



“The Environmental Impacts of Tourism Industry: A Case Study of Jammu and Kashmir”

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ABSTRACT

Tourism industry is one of the largest and fastest growing sectors in the world economy. Tourism now has become most popular global leisure activity. Jammu and Kashmir also known as “Paradise on Earth” possess its rich cultural heritage, world famous pilgrimage destinations, rich flora and fauna, wild animal's sanctuaries, snow clad mountains, and scenic sports etc. which attract tourists from all over the world. Although, tourism plays a vital role in the upliftment of a region, by creating employment opportunities and improving infrastructural facilities but it can also have deteriorating impacts on the environment, if not properly managed. The present paper analyses the environmental impacts of tourism in Jammu and Kashmir. The present study is based on secondary data, been collected from various official sources. It is found from the study that 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. But at the same time, the increasing pressure of tourism has caused the problems of over constructions of hotels, deforestation, air pollution, solid waste, water pollution etc. Indiscriminate throwing of municipal solid waste into rivers is common practice in these tourist destinations, as result river water is continuously getting polluted. Therefore, tourism needs to be planned, administered and taken in an environmentally sustainable, socially favorable and economically feasible way to shun its destructive impacts.

Keywords:

Development, Economy, Environment, Impacts, Jammu & Kashmir, Tourism

I. Introduction

Tourism industry is one of the largest and fastest growing sectors in the world economy. Globally tourism is considered to be an important tool for the socio-economic development of the economy (Singh and Bahadur, 2018)¹. The tourism sector not only

increases economic growth directly, but also stimulates the growth of other sectors through backward and forward linkages and increases domestic incomes and effective demand (Gokovali & Bahar, 2006)². The Forward Linkages measures the relative importance of the tourism sector as supplier to the other

(non-tourism) industries in the economy whereas the Backward Linkage measures its relative importance in creating demand. Tourism opens up a new window for resources, both investments and generation, leading to employment generation as well as socio-economic development of the local populace at large. The tourists are attracted to the destinations not only because of the natural resource or natural beauty of the place, but because of the returns they get on the expenditure they do in the tourist place. These could be satisfaction of psychological needs like proper, safe, hassle free and affordable accommodation, good transport facilities, in and around the tourist place, good water, and hygiene and sanitation facilities. (Darzi 2016)³.

The latest trend in the tourism industry is called “ecotourism”, which refers to travel that combines preserving the natural world and sustaining the well-being of the human cultures that inhabit it (Gosling, 2000)⁴. In general, ecotourism differs from traditional tourism in two main respects: first, ecotourism openly promotes environmentally friendly travel and seeks to ensure that visitors do not disturb the natural environment of flora and fauna, nor do they leave behind rubbish and hazardous materials, which can disrupt the delicate ecosystem. A second aspect of ecotourism is that it seeks to promote “sustainable” tourism. Tourism that destroys the natural environment, or that leads to the disappearances of local human cultures and values is not compatible with ecotourism (Rath and Gupta, 2017)⁵. Therefore, tourism is a double-edged activity as on the side contributes positively to the socio-economic achievements, on the other side its fast, unmanaged and uncontrolled growth is proving to be the major cause of degradation of the environment. As this uncontrolled mass tourism puts enormous pressure on the area and leads to impacts such as increasing pollution (Air, Water, Land etc), soil erosion, discharge into the rivers and streams, loss of natural habitat, deforestation, pressure on endangered species, puts strain on water resources and also force the local population to

compete for using critical resources (Singh and Bahadur, 2018)⁶.

Amongst other Indian tourist states, In Jammu and Kashmir, tourism has been identified as an industry with potential of development next to agriculture and horticulture (Ahmad & Nengroo, 2011)⁷. The lush green forests, sweet springs, perennial rivers, picturesque alpine scenery and pleasant climate of Kashmir valley, also known as “the paradise on earth” has remained an internationally acclaimed tourist destination, whereas Jammu region-the land of temples is attracting a large number of pilgrims (Mir, 2014)⁸.

