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PERCEPTION OF TOURISTS ON ENVIRONMENTAL IMPACT OF TOURISM IN SHIMLA

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Abstract: *Shimla is mostly recognized for its stunning natural surroundings. This paper is on how tourists perceive the Shimla environment. The study demonstrates how tourism affects the area. Tourism has both beneficial and bad effects on the ecosystem, according to the paper. Positive effects on tourism promotion and natural area conservation; negative effects on the natural environment, such as pollution, traffic congestion, water depilation, and overcrowding. The paper also presents the tourist department's initiative to encourage tourism while protecting the area's ecosystem. The paper is based on both primary and secondary data. The online questionnaire was created, and the respondents are tourists who have visited the area.*

Keywords: Shimla environment,tourism effects,overcrowding, tourist perception, pollution, natural environment.

Introduction

Northern India's State of H.P. is where Shimla is situated. When it was still a little village hidden away in the smaller Himalayan peaks, which reach heights of up to 2600 meters, the British were enchanted by its stunning splendor and turned it into a summer resort to escape the heat of the plains. The "Queen of Hills," as the Britons affectionately referred to it, has come to be known as a "must-visit" location for the burgeoning "nouveau riche" Indians who, like their British forebears, flock to the region during the summer vacation to escape the oppressive heat of the Northern plains.

Himachal Pradesh has extraordinary natural attractions at its disposal. There are currently a lot of places that are tourist destinations with abundant biophysical and cultural resources. A place of extraordinary beauty in Shimla's hinterland, the Kufri-Chail-Naldehra area draws roughly 0.3 million visitors from both local (89%) and foreign (11%) tourists. The majority of visitors come from the nearby states of Chandigarh, Delhi, Haryana, and Punjab. The state has established this as a tourism route. Shimla is a secondary tourist hub that is better known for its winter sports, nature park, and zoo that are maintained by the State Forest Department. Rajda ys Shirnla is highly perched (2327 m) with all its grandeur, and together with several other satellites around Kufri, (2633 m) about 16 km from Shimla, forms the tourist growth pole.

The nine-hole golf course in Naldehra, which has dense groves of deodar trees, is well-known. The 45 km distant Chail (2250 m) has all the beauty of a royal park. It served as the Maharaja of Patiala's summer residence. His palace has been transformed into a vacation destination. The world's highest cricket pitch is located there as well. Even though the HP government has prioritized tourism growth, there is still a wide gap between visitor demand and supply, which has a negative impact on the socioeconomic system and the environment. Most often, inadequate infrastructure and poor development management have resulted in irreparable environmental harms in addition to job losses that are frequently taken by foreigners while local populations feel the brunt of it Heavy leakage is common and is a noticeable characteristic. Since the local people depends on these biological resources to thrive, the environmental resources in the Himalayas help to provide them with resources. While the government is responsible for protecting these priceless resources, the tourist industry's resource managers must also manage them responsibly. The host community, which is sometimes ill-equipped to offer financial assistance, may assist in safeguarding and preserving these resources for their continued existence.

Unfortunately, this is not taking place at this well-known tourist area. The development of tourism is unsustainable and endangers biodiversity while increasing risks of saturation (Singh 1989). Extraction of suitable rent for the area's inherent assets, which draw tourists, may be one method of creating financial resources for conservation areas. The important thing to remember is that the owner of the resource should benefit from the rent. There is currently no system in place to recover the use and non-use values from visitors. This essay makes an attempt to research how ready stakeholders are to pay for resource mobilization. It talks about valuation methods and how they affect the way environmental policy is framed. Finally, it makes the case that recovering non-use assets might be crucial in raising money for conservancy area upkeep. According to estimates, the research area's population will likely contribute a sizeable amount of money towards the preservation of rare species and their ecosystems.

Gill and Williams (1994) stated that the abundance of mountain attractions has resulted in high demand over the past 10 years, which has posed a threat to the ecology. The mountain communities should determine the key informational components needed to effectively implement growth

management measures. Providing facilities while maintaining a healthy living environment for those who live in or work in mountain villages is their main challenge.

Cioancă (2015), has opinion that the expansion of tourism and the rise in visitor numbers have had a significant impact on the neighborhood's ecology. More people visiting means more nature pollution, which affects the plants, shrubs, and air quality. Tourism results in higher energy and water use, and visitor behavior may change the landscape and endanger wildlife and plants. Negative environmental effects include improper trash disposal, inadequate water drainage, and the destruction of green space by fire.

