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Tourist Behaviour for Sustainable Development of Ecotourism: A Case Study on the Upper Part of the Beas Tourist Circuit, India

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Abstract

The attitude and behavior of the tourists affect the tourist spots both economically, socially and environmentally. This calls for sustainable tourist behaviour in order to minimize the impact on the natural environment and resources of tourist destinations. The current article makes an attempt to understand the pattern of tourist behaviour based on their social and economic background, travel experiences, awareness about ecotourism, ecotourism activities, environmental consciousness and their environmental impact in the upper part of the Beas Tourism Circuit (BTC). About 180 samples have been taken and analyzed using appropriate methods. It is found that tourist behavior changes with their socio-economic background and level of environmental awareness. Therefore, their impact on the local environment and resources of tourist destination have been both positive and negative for the development of ecotourism based on a selected set of 18 parameters in the study area.

Introduction

Ecotourism emerged as an alternative form of sustainable tourism. Growing mass tourism associated with environmental and cultural degradation has been a big concern lately. Therefore, sustainable tourism is economically viable, socio-culturally approved and environmentally supportable. Ecotourism involves the nature-based tourism activities that minimize the environmental impact through participation of the local community, local stakeholder, administrative body, non-governmental organization, tour operator, travel agency and also the tourists. The development of ecotourism provides support to local people and the protected area, conserves the social and cultural characteristics of the communities and manage well the physical environment and environmental resources in destination regions. To achieve the goal of sustainable tourism through ecotourism in the study area, tourist behavior along with their impacts have been assessed in this article.

The Study Area

The state of Himachal Pradesh is one of the most popular tourist destinations of India. Based on the nature of tourist attraction and tourist activities, the state comprises four tourist circuits, viz., Beas circuit, Sutlej circuit, Dhauladhar circuit, and Tribal circuit. The study area is located in the northern part of the Beas Tourist Circuit (BTC) that extends between 31°45′05″N to 32°24′57″N latitudes and 76°56′14″E to 77°52′23″E longitudes in the central part of the state. The BTC has rich tourism resources, e.g., natural environment, natural landscape, national parks, and wildlife sanctuary, rich biodiversity, and traditional cultural diversity that attract a large number of domestic and international tourists every year. The variety of ecotourism opportunities includes rural tourism, ethnic tourism, cultural tourism, wildlife tourism, and adventure tourism. The ecotourism activities such as trekking, river rafting, river crossing, camping, skiing, paragliding, rock climbing and rappelling, mountaineering and expeditions, bird watching, zorbing, cable car and ropeway, mountain biking, angling and fishing, and meditation and yoga.

Objectives

The major objective of this research is to understand the behavioural characteristics of tourists towards sustainable ecotourism development in the upper part of the BTC.

Materials and Methods

The basic data has been collected using questionnaire survey among the tourists in different parts of the district. About 12

tourist sites/ spots have been selected (fig.2) and in each of these, 15 samples have been taken for a questionnaire survey, and direct personal interview. In the post-field study, further data and information have been added from internet resources. Hence, a total of 180 samples have been taken based on purposive sampling method.

The behavioural characteristics of the tourists have been extracted in five successive steps: the first step involves the introduction about the social and cultural characteristics of the area and the concept of ecotourism to the tourists. Tourism experience along with the background of the tourists have been done in the second step. The third step highlighted the interest of the tourists in different activities and their participation. The fourth step explores the environmental consciousness of tourists through different kinds of activities. Finally, the impact of the tourists on the resources of the destination region has been evaluated using modified ecological footprint analysis method.

Results and Discussion

Ecotourism emerged as a tool of sustainability. The behavior of tourists determines the nature of tourism in a destination region. The tourist behavior reflects their level of environmental consciousness. It is the key to sustainable tourism.

A. Salient Features

Of the total samples, 65% are male and 35% female (fig.3a). This kind of inequality reflects the nature of the socio-cultural background of the tourist households and that of the region of origin. It also determines the characteristics of the tourists and their nature of activities they participate in. It varies from tourists from cities to those from villages. Among the total respondents, 72% has come from towns/cities and 28% from rural areas (fig.3b). The nature of employment of the tourists and the tourism activities are positively related to each other. The nature of job determines where to travel when to travel and what activities to participate in. The sample survey shows that about 24% of the respondents are professionals, 16% housewives, 11% students, 11% businessman,10% government officials, 6% clerics and salesman, 5% agricultural labor, 5% retired and unemployed persons, and 11% others (fig.3c).

The nature of activities participated by the tourists and the consumption of local resources depend on the income level of the tourists. The concentration of higher income group tourists is significantly high and the concentration of the middle-income group is also considerable in this region (fig.3d). However, tourist arrival does not dependent on the income of a tourist. It certainly explains the variation in the participation of the activities. The activities performed by the tourists is determined by their economic ability. The role of education in tourism is immense. Most of the tourist are graduate and master degree holder; tourists having education at primary, higher secondary, diploma level is relatively less (fig.3e).

