Research Article

Impact of tourism on Environment: A case study of Katra.

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Keywords

Tourism,
Environment,
Air Pollution,
Eco Development,
SO_2 and NO_2,
Sustainability.

Abstract

Tourism is one of the largest and fastest growing industries of the world. Tourism is also the most important leisure activity of the world. Jammu and Kashmir which is also called as paradise on earth posses rich cultural heritage, world famous pilgrimage destinations, rich flora and fauna, wild animal sanctuaries, snow clad mountains and scenic sports etc which attracts tourists from all over the world. The development of tourism industry may promote economic growth both directly and indirectly by stimulating growth of other sectors and secondly by increasing domestic income and effective demand. But on the other hand it costs huge in the form of environmental destruction. This paper is an attempt to study negative impact of tourism with special reference to Katra the famous pilgrimage town because presence of world famous Shri Mata Vaisho Devi Shrine in Reasi district of J&K by taking into consideration the increased flow of pilgrim tourists in the town and its impact on environment especially on ambient air quality by discussing the air pollutants mainly So_2 and No_2. The present study focused on the prosperity that tourism brought to the state economy and unplanned tourism development which brought negative feedback to the environment. This paper will offer some valuable suggestions to reduce the negative environmental impacts due to unplanned tourism development and management also helps the planners to incorporate the findings of the paper in the town plan formation in future for sustainable tourism.

Introduction

Tourism which accounted 7% of states, GDP in 2014 according to Govt figures, has great potential to stimulate the local economy by providing significant economic multiplier effects and for generating employment both direct and indirect even for the people lacking specialized skills e.g. Tourist Guides, Travel Agents, Ponywalas, Jobs in hotels and houseboat etc so tour is inflow is a major source of development but (there is other side) also the major cause of environmental destruction, if the level of visitor exceeds the ability of environment to cope with, it causes a serious threat to the environment in the sense "tourism a Goss that not only lays a golden egg but also forms its own nest" (Hawkin 1982, p3). As the uncontrolled mass tourism puts

enormous pressure on the area and leads to impacts such as increasing pollution (Air, water, noise, land etc), soil erosion, discharge into rivers and streams, loss of natural habitats, deforestation, pressure on endangered species, puts strain on water resources and also force the local populations to compete for using critical resources. The Pilgrimage tourism to Katra town constitutes an important component of total tourism in J&K and has contributed significantly to the growth and development of the Katra town. Nevertheless this increasing no of tourists is directly or indirectly influencing the environment of town. With regard to increasing no of tourist thereby the impact on environment particularly the ambient air quality of the town gets deteriorated by contributing SO_2 and NO_2 in the atmosphere with every year.

Objectives

1. To analyze the impact of tourism on environment.
2. To make assessment of negative side of tourism when it is unplanned.
3. To show the need of sustainability of tourism.

Methodology

The Methodology for the study is based on the secondary data source in the form of both govt and non-govt published data in order to develop conceptual frame work. The micro level analyses have been made by using the data published on air pollution to katra town. Further the data has been analyzed by applying appropriate statistical and cartographic tools.

Review of literature

Batra and Kaur (1996) in their study highlighted the increasing conflicts between tourism and the environment and observed that increasing no of tourists arrivals at a destination leads to overcrowding which further leads to supply of polluted water and causes damage to surroundings. Vegetation of a place suffers from constant trampling and crushing by feet. Fumes emitted from the exhausts pipes of automobiles also cause wanton destructions to the fragile environment of the place.

Batta (2000) in his study has analyzed that owing to the needs of developing nations to generate incomes, such the needs are inclined to tourism related environmental destructions. The challenge therefore is to accomplish the harmony between rapidly growing demands of tourism and environmental conservations. (p.77)

Korstange and George (2012) in their study highlighted that tourism is one of the major contributors to global warming. The researchers revealed that tourism industry draws heavily on nature and on natural resources. So it does have a responsibility to ensure that these resources are preserved by means of sustainable consumption initiatives. Their study also focused on the need to adopt necessary effective measures in order to deter global warning.

