A Study on Geography of Pilgrimage Tourism and Environment: A Case Study of Kashmir Valley

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ABSTRACT

Pilgrimage, a journey resulting from religious causes, externally to a holy site, and internally for spiritual purposes and internal understanding is one of the religious and cultural phenomena most common to human society throughout the world. Pilgrimage have powerful political, economic, social and cultural implications, and can affect world trade and health. It is an important subject due to its scope and spatial influence. It stimulates geographer’s interest with distance traveled and the phenomenon’s affect on behaviour. Kashmir is one of the most preferred destination of tourists worldwide. However, considering the description of the Kashmir valley, significant impacts are produced by the slightest negative aspects attached with tourism industry. Present development at the cost of future is not acceptable. The study area is Kashmir valley, a beautiful mountainous area, is one of the most preferred destination of national and international tourists. The aim of our study is to focus on biophysical carrying capacity which deals with the extent to which the natural environment is able to tolerate external interference. The paper concludes that Kashmir valley has a tremendous potential to absorb tourists, but at the same time the results propose that for increasing human welfare we have to set environment at priority and limit tourism to the carrying capacity of the region; promote sustainable tourism in Kashmir valley.

Keywords-- Pilgrimage; Tourism; Carrying Capacity; Environment; Sustainable, Tourism; Statistics

I. INTRODUCTION

Geography is a science that connects natural and human phenomena. Pilgrimage, one of the religious phenomena most common to human society, is important feature of the world’s major religions: Christianity, Buddhism, Islam, Hinduism and Judaism. It is defined as, A journey resulting from religious causes, externally to a holy site, and internally for spiritual purposes and internal understanding (Barber, 1993: 1). Today, pilgrimage is considered a traditional religious or modern secular journey. The literature on pilgrimage and religious tourism is still fragmented and lacks synthesis and holistic conceptualization (Timothy and Olsen, 2006). Pilgrimage creates population mobilities such as trade, cultural exchanges, political integration, and the less desirable spread of illnesses and epidemics (Barber, 1993). Pilgrimages have powerful political, economic, social, and cultural implications, and can even affect global trade and health. Pilgrimage stimulates geographers’ interest with distances travelled and the phenomenon’s affect on behavior. Pilgrimage is an important subject due to its scope and spatial influence. It is also a primary economic activity for some countries and cities (Barber, 1993; Vukoni’c, 1996, 2002). Geographers are beginning to recognize the powerful and contingent roles of religion and spirituality on a range of geographical scales, from the corporeal to the institutional and the geopolitical (Holloway & Valins, 2002). Each year, lakhs Hindu pilgrims visit Kashmir valley and go Amarnath and other religious places. It is important that tourism planners must first of all understand the phenomena with which they are dealing, as well as the participants’ characteristics and desires. In many parts of the world the pilgrimage shapes the nature of economic activity and the design of the public space.

Kashmir is like a bowl so tourism and environment is directly related. Kashmir is a muslim majority area so people of Kashmir are concerned towards environment than economic development as guided by
The tourism industry in Kashmir valley relies on natural resources but the same industry has the potential to impact its natural resources in adverse manner. Tourism and the supporting infrastructure that it requires pose threat to the environment particularly forests, water resources and wild life. The aim of this study is to find trade-off solution that guarantees a flourishing tourism industry. Since polluted regions distract tourists, the tourism planner has to take care of the environment at the time of planning. The attempt is made in this paper to address the issue of environmental quality affected by tourism influx. The focus is on tradeoff between environment and tourism though one being economic and other being social good. This will help us analyze and establish the necessary condition where attaining economic good will not hamper the social good, thus minimize the loss.

II. METHODOLOGY

To examine the trend and predict the tourists inflow regression modeling was used. To identify the best model for a particular time series, generally model
selection criteria $R^2$ (the ratio of the regression sum of squares to the total sum of squares), Draper and Smith (1982) is used. It is generally considered that the more the value of $R^2$, the better is the fit. Other measures like AIC, BIC etc are also used to check the model fitting.

\[
\text{MAE} = \frac{\sum_{i=1}^{n} |y_i - \hat{y}_i|}{n}, \quad \text{RMSE} = \sqrt{\frac{\sum_{i=1}^{n} (y_i - \hat{y}_i)^2}{n}}, \quad \text{MAPE} = \frac{\sum_{i=1}^{n} |y_i - \hat{y}_i|}{n} \times 100\%,
\]

Where $y_i$ and $\hat{y}_i$ are the actual observed values and the predicted values respectively while $n$ is the number of predicted values.

III. REGRESSION ANALYSIS

This is the technique of developing a statistical model, used to predict the value of the dependent variable $Y = a + bx$. Where, $Y$ is the dependent variable, $a$ is the intercept, $b$ is the slope $Trend Analysis$ A linear trend can be obtained by using the least squares method. The line has the equation $y = a + bx$, where $x = 1, 2, 3 \ldots$, $b =$ slope of the line, and $a =$ value of $y$ when $x = 0$. The coefficients of the equation, $a$ and $b$, can be determined with usual notations

\[
a = \bar{y} - b_{yx} \bar{x} \quad \text{and} \quad b_{yx} = \frac{\text{Cov}(x, y)}{\text{Var}(y)}
\]

The mean absolute error (MAE), the root mean square error (RMSE) and the mean absolute percentage error (MAPE) which are given respectively by the following equations,

IV. RESULTS AND DISCUSSION

Kashmir valley is one of the most preferred tourist destinations, both for national and international visitors, which is evident from the constant inflow of tourists.

