

A Study on Impact of Tourism and Sustainable Measures in OOTY, the Nilgiris

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Abstract: This paper provides a review of some tourism literature, which focuses, in particular on environmental impacts of tourism in ooty. Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution and natural habitat loss. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources. The literature was collected from international, national and regional journals, books, government reports and documents in the area of tourism, impact of tourism, impact of tourism on natural resources, sustainable nature-based tourism. This study attempts to fill this void by exploring the important issues pertaining to the growth of mass tourism development and to give the solution for managing the negative impacts of mass tourism through the implementation of the sustainable nature-based tourism in Ooty.

Keywords: Tourism, General Impact, Negative Impact And Sustainable Measures

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I. Introduction

Tourism is one of the biggest and fastest growing sectors in the global economy and has significant environmental, cultural, social and economic effects, both positive and negative. Tourism can be a major tool for economic development but, if not properly planned it can have destructive effects on biodiversity and pristine environments, and can result in the misuse of natural resources such as freshwater, forests and marine life. At a number of sites tourism development has resulted in serious water shortage affecting both local communities and industry, forests have been depleted and coral reefs have been damaged. The adverse impact that tourism can have on the environment both undermines the basic resource for tourism in coastal areas and heavily affects other non-tourist economic activities. To avoid these impacts tourism needs to be planned, managed and undertaken in a way that is environmentally sustainable, socially beneficial and economically viable. Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources. Sustainable tourism development always needs to respect the environment and refer to accepted principles of sustainability. It must be planned to make balanced use of the resources of any site, thus avoiding negative effects, reducing visitor satisfaction, or adversely impacting the local society, economy and culture. Sometimes it may be difficult to quantify limits, but they are essential for sustainable tourism. Thus, if it is to maintain the main elements on which it is based, the tourism sector needs to invest in the maintenance of the natural environment. If properly planned, tourism can become a positive force for conservation and environmental protection, and economic development. The impacts of tourism can be directly traced to the activities of tourists themselves as well as through the operation of tourist facilities. Cohen (1978) observes that there is misuse, overuse and abuse of the environment, especially where the development of tourism has been rapid. Cohen points out that though the aggregate environmental impact of tourism is smaller than that of any extractive or heavy industry developed on a similar scale, the impact of tourism is on its core attraction. Hence what in absolute terms would be minor detrimental effects of tourism on the environment, is of considerable significance, where the survival of the tourism industry is concerned. Resource abuse by tourism has been documented in several parts of the world with warnings about the decreasing ability of the natural environment and its custodians to cope. The broad environmental impacts of the tourism industry includes assaults against the natural equilibrium when slopes are disturbed for construction, extensive use of automobiles, increase in waste products, the pressure of teeming crowds on the 70 infrastructure etc. The natural resources of tourism are not infinitely renewable or endlessly resilient to the

pressures exerted on them by tourism. Tourism development hastens a natural process of environmental pollution. Tourism related constructions, recreational facilities, waste disposal etc. make no effort to avoid disturbances of natural systems. Rapid growth of tourism has created enormous strains on the infrastructure of the host towns. Tourism demands expansion of water supply, waste disposal etc. and the local administration is hard pressed to cope with these additional demands which are not funded by the tourism industry. Infrastructural over loads are commonly faced in all centres of tourism activity. Romeril (1989) states that overcrowding and congestion are obvious manifestations of tourism in resort centres. Ahmed et al. (1990) reports that hill stations in the Himalayas are often converted into slums by a lack of planned growth to meet the needs of tourism. Pant and Joshi (1996) observe the strains on Nainital lake region on account of intense tourist activity.

In general, the impact of 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 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 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.