Tourist arrivals

Katra town situated (latitude $32^059^/$N, longitude $74^055^/$E and average altitude 2840 feet above see level) is the most significant town both religiously as well as economically located at the foot hills of the Trikuta mountains in the Reasi District of J&K. It is about 48km away from Jammu city the winter capital of the state and has thriving tourism industry that offers plenty of hotels, guests' houses, restaurants, Dhabas, fast food points etc. The town witnesses every day the thousands of pilgrims. The no of pilgrims visiting the shrine has risen from 1.5 million1986 to10 million in 2012 that has added no of hotels, shops restaurants etc to the buzzing market of Katra thereby by contributing to the state economy but the town also experiencing the increase in the number of vehicular traffic as large number of vehicles, tourist traffic, are entering the town everyday which affects environments badly.

Growth of pilgrim to Shri Mata Vaishno Devi – Katra :

Year	No. of Tourists	Growth rate
1980	12.13	0
1985	14.86	22.50
1990	21.69	45.96
1995	40.12	84.97
2000	51.92	29.41
2005	62.52	20.42
2010	87.49	28.54
2015	77.76	-11.12
2017	81.78	4.91
2018	85.86	10.76
2019	79.5	-6.36
2020	17.77	-77.64
2021	55.88	68.19
2022	91.25	46.43

Source:

1. Digest of Statistics 2020-21 Directorate of Economic and Statistics, Govt. of Jammu and Kashmir.
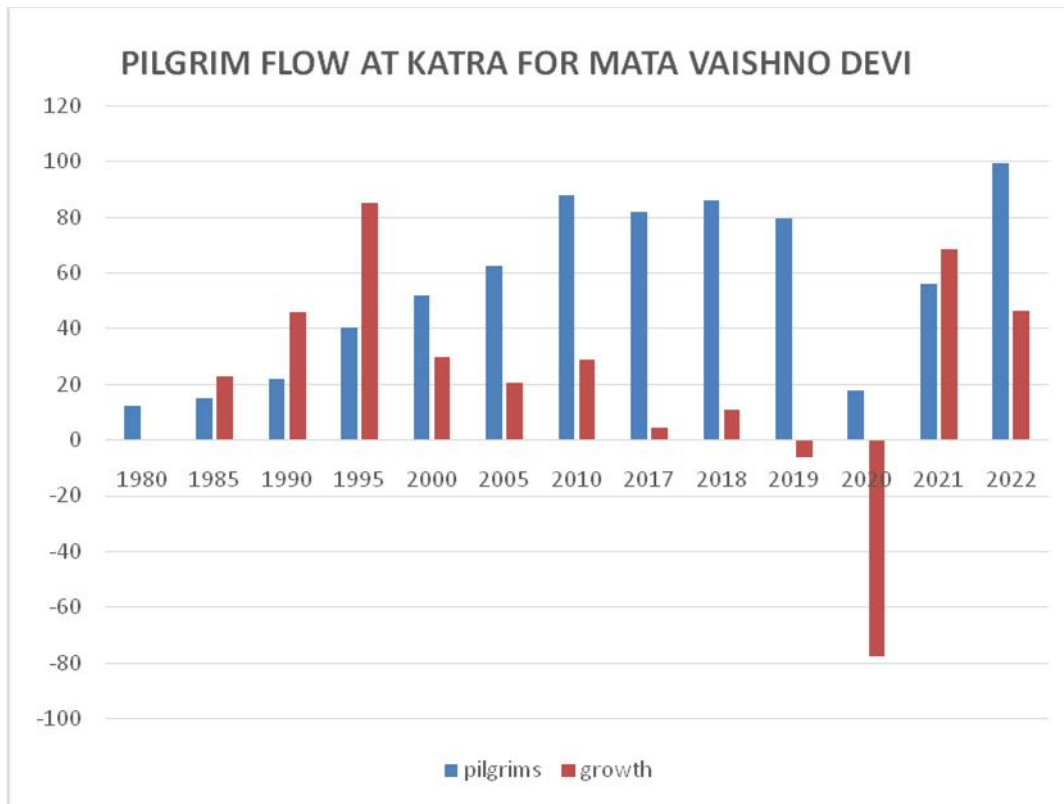

Source:

1. Digest of Statistics 2020-21 Directorate of Economic and Statistics, Govt. of Jammu and Kashmir.
2. JKTDC, Office Jammu.

