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Visitor perceptions towards forest resorts in Kashmir

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Abstract Forests in the Kashmir valley attract hundreds of thousands of tourists annually. This study uses a trip generation function to analyse the perceptions of a random sample of 200 visitors to four famous forest sites: Dodhpathri, Thajiwas, Pahalgam, and Gulmarg. Forest-specific attributes and ecological/scenic concerns attract tourists, mostly from Kashmir and also from elsewhere in India and abroad. Most tourists are highly educated, well off businesspeople or professionals in the 50–60 age group who consider that forest sites are a national treasure that should be preserved sustainably.

Keywords Visitors, tourist, campaign, amenities, ecological balance

JEL codes Q57

Forests contain 80% of the earth's plant biomass and contribute 75% of the gross primary productivity of its biosphere. Forest resources make up the natural wealth of a nation, support livelihoods, help structure economic changes, promote sustainable growth, and determine its status in the world economic system. The amenity value and services of woodlands attract tourists to highland areas (generally) and forests (specifically). Tourism supports local business, employment, and economic output. Environmental economists consider tourism to forest and other resorts vital human activities and pay it attention.

Tourism has a complex relationship with the environment, however. Tourism involves the construction of general infrastructure such as roads and logistics for tourism facilities, including resorts, hotels, restaurants, shops, and golf courses. These activities affect the environment adversely, and these negative impacts can gradually destroy the environmental resources it depends on (Sunlu 2003). The quality of the environment, both natural and man-made, is essential for its, and tourism should be developed so that its negative impacts can be substituted with positive impacts (Hicks compensation principle). Moreover, ecosystem valuation is important for applying the correct models of development (Zhu and Zhang 2008).

Tourism, a tertiary activity, has progressed steadily over the years in the state of Jammu and Kashmir, where the Kashmir valley, home to the Dal Lake, spots of religious importance, and forest-covered mountain peaks and forest resorts, attracts tourists from all over the country, including J&K, and the world. In 2012, the state received 13 million tourists, of which 35.29% were foreigners (Mir 2014), but the numbers fell suddenly in 2016. The tourism cycle of the Kashmir valley as a whole is now in the rejuvenation phase, and the rising influx of tourists is expected to increase the contribution of tourism to the economic development of the state.

Methodology

We used a multistage sampling technique to select the sample forest sites and respondents. We randomly selected the districts, blocks, and forest resorts based on tourist visits and in consultation with officials of tourism department authorities of the respective forest sites. We purposively selected the forest sites (FS)—Dodhpathri (FS 1), Thajiwas (FS 2), Pahalgam (FS 3), and Gulmarg (FS 4)—based on their amenities and distinguished services (Table 1, Figure 1). We randomly selected 50 respondents (day visitors) from each site, forming a total sample of 200 respondents for the study.

Trip generating function method

To analyse the determinants of the frequency of visits to a forest site, we employed a trip generating function method and specified the number of individual visitations to a particular forest site as the dependent variable and the different variables as independent variables. A few independent variables are the socio-economic indicators of visitors and we used a few to capture the impact of forest ecosystem attributes. The model takes the form

$$V_i = f(I_i, FS_i, E_i, A_i, TT_i, TC_i, EC_i, SC_i, FTREE_i, SPCFE_i, U)$$

where, V_i is the number of visits made by the i^{th} visitor to the j^{th} forest site, I_i is the income of the i^{th} visitor (INR per month), FS_i is thefamily size of the i^{th} visitor (number), E_i is the education of the i^{th} visitor (0 for illiterate, 1 for primary, 2 for high, 3 for higher, 4 for above higher education), A_i is the age of the i^{th} visitor (years), TT_i is thetravel time incurred by the i^{th} visitor to reach the site and return (hours per visit), $TC_i$is the travel cost faced by the i^{th} visitor to reach site to and from (INR per visit), EC_i is the ecological concern of the i^{th} visitor (0 for no, 1 for yes), SC_i is the scenic concern of the i^{th} visitor (0 for no, 1 for yes), $FTREE_i$ is thetree-specific characteristics of the i^{th} visitor (0 for no, 1 for yes), $SPCFE_i$ is the space-specific characteristics of the i^{th} visitor (0 for no, 1 for yes), and U is the error term.

