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EMERGING ENVIRONMENTAL ISSUES WITH THE DEVELOPMENT OF TOURISM INDUSTRY IN INDIA: A STUDY

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ABSTRACT

Tourism has strong linkage with the economic growth and development in India. Because of its maximum backward and forward linkages, tourism contributed more in the income and employment generation in India. However, the development of the tourism sector in India also raises some of the issues related to the environment. This paper is an overview on the environmental issues of tourism development in the context of India Tourism. Observational approach has been used in the present study. In addition, pictorial presentation has been made to highlight the mounting effects of tourism in India. The findings of the study revealed that an environmental issue of tourism in India is different per region or state. From the theoretical perspective carrying capacity, land degradation, pollution, deforestation, climate changes, solid wastes etc have been viewed as important environmental effects of tourism development. A detail study on Environmental Impact Assessment is, therefore, needed in different region of India for the sustainable management and environment protection.

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INTRODUCTION

Tourism sector in India is one of the important sectors of the economy. India's rich culture, its beauty and diversity attract tourists from every corner of the globe. From World famous places of Spiritual tourism like., palaces, temples, mosques, forts to the caves and prehistoric crafts, from its monotonous plains to the top mountain peaks of the world, from its hottest and driest place to the wettest and coldest parts of the world, beautiful beaches on the sea coast of Bay of Bengal and Arabian Sea, vast desert, and the diversified life of the Indians offers a reason for tourism visit India. Tourism has strong linkages with the economic growth and development in India. It is not only a significant contributor to GDP and foreign exchange reserve of the country, but also it provides widespread of employment. Tourism sector can also be considered the backbone for allied sectors, like hospitality, civil aviation, and transport. Sensing the importance and worth of the sector, Indian Government has invested abundantly for the development in this sector. It has been partially successful with increase in foreign tourist arrivals over the last decade, courtesy "Incredible India Campaign" (Mishra and Prabina Kumar Padhi, 2013). Because of its maximum backward and forward linkages, tourism contributed more in the income and

employment generation in India. However, the development of the tourism sector in India also raise some to the questions/issues related to the environment and threat to the endangered plants, species and most probably the protected areas in India. This paper, therefore, is an overview on the environmental issues of tourism development in the context of India Tourism.

Objective

The present study highlights the environmental issues of tourism development in India. The paper is an attempt made on the environmental prospect of tourism development in India.

MATERIALS AND METHODS

The study is based on the secondary data collected from the Ministry of Tourism, Government of India, and Tourism Annual Reports. Information on the environmental issues of tourism industry, in general, has been taken from the documents of United Nation Environmental Programme (UNEP). The present study overview the environmental issues of tourism development in the light of theoretical perspective thereby relating them in the context of Indian tourism. Further, the observational approach has been used in the present study to have a boarder view on the issues throughout India. Various

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facts and figures, and related contemporary publications have been reviewed for this purpose. In addition to that, a pictorial presentation has also been applied in the study to get a clear picture-wise presentation and justification of the theoretical aspect of environmental issues.

RESULTS AND DISCUSSION

Tourism Industry in India and Growth status

Tourism in India is the largest service industry, with a contribution of 6.23 percent to the national GDP and 8.78 percent of the total employment in India. In 2010, total Foreign Tourist Arrivals (FTA) in India were 5.78 million and India generated about 200 billion US dollars in 2008 and that is expected to increase to US\$375.5 billion by 2018 at a 9.4 percent annual growth rate. The majority of foreign tourists come from USA and UK. Kerala, Tamil Nadu, Delhi, Uttar Pradesh and Rajasthan are the top five states to receive inbound tourists. Domestic tourism in the same year was 740 million. Andhra Pradesh, Uttar Pradesh, Tamil Nadu and Maharashtra received the big share of these visitors. Ministry of Tourism is the nodal agency to formulate national policies and programmes for the development and promotion of tourism. In the process, the Ministry consults and collaborates with other stakeholders in the sector including various Central Ministries/agencies, the state governments and union territories and the representatives of the private sector. Concerted efforts are being made to promote new forms of tourism such as rural, cruise, medical and eco-tourism. The Ministry of Tourism also maintains the Incredible India campaign. During the year 2011, the number of Foreign Tourist Arrivals (FTAs) in India reached the level of 6.29 million, registering a growth of 8.9 percent over the FTAs of 5.78 million in 2010. The growth rate of 8.9 percent in tourist arrivals in India was almost double the growth of 4.4 percent in tourist arrivals worldwide. The tourism sector in India, therefore, has fared quite well vis-à-vis the world. Foreign Exchange Earnings (FEE) from tourism in India during 2011 were \$16.56 billion as compared to \$ 14.19 billion in 2010, showing a growth of 16.7 percent (Government of India, Ministry of Tourism, 2012).

