Environmental Impact of Pilgrimage Tourism on Jammu and Kashmir: A Study of Shri Amarnath Yatra

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ABSTRACT

Pilgrimage tourism is a pivotal element and part of the tourism industry of Jammu and Kashmir. Every year over 10 million pilgrims come to Jammu and Kashmir to visit Shri Mata Vaishno Devi Sheri in Katra in Jammu Division and Shri Amarnath Yatra in Kashmir Division. The higher number of pilgrims visiting the cave creates the threat to environmental and ecological balance of the environmentally and ecologically sensitive glaciers and other natural resources preserved in the area, which are very much necessary for local populace surviving on these natural resources. This research paper aims to explore the various negative effects of the higher number of pilgrims visiting the Amarnath Cave yearly on the environment and ecology of the area. The paper is review based and uses secondary data for the purpose of analysis.

Key words: Pilgrimage, Tourism, Environment, Ecology, Amarnath Cave, Kashmir etc.

I. INTRODUCTION

Tourism is undoubtedly a life line of economy of Jammu and Kashmir. Jammu and Kashmir is globally known for its gorgeous and mind-blowing scenic natural beauty, which attracts millions of visitors annually from all across the world. Jammu and Kashmir is popularly known as the Switzerland of Asia, and has immense opportunities and products to offer to its visitors. Tourism plays a pivotal and essential role in a country's social, cultural and economic development. In India Tourism is playing a lead role in promotion of cultural, social, socio-religious activities along with economic development by generating foreign exchange through foreign tourist inflow. The tourism industry is the second largest industry in terms of foreign exchange earnings in India.

The World Tourism Organization (WTO) states that tourism is “The activity of people who travel to places outside their customary surrounding and stay there, for leisure, business or other purpose, for no longer than one year without interruption”.

Tourism is the most vibrant tertiary activity and a multi-billion dollar industry in Jammu and Kashmir. Tourism is the right vehicle for a developing the state’s economy. The value added effect of tourism is increasing. The role of tourism is essential in the economic development of the state. Tourism industry employee’s a large number of people, both skilled and unskilled. Hotels travel agencies, transport benefit a lot from this industry.

Jammu and Kashmir presents the distinction of multifaceted variegated and unique cultural blend. The mountainous state is blessed with lofty snow clad peaks, deep gorges, glaciers, lush green meadows and verdant valleys full of Chinar trees, beautiful silky lakes charming flora and fauna, making it a "Paradise on Earth". It is an excellent base for leisure and adventurous holidays amidst breath taking scenery.

Jammu and Kashmir has a very rich history and a distinct culture where people of all faiths live in perfect harmony. It houses some of the most sacred temples, mosques, monasteries and caves. Kashmiri handicrafts are well known all over the world. The ancient tradition of crafting a paper machine, wood carving, carpet and shawl making etc. generates substantial amount of foreign exchange.¹

II. OBJECTIVES

This research paper aims to achieve the following set objectives.

1. To study and understand the tourism and pilgrimage tourism industry of Jammu and Kashmir.
2. To study and understand the impact and consequences of Shri Amarnath Yatra (pilgrimage) on ecology and environment of Jammu and Kashmir.
3. To provide necessary suggestions and recommendations in order to overcome such consequences.

III. RESEARCH METHODOLOGY:

The research work is purely based on the use of secondary data. The data will be collected by reviewing the various research articles, books, and magazines, national and international journals. Most of data is used in this work is collected from the review of past published and unpublished work done by the eminent research scholars on the area said research field.