Several issues need to be resolved in applying the trip generating function method; one is whether it should take a zonal or individual approach, and another is the type of visitation decision to be modelled. However, several other visitation decisions, which may be

Table 1 Forest resorts

Forest resort	Location and altitude	Features
Pahalgam	Anantnag district, altitude 2,200 m (7,200 ft)	Annual Amarnath Yatra Rich vegetation, rare and endangered faunaAbundance of water resources Alpine/coniferous type forests Mountaineering, polo, golf Betaab Valley, surrounded by forests.
Gulmarg	Baramulla district, altitude 2,650 m (8,694 ft)	The 'heartland of winter sports in India', Gulmarg was rated as Asia's seventh best ski destination; provides visitors skiing, gondola, tobogganing services Meadows interspersed with parks and small lakes and surrounded by forests of green pine and fir
Dodhpathri	Budgam district, altitude 2,730 m (8,957 ft)	Alpine valley covered with snowclad mountains and meadows of pine, fir, and deodar Main attractions are the forest resorts at Tangnar, Mujpather, Dophkhal, Sochilpather, Palmaidan, and Parihas
Thajiwas	Sonmarg district, altitude 2,495 m (9,186 ft)	Forest ecosystem with glacier is the primary tourist attraction Striking silvery scene set against emerald meadows and a clear blue sky major attraction in the summer Campsite at the foot of the glacier an idyllic base for trekkers

Source Wikipedia

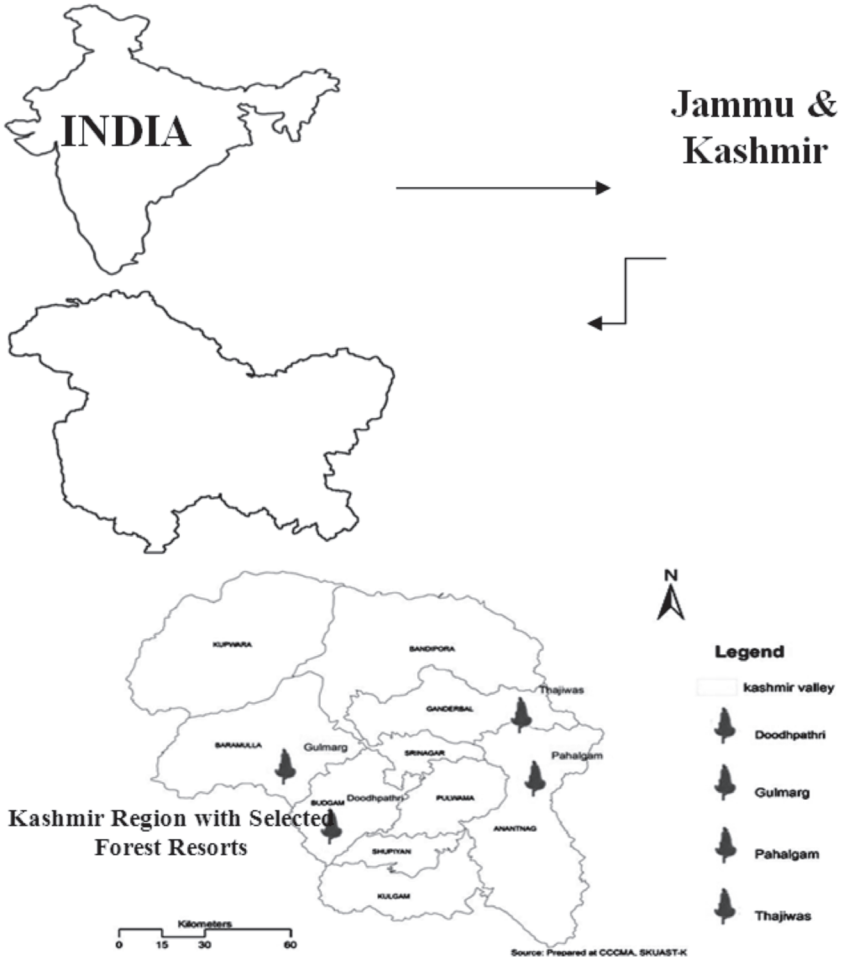

Figure 1 Selected sites

influenced by site attributes, may also affect expenditure rates (Loomis 1995); one such visitation decision is the one over the length of stay at the site. Bell and Leeworthy (1990) use a trip generating function method to assess the factors influencing the length of stay (in days) at a beach site. The data of visitation to a particular forest site was not available; therefore, this study considers individual day visitation to a forest site. This approach was used by Willis and Benson (1989); their model used various variables to attempt to predict the number of visitors from particular locations to Forest Commission sites. This (Willis and Benson 1989) is an example of a zonal trip generating function method, that is, the model attempts to predict the number of visitors from each of a selection of zones around the site to the site itself. The alternative is to adopt an individual trip generating function method, which attempts to estimate the number of trips any one person may make to a site over a period (Willis and Benson 1989).