The concept of ecotourism and tourism sustainability is quite new. Some developed and also developing nations have already implemented it in their tourism planning. But in a developing country like India, it is quite difficult; however, increasing awareness among the tourist in India is the primary challenge for the government and if it is possible, the future of ecotourism industry, as well as environmental sustainability, should gain momentum in near future. Among the total samples, about 72% of tourists are aware of ecotourism. Therefore, the future of ecotourism industry and the environmental sustainability in India is bright (fig.3f). Besides, about 8% of the samples are aware of the ecotourism from their travel agents, 14% from friends and family, 22% from newspaper and magazine, 18% from television and radio, 31% from internet, and 8% from other sources (fig.3g).

Of the total respondents, about 45% participated in ecotourism activities (fig.3h). Thus, there is a lack of participation rate among tourists, indicating poor environmental consciousness. The researcher provided the required information to the respondent tourists and after that, they were asked where they wish to go for ecotourism. Out of total samples, about 27.25% want to spend holidays in mountains, 14.93% in protected areas, 16.35% in forests, 12.32% in islands, 5.92% in coastal areas, 16.82% in tribal areas, 5.21% in rural areas and 1.18% in other places (fig.3i). Therefore, tourists are mainly interested in the mountains and forests, that need to be addressed with proper planning. Ecotourism has some universal rules or code of conduct to make it sustainable. The code of conduct has been developed from global to a local level based on the principle of sustainability.

In India, each state has its own individual code of conduct approved by the Ecotourism Society of India, Government of India. The ecotourism society in Himachal Pradesh has been formed to develop tourism in a sustainable manner and spread its benefits to remote parts of the state. About 50.45% of the respondents are now aware of this code of conduct, while 23.64% know a little bit and only 25.91% has good knowledge about it (fig.3j). About 92% of the respondents are well-informed about popular destinations but do not have any knowledge about lesser-known tourist spots in the study area (fig.4a). Of the total samples, only 22% visited protected areas such as National Parks and Wildlife Sanctuaries in the upper part of the Beas and Parbati valley, while a large number visited Manali Wildlife Sanctuary located in the northern part of the study area. Due to lack of information and locational factor, tourists rarely visit Inderkila National Park, Kanawar Wildlife Sanctuary, Kias Wildlife Sanctuary and Khokan Wildlife Sanctuary (fig.4b).

B. Tourism Background

The act of tourism along with activities performed and participated in by the tourists exerts a deep impact on the habitat of the tourist destinations. Tourist prefers to visit the places where tourism-related facilities are available, e.g. accommodation with basic amenities and transportation and communication facilities. The recreational need of the tourists depends on the socio-cultural, economic and physical environment of the place of their origin. The nature of activities participated by the tourist reflects the individual behavior and also their choice of recreation. The frequency and intensity of travel depend on the economic status, personal needs and professional requirement of the tourists. Most of them (53%) prefer to visit again, 28% for 3^{rd} - 4^{th} times, 13% 5^{th} - 6^{th} times in a calendar year and quite a few uses to visit more than 7 times (fig.4c). Repeated visitors are mainly service professionals.

Repeated visits in a travel destination indicate a positive sign of

tourism development. In the study area, most of them are first-timers (65%), about 23% visited 2 to 3 times while only 12% more 4 times in a calendar year (fig.4d). Repeated visits reflect a kind of psychological bonding.

Longer duration of travel indicates a positive aspect for the destination region in terms of economic opportunities and related tourism development. There is a positive relationship between tourist volume and duration of travel in the study area. About 34% of the tourists stay for 13+ days, 22% for 10 - 12 days, 10% for 7 9 days, 14% for 4 6 days and 20% for 1 - 3 days (fig.4e).

Tourist basically prefers to visit a place for a variety of reasons. About 26% of the tourists travel for recreation, 23.75% for adventure, 8% for seeing wildlife, 19% for scenic beauty, 10.5% for local culture, 8.24 for education, 3% for business and only 1% for the pilgrimage (fig.4f).

Well-developed transportation and communication network help to boost tourism. Most of the tourists used to travel by bus, train and rented a car. Most of the international tourists and those from distant regions take a flight to the nearest airport and then local transport to reach the destination (fig.4g). During travel, some travel with the help of a travel agency or organization whereas there are some who travel independently. Out of the total samples, only 37% travel with the help of a guide and 63% independently (fig.4h). People prefer to use accommodation based on their personal choice and economic condition. Survey shows that about 53% of the tourists prefer to stay in budget hotels, 4.35% star hotels, 2.54% motels, 4.71% forest bungalows. The adventure tourists prefer to stay at camps (9.06%) (fig.4i).

C. Ecotourism Activities

Environmental awareness of tourists is the key to the sustainability of tourism. In India, the concept of ecotourism is relatively new both in academic research and among government officials. The majority of the tourists in India are not aware of their impact on the environment.