Bakloo (2020) highlights the Himalayas as a suitable location for tourism due to its rich flora and fauna and abundant water reservoirs. However, environmental changes have led to adverse effects on the region's vegetation, affecting the economy and livelihoods of workers and ranchers. The lockdown has negatively impacted the farming and tourism sectors, which are the backbone of the region's economy. Uttarakhand, a popular tourist destination, has experienced a decline in economic growth due to the pandemic, affecting the tourism sector and the local population.

Ranbir (2013) stated that Himachal Pradesh's tourism sector is one of the fastest expanding in the country. The tourism industry offers the State and the community a variety of socio-cultural and economic advantages, but it has also had an impact on the environment. The environment in Shimla is under threat from a variety of tourism-related activities. Despite the fact that tourism has many benefits for the Shimla district, it also has negative effects. Shimla is experiencing a variety of issues as a result of the influx of tourists, including noise pollution, air pollution, traffic jams, sanitary issues, etc.

Pal and Pal (2016) has opinion that tourism sector in Shimla has experienced a boom in hotels, restaurants, and amusement activities, leading to a decline in local culture and lifestyle. This has led to lifestyle distortions and cultural decay. To control negative impacts on socio-economic life, measures must be proposed to control unregulated tourism. Researchers have identified the shift from joint families to nuclear families, and the pressure of tourists has caused issues like sanitation, pollution, wildlife destruction, and cultural loss. Adopting eco-friendly measures is necessary to combat these problems.

Research Methodology

To gather unique data for the study, an online survey was used. The majority of the questionnaire's inquiries centered on how tourism impacted local ecosystems. The respondents are locals and both convenience and snowball sampling, which are non-probability sample methods, were used in the study. The quiz was developed utilizing a five-point Likert scale, with responses ranging from strongly Agree to strongly Disagree.

Objectives

To investigate visitor views of the environmental impact of tourism.

Data collection

Both primary and secondary data methods will be used to collect the data. The collection of information through the primary data has consist of structured questionnaires to collect the first-hand information from tourists. For dissemination of questionnaires, has use the survey method. Likert scale techniques has been used for the measurement of data.

Data Analysis

5Descriptive statistics of tourists' perception towards impact of tourism ecological factors of environment

Ecological Factors	N	Mean	Std. Deviation
Wild Life	122	3.07	1.204
Flora	122	3.18	1.185
Natural Calamities	122	3.07	1.026
Cleanliness and sanitation	122	3.18	1.253
Drinking water	122	3.16	1.195
Air Quality	122	3.15	1.162
Forest	122	3.13	1.171
Soil erosion	122	3.30	1.066
Congestion (over carrying capacity)	122	3.23	1.019
Noise levels	122	3.51	1.054
Mountain landscapes	122	3.16	1.109
Natural habitats (for construction of roads and infra etc.)	122	3.20	1.190

The above table presents the data about the tourists' perception about the impact of tourism on ecological factors of environment. The tourists were asked to rate their answers from high positive impact (score of 1) to high negative impact with a mean score of 3 (no impact). Hence, a higher would mean that tourists perceive a negative impact and a low score would mean a positive impact. The results show that in all the ecological factors, the mean score was more than 3, and hence, the tourists do perceive that there is a negative impact of tourism activities on these ecological factors of environment.

Analysis of variance (ANOVA)

For the said purpose one-way ANOVA was performed (table 4.x to 4.x). If $p<0.05$, it signifies that there exists significant difference in opinion in any one of the factors under comparison. The ANOVA has been conducted to find out the difference of opinion regarding impact of tourism on ecological factors, among the tourists on the basis of their demographic profiling. Hence, for the demographic profile; Gender, Age, Educational Qualification, Area of origin (city) & Income were considered.

Table 4.x presents the ANOVA on the basis of gender of the tourists. An attempt was made to find out if there exist any significant differences in the opinion of respondents of different genders.