The expenditure partition method

We employed the expenditure partition method to assess the effects of the existence of forests and/or forest ecosystem features on tourist expenditure. We asked the tourists in our sample to rank the forest attributes at a site by importance, and we used the standard ranking scale to rank the various components by importance.

Various non-market factors explain tourist behaviour and expenditure (on the trip form their residence to the forest site and back). In the absence of more refined methods to assess the role of non-market factors in visitor behaviour and expenditure, studies have widely employed the expenditure partition method. Crabtree

Table 2 Expenditure partitioning method

Response	Rank	Expenditure (%)
Main reason	4	100.00
Very important	3	75.00
Important	2	50.00
Not important	1	0.00

Source Authors' calculations

et al. (1994) used this function to ask visitors at forest sites how important features were in attracting them to these sites. Where the forest was the main reason for a visit, we attributed 100% of the tourist expenditure to forests, but 50% if the forest was a very important reason and 25% if it was quite important. Accordingly, for rank 4, 100% of expenditure was attributed to the forest; for rank 3 only 75%; and for rank 1, 0% (Table 2).

Results and discussion

The socio-economic indicators of tourists are expected to influence the frequency of their visits, and we discuss the indicators in this section. While most of the tourist respondents were in the 30–60 age group, a few were in the 0–30 year age group, indicating that forests attract young visitors. Gössling et al. (2006) also observe the predominance of young visitors at tourist destinations. Young tourists seem to be more keen to visit forests and they schedule a trip to a forest site in a group of family members and friends. Tourism development campaigns should target the 0–30 year age group and motivate them to visit forest resorts.

Education widens a person's horizons (Baba et al. 2010) and enables them to make better decisions. Visits to forest resorts are related to a high level of education (Loesch 1980; Jensen and Koch 2000; Gössling et al. 2006). None of the respondents were illiterate; they were graduates or educated to a higher degree. The respondents at Pahalgam (FS 3) were seen to have attained a higher degree of education compared to the respondents at other sites. The efforts at encouraging tourism to forest sites must target the educated classes of society.

Most tourists were engaged in business activities or other specialized occupations. A good percentage of them were dependents. Income has a close bearing on an individual's decision to visit forest sites. Most of the tourists at Dodhpathri and Thajiwas are in the income category of INR 40,000–60,000 per month (Table 3). At Pahalgam and Gulmarg, most tourists are in the high-income category (above INR 60,000 per month). The services provided by the forest sites at Pahalgam and Gulmarg attract an even higher income class of society, and these amenities need to be created at other forest sites and augmented at existing resorts.

At all the forest sites, most visitors were from Kashmir or other states in India; this number was higher at Dodhpathri and Gulmarg. Most tourists from abroad visited Pahalgam and Gulmarg, which may be due to the features like horse riding, polo, gondola service, and skiing. Explicit amenity services need to be provided to other forest sites, so that more tourist gets attracted towards them.

The gender classification of tourists at the selected forest sites indicated that men outnumbered women. It is important to encourage family, school, and societal visits, and groups of women, to visit these sites. Institutes, educational institutions, and tourism development departments should work together in this regard.

Trip arrangements

A few individual tourists visit forest sites, but most tourists visit in groups (Table 4). All the respondents at Gulmarg travelled in groups, and the group size was relatively larger at the resort. Groups let travel operators/managers enjoy economies of scale on account of various expenses, and it is easier to deal with a group than with individuals, and group travel should be encouraged. Recreational activities have mainly followed the increasing individualization of society (Roovers et al. 2002), which is to be discouraged.

Most visitors arranged their own trips so that they could stop as per their own convenience and could enjoy the scenic beauty they may came across en route and avoid the bindings of tour operations; these visitors are from the state (Table 5). As many as 42% of the visitors came through a trip package in Pahalgam, and more tourists at Pahalgam and Gulmarg visited forest resorts than at Dodhpathri and Thajiwas.