Jammu and Kashmir (J&K) also known as, “Paradise on Earth” because of its unmatched scenic beauty, attractive landscapes, is among the most important tourist destinations of the world. Jammu, also known as, “City Of Temples” is an important destination for pilgrimage tourism. Some of the famous pilgrimage sites located here are Vaishno Devi Temple, Raghunath Temple and Bahu Fort which attract tourists from across the world. Kashmir, known for its enormous natural beauty and landscape, pleasant weather and rich heritage has been one of the most preferred tourist destinations for over centuries now. Important sites here are Pahalgam, Gulmarg, Sonmarg, Dallake, Wularlake, Amaranth cave and Mughal gardens. Tourism holds a strategic place in J&K economy by providing economic benefits like Employment, Foreign Exchange, Infrastructure development and development of local industries like Handicrafts and Handlooms which has placed J&K always in the limelight at the national as well as international level (Mir, 2014)⁹.

II. Objectives of the Study

- To analyse the positive environmental impacts of tourism in Jammu and Kashmir
- To analyse the negative environmental impacts of tourism in Jammu and Kashmir

- To gives some major recommendations/suggestions for future development of tourism

III. Methodology

The present study is based on secondary data. The secondary data have been collected from various official sources like Directorate of Tourism (Jammu/Kashmir), Tourism Ministry of the Union Government (GoI), United Nations World Tourism Organization, World Travel and Tourism Council, Jammu and Kashmir Tourism Development Corporation and Economic Surveys. Moreover, books, journals, newspapers, and other online sources were also analysed to obtain desired data.

IV. Environmental Impacts of Tourism

Like most of the human activities, tourism also has positive and negative impact on the society and environment as a whole. Environmental impact of tourism can be discussed in two ways as:

- ❖ Positive environmental impact of tourism
- ❖ Negative environmental impact of tourism

(a) Positive Environmental Impacts of Tourism

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. Some broad areas of tourism related benefits to environment have been briefly discussed under the following sub-headings:

1. Generating Income and Employment:

Tourism in Jammu and Kashmir has emerged as an instrument of income and employment generation, poverty alleviation and sustainable human development. It contributes immensely to GSDP. ¹⁰Santek Consultants Private Limited, Delhi, in their report "20 years perspective plan for the sustainable development of tourism in the State of J & K" projected impact of tourist inflow on employment generation of J&K from

2002 to 2020 reported that with the implementation of tourism development plan the tourist inflow will go up to the mark of 227.08 Lakh with total employment of 34.062 Lakh (5.677 Lakh direct employment and 24.5575 Lakh in-direct employment) during the year 2020.

2. Contributions to Government Revenues:

The funds collected through User fees, income taxes, taxes on sales or rental of recreation equipment, and license fees for activities such as rafting and fishing helps immensely to the government to manage natural resources. The funds which are collected from various taxes can be used for the betterment of the environment by implementation of different conservation programs and other associated activities like for the maintenance of the park and paying salaries to park ranger. The revenue earned by various departments and organizations from tourism was ₹ 469.29 million in the year 2011-12 (Govt. of J&K, 2013)¹¹.

3. Infrastructure Development: 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 centres, in addition to the hotels and high-end restaurants that cater to foreign visitors. For example, the number of tourist huts and tourist Bungalows in Jammu and Kashmir has increased from 44 and 32 in 2006-07 to 190 and 41 in 2016-17. Similarly, the number of registered hotels and Restaurants has increased from 853 and 1407 in 2006-07 to 1485 and 301 in 2016-17 (Govt. of J&K, 2017)¹².

4. 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 encouraged the government in the state towards this direction leading to

improved and quality environmental management.

5. Protection and Preservation of Environment: Tourism can play a significant role in contributing for the protection of environment, conserving and restoring different biological diversity and sustainable use of natural resources. Due to presence of attractiveness, pristine sites and natural areas are identified as valuable and the need to keep the attraction alive can motivate in creation of national parks and wildlife parks. Likewise, tourism also helps in conserving the natural habitats of many endangered species like wolves, wild cows, owls, peacocks, quails, hangul etc.