Monthly SO_2 and NO_2 (µgm/^{3}) contents in the ambient air of Katra town from July 2017 to June 2018 (1st year) and July 2018 to June 2019 (2nd year)

Sites	Pollutant	Avg.		Min.		Max.		S.D.	
		1st Year	2nd Year	1st Year	2nd Year	1st Year	2nd Year	1st Year	2nd Year
A. Residential Areas									
I. Paharganj	SO_2	3.42	3.53	2.17	2.10	5.21	4.54	.901	.74
	NO_2	9.781	9.789	4.83	5.36	15.51	12.63	3.12	2.80
2. Gopal Nagar	SO_2	2.79	2.99	1.13	1.11	5.57	5.61	1.33	1.29
	NO_2	7.19	8.56	3.06	6.01	10.64	11.89	2.36	1.92
3. Keshav Nagar	SO_2	3.35	3.53	1.82	1.76	5.81	5.70	1.29	1.33
	NO_2	9.56	9.89	5.34	6.48	12.78	12.23	2.79	1.87
B. Commercial Areas									
4. Main Bazaar	SO_2	5.56	5.58	3.10	3.97	11.11	6.94	2.22	.98
	NO_2	15.98	16.69	10.0	9.03	22.45	25.0	4.29	5.62
5.Chintamani	SO_2	14.97	15.03	9.09	9.78	23.80	20.63	4.54	3.04
	NO_2	4.00	4.01	2.01	2.04	6.87	6.39	1.59	1.33
6. Hospital Road	SO_2	4.00	4.01	2.01	2.04	6.87	6.39	1.59	1.33
	NO_2	11.125	11.127	9.13	7.69	13.17	6.99	1.41	2.77
C. Traffic Crosssing									
7. Bus Stand	SO_2	5.44	6.06	3.89	4.00	8.79	14.07	1.56	3.12
	NO_2	21.44	24.14	14.34	14.70	27.49	59.11	3.65	11.81
8. Railway Road	SO_2	4.1x	4.08	2.23	1.50	6.01	5.83	1.07	1.21
	NO_2	19.84	19.84	19.49	11.70	12.94	38.61	24.47	9.40
9. Serli	SO_2	4.78	4.77	2.21	2.33	8.04	8.46	1.88	1.84
	NO_2	14.69	12.91	4.97	5.0	24.12	20.02	5.64	4.47