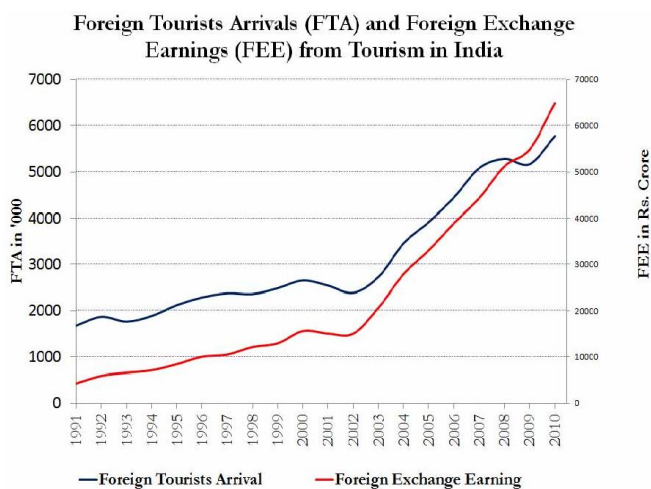
Figure 1 exhibits the volume of Foreign Tourist Arrival (FTA) and Foreign Exchange Earnings (FEE) from tourism industry in India from the year 1991 to 2010. Trend line depicts a tremendous growth in the volume of tourist arrival and Foreign Exchange Earnings from the tourism industry. Most specific, in the last decade, the growth has been marked high in both FTA and FEE as compared to the year 1991-2001. It shows the economic potential, contribution and importance of the tourism as an industry in Indian Economy. However, the increasing tourist arrivals have adverse effect on the region too. With the increasing volume to tourist influx the demand will increase beyond the available resources. On the other hand, it means the increasing demand leads to pressure on natural resource and it has it serious effect on the environment. It gives some serious questions to the planner, stakeholders and all who are directly and indirectly linked with the tourism industry for their livelihood.

Environmental Impacts of Tourism

The quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses and marinas. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends. On the other hand, tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance (UNEP, 2014). Smiriti Chand (2014) stated that the unplanned and unrestricted growth of tourism has a detrimental effect on environment. There is lack of appreciation of the holistic approach to tourism development which takes into account the linkages between environment and pressure of tourists. Adverse effect of tourism development on environment occurs when the level of visitor demand and their use of recourse are greater than the environment's ability to cope with. Unmanaged and unplanned tourism is threats to natural areas. It will place huge pressure on an area and results in increased pollution, soil erosion, land and water resources, loss of natural habitat, pressure on endangered species.

Carrying capacity

Tourism has direct relationship with biodiversity. The most important problem of tourism development in any region or destination is the problem of carrying capacity in terms of environment and resource. Maximum use and abuse of resources for tourism beyond actual capacity have pressure on the environment and resources available locally in the region. This will result in a loss of biodiversity when land and resources are excessive use beyond capacity, and impacts on vegetation, wildlife, mountain, marine and coastal environments and water resources exceed the carrying capacity. In fact, any loss in biodiversity means a loss of future potentiality of tourism industry in an economy.



Source: Smriti Chand, 2014.