IV. PILGRIMAGE TOURISM IN JAMMU AND KASHMIR

Religious tourism also referred as Pilgrimage Tourism and faith tourism, is a type of tourism where people travel individuality or in groups for worship, pilgrimage, missionary, or leisure (fellowship) purposes. The world’s largest mass religious tourism gathering takes place at the annual Hajj Pilgrimage in Mecca Mukarma, Saudi Arabia. During hajj pilgrimage time more than 30 million Hajjis’ (pilgrims) gather in this holy city of Mecca to perform fundamental and basic element of Islam. Another major pilgrimages gathering is seen during the Kumbh Mela a religious festival celebrated once in every twelve years in Ujjain (MP), Allahabad (UP), Varanasi (UP) and Nasik (Maharashtra) in India where more than forty million pilgrims gather for the holy bath, that such event was organized in Ujjain were as per reports around million pilgrims took the holy bath. The most famous holy cities throughout the world where biggest pilgrimage gatherings took place every year include: Mecca Mukarama, Armenia- Ejmiatsin, Karbala, Jerusalem and Varanasi. The most prominent holy sites are the Qaba at Mecca Mukarama, Rauza of Hazrat Imam Hussain at Karbala, Church of the Nativity, the western Wall and the Brahma Temple at Pushkar. Religious tourism comprises of many facets of the tourism industry including:

1. Pilgrimage
2. Missionary travel
3. Leisure (fellowship) vocation
4. Crusades, conventions and rallies
5. Retreats
6. Monastery visits and gust-stays
7. Faith based camps

A pilgrimage is a journey or search of moral or spiritual significance. Typically, it is a journey to a shrine or other location of importance to a person’s beliefs and faith, and is a feature common to almost all societies. The key elements of pilgrimage are motivation, destination and journey. In a traditional religious pilgrimage, the pilgrim, (A person who performs the pilgrimage) is driven by a strong religious or spiritual motivation accomplishes on foot, a long journey that is reinforced by a sense of renunciation of worldly matters.

Jammu and Kashmir is a wondrous creation of God, located between the Karakoram and Pirpanjal mountains of the great Himalayas. J&K’s main three regions have very distinctive qualities in religious aspect. Jammu is a cultural mosaic and represents diversities of varied kinds. These diversities based on religious, linguistic, cultural, and tribal and caste categories are so placed that one can see a pattern of multi-layered and overlapping identities. Kashmir Valley has always been a preferred tourist destination for both domestic and international tourists. It holds an attraction, uniqueness in terms of its natural beauty, Rich Culture, Ancient Temples and Shriners, Ethnic Arts and crafts, Traditional Cuisine and warm and friendly people. Between the mountains of the Great Himalaya and the formidable Karakoram lies the high altitude kingdom of Ladakh. Ladakh lies at altitudes ranging from 2,750m to 6,670m, covering an area of 90,000sq.km. The area’s landscape, unique cultural heritage, and monasteries have been major attractions since Ladakh opened to tourists in 1974.

To reach God, the easiest way is to take a pilgrimage tour to Jammu and Kashmir, abode of Gods and you will experience the devotional power that is the prerequisite to achieve the spiritual Nirvana and you will felt that the entire

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state is holy While Jammu is known as the ‘City of Temples’ and Kashmir has innumerable Shrines and Mosques, Ladakh is recognized as ‘Land of Lamas’ and for its Gompa’s and monasteries the whole state has a deep link with the religion. The state has been influenced by the best traditions of Hinduism, Islam and Buddhism, and their syncretism can be seen by many Temples, Mosques and Buddhist Gompa’s dotting the landscape. These holy sites are situated amidst the picturesque surroundings of the mighty Himalayas, valleys and lovely spots overlooking the rivers. It has some very rich pilgrimage destinations which include visits to a number of ancient Hindu temples, Muslim shrines and Buddhist monasteries

**Shri Amarnath Cave (Annual Yatra):**

Amarnath cave is the most famous and holiest Hindu Cave Temple dedicated to Lord Shiva visited by lakhs of pilgrims annually during the month of July-August (months of sharavan). Situated in a narrow gorge at the farther end of the Lidder Valley Pahalgam in South Kashmir. Amarnath Cave is situated at altitude of 3888 m from sea and 363 kms from Jammu Railway Station via Pahalgam and 414 Kms via Baltal. According to Hindu mythology, this is the cave where Lord Shiva told about the secret of life and eternity to his divine consort Parvati, and hence this Cave Shrine holds a very special value to the Hindus.  