Ooty, the Queen of Hill Stations, has unique attraction, rich biodiversity and natural beauty. Ooty has been receiving on an average about 2.5 million tourists annually. An average 20,000 to 25,000 visitors throng to Ooty every day (Venugopal, 2001). Therefore, the uncontrollable tourist arrivals and the entries of vehicles have been the direct threats to the sustainable nature-based tourism. If this impact prevails for longer period time, Ooty will witness devastating look and it will become the most hazardous site. Thus, the need-of-the-hour is to control and regulate the inflow of tourists by embracing a form of alternative tourism. The present study is taken up with the primary attempt of analyzing the carrying capacity and community participation for sustainable nature-based tourism with a well-defined model for sustaining the pristine nature-based tourism. Nature-based tourism is one of the emerging tourism attractions and it provides socio-economic and cultural benefits to the local people. Ooty is not an exception in view of the multifarious linkages between tourism and its socioeconomic development. The Government of Tamil Nadu has underscored the development of nature-based tourism (ecotourism) in Ooty to support the socioeconomic development. The fragile forest and rich biodiversity of Ooty needs to be preserved for the future generation without causing further damage. Studies on the tourism development in Ooty are very rare and mostly sketchy in nature. The first problem is non-availability of factual data supporting the contributions of tourism to the socio-economic development of Ooty. Some studies have highlighted the magnitude of growth and development of tourism in Ooty, while other studies have outlined the natural forest of Nilgiris along with the soil condition and deforestation in Nilgiris. Many organizations and NGOs have studied biodiversity, flora and fauna, and some other studied about the indigenous people and their cultures. Thus, few researchers have studied about the geographical perspectives of Nilgiris. In this light, the existing literature clearly shows the inadequacy of empirical studies in the area of tourism and its impacts on the ecology, environment and socio-economic development. More specifically, a comprehensive analysis of the impact of growing mass tourism development has been undertaken. Even though, tourism is traditionally one of the revenue-making industries in Ooty and the extent of utilization of natural environment and its contribution to local economic development, employment opportunities and income generation is an integral part of the tourism development. Hence, there is a need for assessing natural resource utilization for tourism industry and local community members through this seminal research. This study attempts to fill this void by exploring the important issues pertaining to the growth of mass tourism development and to give the solution for managing the negative impacts of mass tourism through the implementation of the sustainable nature-based tourism in Ooty.

II. Impact Of Tourism

The impacts of tourism on the environment of Ooty is considerable. Constructions dominate the landscape. The increasing number of multi-storeyed buildings on steep slopes, the scarring of the land when slopes are levelled for construction, the transportation and deposition of excavated soils elsewhere all cause irreparable harm to the environment of Ooty. Pollution in its different forms is another major consequence of tourism. Litter is ubiquitous wherever tourists halt. Since tourists outnumber residents especially during the peak tourist season, solid waste management is a major problem. Since most of the wastes are composed of non-composed materials the town's compost yard has been reduced to a dump yard. Tourism industry is a major contributor to the pollution of Ooty lake. Pollution levels are so high that the lake has no fish and the problem of weeds is acute. The increasing number of commercial vehicles into Ooty is probably causing air pollution since most of the diesel vehicles were found to have emissions much above permissible limits. Tourism results in

infrastructural overloads at the destination. The pace of development of the tourism industry is rapid and infrastructural improvements do not occur at the same rates as tourism development. Tourism places great demands on the infrastructure with seasonal overloads. Consequently the infrastructure is unable to cope. Since the intensity of land use by hotels is great, the demands on basic infrastructure is also more. The year round tourism activity in Ooty with seasonal peaks results in insufficient water supply, inadequate waste disposals and greater burdens on the roads. 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. 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. 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. [http://cpreec.org/\(2002\)](http://cpreec.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. 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 environment 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.

III. Impact Of Tourism On Natural Resources

Water Resources

Water, and especially fresh water, is one of the most critical natural resources. The tourism industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water.