To understand the nature of ecological, cultural and environmental awareness among the tourists, the 5-point Likert scale, e.g., very high, high, moderate, low and very low has been used. Activities like bird watching, wildlife watching, trekking, rock climbing, cycling, horse riding, river rafting, walking, angling, skiing, hiking, angling, stay and interact with local people, photography, buying local craft and view films, etc. have been taken into consideration. All information of preferences to participate in these activities have been tabulated, accordingly weighted and further normalized to 0 to 1 in order to minimize the peak. The normalized weighted data was then calculated by multiplying it with the assigned weights. Finally, these scores were summed up to understand the nature of preferences of all sample tourists in individual activities. The larger the value, the more the degree of ecotourism development.

In the study area, higher scores of preference to participate have been found in photography, walking, vacationing, interacting with local people, skiing, wildlife viewing, and trekking. However, lower scores are found in bird watching, rock climbing, cycling, horse riding, angling, hiking, buying handicrafts and viewing movies (Table 1a and 1b). The higher participation rate indicates a positive sign for ecotourism development in the study area and the lower participation rate is controlled by several factors such as accessibility, extremity, and behavior of tourist. There lies a positive relationship between preference to participate and participation rate (Table - 2).

Thus, the government and local administration should provide infrastructure and other infrastructural facilities to the tourists in order to increase the participation rate in these activities. The correlation coefficient between preference to participate and the participation rate is significantly positive ($r = +0.63$ at 95% confidence level) (fig.5). Thus, about 40% of the total variance can be explained by the linear regression.

D. Environment Awareness of the Tourists

To understand the environmental consciousness of the tourists, the following set of information has been collected with four options like never, sometimes, often and always: participation in cultural programme organized by local people, buying local crafts/ products during visit, staying at a place where abundant wastage of water and electricity is observed, experiencing overcrowding during holidays, use of guide to visit tourist spots, use of normal local dress (not traditional), habit of throwing garbage (plastic bag, foil, glass, bottle, metal can, etc.) here and there, offering food to the animals and birds, plucking flowers and leafs, using biodegradable packaging material, using public transport, actively pursuing nature-based activities, refusing excess packaging, for each activities. The weighted score of each activity has been calculated based on the nature of the responses received.

It shows that a positive environmental consciousness among the tourist has been found in all the aspects excepting the only aspect of 'use of guide' during the visit. The result has been ordered into three groups, viz. high, moderate and low. High score has been found in the case of wastage of water and electricity(C), use of normal local dress (not traditional) during holidays(F), waste generation(G), offering food to the animals and birds (H), plucking of flower and leafs (I) and the participation of nature-based activities during holiday(L). The moderate score has been found on activities such as the purchase of local crafts and products during the visit (B), overcrowding during the holiday (D), use of biodegradable packaging (J), use of public transport (K) and refusing excess packaging (M). The low score has been observed in case of participation in cultural programs organized by local people (A) and use of guide (E). Taking the help of guides and participation in local cultural programs show negative aspects of ecotourism development in the study area (Table - 3 and fig.5).

E. Impact assessment of Tourist

Ecological footprint analysis is a unit-based measurement method and is globally acceptable. Ecological footprint analysis is a viable component of sustainability analysis and an indicator of human demand on a global biological resource (Rees, 1999; Moffatt, 2000). It is an index to measure progress towards the goal of sustainable tourism development where the conversion of consumption and waste in the unit of equivalent land area (Abdelwarith, 2013; Wackernagel and Rees, 1996). Hence, it is a measure based on resource and waste that implies the impact of

an individual on the natural environment. The tourist has both a direct and indirect impact on global ecological system and resources.

The ecological impact assessment of ecotourism destination is the primary key to estimate the carrying capacity. Sustainable operation of ecotourism destination is possible based on ecological footprint as a planning tool. It helps to minimize the ecological impact of the tourists.

For impact assessment, a set of 18 questions pertaining to various aspects of tourism and day-to-day activities of a tourist has been used in the questionnaire, e.g., meal type, food source, food type, food wastage, mode of transport, distance of travel, travel time, transportation, nature of travel, air travel, accommodation type, sharing of accommodation, facilities in accommodations, energy use, water use, water wastage, waste generation and travel time.

The questions with 4 to 5 relative importance options have been given to the tourists. The weight of each factor within each element has been given based on the nature of importance or impact on the ecological and environmental system. The weighted score has been further normalized within 0 to 1, where the value of 1.0 indicates the least impact and 0 indicates a maximum impact on resources. The responses in each option within each element have been tabulated and weighted score of each factor calculated. The result shows that among the 18 elements, some has an adverse impact on resources and some positive impact.

The weighted scores range from 21.53 to 52.50. A higher score indicates a low impact and vice versa. The scores are then categorized into three:

a) high impact,
b) moderate impact, and
C) low impact.

