

Research Article

# Stakeholder Perspectives on Tourism Infrastructure Development in Kashmir Valley

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## Abstract

This study provides a rigorous evaluation of tourism infrastructure in the Kashmir Valley, concentrating on the perceptions of key stakeholders within the tourism sector. The research encompasses a detailed assessment across five major tourism destinations, evaluating a spectrum of factors including the diversity of tourism products, the region's dependency on tourism, and patterns of visitor influx. By applying an extensive analytical framework, this study identifies and elucidates critical weaknesses in the infrastructure's performance, examining the challenges through a scientifically robust approach. Data were meticulously collected and analysed to ascertain the current state of tourism infrastructure, revealing significant deficiencies and operational inefficiencies that impede effective performance. The study's findings underscore the pressing need for strategic interventions tailored to address specific infrastructural shortcomings, geographical peculiarities, and the distinctive requirements of various tourism sites in the Kashmir Valley. This approach not only highlights the inadequacy of current infrastructure but also emphasizes the necessity of aligning infrastructure development with the region's diverse tourism landscape. The study's conclusions advocate for targeted policy recommendations aimed at enhancing infrastructure capabilities and operational efficiency. By ensuring that infrastructure development is both sufficient in quantity and appropriately aligned with regional tourism demands, the research aims to foster sustainable growth and resilience in the tourism sector of Kashmir Valley. This comprehensive analysis contributes to a deeper understanding of the interplay between tourism infrastructure and industry performance, offering valuable insights for policymakers and stakeholders engaged in tourism development.

## Keywords

Tourism Industry, Tourism Stakeholders, Infrastructure Performance and Infrastructure Management

## 1. Introduction

The vitality of the tourism industry hinges upon the continuous augmentation and development of infrastructure, serving as a pivotal factor in sustaining industry operations. The provision of a sufficient quantity of diverse infrastructures is imperative to meet the demands of visitors. The reliability of infrastructure at destinations not only enhances the quality of tourism products but also serves as a magnet for

attracting tourists. Conversely, a deficiency in infrastructure introduces frictions in the industry's operations, jeopardizing its core competence. Neglecting the enhancement of both quantity and quality of infrastructure may lead to excess burden on the existing structure, inadequate supply, weakened competitiveness, and sustainability challenges at destinations [19]. Given that infrastructure is intertwined with all industry

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facets, it acts as a complement to various functions. The consequences of infrastructure shortcomings extend beyond individual elements, disrupting the entire industry. Deficiencies in one infrastructure component create inconsistencies in the system, presenting new challenges. This underscores the pivotal role of infrastructure performance or efficiency in ensuring the smooth functioning of the tourism industry, necessitating a wide range of establishments, periodic maintenance, and compatibility with the landscape [1, 12]. Infrastructure performance is deeply rooted in its quantity and its individual components, involving augmentation, technology adoption, and periodic maintenance. The poor performance of infrastructure unequivocally worsens outcomes in the tourism sector. In particular, inadequacy and poor performance of environmental infrastructure degrade the ambience of destinations, impacting nature-based tourism products [6, 9]. Likewise, the sluggish performance of typical tourism infrastructure, including accommodations, transportation, and roads, diverts visitors, causing infrastructure inadequacy and poor performance to undermine the sustainability of tourism and impact the current and future benefits for stakeholders. Conversely, the poor performance of tourism infrastructure results in both monetary and time costs for visitors, adversely affecting destination growth. These costs and negative experiences convey unfavourable opinions about destinations, eroding the willingness to revisit.

In India, deficient infrastructure and substandard performance rank among the predominant factors hindering industry growth [23, 31]. According to FICCI (2018), India's tourism infrastructure performance lags behind neighbouring countries such as Singapore, Malaysia, and China [28]. Consequently, the Government of India has focused on infrastructure development in most states to foster the country's tourism industry. Initiatives have been launched to improve and ensure the performance of tourism infrastructure, with states and Union Territories receiving directives to promote world-class tourist infrastructure, accompanied by special funds and incentives. The emphasis on tourism infrastructure development aims to create a favourable environment for travellers, ensuring better quality trips throughout India.