Every year lakhs of pilgrims from various parts of country come to the cave for holy Yatra. Up to late 1980’s the number of pilgrims was limited as also the days of Yatra, the number of Yatra days were just 15 days and number hardly crosses 50000. But after the induction of the Shri Amarnath Shrine Board to take the management of Amarnath Cave and Yatra they made immense efforts to attract the pilgrims at large numbers towers the Yatra, and also made it possible to convince the Govt to increase the number of days from 15 days to 2 months. The following figures collected from the official website of Shri Amarnath Shrine Board (www.shriamarnathjishrine.com) depicts how in recent years the number of pilgrims have increased from 373419 in 2009 to 621000 in 2012 and declined possibly due to the civil uprising and disturbance 220490 in 2016.

<table>
<thead>
<tr>
<th>Year</th>
<th>No of Pilgrims</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>498075</td>
</tr>
<tr>
<td>2009</td>
<td>373419</td>
</tr>
<tr>
<td>2010</td>
<td>588046</td>
</tr>
<tr>
<td>2011</td>
<td>634000</td>
</tr>
<tr>
<td>2012</td>
<td>621000</td>
</tr>
<tr>
<td>2013</td>
<td>353969</td>
</tr>
<tr>
<td>2014</td>
<td>372909</td>
</tr>
<tr>
<td>2015</td>
<td>352771</td>
</tr>
<tr>
<td>2016</td>
<td>220490</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3441418</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>491631</strong></td>
</tr>
</tbody>
</table>

Source: Shri Amarnath Shrine Board, www.shriamarnathjishrine.com

The above figures purely describe how the number of pilgrims are increasing our the years to a pilgrimage site which is environmentally and ecologically highly sensitive. The cave is situated in a areas which is bestowed by the nature with immense resources especially water resources, some the environmentally important glaciers like Kolahi is also situated in the same area and global agencies associated with natural resources preservation and conservation have also

**V. ENVIRONMENTAL IMPACT OF PILGRIMAGE TOURISM ON JAMMU AND KASHMIR**

An ecosystem is a geographic area including all the living organisms (people, plants, animals, and microorganisms), their physical surroundings (such as soil, water, and air), and the natural cycles that sustain them. The ecosystems most threatened with degradation are ecologically fragile areas such as alpine regions, rain forests, wetlands, mangroves, coral reefs and sea grass beds. The threats to and pressures on these ecosystems are often severe because such places are very attractive to both tourists and developers.

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2. Shri Amarnath Shrine Board, www.shriamarnathjishrine.com
The relationship between Tourism and 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. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends. The power of faith is undeniable. It is the faith in Lord Shiva that drives thousands of pilgrims to the holy cave of Amaranth in Kashmir. However, the environs of Pahalgam, Sonamarg and Baltal are under risk as the number of yatris are increasing each a direct influence on the flora-and-fauna of an area. With Amarnath pilgrimage set to commence from June 29, the state has declared its preparedness to host the pilgrims from across the country. But environmental experts are not of Kashmir is also ready to host over 7 lakh pilgrims expected this year. Pollution along the Amarnath trek has always been a concern for environmentalists. A recent report published by the State Pollution control Board SPCSB says the indiscriminate rush of pilgrims is playing havoc with the Himalayan environment. “Amarnath Yatra has an important place in Hindu religion. The gathering of devotees in large number in a very short span exerts pressure on environmental resources in the area” says Irshad Ahmad Khan Chairman SPCB, in the foreword of the 37-page report-cum study. However, the unregulated and badly managed affair is putting valley’s fragile environment at risk. The impact of Amarnath Cave Yatra on environment of Pahalgam and the route to Shri Amarnath Cave in Jammu and Kashmir include:

Depletion of Water Resources:
One of the largest glaciers of Kashmir Himalayas, Kolhai, has been melting at a concerning rate, a study by geology and geophysics department of University of Kashmir and Government of India sponsored research project has revealed 18 per cent shrinkage in the glacier in past three decades. The glaciated area of Kolhai, study reveals, has undergone drastic changes in recent past. The glacier area has shrunk from 13.87 sq km in 1976 to 11.24 sq km in 2006. In 1999, it was spread over an area of 12.98 sq km and shrunk to 1179 sq. km in 2001, it reveals. The glacier has developed several crevasses and cracks over the years. while asking about the impact of Yatra on Kolhai glacier Dr. Shakil A Romshoo of Department of Geology and Geophysics who is heading the study said “In past 30 years we have lost 18 per cent of the glacier and it is still melting.” The main reasons for glacier’s melting, according to Romshoo, are climate change due to pollution and drop in the precipitation. But the impact of human interference cannot be ignored, he says. “See we need to determine the carrying capacity of our environment. Then we need to see how much human rush can be accommodated,” he says. “Go to Pahalgam on a Sunday and you will not find an inch of a space free anywhere. It is putting excessive burden on our environment. The river Jhelum, he says, has 24 sub-basins and 18 of them are showing decline in water. “That is why we are facing water scarcity in summers,” he says. “There has to be action at the national level. But things like regulation of tourism can be done locally.” The three year study that Ramshoo is heading is going to submit a list of recommendations to the Union Ministry of Environment. “It will include the need for regulation of tourism, Yatra included,”. Says Romshoo. “If we -see in summer months, the load in Lidder Valley is beyond its capacity. And irrespective of who the visitors are, the rush needs to be regulated because it is having adverse effects on the environment,” explains Romshoo. “it is due to overall change in the climate caused by various factors. We are seeing increase in minimum and maximum temperature almost every season now. The precipitation in the winters has come down drastically. There was almost no snow in the last winter,” he says. Climate change is likely to affect a number of sectors, particularly irrigated agriculture, horticulture, and hydropower capacity in the stake. Changes in flow magnitudes are likely to raise tensions between India and Pakistan, in particular with regard to reduced water flows in the dry season and higher flows during the wet season, posing increased risk to hydropower development and higher frequency of floods in both parts of the Kashmir.

Earlier a study on Kolhai Glacier conducted by remote sensing by the National Geophysical Research Institute, Hyderabad, revealed that the glacier’s spatial extent has changed from 19.34 sq Km in 1992 to 17.23 sq Km in 2001, a net decrease of 2.11 sq km in 10 years. The rate of retreat in 2007 was 21.88 meters in the main snout. Another glaciologist, Prof Syed Iqbal Hasnain, who has conducted on-the-spot assessment of the Kolhai said,” The glacier has developed several crevasses and cracks over the years. Human interference including the Amarnath pilgrimage -is -one -of the reasons -for the glacier’s recession. Gujjars who are putting up in the glacier’s core area are contributors for its meltdown.”

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. The total assessment may be summarized as:

1. Primitive and lacking in specific standards or guidelines which are required to be made for designing and setting of collection centers. Transportation of garbage is carried out by using old outdated trucks, tippers and refuse collector. Inadequately of transportation, fleet and frequent breakdown of vehicles are the major hardships in proper collection of garbage.
2. The present method being adopted for disposal of solid wastes at Pahalgam is a serious health concern, particularly during rainy season and high humidity conditions. The landfill sites, which are not well maintained, are prone to ground water contamination due to leach ate percolation. Open dumping of garbage serves as breeding ground for
disease vectors such as Dogs, files, mosquitoes, cockroaches, rats and other pests. High risks of spreading diseases like typhoid, Cholera, Dysentery, Yellow fever, Encephalitis, Plague and dengue fever can out be ruled out.
3. As per the Municipal Solid Waste Management and handling Rules, garbage disposal sites shall be away from habitation clusters, forest areas and water bodies.
4. It has been observed that there is no proper arrangement being made for clean and separate toilets for Ladies and Gents. It is observed that pits are dug and plastic sheet partitions are made but the front side remains open as shown in below picture. Moreover, neither the pits are cleaned nor anything is sprayed or put on to avoid the foul smell. Also the Government has never made any provision of Bathrooms.
5. Pilgrims and visitors to Pahalgam generate tons of waste per day, higher than per capita in area. Sanitary waste generated by domestic, commercial activities is often indiscriminately disposed. Unscientific management of such waste leads to serious environmental and health problems.
6. The study says that the PDA plan proposal suffers from huge lacunas. Even as the plan proposes road improvement, upgradation, renovation and development, there is no mention about getting the environmental clearance from state government.
7. Waste from slaughter houses, meat and fish markets, fruits and vegetable markets which are bio-degradable in nature are not managed separately instead are dumped at the landfill site.
8. Pollution prevention: No provision for pollution prevention exists at any of the dumping sites in Kashmir divisions except that soil covering and fumigation is being done at Achan landfill site.