The low impact has been recorded on energy use, waste of food, food consumption and frequency of visits in a year. The moderate impact has been found in case of waste generation, travel time, food source, accommodation type, transport, nature of accommodation, air travel, and energy used during travel. Very adverse impact is found in case of travelling distance, sharing of accommodation, water use or wastage of water, mode of transport and meal type. Tourist basically prefers a non-veg meal. Foreign tourists prefer air travel. Longer the distance of tourist spots, the longer the travel time and higher energy consumption. Tourists mostly prefer a personal car to visit tourist spots (Table - 4a and 4b).

Conclusion

The understanding of tourist behaviour is the primary to the development of strategies for better management of tourist destinations. The current study explained the sustainable behaviour of the tourists based on their personal travel experience, awareness about ecotourism, ecotourism activities and environmental conservation. The higher sustainable behaviour of tourists is found in the case of educated tourists, viz. executives and professionals and students. Tourists are mostly not aware of ecotourism and their level of participation in different ecotourism activities is very low. The first time visitors dominate the scenario; they stay for a longer duration. The use of guide and travel modes indicates a negative sign for the development of ecotourism. The preference to participate and participation in different ecotourism activities are positively related. The majority of activities are associated with higher environmental consciousness.

Ecotourism development is negatively affected by lesser use guides and participation in local cultural programmes. Water wastage, fuel use, and meal types exert a huge negative impact on local resources. Thus, sustainable behaviour of the tourists is necessary to achieve the goal of sustainable tourism in the study area. The increase of environmental consciousness among the tourists during travel and the development of environment-friendly tourism activities in the destination should help to achieve the goal of ecotourism as well as sustainable tourism in the study area.

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Table -1a: Weighted Score of Ecotourism Activities and Participation

Activity	Preference	No. of Respondent	Normali-zation	Weight	Weighted Score	Participated Activities		Participation (%)
	Very Low	[illegible]	0.032	1	0.032	Yes	No	
	Low	31	0.141	2	0.282	153	67	**69.55**
Bird Watch-ing	Moderate	66	0.300	3	0.900			
	High	32	0.145	4	0.582			
	Very High	84	0.382	5	1.909			
	Total	220			**3.705**			
	Very Low	0	0.000	1	0.000	167	53	**75.91**
	Low	12	0.055	2	0.109			
Wildlife Viewin g	Moderate	23	0.105	3	0.314			
	High	74	0.336	4	1.345			
	Very High	111	0.505	5	2.523			
	Total	220			**4.291**			
	Very Low	0	0.000	1	0.000	142	78	**64.55**
	Low	6	0.027	2	0.055			
Trek-king	Moderate	36	0.164	3	0.491			
	High	65	0.295	4	1.182			
	Very High	113	0.514	5	2.568			
	Total	220			**4.295**			
	Very Low	11	0.050	1	0.050	63	157	**28.64**
	Low	28	0.127	2	0.255			
Rock Climb ing	Moderate	72	0.327	3	0.982			
	High	59	0.268	4	1.073			
	Very High	50	0.227	5	1.136			
	Total	220			**3.495**			
	Very Low	18	0.082	1	0.082	59	161	**26.82**
	Low	42	0.191	2	0.382			
Cycling	Moderate	66	0.300	3	0.900			
	High	48	0.218	4	0.873			
	Very High	46	0.209	5	1.045			
	Total	220			**3.282**			
	Very Low	10	0.045	1	0.045	138	82	**62.73**
	Low	23	0.105	2	0.209			
Horse Riding	Moderate	38	0.173	3	0.518			
	High	91	0.414	4	1.655			
	Very High	58	0.264	5	1.318			
	Total	220			**3.745**			
	Very Low	13	0.059	1	0.059	103	117	**46.82**
	Low	17	0.077	2	0.155			
River Rafting	Moderate	35	0.159	3	0.477			
	High	52	0.236	4	0.945			
	Very High	103	0.468	5	2.341			
	Total	220			**3.977**			