Table 3 Socio-demographic profile of tourist group heads

Variables	Dodhpathri (FS 1)	Thajiwas (FS 2)	Pahalgam (FS 3)	Gulmarg (FS 4)
Age (year)				
0–30	18 (36.00)	28 (56.00)	26 (52.00)	15 (30.00)
30–60	30 (72.00)	19 (38.00)	24 (48.00)	31(62.00)
>60	2 (4.00)	3 (6.00)	0 (0.00)	4 (8.00)
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)
Education				
Primary	2 (4.00)	1 (2.00)	3 (6.00)	0 (0.00)
High	1 (2.00)	1 (2.00)	2 (4.00)	2 (4.00)
Higher	2 (4.00)	2 (4.00)	4 (8.00)	3 (6.00)
Graduation	24 (48.00)	18 (36.00)	30 (60.00)	22 (44.00)
Above	21 (42.00)	28 (56.00)	11 (22.00)	23 (46.00)
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)
Income (INR/month)				
20000–40,000	17 (34.7)	11 (26.2)	10 (20.8)	8 (17.4)
40000–60,000	20 (40.8)	16 (38.1)	9 (18.8)	11 (23.9)
>60,000	12 (24.4)	15 (35.7)	29 (60.4)	27 (58.7)
Total	49 (100.00)	42 (100.00)	48 (100.00)	46 (100.00)
Average income (INR/month)	71,240	69,320	101,480	91,900
Residence/location				
Kashmir	26 (52.00)	25 (50.00)	19 (38.00)	25 (50.00)
Central	11 (22.00)	13 (26.00)	9 (18.00)	12 (24.00)
North	4 (8.00)	5 (10.00)	0 (0.00)	5 (10.00)
South	11 (22.00)	7 (14.00)	10 (20.00)	8 (16.00)
Jammu	5 (10.00)	3 (6.00)	3 (6.00)	5 (10.00)
India excluding J&K	15 (30.00)	17 (34.00)	19 (38.00)	14 (28.00)
Abroad	4 (8.00)	5 (10.00)	9 (18.00)	6 (12.00)
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)
Gender				
Male	2.64 (74.58)	2.96 (77.1)	2.22 (66.07)	5.36 67.68)
Female	0.9 (25.42)	0.88 (22.92)	1.14 (33.93)	2.56 32.32)
Total	3.54 (100)	3.84 (100)	3.36 (100)	7.92 (100)

Note Figures within the parentheses indicate percentage of total
Source Authors' calculations

Table 4 Group structure of forest visitors (number)

Visit as	Dodhpathri (FS 1)	Thajiwas (FS 2)	Pahalgam (FS 3)	Gulmarg (FS 4)
Individual	1 (2.00)	3 (6.00)	2 (4.00)	0 (0.00)
Group				
Number	49 (98.00)	47 (94.00)	48 (96.00)	50 (100.00)
Average group size	3.57	3.86	3.39	7.92
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)

Note Figures within the parentheses indicate percentage of total.
Source Authors' calculations

Table 5 Tourist travel arrangement (Number)

Arrangements	Dodhpathri (FS 1) Number of visitors	Thajiwas (FS 2) Number of visitors	Pahalgam (FS 3) Number of visitors	Gulmarg (FS 4) Number of visitors
Self	50 (100.00)	40 (80.00)	29 (58.00)	30 (60.00)
Travel package	0 (0.00)	10 (20.00)	21 (42.00)	15 (30.00)
Company	0 (0.00)	0 (0.00)	0 (0.00)	5 (10.00)
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)

Note Figures within the parentheses indicate percentage of total.
Source Authors' calculations

Tourists visited all the sites more than once; many respondents said that their first visit to a forest site, and exposure to a micro-climatic setting and ecological benefits, prompted them to return. Most tourists drove to forest sites, as in other regions (AMINAL 1993; Peltzer 1993; Schmithüsen and Wild-Eck 2000).

Visitors' attitude towards the forest environment

A small proportion of the respondents said 'Our landscape would look just as beautiful even if there were no forests', or 'Forests offer me little or no opportunities for leisure and recreation', and there were intra-site differences in the response across factors, but most tourists at all the forest resorts consider forests a national treasure and they would like these preserved sustainably (Table 6). Forests maintain the ecological balance and create a micro-climate, and the good response shows that visitors have a scientific outlook.