6. Preservation of National Heritage: Tourism helps preserve several places which are of historical importance by declaring them as heritage sites. For instance, historical Jamia Masjid, Hazratbal Shrine, temple of Mata Vaishno Devi, temple of Amarnath Cave and other shrines would have been decayed and destroyed had it not been for the efforts taken by Tourism Department to preserve them.

7. 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

(b) Negative Environmental Impacts of Tourism

Most of the tourist attractions in Jammu and Kashmir are associated with the abundance of natural resources and that of cultural heritage. As such, potential of both desirable as well as undesirable effects to the environment become substantial. Unplanned tourism can be partially held responsible for landslides, flashflood, abandoned projects and so on. As such, tourism can be considered as a double-edged sword that on one hand contributes to the overall development of a place but at the same time inflicts damages to

the environment by putting pressure to its natural resources (Aslam et. al., 2018)¹³. Some broad areas of tourism related threats to environment have been briefly discussed under the following sub-headings:

1. Depletion of Natural Resources: Tourism development can put pressure on natural resources when it increases consumption in areas where resources are already scarce.

(a) Water Resources: Water, especially fresh water, is one of the most critical natural resources in Jammu and Kashmir. 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. Furthermore, untreated sewage from small scale industries and hotels has polluted various lakes, rivers, groundwater and other water resources. For instance, sewage from many hotels and residential homes on Dal banks are disposed into the lake harming its natural flora and fauna. Floating vegetable gardens are additionally significant polluters.

(b) Local Resources: Mass tourism results in increase in the population in J&K which has created pressure on the local resources e.g. land, food, water, energy, recreational amenities and other raw materials which are already scarce in supply. Because of the seasonal character of the industry, many destinations have ten times more inhabitants in the high season as in the low season. A high demand is placed upon these resources to meet the high expectations tourists often have (proper heating, hot water, etc.). As tourism industry is growing rapidly in Jammu and Kashmir, the availability of job and other life supporting activities attracts high number of population gathering in these tourist destinations which causes deterioration of air and water quality and undesirable land use changes.

(c) Land degradation: Rapid increase in construction of tourism and recreational facilities in J&K has increased pressure on the important land resources e.g. forests, wetland and wildlife, fertile soil, minerals resources,

scenic landscapes etc. Development in terms of facilities such as accommodations, hotels and restaurants, and other recreational activities involve mining of sand, soil (for making bricks etc) and other crucial mineral resources and also leads to soil erosion and extensive paving. In addition, construction of roads, airport, railways, golf course, etc can lead to degradation of land, loss of wild life and wetland and deterioration of scenic beauty. Increase in the number of hotels has degraded land surrounding these tourist destinations. Another serious issue related to tourism development is the sprawling developments at these tourist destinations e.g. construction of tourism supporting infrastructure and facilities, due to the lack of land-use planning and building regulations which also give rise to acute land degradation problems. Moreover, the plastic wrappers and bags used by the travelers ameliorate the polluted state of land resources. For example, According to Kashmir University's Centre of Research and Development report for Sonmarg's master plan, 57.57 hectares of land has already been brought under the built - up area when the total area proposed to be under built - up by 2025 is 60.04 hectares. "It means that 96 % of the built - up area has already been covered, although the accommodation related infrastructure is lagging far behind".

2. Pollution: Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage, oil and chemicals, even architectural/visual pollution

(a) Air and Noise Pollution: The air quality of Jammu and Kashmir is worst in the autumn months when people start burning leaves to prepare for winter. From the tourism point of view, transportation system is the major source of air pollution in Jammu and Kashmir. Rapidly increasing tourist arrivals to Kashmir have increased the air and road transport over the recent past. This rise in motorable transport has facilitated the emission of carbon dioxide (CO₂), sulphur dioxide (SO₂) and greenhouse gases. The recently installed Continuous Ambient Air Quality Monitoring

Stations (CAAQMS) at various locations in Srinagar city by State Pollution Control Board (SPCB) have only confirmed that the rise of pollution in the city is alarmingly high. Similarly, the noise pollution is caused due to means of transportation or when any kind of work or construction is going on than too it leads to noise pollution. Furthermore, the pilgrims that visit the Amarnath cave in July and August every year has contributed to growing pollution problems.

