TOURISM INFRASTRUCTURE AND RESOURCE INTERPRETATION FOR SUSTAINABLE TOURISM DEVELOPMENT IN YAMUNA VALLEY: WITH SPECIAL REFERENCE TO DAKPATHAR, KALSI AND LAKHA MANDAL

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Abstract

Yamuna Valley is known for its rich natural resources and rich history. The present natural attributes of the identified location are highly suitable for accelerating business to the community for their development. Cultural and social aspect provides and increases the expectation and worth of tourism which is very supportive with the positive outlook of the local people. The ignorance shown by the authorities to such attraction has led to them being underdeveloped, due to which these destinations are unable to attract potential tourists. Therefore, through this study an effort has been made to evaluate the existing infrastructure, as well as the economic and social scenario at Dakpathar, Kalsi and Lakha Mandal of Yamuna valley, and also to interpret the available tourism resource for sustainable tourism development. The study reveals that the selected destinations lack in basic infrastructure to attract tourist though local residents are willing to participate in tourism activities overall sustainable development.

Key Words: Natural resources, existing infrastructure, accelerating business, sustainable tourism development.

Introduction

Infrastructure is basic physical and organizational structures needed for the operation of a society or enterprise, or the Services and facilities necessary for an economy to function. The term typically refers to the technical structures that support a society, such as roads, water supply, sewage, electrical grids, telecommunications, and so forth. Physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions forms part of the infrastructure (Butler, 1999; Chaw and Williams, 2002; Kaul, 1985a; Kaul, 1985b; Kaul, 1985c; Ritchie and Crouch, 2003; Mill and Morrison, 1998). Infrastructure facilitates the production of goods and services and also the



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distribution of finished products to markets. It is because of physical infrastructure of India that most of the tourist places are visited by tourists and pilgrims across the country. The root cause of poor tourist growth in the Himalaya is the lack of infrastructure. The mountains of Europe are more saleable because of having developed infrastructure and easy accessibility.

Tourism in a particular destination gets admired when its infrastructure satisfies the arriving tourists, both in terms of general and touristic infrastructure (Bravo, 2002). Destination gains significance when the balance between general and touristic infrastructure exists. Such infrastructural improvements not only generate benefits to tourists but can also contribute to improving the living conditions of local populations (Neto, 2003; Byrd, 2007). Adequate infrastructure is essential for the successful development of tourism and can be a particularly critical factor in less developed countries and regions, which often have limited infrastructure (Heraty, 1989). This could be well said that the poor infrastructure with unsurpassed attractions will never share sufficient space in alluring tourists. Such significant infrastructure is not satisfactory, especially in the Himalayas and needs much changes and development. As such, the development of any area depends upon the infrastructure facilities. If a destination or an area is very popular or important, then infrastructural facilities may not play a major role, but in the case of less popular destinations or areas, infrastructural facilities are of immense importance (Awaritefe, 2007; Sinha, 1996; Sharma and Bansal, 2007).

Existing Tourism Infrastructure Evaluation

1. Dakpathar

The beautiful tourist spot of Dakpathar is 45 kms away from Dehradun, on the way to Chakrata and is located at 790 m above sea level with pleasing and unique natural beauty. Yamuna Hydel project has heightened the tourism prospective of Dakpathar by providing further opportunities for picnic and recreation activities. It is accessible by regular bus services from Dehradun. Some of the significant tourist attractions around Dakpathar are Asan Barrage, Kalsi, and Lakha Mandal etc. Notable attractions around Dakpathar can be summarized as belows:

Located at a distance of about 6 km from Dakpathar, Kalsi houses Ashokan rock edict.
The rock edict is preserved till today by the Archaeological Survey of India. The place is
of immense importance from historical and archaeological point of view and the rock
edicts date back to 3 century BC.

- The second major attraction is Asan Barrage. It is about 11 km from Dakpathar and offers exciting water sport facilities and known as a paradise for bird watchers.
- Around 16 km from Dakpathar is a famous town of Paonta Sahib which lies in Himachal Pradesh State. Paonta Sahib is famous for the Gurudwara of Guru Gobind Singh. Every year, thousands of Sikh pilgrims visit this Gurudwara for solace and salvation.
- Another significant tourist attraction is Chakrata and is located at a distance of about 50 kilometers and 92 km from Dakpathar and Dehradun respectively. Situated in the Dehradun district, it is popularly known for its scenic view, sightseeing, invigorating climate, winter season, dense forest and unsurpassed landscape. Koti Kansar and Lakha Mandal are major excursion points from Chakrata.