**Water Pollution:**
1. It is observed that most of the hotels along the River Lidder are major contributors of pollution to the said River. The waste water generated from hotels gets directly discharged into the River Lidder stretch. The sewage as well as night soil generated from hotels, Yatra camps, local residential areas is directly discharged into open drains which ultimately finds into the River Lidder in Pahalgam.
2. Physic-chemical characteristics of water quality of River Lidder indicate some parameters exceeding the prescribed permissible standards of IS, resulting in the significant degradation of water quality of said River. This has created epidemic threat in the villages dependent on these Nallas for portable water.
3. The present method being adopted for disposal of solid wastes at Pahalgam is a serious health concern, particularly during rainy season and high humidity conditions. The landfill sites, which are not well maintained, are prone to ground water contamination due to leach ate percolation.
4. At the Nunwan base camp, the yatris are provided with make shift latrines that ultimately discharge into the Lidder River- the main source of drinking water for most of south Kashmir.
5. While the use of polythene is banned in Kashmir, the yatris can be seen carrying them around casually. Once used polythene bags also become wastes and are either left on roads or disposed in Lidder River causing more contamination and pollution.
6. The continuous pollution of the water body is likely to cause water born disease to the inhabitants of hundreds of villages who consume water from the river and has equally posed a threat to the aquatic life in the roaring river.
7. The Chloride concentration touched 44mgL-1 during the peak tourist season which is attributed to increasing bathing, washing and domestic sewage during the period. Nitrate-Nitrogen increased significantly downstream during summer which is related to the generation of nitrogenous wastes by tourists mainly due to bathing, washing and defecation along the river banks and domestic sewage.

**Air And Noise Pollution:**
1. Vehicles are the major source of air pollution during the Yatra releasing smoky emissions. As the area is covered by mountains therefore the dispersion levels of pollutants is low and smell of some gases are prominent on account of vehicular emission.
2. Problems of air pollution worsened due to poor road conditions and high traffic density on the road adjoining Pahalgam. Huge clouds of dust can be seen while travelling to Pahalgam that adds to the pollutants. Not only this heavy vehicular movement also brings noise as the area is mostly forests it becomes a disturbance for the wildlife and use of loud horn fills the gap.
3. It has been found that although no industry exists in Pahalgam with severe air emissions, the inflow of heavy vehicles and all types of two- wheelers, four-wheelers, trucks, buses, carriage vehicles, passenger vehicles particularly for Yatris, and Army/security force movement, during Yatra period, building material carriage, carriage of tents, etc. is disturbing the eco-balance of the place.
4. Ambient air quality monitoring: No provision for ambient air quality monitoring but soils covering is done daily to minimize odour generation.
5. 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 the global level, especially from carbon dioxide (C02) emissions related to transportation energy use. And it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities.
6. Noise pollution from it causes distress to wildlife, especially in sensitive areas. For instance, noise generated by excess traffic can cause animals to alter their natural activity patterns.
CONCLUSION AND SUGGESTION