Table: One-way ANOVA (Ecological Factors) – one the basis of Gender

		Sum of Squares	Df	Mean Square	F	Sig.
Wild Life	Between Groups	5.484	1	5.484	3.871	.051
	Within Groups	169.991	120	1.417		
	Total	175.475	121			
Flora	Between Groups	.035	1	.035	.025	.875
	Within Groups	169.998	120	1.417		
	Total	170.033	121			
Natural Calamities	Between Groups	.364	1	.364	.344	.559
	Within Groups	127.111	120	1.059		
	Total	127.475	121			
Cleanliness and sanitation	Between Groups	.033	1	.033	.021	.886
	Within Groups	190.000	120	1.583		
	Total	190.033	121			
Drinking water	Between Groups	.001	1	.001	.001	.976
	Within Groups	172.720	120	1.439		
	Total	172.721	121			
Air Quality	Between Groups	.980	1	.980	.724	.396
	Within Groups	162.364	120	1.353		
	Total	163.344	121			
Forest	Between Groups	1.004	1	1.004	.731	.394
	Within Groups	164.898	120	1.374		
	Total	165.902	121			
Soil erosion	Between Groups	4.286	1	4.286	3.864	.052
	Within Groups	133.091	120	1.109		
	Total	137.377	121			
Congestion (over carrying capacity)	Between Groups	1.894	1	1.894	1.837	.178
	Within Groups	123.680	120	1.031		
	Total	125.574	121			
Noise levels	Between Groups	.394	1	.394	.353	.554
	Within Groups	134.098	120	1.117		
	Total	134.492	121			
Mountain landscapes	Between Groups	.597	1	.597	.484	.488
	Within Groups	148.124	120	1.234		
	Total	148.721	121			
Natural habitats (for construction of roads and infra etc.)	Between Groups	8.499	1	8.499	6.265	.014
	Within Groups	162.780	120	1.356		
	Total	171.279	121			

The results from the above table reveal that there does not exists any significant difference of opinion among the male & female tourists regarding impact of tourism on ecological factors as the p-value was more than 0.05 in almost all the cases. However, a significant difference of opinion was found in case of impact of tourism Wild Life, Soil erosion Natural habitats (for construction of roads and infra etc.) as the p-value was less than 0.05.

Table: One-way ANOVA (Ecological Factors) – one the basis of Age

		Sum of Squares	df	Mean Square	F	Sig.
Wild Life	Between Groups	6.128	3	2.043	1.423	.239
	Within Groups	169.348	118	1.435		
	Total	175.475	121			
Flora	Between Groups	15.328	3	5.109	3.897	.011
	Within Groups	154.705	118	1.311		
	Total	170.033	121			
Natural Calamities	Between Groups	13.133	3	4.378	4.518	.005
	Within Groups	114.343	118	.969		
	Total	127.475	121			
Cleanliness and sanitation	Between Groups	8.761	3	2.920	1.901	.133
	Within Groups	181.271	118	1.536		
	Total	190.033	121			
Drinking water	Between Groups	8.402	3	2.801	2.011	.116
	Within Groups	164.319	118	1.393		
	Total	172.721	121			
Air Quality	Between Groups	7.954	3	2.651	2.013	.116
	Within Groups	155.390	118	1.317		
	Total	163.344	121			
Forest	Between Groups	9.711	3	3.237	2.446	.067
	Within Groups	156.190	118	1.324		
	Total	165.902	121			
Soil erosion	Between Groups	3.344	3	1.115	.981	.404
	Within Groups	134.033	118	1.136		
	Total	137.377	121			
Congestion (over carrying capacity)	Between Groups	4.417	3	1.472	1.434	.236
	Within Groups	121.157	118	1.027		
	Total	125.574	121			
Noise levels	Between Groups	3.406	3	1.135	1.022	.386
	Within Groups	131.086	118	1.111		
	Total	134.492	121			

Mountain landscapes	Between Groups	2.493	3	.831	.671	.572
	Within Groups	146.229	118	1.239		
	Total	148.721	121			
Natural habitats (for construction of roads and infra etc.)	Between Groups	15.660	3	5.220	3.958	.010
	Within Groups	155.619	118	1.319		
	Total	171.279	121			

The results from the above table reveal that there does not exist any significant difference of opinion among the tourists belonging to different age groups; regarding impact of tourism on ecological factors as the p-value was more than 0.05 in almost all the cases. However, a significant difference of opinion was found in case of impact of tourism on Flora, Natural Calamities & Natural habitats (for construction of roads and infra etc.) as the p-value was less than 0.05.