S.No	Amenities And Facilities	Category	Available(A), Not Available(NA)	No. of Employees Involved
1.	Accommodation	Hotel	1	10
		Lodge	NA	-
		Guest House	3	4
		Camp Site	NA	-
2.	Fooding Units	Eatery	6	16
		Restaurant	3	12
		Tea/coffee Shops	1	1
3.	Communication	Cellular Network	A	2
		Internet services	A	1
		Post Office	A	9
4.	Medical and health	Hospital and Clinics	A	14
		Medical Shops	A	2
		Safe Drinking Water	A	-
5.	Transportation	Petrol Pumps	A	3
		Malted Road Accessibility	A	-
6.	Others	Tourist Information center	A	2
		Electricity	A	-
		Tour Operator	NA	-
		Tourist Guide	NA	-
		Bank/ATMs	A	5
		Police Station	A	6

Table 1 Field Survey

There is only one hotel of Garhwal Mandal Vikas Nigam (GMVN); an independent corporation of Uttarakhand Govt. Table 1 shows the bleak availability of infrastructure facilities available at Dakpathar. Dakpathar, being a popular tourist destination because of its physical set-up is surrounded by river barrage in its close vicinity with some important tourist spots like Kalsi, Asan Barrage, and Paonta Sahib enjoys sufficient tourist's arrival round the year. A couple of guest houses are operated by Forest, Hydel and Irrigation departments. Such an infrastructure hardly meets the basic purpose of visitors. Because of this problem, Dakpathar could not take its shape into a tourist destination. Other infrastructural facilities like telecommunication, transport, electricity etc. show a satisfactory picture. Road connectivity to this place is satisfactory and is well maintained. However, tour operators and tourist guides are not available, although a tourist informationoffice of the Govt. of Uttarakhand is functioning.

2. Kalsi

Kalsi is an important township in the Jaunsar – Bawar region and is located very close to Dakpathar. This gorgeous land is enriched and nourished by the confluence of the Yamuna River and its tributary, the Tons. The confluence of the Tons and Yamuna rivers is an exceptionally pretty place worth seeing. Rafting down the Yamuna is a novel experience. Another feature of the place is having its association with Ashokan Rock Edict which was carved out and inscribed on rock by Ashoka in 3 century BC. It plays the role of an added value to Kalsi. Many tourists of historical interests do visit Kalsi. Despite much potential, Kalsi lags behind in providing much needed and quality amenities and facilities. The present research work about infrastructural facilities at Kalsi reflects a gloomy and shabby picture which has been evaluated and discussed. Existing infrastructural units at Kalsi have been outlined below in Table 2.

S.No	Amenities And Facilities	Category	Available(A), Not Available(NA)	No. of Employees Involved
1.	Accommodation	Hotel	3	20
		Lodge	2	10
		Guest House	1	2
		Camp Site	A	-
2.	Fooding Units	Eatery	6	14
		Restaurant	2	7
		Tea/coffee Shops	5	10

3.	Communication	Cellular Network	A	2
		Internet services	A	1
		Post Office	A	4
4.	Medical and health	Hospital and Clinics	A	9
		Medical Shops	A	1
		Safe Drinking Water	A	-
5.	Transportation	Petrol Pumps	A	2
		Malted Road Accessibility	A	-
6.	Others	Tourist Information center	NA	-
		Electricity	A	5
		Tour Operator	NA	-
		Tourist Guide	NA	-
		Bank/ ATMs	A	5
		Police Station	A	3

Table 2 Field Survey

Poor state of infrastructure facilities in the region symbolizes that accommodation facilities in Kalsi are not adequate to meet the tourists' needs throughout the year since there are only 3 hotels, 2 lodges and a guest house owned and governed by forest department. The existing hotels in Kalsi are not in good conditions and do not provide adequate facilities and complete hygienic environment. The need for accommodation facilities in Kalsi also enhances because of the fact that this destination has vast potential to pull tourists from Dehradun, Mussoorie and Delhi NCR. Incidentally, Kalsi not only provides an opportunity to have the view of natural attractions but it also gives an opportunity to visitors to go for trekking, bird watching and hiking. This place is also famous for its historic wealth. The restaurant facilities are not adequate in Kalsi.

