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40. IMPACT OF CLIMATE CHANGES ON TOURISM DEVELOPMENT IN INDIA

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ABSTRACT

Eco tourism, also known as ecological tourism, is travel to natural areas to appreciate the cultural and natural history of the environment, while not disturbing the integrity of the ecosystem and creating economic opportunities that make conservation and protection of natural resources advantageous to local people. Ecotourism also minimizes wastage and the environmental impact through sensitized tourists. Tourists look for an ecologically clean, non-polluted and unharmed natural environment to make their trip or vacation, so tourist activities take place mostly in ecologically clean territories. The existence of any ecological problem in a territory – pollution with hard waste materials, water pollution, high soil acidity, disrupted and annihilated vegetation, noise pollution, existence of noxious emissions in the air etc. affect tourism development in it in a most negative way. Existence of ecological problems is one of the strongest restricting factors for modern tourism development and so they are an important criterion for assessing tourism potential. Some of the tourists evince keen interest in nature. There is abundant natural wealth in Tamil Nadu viz. hill stations, waterfalls, forests, bird sanctuaries, beaches, etc. A separate Eco-Tourism Wing is being set up by Tamil Nadu Tourism by posting an officer from the Forest Department. The vision is to make Tamil Nadu a world renowned destination specializing in sustainable tourism through focused efforts on creating synergy among all stakeholders, encouraging capacity building and public-private partnerships with revenue generating strategies.

This research paper focuses on an impact of Tourism on climatic changes in Tamilnadu. The researcher is an analysis the role of climate changes in tourism development through the secondary data from the various published sources.

KEYWORDS: climate changes and Tourism development.

INTRODUCTION

The quality of the environment, both natural and man-made, is essential to tourism. However, the relationship of tourism 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 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. Negative impacts from tourism occurs 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.

OBJECTIVES

This paper aims to fulfill the following purposes;

- To see the positive and negative impact of tourism on environment.
- To identify the improvement in Environmental Management and Planning.

RESEARCH METHODOLOGY

The study has been conducted mainly on the basis of literature survey and secondary

information. Various seminar papers and summary of discussion in those seminars, taskforce reports of research organization, journals and some periodicals on environmental impacts of tourism have been surveyed for the purpose of the study. Some environmental analyst and expertise person has also been interviewed for the purpose of accumulating facts and information.

TOURISM IN TAMILNADU

Tamil Nadu, formerly known as Madras State, is located in the south eastern side of Indian peninsula with Kanyakumari as the southernmost tip of the land. This tip is the meeting point of Bay of Bengal, Indian Ocean and Arabian Sea. Tamil Nadu has a long eastern coastline dotted with enchanting beaches with Bay of Bengal in the east. Arabian Sea and the states of Kerala and Karnataka form the boundary in the west. The state is bounded in the north by the states of Karnataka and Andhra Pradesh. The state language is Tamil and the main religions in the state are Hinduism, Christianity, Islam and Jainism. With forested slopes of the majestic hills of the Western Ghats, profuse incense of the towering temples and gourami, vibrant festivals of music and dance, shimmering silk fabrics of brilliant colors, and an endless array of silver lined beaches, Tamil Nadu also boasts of being the land of Dravidian culture and tradition. Tamil Nadu is the eleventh largest state in India by area and the seventh most populous state. It is the second largest state economy in India as of 2012. The state ranked among the top five states in India in Human Development Index as of 2006. Tamil Nadu is also the most urbanized state in India. The state has the highest number of business enterprises and stands second in total employment in India, compared to the population share of about 6%.

Tamil Nadu has a long tradition of venerable culture. Tamil Nadu is known for its rich tradition of literature, music and dance which continue to flourish today. Unique cultural features like Bharatanatyam (dance), Tanjore painting, and Tamil architecture were developed and continue to be practiced in Tamil Nadu. Pongal, also called as Tamizhar Thirunaal (festival of Tamils) or Makara Sankranti elsewhere in India, a four-day harvest festival is one of the most widely celebrated festivals throughout Tamil Nadu. Keeping this in mind the Market Research Division of Ministry of Tourism, Government of India has awarded Nielsen India Pvt. Ltd. (Formerly ACNielsen ORG-MARG), one of the largest market research and consultancy organizations in this part of the continent, to

conduct a study for a period of one year for collection of Tourism Statistics.

TOURISM AND ITS IMPACT ON ENVIRONMENT

Like most of the human activities, tourism also has positive and negative impact on the society and environment as a whole. For the purpose of the research, it is important to assess and examine both the positive and negative impacts in a neutral way. The quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is complex. 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.