Table: One-way ANOVA (Ecological Factors) – one the basis of City

		Sum of Squares	Df	Mean Square	F	Sig.
Wild Life	Between Groups	33.347	13	2.565	1.949	.032
	Within Groups	142.129	108	1.316		
	Total	175.475	121			
Flora	Between Groups	34.601	13	2.662	2.123	.018
	Within Groups	135.432	108	1.254		
	Total	170.033	121			
Natural Calamities	Between Groups	16.839	13	1.295	1.264	.246
	Within Groups	110.636	108	1.024		
	Total	127.475	121			
Cleanliness and sanitation	Between Groups	38.359	13	2.951	2.101	.020
	Within Groups	151.674	108	1.404		
	Total	190.033	121			
Drinking water	Between Groups	27.464	13	2.113	1.571	.105
	Within Groups	145.258	108	1.345		
	Total	172.721	121			
Air Quality	Between Groups	24.670	13	1.898	1.478	.137
	Within Groups	138.674	108	1.284		
	Total	163.344	121			
Forest	Between Groups	36.879	13	2.837	2.375	.008
	Within Groups	129.023	108	1.195		
	Total	165.902	121			
Soil erosion	Between Groups	39.627	13	3.048	3.368	.000
	Within Groups	97.750	108	.905		

	Total	137.377	121			
Congestion (over carrying capacity)	Between Groups	28.763	13	2.213	2.468	.006
	Within Groups	96.811	108	.896		
	Total	125.574	121			
Noise levels	Between Groups	23.810	13	1.832	1.787	.054
	Within Groups	110.682	108	1.025		
	Total	134.492	121			
Mountain landscapes	Between Groups	22.464	13	1.728	1.478	.137
	Within Groups	126.258	108	1.169		
	Total	148.721	121			
Natural habitats (for construction of roads and infra etc.)	Between Groups	17.574	13	1.352	.950	.505
	Within Groups	153.705	108	1.423		
	Total	171.279	121			

The results from the above table reveal that there does exists a significant difference of opinion among the tourists belonging to different geographical regions; regarding the impact of tourism on ecological factors as the p-value was less than 0.05 in most of the cases. However, no significant difference of opinion was found in case of impact of tourism on Natural Calamities, Drinking water, Air Quality, Mountain landscapes & Natural habitats (for construction of roads and infra etc.); as the p-value was more than 0.05.

Table: One-way ANOVA (Ecological Factors) – one the basis of Qualification

		Sum of Squares	Df	Mean Square	F	Sig.
Wild Life	Between Groups	7.561	4	1.890	1.317	.268
	Within Groups	167.915	117	1.435		
	Total	175.475	121			
Flora	Between Groups	5.452	4	1.363	.969	.427
	Within Groups	164.581	117	1.407		
	Total	170.033	121			
Natural Calamities	Between Groups	18.663	4	4.666	5.017	.001
	Within Groups	108.812	117	.930		
	Total	127.475	121			
Cleanliness and sanitation	Between Groups	8.149	4	2.037	1.311	.270
	Within Groups	181.884	117	1.555		
	Total	190.033	121			
Drinking water	Between Groups	3.992	4	.998	.692	.599
	Within Groups	168.730	117	1.442		
	Total	172.721	121			
Air Quality	Between Groups	16.238	4	4.060	3.229	.015

	Within Groups	147.106	117	1.257		
	Total	163.344	121			
Forest	Between Groups	11.881	4	2.970	2.256	.067
	Within Groups	154.020	117	1.316		
	Total	165.902	121			
Soil erosion	Between Groups	11.189	4	2.797	2.594	.040
	Within Groups	126.188	117	1.079		
	Total	137.377	121			
Congestion (over carrying capacity)	Between Groups	17.322	4	4.330	4.680	.002
	Within Groups	108.252	117	.925		
	Total	125.574	121			
Noise levels	Between Groups	22.744	4	5.686	5.953	.000
	Within Groups	111.748	117	.955		
	Total	134.492	121			
Mountain landscapes	Between Groups	17.533	4	4.383	3.909	.005
	Within Groups	131.188	117	1.121		
	Total	148.721	121			
Natural habitats (for construction of roads and infra etc.)	Between Groups	8.549	4	2.137	1.537	.196
	Within Groups	162.730	117	1.391		
	Total	171.279	121			

The results from the above table reveal that there exists a significant difference of opinion among the tourists having different educational qualification; regarding impact of tourism on ecological factors as the p-value was less than 0.05 in following cases.

- Natural Calamities
- Air Quality
- Soil erosion
- Congestion (over carrying capacity)
- Noise levels
- Mountain landscapes

However, no significant difference of opinion was found in case of impact of tourism on following cases where the p-value was more than 0.05.

