

## ENVIRONMENTAL IMPACTS OF TOURISM: CASE STUDY OF MUSSOORIE

**DR.RENU MALRA**

ASSISTANT PROFESSOR,  
UNIVERSITY COLLEGE, KURUKSHETRA UNIVERSITY,  
KURUKSHETRA.

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**ABSTRACT:** In the dramatic impacts of tourism in the developed world which has improved, and often provide the necessary example, for developing countries to follow. Tourism obviously has advantage as a contributor to economic development that has other activities might not have. But this is only the one side of the coin.

Beside tourism is also held responsible for climate change at number of destinations. Scientists have proved that there are continuous changes in the climate due to green house effect and tourism also contributes in it in the form of movement of people to destinations through automobiles and other means of transport. The continuous growth in the population and number of hotels at the destination is result in to loss of habitat to many animal species. Due to overuse of the place in the form of frequent walking by tourists to a place result in degradation of that area like in mountain areas it result into naked peaks. The tourists leave the garbage that causes pollution. All these impacts at the destinations are a matter of concern particularly for the researchers. The tourism development in India, too, is not free from such impacts. The study involves the assessment of environment impacts of tourism on the famous hill destination of Uttarakhand (India) i.e. Mussoorie.

**KEYWORDS:** Tourism development, Carrying Capacity, Environment impacts of Tourism.

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The continuous overexploitations of resources like water used more for golf courses and to meet the need of increased tourist traffic, result into Stalinization of soils and water becomes unfit for drinking. Moreover, the agriculture, which feeds a large number of people, is deprived of water for irrigation purposes. Due to frequent visits of tourists of over the place result into soil erosion to that place and caused loss to many species of the flora. As pressure on the land increasing continuously to accommodate the swelling population and tourists, it leads to more construction activity that result into cutting of forests and that, in turn, causes deforestation. Tourism also shows its impacts on the life of community also in the form of loss of their identity, values and others. The impacts are manifested through commodification of local cultural products and standardization of facilities. The culture at the destination is exposed to an alien culture of tourists and that too a dominant one and results in the development of social conflicts between the host and the guest. When the tourists use more benefits than host it cross the carrying capacity of the place and result into stage of irritations among hosts for them. Conflicts arises when the place's resources is used for development of infrastructure for tourists instead it for host population. Tourism also causes crime like prostitution, robbery, gambling etc. due to over spending power of tourists.

All these impacts at the destinations are a matter of concern particularly for the researchers. The tourism development in India, too, is not free from such impacts. We have been working

towards tourism with the conventional objective of economic gains and turn blind eye to the impacts on environment, society and culture due to tourism.

Mussoorie popularly called, as “Queen of Hill Stations” became one of the most popular hill resorts in Northern India. It is the high time now to make an assessment or review the status of development, the contribution of development mainly the contribution of tourism. As the tourist traffic in the area has continuously increased and show various impacts on the environment of destination, both physical as well as social.

### **Objectives of the studies:**

- To make a survey of tourist trends and patterns at Mussoorie.
- To assess the impacts of tourism on the environment at Mussoorie.

### **Hypothesis**

- Tourism development at Mussoorie has taken place beyond its carrying capacity.
- Tourism development is affecting environment at Mussoorie.

### **RESEARCH METHODOLOGY**

The key role players in the study area include the residents, the local, government agencies, hoteliers, real estate and other businessman. Since the nature of the study is very complex and explanatory to make it as convincing.

To meet these objectives, an in depth analysis of environment of the destination and its relational implications with tourism is the need of the study. The tourism trends at Mussoorie clearly establishes that this place have grown into important centers of trade and commerce because of its tourist potential. To say it differently tourism is a major economic activity of this destination. So whatever development is visible at Mussoorie, that is because of tourism, and if negative impacts appear because of development occurs, it is to be attributable to tourism.

Such scheme of discussion necessitates to understand the status of environment and environmental health at the destination. To achieve this objective an extensive and periodical survey of Mussoorie was made that provided first hand information of environmental conditions of the destinations. The knowledge about the environment depends upon variety of data belonging to variety of sources.