Many high-biodiversity areas are under pressure from tourism (Pickering 2010) and a negative ecological footprint (Wackernagel and Rees 1996), and the management of protected areas must balance

Table 6 Attitude of tourists towards forest environment (%)

Particulars	Dodhpathri (FS 1)	Thajiwas (FS 2)	Pahalgam (FS 3)	Gulmarg (FS 4)
Forest maintain ecological balance and may clean environment	80.00	90.00	94.00	88.00
Forest creates micro-climate	90.00	78.00	86.00	80.00
We should view the wildlife, water, and plants in our forests as a national treasure	88.00	84.00	86.00	88.00
Pure environment helps to sustain living	86.00	88.00	86.00	80.00
Forests are an important part of our national heritage	86.00	80.00	78.00	82.00
Forests for recreation and leisure are important for the wellbeing of the nation	78.00	86.00	92.00	90.00
Contribution for creating healthy environment and forest should be the priority	78.00	80.00	82.00	84.00
There should be pavements inside the forests	78.00	58.00	78.00	68.00
Visiting forests is important for my wellbeing	70.00	86.00	74.00	78.00
Forest conservation is important for livelihood	64.00	62.00	74.00	72.00
I feel perfectly safe when visiting forests	60.00	66.00	72.00	70.00
Forests make great holiday destinations for me and my family	54.00	68.00	70.00	72.00
Forests offer me little or no opportunities for leisure and recreation	0.00	8.00	4.00	6.00
Our landscape would look just as beautiful even if there were no forests	0.00	4.00	2.00	4.00

Note Chi-square= 516.14, p= <0.05
Source Authors' calculations

conservation requirements and visitors' expectations (Suckall et al. 2009). That represents a conservation management challenge, because the tourist population is heterogeneous, and it represents a diversity of socio-cultures, attitudes, perceptions, and viewpoints regarding the forest environment (Jones et al. 2011). Conservation management and improvement plans must consider visitors' perceptions of protected areas and the factors influencing these perceptions in formulating policy, therefore, and understanding the differences in visitor perception (Jones et al. 2011) and investigating their long-term impact on conservation management (Suckall et al. 2009) can help to optimize the existing conservation management instruments.

Reason for forest visits

It is important to understand the features that attract tourists to a resort, so that concerted efforts can be made to improve those factors and increase the tourist inflow. We attempted to capture the motivation of visitors (Table 7). At Dodhpathri (FS 1), the motivations were being in peaceful and tranquil surroundings, attraction to natural environment, and visiting paradise on earth. Fewer respondents cited escaping urban environment as a motivation. Many said attraction to nature and visiting paradise on earth motivated them. The responses were specific to forest sites. The findings are in line with Tong et al. (2019 a), which finds that the more frequent visitors visit for forest walking and first-time visitors come for forest bathing and forest walking. The chi-square estimate indicated that the responses to factors varied widely by site.

Most of the respondents said that forests motivated their visit, but some did not set out to visit a particular forest site; they decided to visit during the course of their outing. The existing literature reveals that forests do not motivate their day trip, which would be made regardless of a specific forest (Hill et al. 2003).

Forest-specific motivation/attractions

We asked the respondents at all the sites which forest-specific factors motivated their visit; the responses varied by site and showed that the factors were site-specific (Table 8). At Dodhpathri (FS 1), tourists were attracted by the excellent view of forests (90%), pleasant breeze (90%), and large trees (88%); only 6% were attracted by the spruce forests. The rock and ice

Table 7 Reasons for visiting forest site (%)

Particulars	Dodhpathri (FS 1)	Thajiwas (FS 2)	Pahalgam (FS 3)	Gulmarg (FS 4)
Being in peaceful and tranquil surroundings	86.00	8.00	78.00	86.00
Appreciating nature	60.00	72.00	8.00	82.00
Escaping the urban environment	13.00	18.00	27.00	11.00
Relaxation	40.00	46.00	52.00	68.00
Seeing the scenery along the way	66.00	72.00	38.00	68.00
Seeing forests	57.00	55.00	72.00	74.00
Spending time with family/friends	56.00	76.00	56.00	18.00
Seeing wildlife	0.00	5.00	7.00	8.00
Seeing a new place	66.00	58.00	52.00	28.00
Attracted by water	56.00	26.00	86.00	2.00
Attracted by natural environment	79.00	82.00	86.00	82.00
Learning about nature	72.00	74.00	72.00	68.00
Self-discovery	46.00	4.00	2.00	14.00
On a date/ post marriage trip	10	8.00	12.00	18.00
Visiting paradise on Earth	74.00	78.00	80.00	88.00
Others*	0.00	0.00	12.00	4.00