Within the context of the Incredible India Programme, the Union Territory of Jammu and Kashmir has also prioritized quality infrastructure at tourist destinations. However, infrastructure promotion has not reached the desired extent. The major hindrance to industry development is the poor performance of infrastructure facilities, negatively impacting the progress and operational capacity of the tourism industry [14]. Consequently, substantial initiatives are imperative to improve infrastructure performance. The quantity required and the expected performance from tourism infrastructure may vary across regions and destinations. Even destinations with sufficient infrastructure may not meet set performance standards, suggesting that infrastructure performance varies based on existing infrastructure and regional topography. Therefore, understanding the perfor-

mance of various dimensions of tourism infrastructure, identifying weak areas, and addressing issues specific to the study area are essential.

At this juncture, this section of the analysis aims to scrutinize the performance of tourism infrastructure and related issues in the Kashmir Valley.

## 2. Literature Review

A substantial body of research exists within the realm of tourism infrastructure at both national and international levels. Against this backdrop, this paper conducts a comprehensive review of the literature pertaining to tourism infrastructure, aiming to shed light on pertinent research issues and insights.

Infrastructure and its operational efficiency are paramount in unlocking unexplored potentials and steering destinations towards sustainable tourism development. Such infrastructure initiatives have the potential to provide livelihood opportunities for host communities [8, 27]. Indeed, infrastructure forms the cornerstone of tourism industry competitiveness, facilitating contributions to GDP and job creation. Investments in transportation, healthcare, sanitation, security, and technology bolster the competitiveness of the tourism sector by attracting tourists and fostering regional development, thereby positively impacting society and advancing sustainable tourism initiatives [7, 15, 16].

However, inadequate infrastructure, subpar quality, and inadequate maintenance often lead to congestion at service points and dissatisfaction among tourists at destinations, highlighting the existence of an infrastructure gap. This gap places significant strain on existing structures and adversely affects overall performance [21, 24]. Thus, the availability of ample infrastructure is crucial in ensuring the seamless operation of destinations and cultivating a positive image among tourists. To address these constraints, studies have proposed frameworks for identifying, prioritizing, and funding tourism-specific infrastructure improvements [1, 5, 11].

The presence of multimodal transportation options not only attracts tourists but also facilitates their exploration of diverse destinations [5, 20, 25]. Efficient transport infrastructure is crucial in providing tourists with cost-effective and frequent service options. However, the development of infrastructure frameworks and guidelines must align with the specific needs of destinations and visitors [18, 29]. Destinations equipped with basic facilities can offer a wide array of tourism products, maintain a nature-friendly environment, and provide quality services, thereby enhancing their reputation [25]. Furthermore, infrastructure related to accommodation, markets, and other facilities enhances destinations' attractiveness to tourists, underscoring the pivotal role of infrastructure in shaping tourists' willingness to revisit [2, 4, 12, 30, 32].

Acknowledging the negative impacts of tourism activities, the adoption of green infrastructure emerges as a crucial strategy for mitigating adverse effects. Nations have initiated

green infrastructure initiatives aimed at preserving tourism resources and destinations [26]. Inadequate supervision and periodic maintenance of infrastructure can lead to detrimental outcomes, underscoring the interconnectedness between the environment, tourism performance, and industry operations. Therefore, the adoption of green infrastructure is imperative for safeguarding tourism resources and promoting environmentally sustainable tourism destinations [3, 13, 22].

The reviewed literature encompasses diverse aspects of infrastructure development within the tourism industry, including transport, accommodation, and the imperative for green infrastructure initiatives. Collectively, these studies underscore the indispensable role of infrastructure functioning and performance in driving the tourism industry forward. However, addressing the performance of various infrastructure elements remains a critical research question necessitating empirical investigation. Hence, conducting a study on the aforementioned topic holds promise in contributing to the existing body of knowledge.