Local Resources

Tourism can create great pressure on local resources like energy, food, and other raw materials that may already be in short supply. Greater extraction and transport of these resources exacerbates physical impacts associated with their exploitation. Because of the seasonal character of the industry, many destinations have ten times more inhabitants in the high season than in the low season. High demand is placed upon these resources to meet the high expectations tourists often have (proper heating, hot water, etc.).

Land Degradation

Important land resources include minerals, fossil fuels, fertile soil, forests, wetland and wildlife. Increased construction of tourism and recreational facilities has increased pressure on these resources and on scenic landscapes. Direct impact on natural resources, both renewable and non-renewable, in the provision of tourist facilities can be caused by the use of land for accommodation and other infrastructure provision, and the use of building materials. Forests often suffer negative impacts of tourism in the form of deforestation caused by fuel wood collection and land clearing.

POLLUTION Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage. Air Pollution and Noise Transport by air, road, and rail is continuously increasing in response to the rising number of tourists and their greater mobility. Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourist transportation has impacts on global level, especially from carbon dioxide (CO₂) emissions related to transportation energy use. And it can contribute to severe local air pollution.

Tourism Impact In Ooty

Tourism development hastens a natural process of environment pollution. Tourism related construction, recreational facilities, waste disposal etc. make no effort to avoid disturbances of natural systems. Rapid growth of tourism has created enormous strains on the infrastructure of Ooty town.

Air Pollution Suffocates Ooty



Charing Cross, One of the Most Polluted Parts of the Town

Well known far and wide for a number of unique features, this popular hill station's main attributes have for long been its salubrious weather and pollution-free atmosphere is now at stake. While haphazard development, loss of green cover and changes in the weather pattern, among the contributory factors identified for the inflow of tourist vehicles and the number of vehicles belonging to the residents. Residents the sad state of affairs was the sight of police officers and men wearing masks while regulating traffic in various parts of town.

Smoke

Speaking to The Hindu some of them said that at traffic point like Charing Cross, the District Police Office junction and the Collectorate junction, the flow of different kinds of vehicles was non-stop almost throughout the day and the smoke emitted by many of them was suffocating. Even when there was no traffic like early in the morning and late in the night atmosphere was polluted. Hence it is has become necessary to take precautionary measures. Observers regretted that congestion has never been as bad as it now and added that along with air pollution, noise pollution has gone up due to the blaring of horns.

Survey

They recalled that a survey conducted a few years ago had revealed that Charing Cross on the threshold of the town was one of the most polluted. They also pointed out that a few years ago measures had been initiated to check vehicles near Mettupalayam before they started to ascend. However they were short-lived. Stating that many of the tourists choose to visit hill station like Ooty only to enjoy the relatively pollution free air, they said if action was not taken to check the trend, the tourism dependent economy of the district will suffer.

Ooty Lake Turns To Sewage Pool



The iconic Ooty Lake continues to be increasingly polluted as untreated sewage water is directly diverted into lake, despite a sewage treatment plant being in existence.

Though the treatment plant, built at a cost of more than Rs.1.2 crore, was designed to purify the water from the Kodappamund Channel before it is introduced to the lake, much of the machinery remains idle. Moreover, a bottleneck has formed at the point where the water enters the treatment plant, as thousands of plastic bottles, washed down from further upstream, have dammed up the entry point of the facility.

Activists say that the lake has become an ideal breeding ground for mosquitoes, and that the increasingly levels of pollution are a cause for concern, especially as it is a prime tourist location.

“We have been urging the municipality to clean up the lake and take up measures that would ensure that there is a holistic approach to keeping the water body clean.

With new technologies, sewage water can be purified and introduced to big lakes with almost no impact on the environment,” said S Jayachandran, Joint Secretary of the Tamil Nadu Green Movement.

Sources at the Ooty Boat House said that officials had already raised the issue with the municipality and had asked them to treat the water before releasing it into the lake.

“There is also a complaint that the treatment plant was being run only sporadically,” the source who requested anonymity said.