Figure 1. Foreign Tourist Arrival (FTA) and Foreign Exchanging Earning (FEE) in India from the year 1991 to 2010

Ozone Layer Depletion

Ozone depleting substances (ODSs) such as Chlorofluorocarbons (CFCs) have contributed to the destruction of Ozone layer in the atmosphere. Directly and indirectly, tourism industry is among one such industries which contributes in the depletion of Ozone Layer. All high techno-chemical items viz., refrigerators, air conditioners and propellants in aerosol spray cans, contains ODSs and they are highly used in the hotels and other sub-sectors of tourism industry. Further, an emission from aircraft is also a major source of ODSs in atmosphere.

Climate Change

Climate change and tourism are closely linked with each other. Tourism industry involves the inflow and outflows of tourists from their homes to other destinations and accounts for about 50 percent of traffic movements. An expanding air traffic, because of more travelling of tourists, contributes about 2.5 percent of the production of CO₂. Tourism is thus a significant contributor to the increasing concentrations of greenhouse gases in the atmosphere. Air travel itself is a major contributor to the greenhouse effect. As per the World Wildlife Fund (WWF), the number of international travelers is expected to increase from 594 million in 1996 to 1.6 billion by 2020, adding realty to the problem unless steps are taken to reduce emissions.

Impact of exotic species

Introduction of new species viz., insects, wild and cultivated plants and diseases by tourists or suppliers which is not for the local environment that may result in the enormous disruption and leads to the destruction of ecosystems (UNEP, 2001).

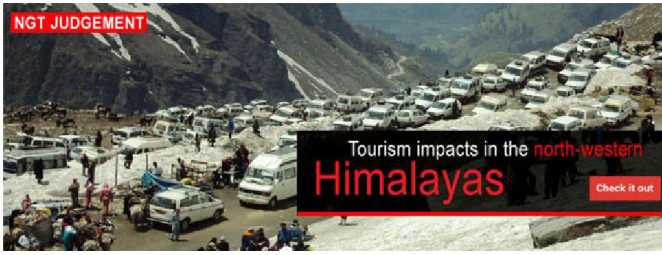
Depletion of Natural Resources

Tourism development puts pressure on natural resources when it increases consumption in areas where resources are already scarce. Water is one of the most important natural resources available in the earth. The tourism industry generally overuses water resources for hotels and restaurants, swimming pools, golf courses and personal use by tourists. Increasing tourist arrival leads to increase in demand for more water. This results in water shortages and degradation of water supplies, as well as generating a greater volume of waste water. Tourism development, further, create a great pressure on locally available resources like energy, vegetation, food, and other raw materials. Greater uses and transport of these resources leads to the physical impacts associated with their exploitation. Because of the seasonal character of the tourism industry, many destinations have more inhabitants in the high season as in the low season. A huge demand is placed upon these resources to meet the tourism need. Increased construction of tourism and recreational facilities has increased the pressure on these resources and on scenic landscapes. Direct impact on natural resources, both renewable and nonrenewable, 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.

Tourism causes the pollution like air pollution, noise, solid waste and littering, oil and chemicals, even architectural/visual pollution. Air pollution and noise pollution from Transport systems like airplanes, cars, buses, snowmobiles and jet skis, is an increasing problem. In addition, it also leads to distress to wildlife, especially in sensitive areas. An area with high concentrations of tourist and tourism activities, waste disposal is a serious problem. Improper disposal of these wastes is a major hazard of the environment. In mountain areas, trekking tourists generate a great deal of solid waste. They leave behind garbage, oxygen cylinders and even camping equipment which degrade the environment on the area. Furthermore, construction of hotels, recreation and other facilities results in increasing sewage pollution. Wastewater has polluted seas and lakes surrounding tourist attractions, damaging the flora and fauna. Sewage runoff causes serious damage to coral reefs because it stimulates the growth of algae, which cover the filter-feeding corals, hindering their ability to survive. Changes in salinity and siltation can have wide-ranging impacts on coastal environments. And sewage pollution can threaten the health of humans and animals. Physical impacts are also caused by continuing tourist activities and long-term changes in economies and ecologies. Construction activities of accommodation, water supplies, restaurants and recreation facilities for the infrastructural development of tourism industry involve destruction of land and soil erosion. In addition, road and airport construction also results in land degradation and loss of wildlife habitats and deterioration of scenery. Further, the construction of resort accommodation and facilities frequently requires clearing forested.