The data has been generated from various sources such as census of India, city Board, Divisional Forest Office, Jal Nigam, and MDDA. It must however be noted that often these secondary data are not in a form in which they could be used for purpose at hand. As a result, a number of estimates had to make. In order to get a nearly accurate status of environment a number of parameters discussed below were put into use. These parameter acts as potential pointer to indicate not only their influence in the present times but in terms of future also. As the present study dependent upon primary data as well as secondary sources. Primary data was collected through structured questionnaire from residents.

A total of 300 residents were interviewed through structured questionnaire to test the hypothesis.

- a) The questionnaire of residents consisted of 36 questions related to different variables to assess different impacts. Ranking was on five point Likert Scale

Difference regarding the changes in the built up area is also shown through photographs.

### METHOD OF ANALYSIS

Since the purpose of questionnaire was to know the responses of major stake holders i.e. the tourist and the local residents, the percentage method was used to derive information on the attitude of the above mentioned stake holders. It was found that information about attitude could be interpreted meaningfully through percentage and mean ranking method.

In first section, the responses are analyzed with the help of mean, standard deviation and mean ranking method. These were employed with the intension to find out the intensity of responses given by the respondents. Higher mean indicate the higher intensity of response whereas low ranking indicates low intensity.

Second section devotes to asses the responses with the help of percentage method. Higher percentage indicates closer to responses.

### RESPONSES OF TOURISTS AND RESIDENTS TOWARDS TOURISM

The responses of tourists and the local residents throw light on the respective attitudes towards tourism. This information provides us the clues how the stake holder view tourism. The tables below and the subsequent discussions cover important dimensions tourist and residents behavior.

#### a. analysis of residents response

**Table 6.12**

#### **i. Analysis of Residence Response about Tourism positive Impacts in Mussoorie ( Mean ranking method)**

(Variables showing positive impacts i.e. 14 out of 36)

		Mean	Std. Deviation	Ranking (overall)	Ranking
1	Tourism creates job opportunity.	3.6567	.8952	14	8
	Tourism improve the quality of life	3.8933	.8782	6	4
3	Economic benefits of tourism are more then the negative impacts	3.2700	1.0036	24	13
4	Tourism improves the local transport	3.3167	.9762	23	12
5	Tourism improves the surrounding exterior	3.5233	.9657	17	10
6	Tourism contributes in the improvement	3.4100	1.0704	19	11
7	Shopping opportunities are better due to tourism	3.6333	1.0242	16	9
8	Road infrastructure is better due to tourism.	3.8633	.9421	7	5
9	Tourism can be one of the most important industry	4.1200	1.0078	3	2
10	New tourism facilities should be introduced to attract more tourists.	4.1433	1.1665	2	1
11	Meeting tourists is a valuable experience	4.0933	.8001	4	3
12	Tourism provide restoration and conservation	2.5100	1.1228	33	14
13	Residents have healthy relation with tourists	3.8333	.9497	8	6
14	Tourism provides culture exchange and education.	3.7733	1.0419	10	7

Higher value of mean shows the higher ranking, the variable is most acceptable by respondents

In the analysis of Residence Response about Tourism positive Impacts on the study area Mussoorie in table no. 6.11 the statement “New Facilities should be introduced to attract more Tourists” is accepted by most of the respondents with mean value 4.1433. “Tourism can be one of the most

important industry” is also relevant variable with mean value 4.1200 (Ranking-2). But the statement “tourism provide restoration and conservation” with mean value 2.5100 is less relevant with Ranking 14.