AVERAGE POLLUTANT CONTENTS IN RESIDENTIAL AREA
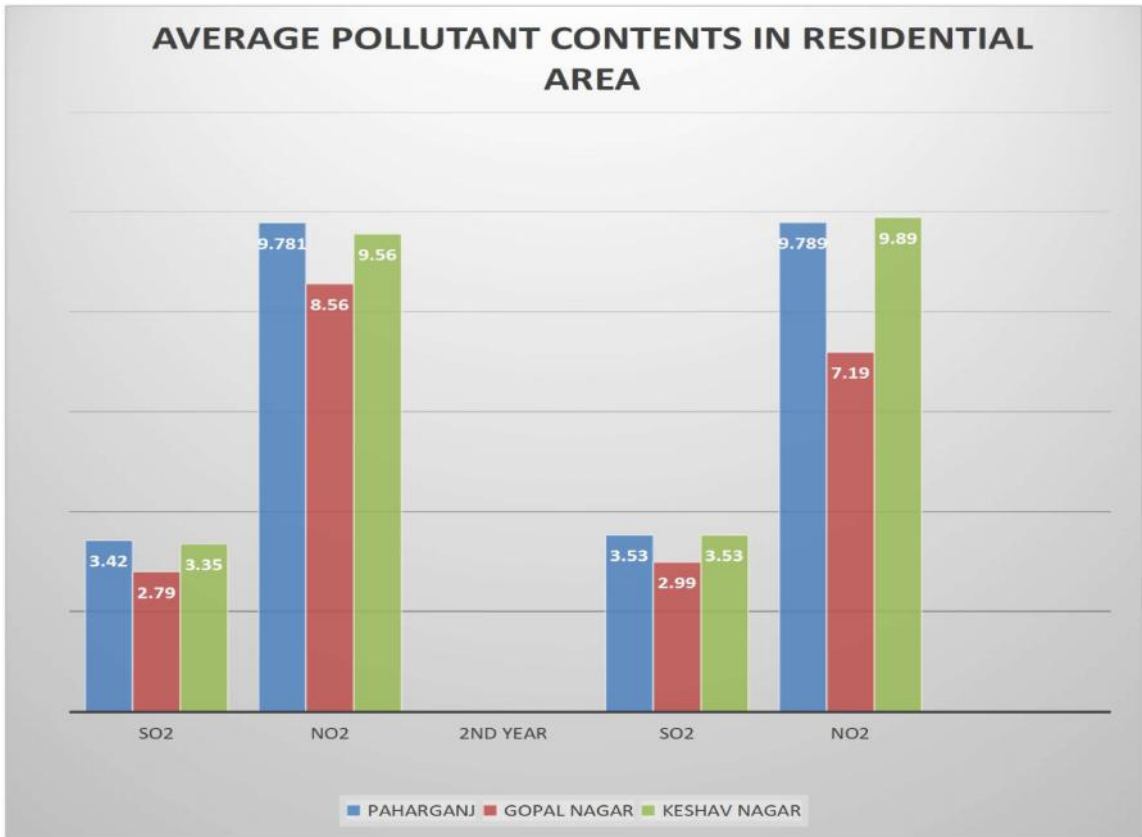
Average pollutant contents in commercial area
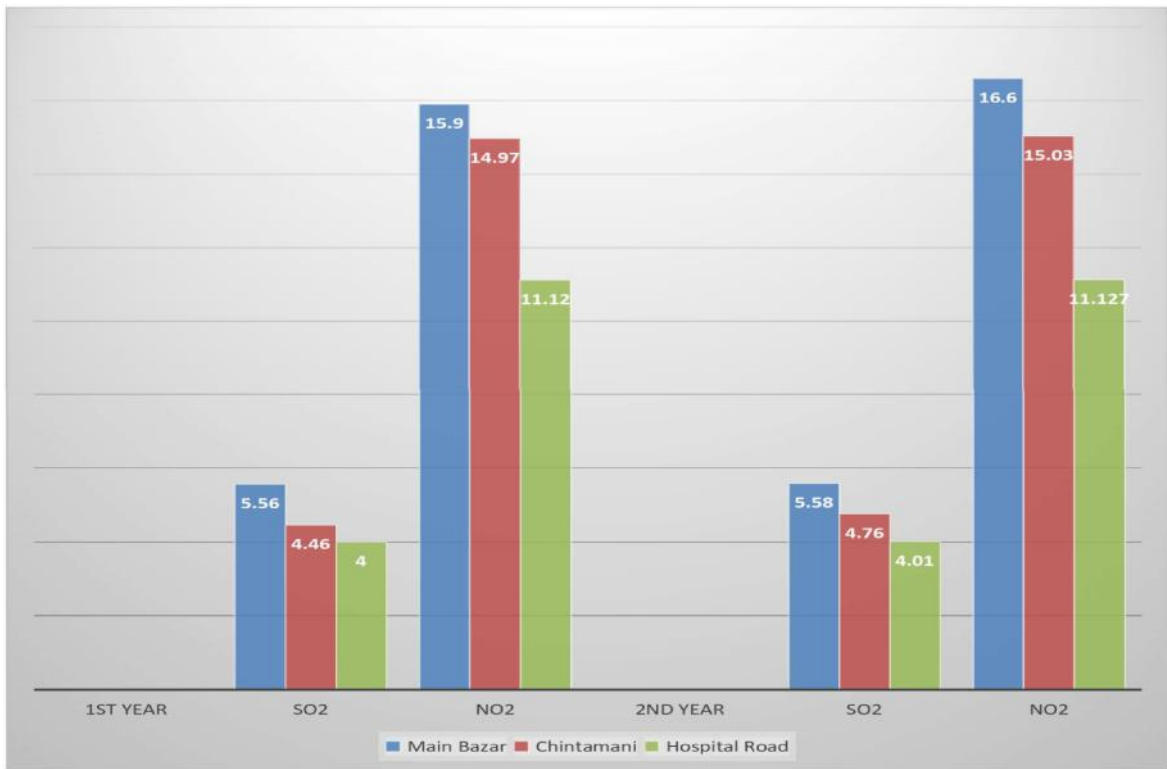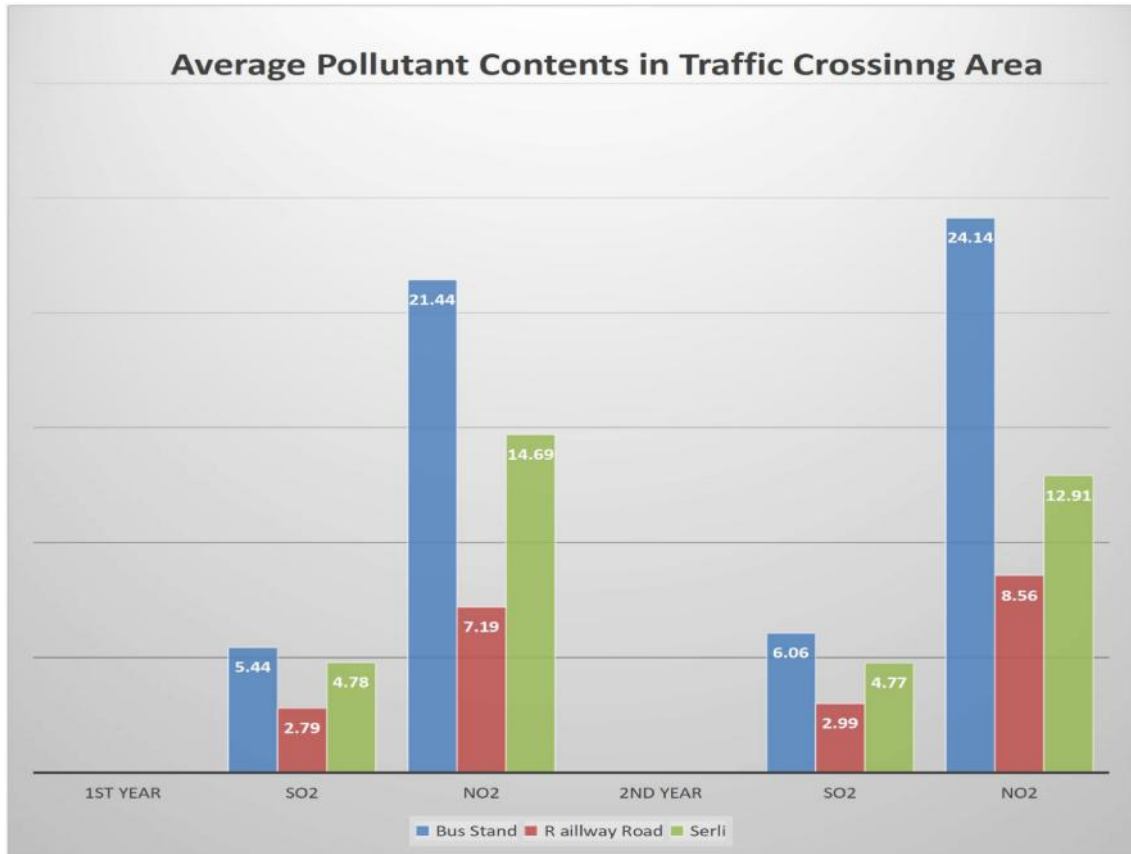
From the above table and bar diagrams it become clear that during the periods of high tourism inflow the concentration of air pollutants has increased where as with periods of low tourist arrivals in the town has observed low pollution concentration. Similarly in the areas of commercial hub areas the pollution concentration has is much more than the areas of residential areas. As the area of study comprises of three types of areas such as residential areas, commercial areas traffic areas to know the impact of tourist arrivals in different areas. The data shows the concentrations of pollutants is high in areas where concentration of tourists is more sequence is commercial areas, traffic areas and the residential areas .If we put a glance on the data collected from various area we come across that so far as concentration of SO_2 is concerned it is highest average in commercial areas in first year in main bazaar is of that of 5.56 ugm/3 where as NO_2 average in first year is15.98ugm/3 in Paharganj area of commercial area where as chintamani area its average in first year has 14.97