Studies on Environmental impact of Tourism Development in India

Kalidas Sawkar, et al., (1998) have studied on the Tourism and Environmental Issues of Concern in the Coastal Zone of Goa. They have highlighted the impact of tourism development in marine life, land of coastal zone and environment. Some problems they found were the loss of mangrove, reducing fish catch and species, erosion, sanitation, and water resources etc. Dr. D. Y. Patil and Ms. Lata S. Patil (2008) have examined on the environmental impact of tourism development on the Maharashtra. Findings on the study revealed that 89 percent of the surveyed respondent experienced that there would be maximum negative impact on the environment as a result of developing tourism, they experience that more forests degradation might take place in and around the area because of tremendous demands for area by encroachment of hotels and restaurants. Sapana Madan and Laxmi Rawat (2000) have studied on the *impacts of tourism on the environment* of Mussoorie, Garhwal Himalaya. They stated that because of huge influx in the tourists the demand for the lodges/hotel and other infra-structure and super-structure facilities and amenities in the area was enormous and it imposed a great stress on the natural environment of the place. Proshanta Kumar Ghosh and Debajit Datta (2012), made an investigation on the coastal tourism in Kolavam, India. It was found that environmental conservation and community development have never been taken as the prerequisites for the betterment of tourism industry in this place. As a result of the ever increasing conflicts between the demands of existing environmental and tourism development policies, one may see



Picture 1. Tourism impact in North-west Himalayas in India



Picture 2. Mangrove forest



Picture 3. Solid waste



Picture 4. Women in Goa



Picture 5. increasing crowd in sacred places



Picture 6. Marine degradation



Picture 7. Goa beach

the seeds of demise of a prospective industry by the deterioration of that very ecological milieu on which it thrives. Joshi and Dhyani (2009), has examined the impact of tourism on the environment of Sikkim Himalayas. They stated that though the tourism potential lies in the Sikkim state, the development has also a threat on the protected areas in the region. They advocate for the sustainable planning for tourism in the state.

Pictorial presentation: Impact of tourism development on environmental

Environmental issues of tourism development can also be highlighted with the help of pictorial presentation. Here are some related images for the present study.

Conclusion and Suggestion

The findings of the study leaves more question on the development of tourism in India. Environmental issues of tourism in India are different per region or state as per the types of tourism. It has been viewed that the issues like carrying capacity, land degradation, pollution, deforestation, climate changes, solid wastes etc are the main problem to look upon. From the various studies it is clear that the environmental effect of tourism development in India differs from region to region. One cannot study and plan same for all the regions. Like, the more development of tourism in the Coastal area like Goa, Kerala, Pondicherry and other coastal region have impact on the marine life and water resources. In case of the Himalayan states of India, the impact is on the forest, climate, land degradation, temperature, and threat to the protected areas. Further, in the metropolitan cities and states having maximum population, further development of tourism has impact on environmental pollution, deforestation, crowd and carrying capacity. The study also awakes us and provokes us to take the issue in a more serious point to discuss. Though many environments are endowed with great tourist potential, they are delicately balanced and large scale unplanned expansion of tourism in such areas often manifests itself in problems of serious environmental concern. It is necessary that tourism should be developed in a planned way taking care of environment and infrastructural development. Therefore, state-wise/region-wise in-depth study on environment assessment of tourism industry in India is very necessary for the sustainable management of tourism and environment. Further, the tourism planning should be made on the basis of regional characteristic of the tourist destinations. Further, a sufficient fund for Research and Development is required to execute these studies effective for sustainable tourism policy in India.

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