**Table 6.13**  
**ii. Analysis of Residence Response about Tourism Negative impacts in Mussoorie( Mean ranking method)**

		Mean	Std Deviation	Ranking (overall)	Ranking
15	Tourism creates more jobs for outsiders then for the local people	3.7833	.9762	9	3
16	Tourism creates problem for local people	2.5767	1.0004	31	18
17	Tourism contributes in goods and service price increase	3.3200	1.1381	22	11
18	Tourism overload tourist sites	3.4033	1.0976	20	9
19	Due to outsiders price of land have increased	3.7300	.9662	11	4
20	Tourism negatively affect community's of life	2.2700	.8905	36	22
21	Local people are exploited by tourism	2.8333	1.1932	28	15
22	Tourism results in more litter in an area	4.2400	.9689	1	1
23	Tourism results in more destruction in community.	3.0633	1.2073	26	13
24	Tourism gives benefits to small group of region.	2.7567	1.1497	29	16
25	Local residents have lower quality of life due to be in tourist area.	2.7333	1.0705	30	17
26	High spending tourists have n undesirable affect on community	3.0167	1.1047	27	14
27	Construction of hotels and other facilities have destroyed the natural environment.	3.3600	1.087	21	10
28	Tourism tends to change local value, customs and dress.	3.6933	1.2641	13	6
29	Tourism increases the pollution in the settlement.	3.4867	1.0584	18	8
30	Tourism increases the noise in the settlement.	3.7167	.9727	12	5
31	Tourism contributes in sexual abuse.	2.4033	.8963	34	20
32	Tourists view local woman with contempt.	2.3967	.8955	35	21
33	Tourism contributes in begging increase.	4.0000	.7929	5	2
34	Due To tourism liquor consumption has increased.	3.2167	1.1580	25	12
35	Tourism contributes in increase of drug use.	2.5767	1.0365	32	19
36	Tourism increased crime rates in settlement.	3.6500	.9716	15	7

Table no.6.12 reveals about analysis of residents Response towards the development of tourism leads to harm to the study area.

Tourism results in more litter in an area is most relevance variable according to most of the respondents with mean value 4.2400 (ranking-1) “tourism contributes in begging increase” is also accepted by most of the respondents with mean value 4.000 and men ranking-2.

But the statement that “tourists view local women with contempt” is not much relevant in the eyes of respondents with men ranking 22 and mean value 2.3967.

Table no.6.11 & 6.12 depicts about the response of residence towards tourism impacts. In the analysis of total responses of 36 variables; the statement “tourism results in more litter in an area is accepted by most of the residents with mean value 4.2400 and ranking 1, majority of respondent agree of this statement that tourism affecting the environment of Mussoorie by dispersing the litter in an area. But residents also considered that “Tourism can be One of Most Important Industry” with ranking 3 and mean value 4.1200 therefore respondents wants that “New tourism facilities should be introduced to attract more tourists” with mean value 4.1433 and ranking 2 hence preferences are given to this statement over the previous one. The statement “Tourism Negatively Affect Community’s Way of Life” with mean value 2.2700 has less relevance.

### **b. analysis of tourist’s response**

#### **i.Tourists ‘ranking of tourism issues (mean ranking method)**

		Mean	Std. Deviation	Ranking
1	Safety measures are good at destination	4.0200	.9709	1
2	Locals behavior is excellent	2.8333	.9391	9
3	Transport facilities are good	3.3433	1.0110	5
4	Information accessibilities are good	3.1600	.9888	8
5	Parking facilities are good at destination	2.3333	.9689	10
6	Tourists feel pollution in environment	3.2333	1.1387	7
7	Places are overcrowded	3.2633	1.0541	6
8	On the whole satisfied with the vacation	3.5167	1.0987	4
9	Recommendation would be given to another for the place	3.7767	1.1625	2
10	Tourist would like to visit the place again	3.6567	1.0875	3

Table no.6.16 depicts the Tourists’ observances about the destination Mussoorie. The statement “safety measures are good at destination” is high relevant, accepted by most of tourists with highest mean value 4.0200 (Ranking=1). The experiences of the tourists were so good that most of tourists also showed their consent to recommend the place to other kindred with mean value 3.7767 (Ranking=2). Instead tourists also showed their interest to visit place again having ranking 3 with mean value 3.6567. The statement “parking facilities are good at destination is neglected by maximum of tourists as revealed by the mean value 2.3333 having least mean ranking 10.

### **Conclusion:**

Based on the information provided by questionnaire, the following conclusion can be drawn

- Most of the residents in Mussoorie agreed tourism results in more litter in an area having highest mean value 4.1200 and mean ranking while in the case of Nainital the statement

tourism overload the tourist sites is accepted by most of the residents with mean ranking 1, and mean value 4.3367. The response of residents of both areas shows that residents are more aware about the deterioration of their residential area due to growth of tourism industry.