Tourism is an asset, an endowment of the nature on the state. Unless we are not able to spawn the requisite infrastructure and other facilities of international standards for the tourists, in consideration with the environmental norms, the real benefits will not flow to our people. Service and business classes constitute the largest group of visitors to the valley with sightseeing and pilgrimage as the major purposes. The principal mode of haulage is road transport. “Contented Tourist” itself is the best tourism promotional method as it is noticeable from our field survey that many tourists visit valley on the recommendations of their friends and relatives. In chorus, the disappointed tourists prove injurious to the interests of tourism industry. The analysis shows that the tourists are attracted mainly by the natural beauty of Kashmir; so under such circumstances the concerned are suggested to take care of the pristine environment, which is the basic stuff of the industry. It is encouraging that tourists visiting Kashmir encourages plays a significant role in encouraging others to visit. The Picture 1 and Picture 2 shows the attitude of authorities towards environmental protection.
Environmental Effect of Pilgrim Tourism/Tourist Destinations in Kashmir Valley: Pahalgam A Growing Concern

Pahalgam is situated at an altitude of 2,133 meters amidst lofty deodars, fir and pine trees, junipers and many other conifers. Pahalgam gets lively during the tourist months of the summer, as well as during the weeks before the Amaranth Yatra. The town is at the junction of the Aru and Sheshnag rivers surrounded by, fir-covered mountains with bare, snowcapped peaks rising behind them. The Aru flows down from the Kolahi glacier beyond Lidderwat while the Sheshnag from glaciers of the great Himalayas. According to the mountaineers from Jawahar Institute of Mountaineering (JIM) in 2008, the glacier has receded by half since 1985. The glacier is not safe to study because it...
The sounds of cracking ice can be heard from either side of the glacier, which indicates an imminent collapse. Tourism in Kashmir is of different forms. Pilgrimage tourism, in particular, is of most significant forms, which is advantageous as well as disadvantageous for the society of Kashmir. The data presented in Figure 1 shows number of Yatris visiting Kashmir valley.

The Figure 1, shows that the inflow of devotees visiting the holy shrine have been unremittingly increasing at an alarming rate over the period of time. No doubt there are various fluctuations in the devotees’ influx but on the whole there has been a steady increase in pilgrims visiting the Holy cave. The number of pilgrims starts declining after 1989-90 due to turmoil in the valley, but after slight improvement in valley the arrival of pilgrims again picked up due to the joint efforts of agencies involved. The Government and people of Kashmir valley take an initiative to provide various types of facilities and amenities to the Pilgrims for their safety and security. On the whole it is ostensible from the data provided by the authorities that there has been a terrific growth in the inflow of Pilgrims visiting the valley. Forecasting Yatris arrival is important as it would enable tourist related industries like airlines, hotels, food and catering services, etc., to plan and prepare their activities in an optimal way. From the data it is observed that Yatris arrivals has generally increased over the years and obviously it is not a stationary time series. On the basis of fitting various models as reported in Table 2 using statistical software SPSS version 20, taking number of Yatris visiting as dependent variable and year as independent variable, we forecast by applying a suitable model on the basis of the highest value of Rsquare.

The forecasting is of course based on the assumption that events, like government policy, promotion campaigns, natural or man made events, etc., do not change drastically. The forecasts are given in the Table 2. It is prominent from Table 2 that the arrival will go on mounting as growth will reach to 1484.6. The terrific increase in the limited capacity of the destination is an alarming bell for the valley as a whole. The apex institution of India has recently raised two more points on Amarnath Yatra in the Kashmir valley. One, the most important from study point of view is, how this large number of people – seven times more than the handling capacity to be specific – had been permitted to visit the cave. It is important that, it should be the effort of the State administration to make the movement of such pilgrims safe for the environment; the environment that should be prevailing in the future to attract the tourists in large. It is obvious that during Amarnath Yatra there is a heavy load on environment due to the increased number of visitors pilgrimages accompanied by a good number of beggars and security personal.
Table 2: Year wise projection of pilgrim tourists into Kashmir valley from 2009-2025

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Year</th>
<th>Yatris (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2009</td>
<td>373</td>
</tr>
<tr>
<td>2</td>
<td>2010</td>
<td>458</td>
</tr>
<tr>
<td>3</td>
<td>2011</td>
<td>542</td>
</tr>
<tr>
<td>4</td>
<td>2012</td>
<td>600</td>
</tr>
<tr>
<td>5</td>
<td>2013</td>
<td>606.1</td>
</tr>
<tr>
<td>6</td>
<td>2014</td>
<td>643.4</td>
</tr>
<tr>
<td>7</td>
<td>2015</td>
<td>680.7</td>
</tr>
<tr>
<td>8</td>
<td>2016</td>
<td>718</td>
</tr>
<tr>
<td>9</td>
<td>2017</td>
<td>755.3</td>
</tr>
<tr>
<td>10</td>
<td>2020</td>
<td>1056.2</td>
</tr>
<tr>
<td>11</td>
<td>2025</td>
<td>1484.6</td>
</tr>
</tbody>
</table>