Table -1b: Weighted Score of Ecotourism Activities and Participation

Activity	Preference	Respondents	Normali-zation	Weight	Weighted Score	Participation		Participation (%)
	Very Low	4	0.018	1	0.018	220	0	**100.00**
	Low	7	0.032	2	0.064			
Walking	Moderate	32	0.145	3	0.436			
	High	39	0.177	4	0.709			
	Very High	138	0.627	5	3.136			
	Total	220			**4.364**			
	Very Low	18	0.082	1	0.082	35	185	**15.91**
	Low	41	0.186	2	0.373			
Angling	Moderate	87	0.395	3	1.186			
	High	39	0.177	4	0.709			
	Very High	35	0.159	5	0.795			
	Total	220			**3.145**			
	Very Low	8	0.036	1	0.036	90	130	**40.91**
	Low	17	0.077	2	0.155			
Skiing	Moderate	12	0.055	3	0.164			
	High	80	0.364	4	1.455			
	Very High	103	0.468	5	2.341			
	Total	220			**4.150**			
	Very Low	11	0.050	1	0.050	82	138	**37.27**
	Low	19	0.086	2	0.173			
Hiking	Moderate	75	0.341	3	1.023			
	High	47	0.214	4	0.855			
	Very High	68	0.309	5	1.545			
	Total	220			**3.645**			
	Very Low	8	0.036	1	0.036	208	12	**94.55**
	Low	6	0.027	2	0.055			
Stay & Interact with Local People	Moderate	28	0.127	3	0.382			
	High	30	0.136	4	0.545			
	Very High	148	0.673	5	3.364			
	Total	220			**4.382**			
	Very Low	3	0.014	1	0.014	202	18	**91.82**
	Low	4	0.018	2	0.036			
Photograp hy	Moderate	18	0.082	3	0.245			
	High	45	0.205	4	0.818			
	Very High	150	0.682	5	3.409			
	Total	220			**4.523**			
	Very Low	31	0.141	1	0.141	183	37	**83.18**
	Low	55	0.250	2	0.500			
Buying Craft	Moderate	59	0.268	3	0.805			
	High	27	0.123	4	0.491			
	Very High	48	0.218	5	1.091			
	Total	220			**3.027**			
	Very Low	103	0.468	1	0.468	58	162	**26.36**
	Low	48	0.218	2	0.436			
Viewing Film	Moderate	22	0.100	3	0.300			
	High	28	0.127	4	0.509			
	Very High	19	0.086	5	0.432			
	Total	220			**2.145**			

Table - 2: Activities score and percentage of participation

Activities	Total Weighted Score of Preference to Participate	Participants (%)
Bird Watching	3.705	69.545
Wildlife Watching	**4.291**	75.909
Trekking	**4.295**	64.545
Rock Climbing	3.495	***28.636***
Cycling	3.282	***26.818***
Horse Riding	3.745	62.727
River Rafting	**3.977**	***46.818***
Walking	**4.364**	100.000
Angling	3.145	***15.909***
Skiing	**4.150**	***40.909***
Hiking	3.645	***37.273***
Stay And Interact With Local People	**4.382**	94.545
Photography	**4.523**	91.818
Buy Craft	3.027	83.182
View Film	2.145	***26.364***

Activities During Travelling	Sample Data					Weight Assigned				Weighted Score				
	Never	Sometimes	Often	Always	Total	Never	Some-times	Often	Always	Never	Some-times	Often	Always	Total
I participated cultural programme organized by local people. (A)	60	95	28	37	220	1	2	3	4	0.2727	0.8636	0.3818	0.6727	2.1909
I buy local crafts/ products during visit. (B)	24	87	64	45	220	1	2	3	4	0.1091	0.7909	0.8727	0.8182	2.5909
I stay at the place where abundant wastage of water and electricity observed. (C)	102	53	58	7	220	4	3	2	1	1.8545	0.7227	0.5273	0.0318	**3.1364**
I faced over crowd during my holiday. (D)	35	100	55	30	220	4	3	2	1	0.6364	1.3636	0.5000	0.1364	2.6364
I used guide to visit tourist spots in Kullu-Manali Circuit.(E)	135	44	22	19	220	1	2	3	4	0.6136	0.4000	0.3000	0.3455	1.6591
I used normal local dress (not traditional) during my whole Holiday. (F)	35	48	22	115	220	1	2	3	4	0.1591	0.4364	0.3000	2.0909	2.9864
I throw garbage (plastic bag, foil, glass, bottle, metal can etc.) in here and there. (G)	149	52	12	7	220	4	3	2	1	2.7091	0.7091	0.1091	0.0318	**3.5591**
I offered food to the animals and birds. (H)	93	77	48	2	220	4	3	2	1	1.6909	1.0500	0.4364	0.0091	**3.1864**
I pluck flower and leafs. (I)	155	33	28	4	220	4	3	2	1	2.8182	0.4500	0.2545	0.0182	**3.5409**
I used biodegradable packaging instead of plastic packaging. (J)	18	84	65	53	220	1	2	3	4	0.0818	0.7636	0.8864	0.9636	2.6955
I used public transportation instead of a car. (K)	59	52	44	65	220	1	2	3	4	0.2682	0.4727	0.6000	1.1818	2.5227
I actively pursue nature based activities during holiday time. (L)	2	46	75	97	220	1	2	3	4	0.0091	0.4182	1.0227	1.7636	**3.2136**
I refuse excess packaging when I buy products. (M)	34	87	42	57	220	1	2	3	4	0.1545	0.7909	0.5727	1.0364	2.5545