3. Lakha Mandal

Situated on the right bank of Yamuna River, Lakha Mandal is located in the abode of nature. It is the same place that is revered in Mahabharata, where *Kauravas* had once conspired to burn the *Pandavas* alive here in a palace made up totally of Stellac, known as Lakshagriha (a palace of shellac). The *Pandavas*, however, escaped unscathed with the help of lord Krishna. It is said that there is a historic cave here and an eight century temple with a number of

carved stone figures and two *Shivlingas*, all of which are considerable archaeological importance.

The village is rich in cultural legacy as revealed by their architecture and gastronomic delights. The attitude of local residents is hospitable to strangers. Table 3 depicts the available infrastructure facilities at Lakha Mandal.

S.No	Amenities And Facilities	Category	Available(A), Not Available(NA)	No. of Employees Involved
1.	Accommodation	Hotel	-	-
		Lodge	4	10
		Guest House	-	-
		Camp Site	A	-
2.	Fooding Units	Eatery	2	2
		Restaurant	-	-
		Tea/coffee Shops	2	3
3.	Communication	Cellular Network	A	1
		Internet services	A	-
		Post Office	NA	-
4.	Medical and health	Hospital and Clinics	A	1
		Medical Shops	A	2
		Safe Drinking Water	NA	1
5.	Transportation	Petrol Pumps	NA	-
		Malted Road	A	-
6.	Others	Tourist Information	NA	-
		Electricity	A	-
		Tour Operator	NA	-
		Tourist Guide	NA	-
		Bank/ATMs	NA	-
		Police Station	NA	-

Table 3 Field Survey

While studying the above table, it seems that accommodation facilities are not adequate to meet the tourists' needs as there are only 4 lodges available therein. The existing lodges are in poor conditions and do not provide adequate facilities and complete hygienic environment. There is urgent need to have good quality of accommodation units as Lakha Mandal has got

all possibilities of future development. Despite bad infrastructural facilities, thousands of tourists take an opportunity to visit Lakha Mandal.

Methodology

The study is exploratory and descriptive in nature. Total sample size of the population was 200 as identified from the study area. Field visit was conducted using quantitative methods involving questionnaires and the survey was conducted among the local people at various villages of Yamuna Valley. Result from this study may provide holistic approach in tourism planning and practices. It is hoped that the field survey findings of this project may enhance the tourism business opportunities and can be better managed for the visitors than ever.

Results and Findings

Demographic Profile: Present study is based on the field study conducted in the study area where 200 local residents were taken into consideration. Among 200 respondents, 65 (35%) belongs to 18-35 years age group, 108 (54.0%) respondents are in between 36-50 years and 27 (13.5%) respondents are above 50 years. 175 (86.5%) respondents are male and 27 (13.5%) respondents are female. 14 (7.0%) respondents are intermediate passed; 186 (93.0%) respondents are graduate. 66 (33%) respondents are self-employed, 48 (24%) respondents are in government services, 64 (32%) respondents are in private services and 22 (11.0%) respondents are unemployed.

Available Tourism Resource Interpretation

1. Accessin	1. Accessing the potentiality of region for tourism promotion									
	Not Potential	to some ° ° ° ° ' Total								
Frequency	59	52	64	25	00	200				
Percent	29.5	26.0	32.0	12.5	00	100				
Standard Deviation	1.02									
Deviation										

Table 4 Field Survey

Out of the total respondents, 59 (29.5%) respondents think that their region is not potential for tourism promotion, 52(26.0%) respondents think that their region is potential to some extent while 64(32.0%o) respondents feels that their region is marginally potential for

tourism promotion followed by 25(12.5%) respondents who thinks that their region is moderately potential for ecotourism promotion. No respondents think that their region has high potential for ecotourism promotion. The value of Standard deviation for the data is 1.02.