- Wild Life
- Flora
- Cleanliness and sanitation
- Drinking water
- Forest
- Natural habitats (for construction of roads and infra etc.)

Table: One-way ANOVA (Ecological Factors) – one the basis of Income

		Sum of Squares	df	Mean Square	F	Sig.
Wild Life	Between Groups	7.378	4	1.845	1.284	.280
	Within Groups	168.097	117	1.437		
	Total	175.475	121			
Flora	Between Groups	15.487	4	3.872	2.931	.024
	Within Groups	154.546	117	1.321		
	Total	170.033	121			
Natural Calamities	Between Groups	3.740	4	.935	.884	.476
	Within Groups	123.736	117	1.058		
	Total	127.475	121			
Cleanliness and sanitation	Between Groups	40.131	4	10.033	7.831	.000
	Within Groups	149.902	117	1.281		
	Total	190.033	121			
Drinking water	Between Groups	17.135	4	4.284	3.221	.015
	Within Groups	155.586	117	1.330		
	Total	172.721	121			
Air Quality	Between Groups	32.333	4	8.083	7.219	.000
	Within Groups	131.011	117	1.120		
	Total	163.344	121			
Forest	Between Groups	23.916	4	5.979	4.927	.001
	Within Groups	141.986	117	1.214		
	Total	165.902	121			
Soil erosion	Between Groups	6.675	4	1.669	1.494	.208
	Within Groups	130.702	117	1.117		
	Total	137.377	121			
Congestion (over carrying capacity)	Between Groups	11.402	4	2.851	2.921	.024
	Within Groups	114.171	117	.976		
	Total	125.574	121			
Noise levels	Between Groups	6.221	4	1.555	1.419	.232
	Within Groups	128.271	117	1.096		
	Total	134.492	121			
Mountain landscapes	Between Groups	21.688	4	5.422	4.994	.001
	Within Groups	127.033	117	1.086		
	Total	148.721	121			
Natural habitats (for construction	Between Groups	10.227	4	2.557	1.857	.123
	Within Groups	161.051	117	1.377		

of roads and infra etc.)	Total	171.279	121			

The results from the above table reveal that there does exist a significant difference of opinion among the tourists belonging to different income group; regarding the impact of tourism on ecological factors as the p-value was less than 0.05 in following cases.

- Flora
- Cleanliness and sanitation
- Drinking water
- Air Quality
- Forest
- Congestion (over carrying capacity)
- Mountain landscapes

However, a significant difference of opinion was found in case of impact of tourism on following as the p-value was more than 0.05 in following cases.

- Wild Life
- Natural Calamities
- Soil erosion
- Noise levels
- Natural habitats (for construction of roads and infra etc.)

The second part of the ANOVA has been conducted to find out the difference of opinion regarding impact of tourism on socio cultural factors, among the tourists on the basis of their demographic profiling. Hence, for the demographic profile; Gender, Age, Educational Qualification, Area of origin (city) & Income were considered.

Findings

The study aimed to understand tourists' perceptions of tourism's impact on environmental factors. Results showed that tourists generally feel that tourism has a negative impact on ecological factors, with a mean score of more than 3 in each variable. ANOVA was used to analyze the difference in opinion among tourists based on demographic factors such as gender, age, educational qualification, area of origin, and income. Results showed that male and female tourists did not think differently about the impact of tourism on ecological factors, but there was a significant difference in opinions on wild life, soil erosion, and natural habitats. Tourists from different states had similar opinions on natural calamities, air quality, mountain landscapes, and qualifications. Tourists from different income groups had similar opinions on the impact of tourism on ecological factors.signifying that the range was very low and tourists responded for all the questions in almost same manner.

Conclusion

Tourism and hospitality industry is highly interlinked with human and environment. This industry is ever changing and highly volatile industry. The tourism industry serves tailor based need while using the natural environment. The main variables which effected ecological factors were cleanliness, sanitation followed by mountain landscape and wildlife whereas, dislocation, local values affected the social factors the most.The tourists perception about the environmental impact of tourism. The result showed that tourist think that tourism had negative impact on ecological factors of environment. After conducting the study it can be summed up that the general public the tourists coming Shimla have a concern for the deterioration of the environment. They are also aware of the reasons that are causing this harm to the environment. it is suggested that the local government & tourism department should join hands and introduce more eco-friendly activities that not only promotes tourism, but also does not harm the environment at the same time; like promotion eco-village tourism, responsible tourism and alike.

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