative Tourism

Promotion of Sustainable Nature-Based Tourism