The work “Environmental consequences of pilgrimage tourism on Jammu and Kashmir: a Study of Shri Amarnath Yatra” concludes with that the increased flow of pilgrims and tourists have largely impacted the ecological and environmental status of the Pahalgam Town in multiple ways. The water quality of the main river flowing through the main town of Pahalgam is shown changes in physico-chemical characteristics due to waste of hotels, langers, bathing and wasting activities of pilgrims and other tourists which is creating unhygienic conditions in the town, and a large population which is dependent for drinking water of the River. Ambient air quality has also been found to be affected because of the increase in the number of vehicles which are globally found to a major cause of air pollution. A strategy for better Environment Management is the need of the hour. On one hand local authorities are incapable of handling the additional burdens of the floating population due to lack of resources and authorities to act. On the other hand most religious institutions which benefit directly from offering made by pilgrims, as well as local business are not contributing to improving the Environment. It is paramount of these institutions to have the moral responsibility of propagating religious faith while incorporating Environmental concerns.

The study further provides some valuable suggestions and recommendations for protection, prevention and conservation of ecological and environmental balance of this environmentally sensitive area:

1. Number of Yatri’s need to be restricted keeping in view the carrying capacity of area. The increasing number of Yatris will put the environmental status of the areas in danger as it is becoming a major cause of various types of pollutions and depletion of precious glaciers which are the main source of water reservoirs in the Kashmir valley in general and Pahalgam in particular.

2. Polythene bags and their use had been universally accepted as environmental hazardous products. Therefore, carrying or use of polythene in and around Pahalgam or enroute Holy Cave should be strictly prohibited. Government, along with other agencies should make it sure that there is a complete restriction on sale, use or carry of polythene in the area.

3. Disposal of Municipal solid waste in the forest areas and nearby water bodies shall be prohibited as per Municipal Solid Waste Management and handling rules 2000. Proper place should be identified and allotted for dumping of waste by which lush green forest area and water bodies should be protected from hazardous complications of such wastes.

4. The Municipal Authority shall undertake phased programmes to ensure community participation in waste segregation and shall promote recycling and reuse of segregated material. For this purpose the Municipal Authorities shall arrange regular meetings at quarterly intervals with representatives of local residents, welfare associations and non-Government organizations.

5. Today’s raw material is tomorrows waste. Therefore the principle of four (4) R’s reduce, reuse, recycle and retain (composting) should be followed. Current waste disposal philosophy is to treat all waste into resource material, some for the recycling, some for conservation to composting, and some as a source of energy and the balance for land reclamation.

6. Sewerage treatment plants are required to be constructed at Pahalgam. Although work has been taken up for the same last year but, it needs to be completed as soon as possible to avoid further contamination of Lidder River.

7. Strict laws to be enforced for prohibiting tourists/Yatris to use the River Lidder bank of Pahalgam for toilet purposes.

8. It is desired that standard emission Norms as set the concerned authorities must be strictly enforced and Vehicles playing within Pahalgam must be properly maintained and regulated and only after complete satisfaction and proper approval of the concerned authorities the vehicles should be allowed to run on Pahalgam roads.

9. The main road from Anantnag to Pahalgam should be properly Maintained and traffic congestions may be avoided through suitable Measures to control Noise and dust pollution.

10. Encouraging the involvement of local NGO’s in working on various environmental awareness programmes, particularly about educating the public about the strategies for Sustainable environmental Management.

11. Keeping the fragile ecosystems in consideration, Vehicles should not be allowed to play on Pahalgam Chandanwari road. Rather it should be replaced with ponies.

12. Langer sites should be identified on permanent basis away from the forest and water bodies.

13. Responsibilities should be fixed to Langer arranging agencies for Clearance of the waste generating around the Langer site.

REFERENCES


[8.] Chapter 12, IGNOU Study Material, MTTM- MTTM10.

[9.] Chapter 13, IGNOU Study Material, MTTM- MTTM10.


[12.] www.airticket.oniweb.com/200907/religious-tourism/

[13.] www.jktourism.org

[14.] www.greaterkashmir.com

[15.] www.anantnag.gov.in

[16.] www.risingkashmir.com