Note *Others are business, eventual purpose, horse-riding, etc.
Chi-square= 900.84, p= <0.05
Source Authors' calculations

Table 8 Forest-specific attributes motivating tourists towards forest site (%)

Particulars	Dodhpathri (FS 1)	Thajiwas (FS 2)	Pahalgam (FS 3)	Gulmarg (FS 4)
Shade	74.00	7.00	76.00	84.00
Silence	84.00	64.00	68.00	74.00
Chirping of birds	38.00	10.00	10.00	22.00
Diverse tree height	64.00	68.00	78.00	78.00
Mix of conifers and broadleaved trees	62.00	56.00	7.00	7.00
Presence of a water feature	86.00	36.00	84.00	6.00
Excellent view	96.00	94.00	84.00	86.00
Lush green view	62.00	58.00	78.00	82.00
Closed spruce forests	6.00	1.00	0.00	8.00
Rock and ice	78.00	96.00	82.00	26.00
Verdant forests	83.00	78.00	86.00	82.00
Large trees	88.00	62.00	68.00	92.00
Presence of campground	82.00	52.00	37.00	84.00
Pleasant breeze	90.00	86.00	92.00	92.00

Note Chi-square= 706.69, p= <0.05
Source Authors' calculations

and excellent view at Thajiwas (FS 2) were the motivation. The pleasant breeze at Pahalgam (FS 3) and its verdant forests and water feature were the most attractive forest-specific motivational factors. Besides, tourists have reported the shade and silence at the forest in Gulmarg as an important motivation.

Both men and women visit forests to see the landscape and experience forest bathing (Zhang et al. 2019). The chi-square estimate implies that the tourist response to forest-specific motivational factors vary significantly by forest site. The overarching motivation was the enjoyment of nature and the outdoors and an awareness of the need for environmental restoration by preserving forests. These perceptions have clear links to the ways in which people value nature and the environment (Leichenko and O'Brien 2008).

Expenditure on forest visits and ranking

We categorized tourists by their ranking of reasons for visiting a forest site; forests constituted the main reason for the trip for 36% of the tourists at Pahalgam and Gulmarg, 34% at Dodhpathri, and 28% at Thajiwas. We assigned 100% of the expenditure to forests for tourists who revealed forests as the main reason for their trip. Forests constituted a very important reason for their visit for 56% of the tourists at Dodhpathri and 42% of the tourists at Thajiwas; the response was lower in Gulmarg. Few respondents said that forests were of little importance to their visit.

The expenditure partitioning method estimates reveal that expenditure was the highest at forest resorts in Pahalgam and Gulmarg (Table 9), because these two world-famous tourist destinations attract visits from all over the globe and provide a range of tourism services. The expenditure was lower at Dodhpathri because that forest has not been fully discovered or promoted; unexplored or partially explored forest sites must be promoted rigorously in the country and abroad.

A study of the economic impact of conserved landscapes in the south-west conducted by Tourism Associates in association with Geoff Broom Associates (1999) used a slight variant of this approach: visitors leaving the south-west were asked to score the extent to which conserved landscapes had motivated their trip on 10. The average score was 7.8, which was converted into a motivation factor of 78%, and interpreted to mean that conserved landscapes motivate 78% of holiday trips (or 78% of each holiday trip on average). The figures on the number of holiday trips taken in the south-west can then be adjusted to reflect this motivation when calculating the economic benefits of conserved landscapes to the region.

Table 9 Categorization of tourists on the basis of their ranking of reasons for visiting forest sites (No.)