V. CONCLUSION

The J&K State Pollution Control Board was created vide order no.34 of 1987 Dt.03.08.1987. (vide SRO 88) under the provision of the Water (Prevention & Control of Pollution) Act, 1974. The Board has been performing its duties assigned to it under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and under the Air (Prevention & Control of Pollution) Act, 1981. Additional responsibilities were assigned to the Board for enactment of Environment (Protection) Act, 1986 (EPA). We have many rules related to environmental protection in J&K on papers. The EPA had a large domain of regulatory and developmental function in the area of Environment Management which is an umbrella Act and various Rules made under this Act from time to time covering the various facets of Pollution. The present study have expressed concern over the number of people participating in the Amarnath Yatra which is having a negative impact on the area’s ecology and to a some extent expressed support for government regulated limits on the number of pilgrims permitted to make the trek. The heavy rush of yatris creates a condition of excessive pollution. The sustained increase in tourist influx to Pahalgam cheers the concerned departments up, but there is something that will soon give a bad taste.

A study by the directorate of ecology and environment has expressed serious concern over the surging scale of pollution and excessive use of polyethylene carry bags that have choked the streams in this region. In the earlier times these forests were so dense and that wild animals/birds would be seen roaming in the lanes of old towns especially in the winter season.

Picture 4: Polyethylene, plastic bottles and other material lying around streams
According to the Department of environmental Science, University of Kashmir, State pollution Control Board (SPCB) the physio–chemical properties of water quality of River Lidder indicate some parameters exceeding the prescribed permissible standards of IS resulting in significant degradation of water quality. This has created the epidemic threat in the villages dependent on these nullahs for portable water. Our study maintains that although no industry with severe air emissions exists in pahalgam but the inflow of heavy vehicles and all types of two wheelers, four wheeler, trucks, buses, carriage vehicles, passenger vehicles, yatris load carriers, armed force convoys, building material carriages, carriages transporting tents etc. is disturbing the eco balance of the place. In view of the environmental concerns, the Government of Uttranchal has restricted the number of pilgrims visiting Gomukh and other Gangotri glaciers, the origin of the holy river Ganga to only 150 per day, while in Kashmir per day 20,000 the Amarnath yatris are allowed for Darshan near Kolhi Glacier which is a colossal source of drinking water for residents in south Kashmir. According to the surveys done by various environment and ecological departments, the Kolahai glacier has shrunk by 18 percent during the last three decades. Pumping of millions of Pilgrims to Amarnath will vandalize the fragile environment of Kashmir as the number of Pilgrims is much more than the assimilative or carrying capacity of the place. The ecosystem is a delicate phenomenon that cannot be thrown open to wanton exploitation or abuse. Preserving biodiversity in an area of increasing biodiversity erosions is not an option today; it is rather a necessity for a sustainable tourism development agenda. Given the huge environment issue related to it, the Amarnath Yatra should never be looked through the political prism but must be acknowledged as an economic activity which producing output that adds to environment pollution. The present method being adopted for disposal of solid wastes at Pahalgam is of 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 leachate percolation. Open dumping of garbage serves as breeding ground for disease. Strategies for better Environment Management are only beginning to see the light of the day. On one hand local authorities are incapable of handling the additional burdens of the floating population due to the lack of resources and on the other hand most Religious institutions which benefit directly from offerings made by Pilgrims, as well as local business are not contributing to improve the environment.
We have no right to destroy our nature in the name of any religion. PM Modi talks about Clean Indian Drive (Swatch Bharat Mission) but no funds are provided to J&K Government for making AmarnathYatra clean and swatch. Hardly we see the Shrine Board inviting tenders from registered firms doing work on Solid Waste Management in a scientific and approved way. It is seen that contractors who are allotted the sanitation work hardly know the basic techniques like segregation and composting of solid waste which is very much essential. Let SASB invite suggestions for making Amarnath yatra eco friendly from next year. We can jointly find out some scientific mechanism which can control this messy situation in future. Tourism is the lifeline of Jammu & Kashmir and all possible efforts need to be undertaken for retaining, maintaining and sustaining it. According to one estimate, 30 percent of the J&K states population is directly or indirectly connected with the tourism industry so it is important that Kashmir issue may be solved peacefully as it is because of this lingering issue millions of people are facing immense hardships and a state of uncertainty and instability. Tourism has a great potential in Kashmir and if tapped in a right direction Kashmir will be a new Switzerland. The forecasting will help government to plan the future strategies to meet the environmental as well as other challenges. Tourism Policy needs to be developed for the state to be able to attract more tourists both domestic as well as foreign. To conclude, the environmentally conscious friends and religious people can help government in planning for the future strategies to meet the environmental as well as other challenges.

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REFERENCES