ugm/3 of SO_2 and 4ugm/3 of NO_2 and at hospital bazaar SO_2 4ugm/3 and11.2ugm/3 NO_2. So in commercial bazaar also there is a variation of concentration of pollutants depending upon the concentration of population in the areas. Where there is high concentration of the population the concentration of pollutants is also high.

Similarly in other areas also such as in residential areas comparatively as compared to the commercial and traffic areas the pollution is high but within the the residential areas also there is diversity of pollution concentration because of population concentration. The data shows in paharganj area the SO_2 concentration is high that is of 3.42ugm/3 among all areas of the residential area because of high population concentration where as at Gopal Nagar area which is of 2.79ugm/3 whereas the lowest is in Gopal Nagar area with pollution concentration of 2.79ugm/3 of SO_2 and 7.19umg/3 of NO_2 which is lowest in residential area among all localities.

But with respect to traffic crossing areas such as bus stand, railway road and serli there is variation in the level of pollution as well .the highest level of pollution has been found in bus stand area with SO_2 and NO_2 5.44umg/3 and 21.22 umg/3 respectively and least in seril area having SO_2 24.78 umg/3 and NO_2 14.69 umg/3. But railway road having 4.10 umg/3 SO_2 and 19.84 NO_2 umg/3 Which in between the two diff levels of two different areas. In 2nd year average SO_2 in main bazaar area of commercial area the figure is 5.58 and mini level of SO_2 in the 2nd year is 3.97 umg/3 while that of NO_2 is 16.69 and 9.03 respectively. But the figure for highest level for SO_2 and NO_2 in the 2nd year is 2.22 and 4.29 respectively which is highest in all the areas of commercial areas as well as even in across the diff areas which are taken as sample data.

Conclusion

The size of tourism industry requires the rational management of resources. The existing unplanned development may soon be transformed completely into a chain of co instructions of unplanned infrastructure. It is necessary that some alternative development strategies be brought to the forefront. These are strategies which most not only more respect for the environment but also facilitate some mutual understanding between locals and the visitors. A separate and district planning efforts required aiming primarily at determining the best location of facilities, hotels, resorts facilities transportation networks. The planning should view tourism as a source of foreign exchange earnings. There should be an approach of profit maximizing by development to accommodate the maximum possible no of projected visitors and design facilities to generate maxi possible spending by the tourists.

The existing tourism environment norms should be tried and construction regulations should be enforced. A tourist code of conduct for this region should be evolved which could be applicable both tourists and commoners alike. Legal provisions should be applied for strictly following of the code of conduct. Strict pollution controlling policies should be applied.

Recommendations

1. Develop a better dialogue with local communities in travel destinations and promote the involvement of local stakeholders in tourism ventures.
2. Raise the awareness of tourism clients of environment and social implications of their pilgrimage.
3. Tourism industry remains credible in their commitment to sustainable Development and be responsive environmental concerns.
4. There is a continued development of long haul travel. Economic, technological and management approaches should be developed to reduce emissions, waste and pollution resulting from tourism transportation changing consumption pattern should also be considered.
5. Bank and insurance sectors can greatly expedite sustainable tourism by Incorporating environmental and social criteria into assessment procedures for loans, investments and insurance. They could help finance environmentally- sound technologies and provide incentives for sustainable tourism. Widespread involvement of the banking and insurance sectors should be sought.

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