2. Benefits	2. Benefits of tourism promotion and management for employment generation								
	Hardly Beneficial	Beneficial to some extent	Beneficial to moderate extent	Beneficial to large extent	Fully beneficial	Total			
Frequency	48	25	39	53	35	200			
Percent	24.0	12.5	19.5	26.5	17.5	100.0			
Standard Deviation			1.43						

Table 5 Field Survey

Table 5 gives an idea that 48 (24.0%) respondents think that the ecotourism promotion and management in their region is hardly beneficial for employment generation, 25(12.596) respondents think that the ecotourism promotion and management in their region is beneficial to some extent for employmentgeneration,39(19.5%) respondents think that the ecotourism promotion and management in their region is beneficial to moderate extent for employmentgeneration,53(26.5%) respondents think that the ecotourism promotion and management in their region is beneficial to large extent for employment generation and 35 (17.5%) respondents think that the ecotourism promotion and management in their region fully beneficial for employment generation.

3. Sectors I	3. Sectors Involvement in Tourism									
	Lodging and Fooding	and and Transportation liking Souvenir Tota								
Frequency	53	12	51	48	36	200				
Percent	26.5	6.0	25.5	24.0	18.0	100.0				
Standard Deviation			1.44							

Table 6 Field Survey

Table 6 inferred that 53 (26.5%) respondents want to involve themselves in lodging and catering, 12 (6.0%) respondents want to involve in guiding and escorting, 51 (25.5%)

respondents want to adopt transportation business, 48 (24%) respondents want to get involved in trekking and hiking and 36 (18%) respondents want to involve themselves in souvenir selling.

4. Access to	4. Access to Financial assistance from banks on subsidized rate								
	Not Interested	Interested to some extent	Interested to moderate extent	Interested to large extent	Fully interested	Total			
Frequency	36	13	39	34	78	200			
Percent	18.0	6.5	19.5	17.0	39.0	100.0			
Standard Deviation		1.50							

Table 7 Field Survey

Table 7 above exhibit that there 36 (18%) respondents are not interested in seeking access to financial assistance from any bank for ecotourism, 13(6.5%) are interested to some extent. 39 (19.5%) respondents are moderately interested in accessing financial assistance from any bank whereas 34(17.0%) respondents are interested to large extent in financial assistance. Majority of the respondents 78 (39.0) wish to get fully interested in seeking access to financial assistance from banks on subsidized rates. The value of Standard deviation for the data is 1.02

5. Propensity to offer local cuisines to tourists									
	Hardly to offer	Offer to some extent	Offer to moderate extent	Offer to large extent	Fully offer	Total			
Frequency	13	38	47	65	37	200			
Percent	6.5	19.0	23.5	32.5	18.5	100.0			
Standard Deviation		1.175							

Table 8 Field Survey

Table 8 enumerates that 13(6.5%) respondents think that they can hardly manage to offer locally produced cuisines to tourists, 38(19%) respondents are of the opinion that they can offer local cuisines to tourists to some extent, 47(23.50) respondents views that they can manage to offer local cuisine to tourists to moderate extent, 65 (32.59%) respondents think

that can offer local cuisines to tourists to a larger extent whereas 37 (18.59%) respondents wish to offer local cuisines. The value of Standard deviation for the data is 1.175.

6. Willing t	6. Willing to convert and sublet home stay accommodation for tourist								
	Not possible	to some moderate to large " Total							
Frequency	0	26	60	52	62	200			
Percent	0	13.0	30.0	26.0	31.0	100.0			
Standard Deviation		1.03							

Table 9 Field Survey

Table 9 observes that no respondents are willing to convert and sublet home stay accommodation for tourists. 26 (13.0%) respondents are willing to offer same facilities to tourist to some extent whereas 60 (30.0%) respondents are willing to offer it to moderate extent. 52 (26.0%) respondents are willing to offer these facilities to a larger extent and 62 (31%) respondents are fully ready to offer such kind of services to tourists. The value of standard deviation is 1.03.

7. Proportion of escorts and porters to meet the demand of tourist								
	Not agree	to some moderate large Tot						
Frequency	40	13	96	24	27	200		
Percent	20.0	6.5	48.0	12.0	13.5	100.0		
Standard Deviation		1.23						

Table 10 Field Survey

Table 10 reveals that 40(20%) respondents are not agree to become a porter cum guide to tourist on reasonable payment basis, 13(6.5%) respondents are agreed to some extent while providing similar services of escorts and porters, 96(48.0%) respondents are agreed to a moderate extent whereas 24(27.0%) respondents agreed to a larger extent and 27(13.5%) respondents are fully agreed to serve as escorts and porters to meet the demand of tourists. The value of Standard deviation for the data is 1.23.