Table - 4a: Impact of the Ecotourists

Elements	Elements	Options	Weight	Normalized Weight	Respondent	% of Respondent	Weighted Score	Total Weighted Score	Mean	Standard Deviation
Meal Type	**Q1**	a	5	0.333	7	4.24	2.33	**28.60**	**5.72**	**3.96**
		b	4	0.267	25	15.15	6.67			
		c	3	0.200	59	35.76	11.80			
		d	2	0.133	43	26.06	5.73			
		e	1	0.067	31	18.79	2.07			
Food Source	**Q2**	a	5	0.333	48	29.09	16.00	**37.80**	**7.56**	**6.00**
		b	4	0.267	42	25.45	11.20			
		c	3	0.200	30	18.18	6.00			
		d	2	0.133	24	14.55	3.20			
		e	1	0.067	21	12.73	1.40			
Food Type	**Q3**	a	4	0.400	32	19.39	12.80	**42.70**	**10.68**	**6.17**
		b	3	0.300	57	34.55	17.10			
		c	2	0.200	52	31.52	10.40			
		d	1	0.100	24	14.55	2.40			
Waste of food	**Q4**	a	4	0.400	37	22.42	14.80	**45.90**	**11.48**	**8.04**
		b	3	0.300	67	40.61	20.10			
		c	2	0.200	49	29.70	9.80			
		d	1	0.100	12	7.27	1.20			
Transportation	**Q5**	a	1	0.067	9	3.52	0.60	**36.27**	**7.25**	**5.93**
		b	2	0.133	55	21.50	7.33			
		c	3	0.200	12	4.69	2.40			
		d	4	0.267	56	21.90	14.93			
		e	5	0.333	33	12.90	11.00			
Travelling Distance	**Q6**	a	5	0.238	12	7.27	2.86	**21.24**	**4.25**	**2.13**
		b	4	0.190	36	21.82	6.86			
		c	3	0.143	39	23.64	5.57			
		d	2	0.095	47	28.48	4.48			
		e	1	0.048	31	18.79	1.48			
Travelling Time	**Q7**	a	5	0.333	31	18.79	10.33	**38.47**	**7.69**	**5.99**
		b	4	0.267	58	35.15	15.47			
		c	3	0.200	46	27.88	9.20			
		d	2	0.133	22	13.33	2.93			
		e	1	0.067	8	4.85	0.53			
Nature of transportation mode	**Q8**	a	1	0.067	72	43.64	4.80	**28.47**	**5.69**	**5.24**
		b	3	0.200	35	21.21	7.00			
		c	2	0.133	12	7.27	1.60			
		d	4	0.267	4	2.42	1.07			
		e	5	0.333	42	25.45	14.00			
Travel Nature	**Q9**	a	5	0.333	52	31.52	17.33	**40.93**	**8.19**	**7.51**
		b	4	0.267	56	33.94	14.93			
		c	3	0.200	28	16.97	5.60			
		d	2	0.133	17	10.30	2.27			
		e	1	0.067	12	7.27	0.80			

Table - 4b: Impact of the Ecotourists

Elements	Elements	Options	Weight	Normalized Weight	Respondents	% Respondents	Weighted Score	Total Weighted Score	Mean	Standard Deviation
Air Travel	Q10	a	5	0.333	31	18.79	10.33	**34.13**	**6.83**	**3.69**
		b	4	0.267	35	21.21	9.33			
		c	3	0.200	42	25.45	8.40			
		d	2	0.133	34	20.61	4.53			
		e	1	0.067	23	13.94	1.53			
Accommodation type	Q11	a	1	0.100	34	20.61	3.40	**37.60**	**9.40**	**4.99**
		b	2	0.200	69	41.82	13.80			
		c	3	0.300	44	26.67	13.20			
		d	4	0.400	18	10.91	7.20			
Sharing of Accommodation	Q12	a	1	0.067	41	24.85	2.73	**26.53**	**5.31**	**2.17**
		b	2	0.133	58	35.15	7.73			
		c	3	0.200	33	20.00	6.60			
		d	4	0.267	23	13.94	6.13			
		e	5	0.333	10	6.06	3.33			
Facilities in Accommodations	Q13	a	5	0.333	32	19.39	10.67	**35.33**	**7.07**	**4.34**
		b	4	0.267	41	24.85	10.93			
		c	3	0.200	44	26.67	8.80			
		d	2	0.133	26	15.76	3.47			
		e	1	0.067	22	13.33	1.47			
Energy use	Q14	a	4	0.400	76	46.06	30.40	**52.50**	**13.13**	**13.11**
		b	3	0.300	53	32.12	15.90			
		c	2	0.200	26	15.76	5.20			
		d	1	0.100	10	6.06	1.00			
Water Use	Q15	a	1	0.100	86	52.12	8.60	**27.40**	**6.85**	**3.75**
		b	2	0.200	55	33.33	11.00			
		c	3	0.300	18	10.91	5.40			
		d	4	0.400	6	3.64	2.40			
Water Waste	Q16	a	1	0.100	31	18.79	3.10	**45.60**	**11.40**	**10.03**
		b	2	0.200	42	25.45	8.40			
		c	3	0.300	27	16.36	8.10			
		d	4	0.400	65	39.39	26.00			
Waste Generation	Q17	a	5	0.333	57	34.55	19.00	**39.93**	**7.99**	**7.30**
		b	4	0.267	43	26.06	11.47			
		c	3	0.200	27	16.36	5.40			
		d	2	0.133	23	13.94	3.07			
		e	1	0.067	15	9.09	1.00			
Travelling Time	Q18	a	5	0.333	17	10.30	5.67	**32.93**	**6.59**	**4.31**
		b	4	0.267	31	18.79	8.27			
		c	3	0.200	63	38.18	12.60			
		d	2	0.133	42	25.45	5.60			
		e	1	0.067	12	7.27	0.80			