POSITIVE IMPACT OF TOURISM

a. Generating Income and Employment:

Tourism in India has emerged as an instrument of income and employment generation, poverty alleviation and sustainable human development. It contributes 6.23% to the National GDP and 8.78% of the total employment in India. Almost 20 million people are now working in the India's tourism industry.

b. Source of Foreign Exchange Earnings:

Tourism is an important source of foreign exchange earnings in India. This has favorable impact on the balance of payment of the country. The tourism industry in India generated about US\$100 billion in 2008 and that is expected to increase to US \$ 275.5 billion by 2018 at a 9.4% annual growth rate¹⁷⁹.

c. Preservation of National Heritage and Environment:

Tourism helps preserve several places which are of historical importance by declaring them as heritage sites. For instance, the Taj Mahal¹⁸⁰, the Qutab Minar¹⁸¹, Ajanta¹⁸² and Ellora¹⁸³ temples, etc, would have been decayed and destroyed had it not been for the efforts taken by Tourism Department to preserve them. Likewise, tourism also helps in conserving the

natural habitats of many endangered species.

d. Developing Infrastructure:

Tourism tends to encourage the development of multiple-use infrastructure that benefits the host community, including various means of transports, health care facilities, and sports centers, in addition to the hotels and high-end restaurants that cater to foreign visitors. The development of infrastructure has in turn induced the development of other directly productive activities.

e. Promoting Peace and Stability:

Honey and Gilpin (2009) suggests that the tourism industry can also help promote peace and stability in developing country like India by providing jobs, generating income, diversifying the economy, protecting the environment, and promoting cross-cultural awareness. However, key challenges like adoption of regulatory frameworks, mechanisms to reduce crime and corruption, etc, must be addressed if peace-enhancing benefits from this industry are to be realized.

f. Improved Environmental management and Planning:

Sound environmental management of tourism facilities and especially hotels can increase the benefits to natural environment. By planning early for tourism development, damaging and expensive mistakes can be prevented, avoiding the gradual deterioration of environmental assets significant to tourism. The development of tourism has moved the Indian Government towards this direction leading to improved environmental management.

g. Creating Environmental Awareness:

Tourism has the potential to increase public appreciation of the environment and to spread awareness of environmental problems when it brings people into closer contact with nature and the environment. This confrontation heightens awareness of the value of nature among the community and lead to environmentally conscious behavior and activities to preserve the environment.

NEGATIVE IMPACT ON ENVIRONMENT:

Tourism can cause the same forms of pollution as any other industry are emissions, noise, solid waste and littering, releasing of sewage, oil and

chemicals, even architecture/visual pollution.

a. Depletion of Local Resources:

Tourism can create pressure on local resources like energy, food, and transport of these resources exacerbates the 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. A high demand is placed upon these resources to meet the high expectations tourists often have proper heating, hot water, etc.

b. Land degradation:

Important land resources include minerals, fossil fuels, fertile soil, forests, wetland and wildlife. Increases construction of tourism and recreational facilities has increased the pressure on these resources and scenic landscapes. Direct impact on natural resources, both renewable and nonrenewable, in the provision of tourist facilities is caused by the use of land for accommodation and other infrastructure provision, and the use of building materials.

c. Water Pollution:

Water especially, 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 wastewater. In dryer regions like Rajasthan, the issue of water scarcity is particular concern. If a proper sewage disposal system has not been installed for hotels, resorts and other tourist facilities, there may be pollution of ground water from the sewage, or if a sewage outfall has been construed into a nearby river, lake or coastal seawater and the sewage has not been adequately treated, the effluent will pollute that water area.

This situation is common in beach resort areas where the hotels construct an outfall into the adjacent water area, which can also be used for swimming by tourists or for fishing by locals. Recreational and tourist transportation motor boats in surface water result in pollution in river, lakes and sea water due to spilling oil and gas and cleaning their bilge in water. This is usually common in enclosed harbor and places where natural water circulation is slow. Water

resources are a prime attraction for tourism and recreational developments, and thus suffer impacts. Water pollution is a result of waste water generated by tourist facilities and runoff, and 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 runoff from disturbed soil.

d. Air Pollution:

Tourism is generally considered a “smokeless industry”. However, it can also result in air pollution by tourist vehicles in a particular area, especially at major attraction sites, that are accessible only by road. This is due to improperly maintained exhaust systems of the vehicles. In addition, pollution in the form of dust and dirt in the air may be generated from open, if the tourism development is not properly planned, developed and landscaped or is in an interim State of construction. Transport by Air, road, and rail is continuously increasing in response to the rising to the rising number of tourists activities in India. Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourists’ transportation has impacts on the global level, especially from carbon dioxide (CO₂) emissions related to transportation energy use. In addition, it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities where the sites are in remote areas like Ajanta and Ellora temples. For example, tour buses often leave their motors running for hours while the tourists go out for an excursion because they want to return to a comfortably air-conditioned bus.

e. Noise Pollution:

Noise generated by a concentration of tourist’s road and certain types of tourist attractions such as amusement parks or car/motorcycle race tracks may reach uncomfortable and irritating levels for nearby residents and other tourists. Such loud noise can often result in ear damage and psychological stress. Noise pollution from airplanes, cars, and buses, as well as recreational vehicles is an ever-growing problem of modern life. In addition to causing annoyance, stress, and even hearing loss for humans, it causes distress to wildlife, especially in sensitive areas.

f. Visual Pollution:

It may result from several sources. These can

be due to poorly- designed hotels and other facility buildings, which are not compatible with local architectural style or not well integrated into the natural environment. Other reasons can be poor maintenance of buildings and landscaping obstruction of scenic views by development use of large and ugly advertising signs. Littering of landscape also results in visual pollution.

g. Aesthetic Pollution:

Often tourism fails to integrate its structures with the natural features and indigenous architectural of the destination. Large, dominating resorts of disparate design can look out of place in any natural environment and may clash with the indigenous structural design. A lack of land-use planning and building regulations in many destinations has facilitated sprawling developments along coastlines, valleys and scenic routes. The sprawl includes tourism facilities themselves and supporting infrastructure such as roads, employee housing, parking, service areas, and waste disposal.

h. Waste Disposal Problems:

The most common problem in tourism areas is the littering of debris on the landscape. This is due to large number of people using the area of picnicking. Improper disposal of solid waste from hotel restaurants, and resorts generate both litter and environmental health problems from vermin, disease and pollution. It can also lead to the degradation of tourist sites. In areas with high concentrations of tourist’s activities and appealing natural attractions, waste disposal is a serious problem and improper disposal can be a major despoiler of the natural environment-rivers, scenic areas, and roadsides. In mountain areas of the Himalayas and Darjeeling their garbage, oxygen cylinders and even camping equipment. Such practices degrade the environment particularly in remote areas because they have few garbage collection or disposal facilities.

i. Sewage:

Construction of hotels, recreation and other facilities often leads to increased 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 threaten the health of humans and animals. Examples of such pollution can be seen in the coastal States of Goa, Kerala, Maharashtra, TamilNadu, etc. Nearly all impact studies have been concerned with natural or semi-natural areas, with very little work focused on urban settings. Additionally, most research has been reactionary and centered on the negative impacts that tourism has on natural resources after the damage has taken place. Thus, it is difficult to document the process of environmental change resulting from tourism activity. Tourism is often blamed to an unreasonable degree for resource degradation. While tourism does at times result in negative environmental impacts, there are also environmental benefits associated with tourism, including fostering appreciation for the environment.

j. Destruction and Alteration of Ecosystem:

An ecosystem is a geographic area including the entire living organism (people, plants, animals, and microorganisms) their physical surroundings such as soil as soil, water, and air) and the natural cycles that sustain them. Attractivelandscape sites, such as sandy beaches in Goa, Maharashtra, Kerala, TamilNadu, lakes, riversides, and mountaintops and slopes, are often transitional Zones, characterized by species-rich ecosystems. The threats to and pressures on these ecosystems are often severe because such places are very attractive to both tourists and developers. Examples may be cited from Krushedei Island near Rameswaram. What was once called paradise for marine biologists has been abandoned due to massive destruction of coral and other marine life.

Another area of concern, which emerged at jaisalmer, is regarding the deterioration of the desert ecology due to increased tourist activities in the desert. Moreover, habitat can be degraded by tourism leisure activities. For example, wildlife viewing can bring about stress for the animals and alter their natural behavior when tourists come too close. Safaris and wildlife watching activities have a degrading effect on habituate as they often are accompanied by the noise and commotion created by tourists.

k. Adverse effects of excessive tourism on wetlands:

Excessive tourism affects wetlands in a variety of ways. Here are some of them. Reduced

Arrival of Migratory Birds - the phenomenon of migratory birds flying thousands of miles in winter to reach a far away lake and then to start their back journey after three months or so is mind boggling. However, one thing is certain that these birds go to the particular lakes because they find the environment friendly and peaceful and food supply abundant.

l. Solid waste and littering:

In areas with high concentrations of tourist activities and appealing natural attractions, waste disposal is a serious problem and improper disposal can be a major despoiler of the natural environment - rivers, scenic areas, and roadsides. For example, cruise ships in the Caribbean are estimated to produce more than 70,000 tons of waste each year. Today some cruise lines are actively working to reduce waste-related impacts. Solid waste and littering can degrade the physical appearance of the water and shoreline and cause the death of marine animals

IMPROVED ENVIRONMENTAL MANAGEMENT AND PLANNING

Sound environmental management of tourism facilities and especially hotels can increase benefits to natural areas. But this requires careful planning for controlled development, based on analysis of the environmental resources of the area. Planning helps to make choices between conflicting uses, or to find ways to make them compatible. By planning early for tourism development, damaging and expensive mistakes can be prevented, avoiding the gradual deterioration of environmental assets significant to tourism. Cleaner production techniques can be important tools for planning and operating tourism facilities in a way that minimizes their environmental impacts. For example, green building (using energy-efficient and non-polluting construction materials, sewage systems and energy sources) is an increasingly important way for the tourism industry to decrease its impact on the environment. And because waste treatment and disposal are often major, long-term environmental problems in the tourism industry, pollution prevention and waste minimization techniques are especially important for the tourism industry (UNEP, 1995, 1997, 1998; WTO, 1995).

Environmental Awareness Rising

Tourism has the potential to increase public appreciation of the environment and to spread

awareness of environmental problems when it brings people into closer contact with nature and the environment. This confrontation may heighten awareness of the value of nature and lead to environmentally conscious behavior and activities to preserve the environment. If it is to be sustainable in the long run, tourism must incorporate the principles and practices of sustainable consumption. Sustainable consumption includes building consumer demand for products that have been made using cleaner production techniques, and for services including tourism services that are provided in a way that minimizes environmental impacts. The tourism industry can play a key role in providing environmental information and raising awareness among tourists of the environmental consequences of their actions. Tourists and tourism-related businesses consume an enormous quantity of goods and services; moving them toward using those that are produced and provided in an environmentally sustainable way could have an enormous positive impact on the planet's environment (UNEP, 1992).

Protection and Preservation

Tourism can significantly contribute to environmental protection, conservation and restoration of biological diversity and sustainable use of natural resources. Because of their attractiveness, pristine sites and natural areas are identified as valuable and the need to keep the attraction alive can lead to creation of national parks and wildlife parks. In Hawaii, new laws and regulations have been enacted to preserve the Hawaiian rainforest and to protect native species. The coral reefs around the islands and the marine life that depend on them for survival are also protected. Hawaii now has become an international center for research on ecological systems and the promotion and preservation of the islands' tourism industry was the main motivation for these actions.

Tourism has had a positive effect on wildlife preservation and protection efforts, notably in Africa but also in South America, Asia, Australia, and the South Pacific. Numerous animal and plant species have already become extinct or may become extinct soon. Many countries have therefore established wildlife reserves and enacted strict laws protecting the animals that draw nature-loving tourists. As a result of these measures, several endangered species have begun to thrive again (IUCN, 1996; UNEP and WTO, 1992; WWF, 1992; www.unepie.org/tourism).

org/tourism).

Regulatory Measures

Regulatory measures help offset negative impacts; for instance, controls on the number of tourist activities and movement of visitors within protected areas can limit impacts on the ecosystem and help maintain the integrity and vitality of the site. Such limits can also reduce the negative impacts on resources. Limits should be established after an in-depth analysis of the maximum sustainable visitor capacity. This strategy is being used in the Galapagos Islands, where the number of ships allowed to cruise in this remote archipelago is limited, and only designated islands can be visited; ensuring visitors have little impact on the sensitive environment and animal habitats (UNEP, 1998; UNEP, 1997; www.unipie.org/tourism).

CONCLUSION

Tourism industry in India is growing and it has vast potential for generating employment and earning large amount of foreign exchange besides giving a fillip to the country's overall economic and social development. However, much more remains to be done. Eco-tourism needs to be promoted so that tourism in India helps in preserving and sustaining the diversity of the India's natural and cultural environments. Tourism in India should be developed in such a way that it accommodates and entertains visitors in a way that is minimally intrusive or destructive to the environment and sustains & supports the native cultures in the locations it is operating in. Moreover, since tourism is a multi-dimensional activity, and basically a service industry, it would be necessary that all wings of the Central and State governments, private sector and voluntary organizations become active partners in the Endeavour to attain sustainable growth in tourism if India is to become a world player in the tourism industry.

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