8. Knowledge dissemination to tourists on floral and faunal wealth								
	Not at all							
Frequency	13	97	49	27	14	200		
Percent	6.5	48.5	24.5	13.5	07.0	100.0		
Standard Deviation			1.0)2				

Table 11 Field Survey

Table 11 enumerates that 13 (6.5%) respondents feel uneasy to disseminate knowledge on floral and faunal wealth of the study area The views of the 97 (48.3%) respondents shows that they can give knowledge on the floral and faunal wealth to tourists to some extent whereas 49 (24.56%) respondents wish to offer knowledge to a moderate extent. 27(13.596) respondents can share knowledge on such wealth to a larger extent and 14 (7.0%) respondents can impart knowledge on such wealth fully. The value of Standard deviation for the data is 1.02.

9. Observing Do's and Don'ts prescribed by department of wildlife and forest									
	Not at all	Able to follow some	Able to follow to moderate	Able to follow to large	Fully Follow	Total			
		extent	extent	extent					
Frequency	12	71	37	67	13	200			
Percent	6.0	35.5	18.5	33.5	6.5	100.0			
Standard	1.00								
Deviation	1.09								

Table 12 Field Survey

Details of Table 12 shows that 12(6.0%) respondents will not be able to follow the do's and don'ts prescribed by Department of Wildlife and Forest for protection and conservation of ecotourism resources, 71(35.5%) respondents will be able to follow to some extent the similar do's and don'ts, 37(18.5%) respondents will be able to follow to moderate extent whereas 67(33.5%) respondents will be able to follow such rules. 13(6.5%) respondents will

be able to follow to full extent the similar do's and don'ts. The value of Standard deviation for the data is 1.09.

10. Willingness to participate in training camps organized by Uttarakhand										
Tourism development Board and other agencies.										
	Hardly Possible	Possible to some extent	Possible to moderate extent	Possible to large extent	Fully Possible	Total				
Frequency	38	62	22	78	0	200				
Percent	19.0	31.5	11.0	39.0	0	100.0				
Standard Deviation	1.17									

Table 13 Field Survey

Table 13 outlines that 38(19.0%) respondents are not willing to participate in training camps organized by Uttarakhand Tourism Development Board (UTDB) and other agencies, for 62(31.0%) respondents it can be possible to avail such benefits to some extent. 22(11.0%) respondents feels that it is possible to moderate extent to join such training camps whereas 78(39.0%) respondents thinks that they can avail such benefits to a larger extent. The value of Standard deviation for the data is 1.17.

Conclusion and Suggestion

There is an almost complete lack of regional or local tourism planning in the valley and as a result, the effectiveness of tourism marketing strategies for the Valley is virtually unknown. Efforts are needed to be up surged and internalized well through a collaborative dialogue and a series of brain storming sessions to plan and develop resource base of the Yamuna Valley as the planning and development concept may vary depending upon the geographic scale. Though master plan of Uttarakhand (2007-12) places great emphasis on providing necessary infrastructure and other facilities for which programmes in the shape of suitable accommodation, wayside amenities, transport and communication, training in hotel management and catering institutes, development of important tourist resorts and pilgrim places are being taken up. This has yet to be materialized in the Yamuna Valley. A master plan should identify the potential tourism centers and should focus on developing tourism facilities in a particular region.

Development would result in small investments and stakeholders' involvement initially. Fundamentally, these require not only a broader geographical context but a more comprehensive action-oriented blueprint. This will help local residents to participate in the development process and benefit from it. Involvement of NGOs will be critical for bridging required skills, knowledge, awareness and resources between the locals and tourist, micro financiers and suppliers. Realization of tourism potential has a very major correlation with promotion, time and convenience. Among the three most important factors identified for government initiatives are providing good connectivity, roadside amenities (including tourist information centers, good signage's etc.) and promotion of destination. Simultaneously government should start the process of identifying and selecting private sector parties for accommodation infrastructure and theme projects.

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