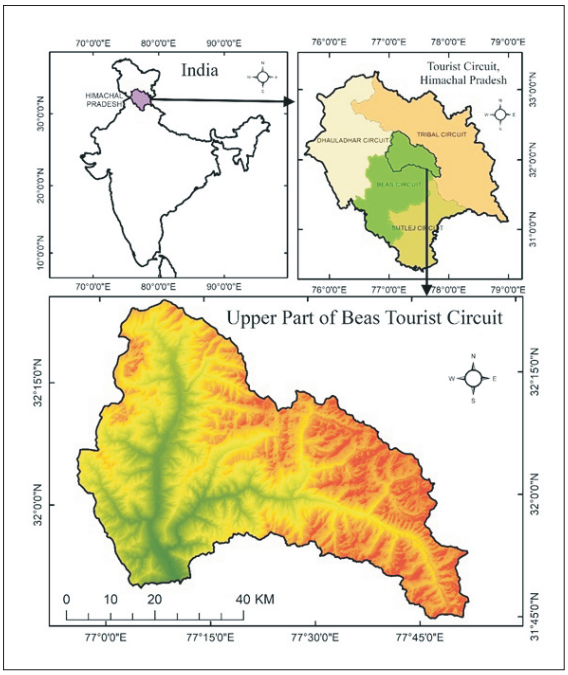

Fig. 1: Location Map of the Study Area

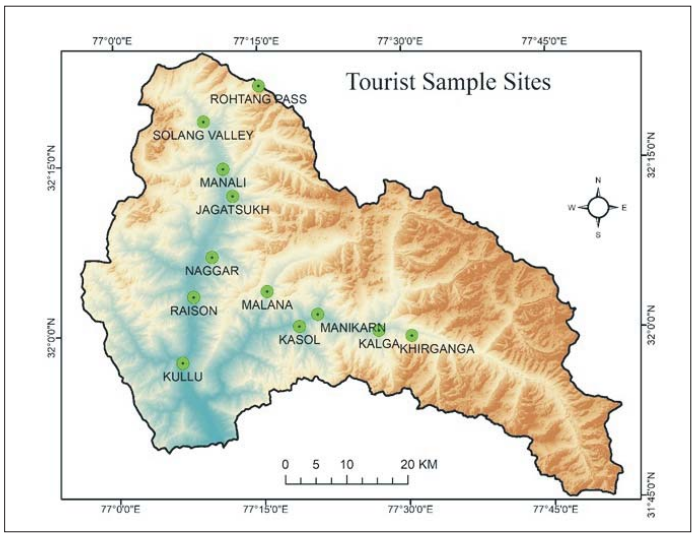

Fig. 2: Sample Sites for Tourist Survey

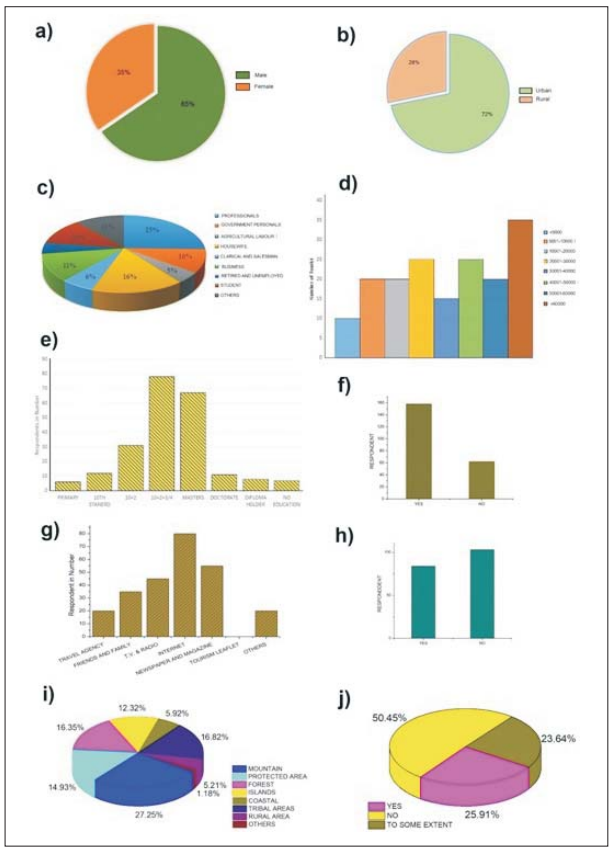

Fig.3: a) Gender, b)Tourist Origin, c)Employment, d)Income, e) Educationf) Idea of Ecotourism, g) Source of Information, h) Participation in Ecotourism, i)Preferred Ecotourism Destinations, j)Knowledge about Code of conduct.