However, municipality officials claimed that sewage was indeed being treated before being let into the lake. V Prabhakaran, Health Officer and Commissioner (in-charge), Udthagamandalam Municipality, disputed claims that the water was not being treated. He, however, said that the municipality will look into the issue once again.

Tourist Inflow In Ooty Up, But Revenue Stagnates

The ‘Queen of Hills has seen a significant increase of nearly 50% in footfall of tourists in three years’ time. While 23.4 lakh tourists visited Ooty in 2014’ around 32.69 lakh visited in 2017, according to official records. Also, the increase in number of tourists in 2017 is about 105 lakh compared to 2016. As the inflow is seen increasing every year, where does the ecologically fragile hill station stand at? What are the initiatives being taken by the district administration to cope up with the increase in tourist crowd? N Chandrasekhar, secretary, Nilgiris Hoteliers’ Association, said, “Of course, we see a drastic increase in tourist inflow. But when it comes to the revenue aspects, there is no change as there has been no increase in number of standard hotels.” He said, “Several home stays have come up in the town. The crowd we get nowadays is a floating crowd and their visit is only for a day.”

President of Ooty Taxi Owners’ Association Govardhan said the expected business during last December was disappointing. “While around 155 taxies were plying in the town three years ago, it has gone up to 375. But we face high competition with the same amount of business prevailed three years ago. Most of the

tourists nowadays come in their own vehicles.” “Even local business has gone down significantly as many people own a four-wheeler,” he said. But the revenue generated by the horticulture department has gone up, at least, by 50%. The entry fee collected at the Government Botanical Garden (GBG) and the Government Rose Garden (GRG) by the department stands at over Rs 10 crore. The footfall registered at GBG is taken as the official figure for the tourists’ inflow in Ooty.

According to Nilgiris collector J Innocent Divya, the amount collected as entry fee at GBG and GRG and other tourist spots handled by the horticulture department always goes to the government as a central pooling. “Ooty earns much higher revenue when it comes to tourists’ visit but when allocation takes place, the hill district gets as same as any other district,” Divya said. “Hence, we are demanding a sizable portion of funds from the government to maintain the tourist town at par with national standard.”

“Recently, we have initiated collecting green tax from tourist vehicles. That will be utilized for community toilets and other civic amenities. The Ooty municipality lacks funds as its revenues are not being streamlined,” Divya said. According to the collector, in order to cope up with the tourist traffic during season time, the revenue and the police departments have initiated steps to make few of the places in the town as vehicles free-zones. “In another words, it is to encourage cycling within the town. Also, systematic shuttle services would be introduced so that tourists could visit all the spots without any hassle. A parking point will be identified for tourist vehicles,” she said. Ooty is likely to see in future a centralized information centre to make tourism a systematic and hassle-free process. “Works are being undertaken to lay and repair roads within Ooty town at the cost of Rs 2.7 crore. It will be seen that all the roads have footpaths and closed drainage. Even the National Highways passing through Ooty town will have footpaths with gardens so as to give an aesthetic sense to the town end to end,” said Divya. Stephen Stanger from Wimbledon, London told the TOI, “India is a hot place. So we decided to visit India during winter so that we can cover all the places of tourist importance.” Susan from Mumbai said, “Of course, climate-wise, Ooty is lovely just like any other European country.” She added, “A ride in the Nilgiris Mountain train is enchanting.”

Demands on infrastructure and resulting stress. Tourism demands expansion of water supply, waste disposal etc. and the local administration is hard pressed to cope with these additional demands which are not funded 91 by the tourism industry. Rapid growth of tourism has created enormous strains on the infrastructure on the host towns.