(b) Water Pollution: Wastewater generated through tourism activities has polluted already various water bodies surrounding tourist attractions, damaged heavily the flora and fauna. 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. These waste pollution can threaten the health of humans as well as animals. In mountain areas of the Himalayas and Darjeeling, trekking tourists generate a great deal of waste. Tourists on expedition leave behind their garbage, oxygen cylinders and even camping equipment or disposal facilities. For example, Dal Lake bears the brunt of human activities for a major part of the year with around 600 houseboats permanently anchored for tourists and many smaller boats used as ferries and mobile shops. So you have both home toilets and the toilets of 600 houseboats".

3. Deforestation: Forests often suffer negative impacts of tourism in the form of deforestation caused by fuel wood collection and land clearing. The quick development of tourism is one of the fundamental culprit for uncontrolled decimations of woods, in light of the fact that the developing interest of tourism has prompted expanding requirement for building material i.e. development of lodgings, eateries, lodges, houseboats and for other rural exercises. The report from the Forest Department in 2010 puts the estimate of land encroachment in Kashmir valley at 4877 hectares. According to the forest policy of India around 33% and 60% of the aggregate region

of plain and Himalayan areas respectively should be under forest cover, however sadly there is just under 22% of forest cover on national scale and just 20% in Jammu and Kashmir. The Siwaliks Kandi which was once full of forest trees, has now become a vast desert. Similarly, the traditional important Dachigam's pasture lands are under high grazing and consequently suffer from soil erosion. Similarly, deodars and blue pine forests of Jammu and Kashmir have also been very much degraded (Gupta, 2016)¹⁴.

4. Destruction and Alteration of Ecosystem:

An ecosystem is a geographic area including all the living organisms (people, plants, animals, and micro-organisms), their physical surroundings (such as soil, water, and air), and the natural cycles that sustain them. Attractive landscape sites, such as lakes, riversides, and mountain tops and slopes, are often transitional zones, characterized by species-rich ecosystems. Because of tourism leisure activities more and more habitat has been degraded. For example, wildlife viewing can bring about stress for the animals and alter their natural behaviour when tourists come too close. Safaris and wildlife watching activities have a degrading effect on habitat as they often are accompanied by the noise and commotion created by tourists. The list of threatened species of animals and birds is increasing day by day. For example, a lot of wild animals like tigers, wolves, wild cows, owls, peacocks, quails etc. which have totally now vanished. Furthermore, studies carried out by Fred Curt on Hangul for several years in the Dachigam also voiced the same concern that the presence of nomads with their herd of livestock has disastrous effect on this traditionally important grazing habitat of hangul.

5. Sewage: A primary cause of decimation of water resources and its natural flora and fauna is the drastic increase in sewage production from hotels etc. However, tourism alone cannot be held responsible for sewage production. Development of tourism industry attracts people for the availability of job and other business related opportunities resulting

temporary and permanent settlement of huge population which is also a main reason for rapid urbanization of these areas. Consequently a number of environmental problems including sewage production are generated due to urbanization. Lidder River among other fresh water sources are a major victim of untreated sewage in Kashmir. For example, experts say one of the main reasons for the deterioration of the lake's condition is the dumping of huge amounts of untreated waste. "At least 44.2 million litres of sewage goes into the Dal Lake every day". Around 5 million litres of waste is generated from the inhabitants of the lake, while only 0.8 percent sewage is generated from houseboats. According to a report by the Jammu and Kashmir State Pollution Control Board, Srinagar generated 201 million litres of sewage daily but the capacity to treat only 53.8 million litres (Kuloo, 2019)¹⁵.