- Residents of Mussoorie and Nainital both showed the same response against the variable that tourism creates job opportunity and also one of the most important industries for the region. Hence they also agreed that “new tourism facilities should be introduced to attract more tourists. But simultaneously respondents showed their consent that “tourism creates more jobs for outsiders than for the local people and it also contributes in the increase of prices of goods, services and land. But still most of the residents accepted that economic benefits of tourism are more than the negative impacts it is in the context that the residents identified tourism as one of the most important industries and favoured more tourism development in the area.
- In the analysis of Socio-cultural impacts of the tourism for the study area various problems due to tourism, like exploitation, change in local values, dresses, begging, liquor consumption, increment in crime rates is perceived by large proportion of residents. But respondents did not agree that tourism development leads to misbehaviour with the woman, increase in drug use.
- Tourism development is found contributing significantly to increase income and living standards, transport facilities, improved shopping facilities etc. Residents maintain healthy relationship with tourists and it also provides opportunities for cultural exchange.
- In the analysis of environmental impacts of tourism also, respondents of both area showed a similar response. One of the most vociferously expressed problems related to the Environment is tourism increases the pollution and noise in the settlement. More than three fourth of the respondents agreed that construction of hotels and other facilities have destroyed the natural environment.
- Respondents also perceived that tourism development contributes in beautifying the exterior. Locals did not favour that tourism provide restoration and conservation of local culture and environment.
- The need of time is to protect and strengthen the tourism industry while minimising negative impacts of such growth manifested in pressure on service and city infrastructure.
- The analysis of tourist’s response towards study area Mussoorie and Nainital found that respondents were satisfied with safety measures of the destination. The infrastructure facilities like transport facilities and information accessibility is perceived as good by majority of respondents. But tourists did not find parking facilities and locals behaviours excellent. Tourists also find pollution, over crowding at the destination as a major problem. But overall they were satisfied with the vacation and showed had to visit again and would also recommend the destination to their known ones.

#### **POISTION OF HYPOTHESIS**

1. Tourism development at Mussoorie and Nainital has taken place beyond its carrying capacity.  
The findings and conclusion support above hypothesis therefore this hypothesis first is accepted.
2. Tourism development is affecting environment at Mussoorie and Nainital.

Above mentioned conclusions support the hypothesis again hence hypothesis second is also accepted.

### **Suggestions:**

In the peak season, from April to October maximum number of tourists makes visit to the study areas. Hence the overcrowding at these places leads to congestions, pollution, and analogous problems. The solution of these problems is not to relegate the industry as it is the main keystone of the earning for the residents as well as non-residents, but the need of the time is to manage and strengthen properly the carrying capacity, at the destinations.

Analysis and interpretation of primary and secondary data suggests the following guidelines for tourism development in study areas.

- Tourism creates employment but the locals get low paid jobs while high paid jobs are going to outsiders. This trend must be changed through adequate government intervention.
- There is a need to control the prices of general goods, services, cost of land and housing because maximum responses indicated higher cost of living because of tourism. The government should take appropriate steps to tackle the problem.
- Tourism is creating social evils like alcoholism, begging and crime rates. These problems could be minimized by fixing the code of ethics for visitors while visiting public places. Women and social organizations should be given more authorities to deal with the problems.
- The residents of the area should be involved in decision-making process as well as in implementation of tourism plans, so that they can contribute their ideas to the development and learn ways in which they can participate, all of which ultimately provides their support to tourism development.
- In order to tackle the problem of pollution, fine must be imposed on the pollution emitting vehicles.
- The reforestation process should be taken up aggressively. Trees should be planted in rotation and state government agency should be entrusted to supervise the cutting of trees strictly in accordance with the ordinance given.
- There should be proper disposal system of garbage. Modernisation of drainage system is required.
- Tourist must be given instructions to avoid loud music and noise and not to leave behind any garbage in the form of polythenes.