Tourism Traffic in Ooty Besides the local vehicles, everyday hundreds of vehicles with tourists enter Ooty town. Besides tourist buses, tourist maxicabs and tourist taxis, there are a large number of private car and two wheelers coming to Ooty. During the peak tourist season there are more frequent public bus services from the plains. Since Ooty depends on the plains for almost all its goods, lorry traffic also increases during the tourist season. Enquiries at the sales tax check post at the entrance to the ghat roads reveal that grocery loads increase during the weekends. Since weekend tourists to Ooty are considerable, these extra loads may be attributed to them. During the months of February and march loads of mattresses and other hotel requirements go to Ooty in preparation for the tourist rush in summer.

Other Consequences of Pollution. Plastic paper bags floating down the channel presents yet another problem. To prevent pollution to the lake a multicore project is being implemented under HADP assistance. The scheme envisages the collection of sewage at the end of children park by gravity, and then pumping it through 400 m.m pipes along the north lake road to Kandal to the sewage treatment plant these. The pumps in the pumping station is already being threatened by the thousands of plastic paper bags which float down the channel. Engineers of the Tamil Nadu Water and Drainage board (TWAD) already express fears that this will soon damage the two 50 hp. Motors in the pumping station. If this happens the sewers are going to be choked. Consequent to earlier studies a number of weirs were built in the bed of the Kodappmund channel with the express purpose of checking silt from entering the lake. But 85 in the absence of periodic cleaning and maintenance, the water now flows slowly in the channel and stagnates at places. Consequently Ooty now faces an unprecedented mosquito menace

Pollution of Ootylake. The consequences of sewage overloads is the pollution to Ooty lake. Dense population in the race course watershed, tourism, construction activity, market garbage, the oil and workshop waste from the bus stand are all contributors to the pollution of Ooty lake in varying degrees. The master plan report (2007) notes that owing to population increase and expansion of tourist activities, the sewage load has become so excessive that pipelines which carry wastes off load them into the storm water channel (Kodappamund channel) at several places. Because of overloads, sewage overflows through manholes and finds its way into Kodappmund channel. The existing branch sewers are tampered with and sewage flow is diverted into the channel

Restructuring of the environment by tourism related construction

Hotels and restaurants as users of land and providers of various services alter city structure and affects urban morphology and landscape. MAB studies of Swiss mountain areas show disfigurement of the landscape together with pollution. Morgan (1991) observed the commercialization and environmental deterioration of Majora, Spain, through uncontrolled hotel construction. The stresses begin with land clearings for construction of tourist facilities (Saenger 1989). The scenery is increasingly affected by hotel constructions. Mueller (1992) observes that tourism has a strong consumer character. Continuing construction activity leads to loss of open areas, terrain leveling, disfigures the 71 landscape and greenery and open areas are swallowed by concrete. Williams (1978) points out that areas where speculative tourism booms have occurred reveal considerable disdain for environmental concerns. Tyler (1989) observes that tourism construction in developing countries is poorly designed and not in keeping with the local environment. Overtime because of crass commercialization the tourist centre gradually loses its sense of place and the things that make the place very special will disappear. Hill areas in the tropics are often intensively developed for tourism, since they hold particular attraction for tourists. The tourist destination is intensively developed for tourism and the hill environments, being least resilient to the mass tourist impact, pose the hardest problems for environmental protection. Here constructions come close to destroying the very thing the tourists come to see. Intense construction activity in areas that have witnessed a sudden spurt in tourism, lead to damages to the environment.

Planning For Sustainable Tourism Development in Ooty

Coccosis 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. 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 68 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.

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 62 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. Tourists are one of the key stakeholders of tourism development. Tourist expenditures directly and indirectly create income and employment, infrastructure development, host-guest interaction, fund for conservation and preservation of art, culture and natural areas. Finally, visitor satisfaction is the core point of achieving sustainable nature-based tourism in Ooty.