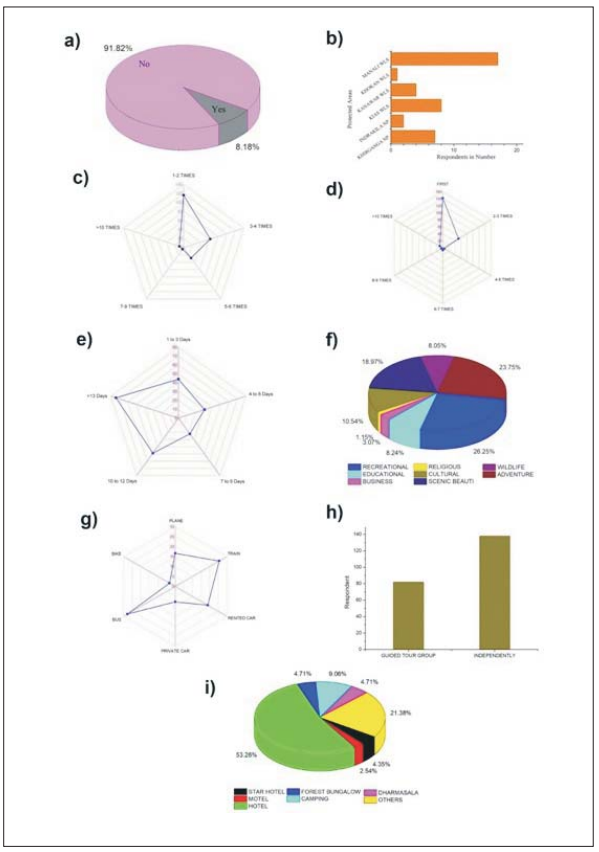

Fig. 4:*a) Knowledge about lesser known spots, b) Protected area visit, c) Nature of visit, d) Repetition of visit, e) Duration of visit, f) Purpose of visit, g) Travel mode, h) Guide help, i) Nature of Accommodation*

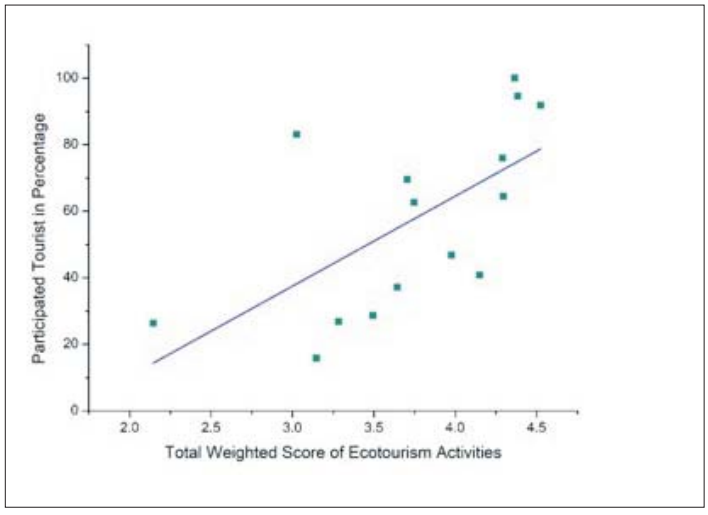

Fig. 5: Relation between Preference and Participation in Ecotourism Activities

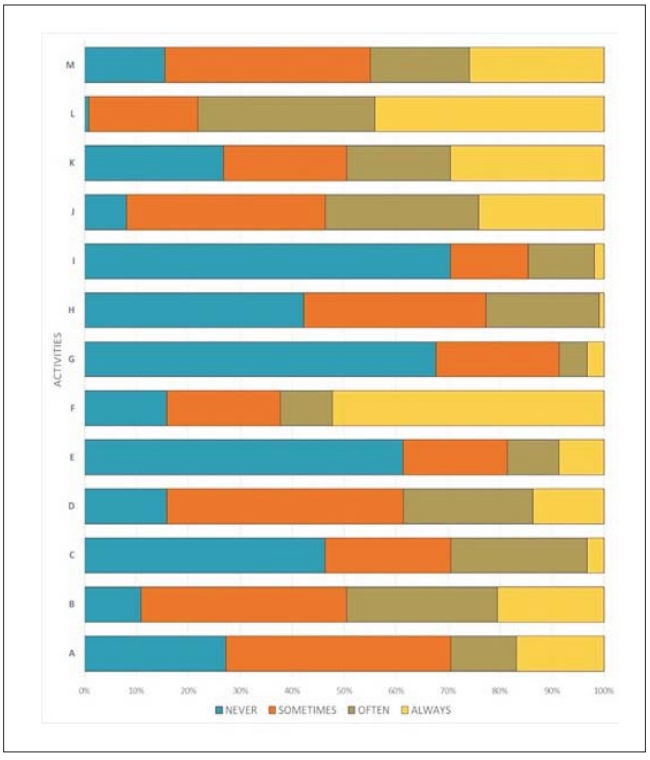

Fig. 6: Environmental Consciousness among Respondents