Rank	Dodhpathri (FS 1)	Thajiwas (FS 2)	Pahalgam (FS 3)	Gulmarg (FS 4)
Main reason	17 (34.00)	14 (28.00)	34(68.00)	36 (72.00)
Very important	28 (56.00)	21 (42.00)	12 (24.00)	10 (20.00)
Important	5 (10.00)	13 (26.00)	3 (6.00)	2 (4.00)
Not very important	0 (0.00)	2 (4.00)	1 (2.00)	2 (4.00)
Total	50 (100.00)	50 (100.00)	50 (100.00)	50 (100.00)

Source Authors' calculations

Table 10 Estimates of trip generation function

Variable	Dodhpathri (FS 1)		Thajiwas (FS 2)		Pahalgam (FS 3)		Gulmarg (FS 4)	
	Coeff**	SE^	Coeff**	SE^	Coeff**	SE^	Coeff**	SE^
I	0.02*	0.01	0.00	0.02	0.05*	0.01	–0.13	0.11
FS	0.01	0.04	0.23*	0.12	–0.36	0.59	–0.12	0.38
E	0.12*	0.07	0.02	0.12	0.15	0.49	0.86*	0.71
A	–0.01	0.01	0.01	0.01	–0.20*	0.11	0.23*	0.07
TT	0.07*	0.01	–0.12*	0.01	–3.49*	1.53	0.21*	0.08
TC	0.00	0.02	–0.01	0.01	–0.13*	0.08	–0.02	0.02
EC	0.33*	0.13	0.24*	0.11	0.33*	0.04	–1.92	1.60
SC	–0.12	0.12	0.48*	0.28	0.50	1.76	1.13*	1.23
FTREE	0.37*	0.16	0.63*	0.24	–0.24	1.62	1.16*	0.58
SPCFE	0.33*	0.13	–0.04	0.50	0.24*	0.11*	0.93*	0.47
Intercept	0.26	0.46	–1.12	1.01	5.08	4.91	–11.89	5.27
R2	0.8523		0.8509		0.4147		0.5052	

Source *Significance at 0.05 or better probability levels
** Regression coefficient, and ^ Standard error
Note Authors' calculations

Trip generating function estimates

An attempt was made to capture the impact of forest-specific variables on visits to forest sites (Table 10). The estimates revealed that out of all exogenous variables, 5 variables appear to have significant role on visitation of an individual to a particular forest site. Income, education, ecological concerns, tree specific and space specific characters contributed positively while family size, travel and age has negatively contributed to it.

The coefficients of the function indicated that forest ecosystem (as explained by forest specific attributes) have significant role in generating visits to forest sites. Moreover, ecological concerns and scenic concerns have also a significant role in increasing visits to forest. Accordingly, the positive and negative coefficients must be judiciously taken care off for improving visitations to a particular forest site. The estimates of R^2 indicated a model to be best fit for qualifying determinants of visitation to forest.

Conclusion and policy suggestions

Most of the visitors were from the Kashmir region and from other states; however, a good number were from abroad. They were in the 30–60 age group, considered to be the active population in respect of risk bearing and decision-making, and involved in business or white-collar jobs. The distinct amenities provided by the forest resorts at Pahalgam and Gulmarg attracted high-income visitors, which indicates that these amenities need to be created at other forest sites as well. Men outnumbered women; therefore, women

should be encouraged to visit. Most trips to Pahalgam were self-arranged; 42% of the visitors used tourist packages. Several factors motivated the respondents of our study to visit the forest sites, but few visited for business. Most tourists were attracted by forest-specific attributes: water features, lush green view, and pleasant breeze. Most tourists consider forests a national treasure and emphasized that these should be preserved sustainably. The trip generation function estimates revealed that the forest-specific attributes of the ecosystem at the selected resorts contributed significantly in improving the frequency of individual visits. Income, scenic concerns, and education were the other positively significant determinants of visits, while family size and travel time had a negative impact.

The forest and tourism department may offer visitors to forest sites complementary 'hop on, hop off' rides that play movies of forest attributes and vanity vans at the entry or exit points. Publishing, audio-visual content, calendars, flyers, and wall hangings and distributing them would help make people eager to visit forests. Targeting the young would attract more visitors to forest sites. The campaign should focus on groups like Mahila Mandals and self-help groups.

The tourism industry undertakes initiatives to minimize the negative environmental impacts of tourism and avoid further impacts. The forest and tourism department needs to amplify these initiatives. Developers, industry, and the government could volunteer to design and build eco-friendly tourist infrastructure and non-profit tours that expose eco-friendly travel ethics.

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