6. Change in Climate: Tourism, being a climate responsive sector, is directly affected by any unpleasant changes in the weather of region, like climate-change inflicted storms, floods, loss of snowfall, excessive rains etc. It is been estimated that only movement of people from one destination to other amounts to 50% of the total traffic (road, rail and air), hence contributing substantially to the emission of greenhouse gases and other major pollutants. In the last two decades, the rise in average temperature in Kashmir valley as reported by IMD (Indian Meteorological Department, Ministry of Earth Sciences, Govt. of India), was 1.45° C as compared to 2.32° C in Jammu region. Another facet of climate change is irregular patterns of rainfall. Therefore, droughts and flood like situations have now become more prominent. The great floods of September 2014 can be attributed to drastic climate change over the recent past. Climate change is badly hurting the snowfall balance of Kashmir valley. A large number of tourists are attracted to Kashmir because of adventure sports associated with snow. The recent rise in temperatures, no snow in winter season, torrential rains are a clear symptom of climate

change making its presence in the valley (Aslam, et. al., 2018)¹⁶.

V. Suggestions and Recommendations:

By the above discussion it is proved that the unmanaged and unrestrained growth of tourism is detrimental for the environment in Jammu and Kashmir. Tourism needs to be planned, administered and taken in an environmentally sustainable, socially favorable and economically feasible way to shun its destructive impacts.

1. To avoid worsening of the flimsy ecology, the Ministry of Planning and Human Resources should account for the rules, regulations and policies related to the environmental management of these areas.
2. To reduce the ecological impact on flora, fauna and vulnerable habitats, the ecology and environment of lakes, rivers and other water bodies should be managed resourcefully.
3. The adoption of eco-friendly practices should be made compulsory to the tourism industry, encouraging the protection and promotion of environment for a longer period in future.
4. Special services and investment layouts must be aided by government to promote environmental conservation.
5. There is a need to educate the tourists to know the impact of their activities on the environment and measures to reduce them.
6. The concept of "Reduce, Reuse and Recycle" should be made popular. The installation of dustbins and „Recycle Bins" is required at every corner of tourist destinations.
7. Further, conferences, seminars, road shows etc. should be organized that help to solve problems related waste management and disposal. There should be easy availability of data regarding the wastes and management to the researchers, users of the waste and governmental organizations.
8. Environment friendly measures like complete prohibition on the use of plastic and introduction of pollution free battery-operated vehicles can help in the ecological protection.
9. Deforestation must be avoided, rehabilitating cut down woods on war footing.

Native trees, shrubs and other plants must be conserved. All the developmental activities including construction of roads, buildings, tourism and recreational facilities etc. must be monitored by the authorities for the minimization of harmful effects on the state forest resources.

10. Emission of greenhouse gases like carbon dioxide (CO₂), CFCs, etc. from the tourism and housing activities need to be monitored in order to control the rising climate changes and air pollution.

VI. Conclusion

The study concludes that, there is vast potentiality of tourism industry in Jammu and Kashmir because it is one of the fastest growing industry when it is compared with other industries which are generating employment and earning large amount of foreign exchange besides giving a fillip to the country's overall economic and social development. Tourism is a goose that not only lays a golden egg (economic benefits), but also has the potential to foul its own nest (environmental degradation). Whereas, proper management and planning can reduce the negative impacts, unplanned and mis-managed tourism can induce damages that are sometimes beyond the resilience power of nature and hence the damages inflicted are termed as irreparable. As such, tourism can be considered as a double-edged sword that on one hand contributes to the overall development of a place but at the same time inflicts damages to the environment by putting pressure to its natural resources. Therefore, more emphasis should be given on the concept Eco-tourism. Ecotourism needed to be implemented in different tourist destinations in Jammu and Kashmir and if it would happen then it would help immensely in conserving, preserving and sustaining natural and cultural environments. Tourism need to 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.

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