IV. Summary

The impacts of tourism on the environment of Ooty is considerable. Constructions dominate the landscape. The increasing number of multi-storeyed buildings on steep slopes, the scarring of the land when slopes are levelled for construction, the transportation and deposition of excavated soils elsewhere all cause irreparable harm to the environment of Ooty. Pollution in its different forms is another major consequence of tourism. Litter is ubiquitous wherever tourists halt. Since tourists outnumber residents especially during the peak tourist season, solid waste management is a major problem. Since most of the wastes are composed of non-composed materials the town's compost yard has been reduced to a dump yard. Tourism industry is a major contributor to the pollution of Ooty lake. Pollution levels are so high that the lake has no fish and the problem of weeds is acute. The increasing number of commercial vehicles into Ooty is probably causing air pollution since most of the diesel vehicles were found to have emissions much above permissible limits. Tourism results in infrastructural overloads at the destination. The pace of development of the tourism industry is rapid and infrastructural improvements do not occur at the same rates as tourism development. Tourism places great demands on the infrastructure with seasonal overloads. Consequently the infrastructure is unable to cope. Since the intensity of land use by hotels is great, the demands on basic infrastructure is also more. The year round tourism activity in Ooty with seasonal peaks results in insufficient water supply, inadequate waste disposals and greater burdens on the roads.

V. Conclusion

The intensity and rapidity of tourism development has been rampant in Ooty town. Consequently the relationship between tourism and environment has been one of conflict rather than symbiosis. Beyond certain levels of tourism development, the asset base of the tourism rapidly depreciates. The impact of mass tourism is rapid because of growing commercialisation of the destination. Seasonal concentration of visitors is high in the study area, thus making the town crowded and placing enormous strains on the infrastructure. Random infrastructure development for tourism facilities adds stress to the already decaying environment. Ooty Lake has become a helpless victim of abuse. The visual and olfactory squalor of the untreated water of Ooty Lake bears witness to the infrastructural overloads on the sewerage system. Enormous funds are being spent in an effort to salvage the lake, but the road to recovery is bound to be excruciatingly slow, considering the continuing sewage inflows. Similarly solid waste is a staggering burden both because of the litter and because it exceeds the capacity of the natural process to transform it. The increasing volume of use of elaborately packed and presented throwaways has resulted in an increase in non-compostable matter. Ooty town compost yard bears witness to this. Handling solid waste is hard pressed to the municipality 172 authorities. An infrastructural requirement for disposing solid waste is also 17 under pressure. Despite growing tourist numbers and increasing amounts of solid waste being disposed, the strength of the conservancy staff has not risen proportionately. Need to appoint more permanent conservancy staff should be appointed immediately. Dispute of the land for dumping must be cleared soon. The methods of clearing and carrying the waste to the dumping yard should be modernized. Need to take more care at the time of peak season. Environmental and social stresses are noticeable in Ooty. Agricultural and vacant lands are getting rapidly transformed into resorts etc. and the land is scarred by construction activity. Congestion and commercialization, the two conspicuous traits of tourism growth are evident in Ooty. When tourism development is carried too far the quality of life of residents is lost. Floating population is very much high in the peak season compared with the residents population. Consequent to this crowding, there is a loss of residential amenities to locals. Residents face problems of housing, feel deprived of water supply and hold tourism responsible for price rise and shortages for essential commodities. A resident focused development rather than tourist focused development is desired by the residents of Ooty. The recently constructed buildings in Ooty are multistory and are in slopes. The heavy weight in the slopes will always have to face drastic disaster even for small trimmers. Since these buildings are multistoried they would have dug deeply below for 174 basement laying. This will pay the way for land slides. If this progress of buildings continues there is a need to face big problems for the light trimmers. Since urbanization is increasing day by day at the expansion of the agricultural land, the total size of the cultivable land is decreased. The green lands are converted into brown buildings for the infrastructure facilities for tourists. Continuous extract of ground water for the purpose of tourism decreased the ground water table. The quality of environment is the casualty. The attraction of the environment will lose its charm and beauty. Unless systematic and sustainable efforts are made, Ooty may slip out from the favoured destination of the tourists in the course of time.

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