### 3. Materials and Methods

#### 3.1. Sample Selection

In order to conduct a rigorous analysis of tourism infrastructure performance in the Kashmir Valley, primary data was collected through a comprehensive survey methodology. Given the absence of a pre-existing structured dataset, a primary survey was deemed necessary to acquire the requisite information. The survey employed a meticulous area sampling technique known as multi-stage stratified disproportionate random sampling, ensuring representation from diverse segments of the population.

The survey targeted a total of 450 observations, comprising three key stakeholders: tourists, service providers, and local residents. This sample size was strategically designed by applying Cochran's formula [10, 17] to encompass a broad spectrum of perspectives and experiences from individuals residing in or interacting with the tourism hotspots of Srinagar, Pahalgam, Kokernag, Gulmarg, and Yusmarg.

*Table 1. Particulars of Sample Group.*

Sl.No.	Destinations	Sample Group			All (N = 450)
		Tourists (n = 150)	Residents (n = 150)	Service Providers (n = 150)	
1.	Srinagar	30	30	30	90
2.	Pahalgam	30	30	30	90
3.	Kokernag	30	30	30	90
4.	Gulmarg	30	30	30	90
5.	Yousmarg	30	30	30	90
Total		150	150	150	450

To ensure the reliability and validity of the data collection process, a rigorously tested interview schedule was employed. This interview schedule was meticulously crafted to elicit detailed insights and perceptions from each stakeholder group regarding the performance of tourism infrastructure in the region. By utilizing a standardized interview schedule, the survey sought to maintain consistency and comparability across responses, thereby enhancing the credibility of the findings.

Each participant was approached and engaged in a structured interview, wherein they were asked a series of carefully formulated questions pertaining to their experiences with tourism infrastructure in the Kashmir Valley. Through this comprehensive data collection approach, a rich repository of qualitative and quantitative data was amassed, offering valuable insights into the strengths, weaknesses, and challenges

associated with the region's tourism infrastructure.

By leveraging the power of primary data collection through a rigorous survey methodology, this study aimed to provide a nuanced and evidence-based analysis of tourism infrastructure performance in the Kashmir Valley. The utilization of stratified random sampling and a meticulously tested interview schedule ensured the robustness and reliability of the data, laying the foundation for informed decision-making and policy formulation aimed at enhancing the tourism infrastructure in the region.

#### 3.2. Analytical Tools

In order to comprehensively assess the performance of various types of infrastructure within the destinations of the Kashmir Valley, this study relies on the perceptions of three

key stakeholder groups: visitors, service providers, and local residents. Recognizing the diverse perspectives and experiences of these stakeholders, their insights are invaluable in gauging the effectiveness and functionality of the infrastructure available.

To analyze the performance of infrastructure, a rigorous methodological approach is employed, encompassing cross-tabulation and simple percentage analysis. These analytical techniques serve as robust tools for observing and understanding the performance of infrastructure by comparing the perceptions of the sampled groups.

Cross-tabulation allows for the systematic examination of relationships between different variables, such as infrastructure type and stakeholder group. By cross-referencing the perceptions of visitors, service providers, and residents with specific types of infrastructure, patterns and trends in performance can be elucidated.

Additionally, simple percentage analysis offers a straightforward yet powerful means of quantifying the distribution of perceptions among the sampled groups. This statistical method enables researchers to calculate the proportion of respondents expressing positive, neutral, or negative views regarding the performance of various infrastructure components.

Through the systematic application of cross-tabulation and simple percentage analysis, this study endeavours to generate comprehensive insights into the performance of tourism infrastructure in the Kashmir Valley. By triangulating the perspectives of visitors, service providers, and residents, the research aims to provide a nuanced understanding of the strengths, weaknesses, and areas for improvement within the region's infrastructure landscape. Such findings hold significant implications for informing strategic interventions and policy initiatives aimed at enhancing the overall tourism experience and destina-

tion attractiveness in the Kashmir Valley.

## 4. Profile of Surveyed Respondents

### *Demographic and Social Profile of Surveyed Respondents*

The demographic and social profile particulars, delineated in [Table 2](#), provide insights into key characteristics such as gender, age distribution, and marital status. Notably, the study area exhibits a pronounced gender imbalance, with over 90 percent of respondents identified as male. This gender disparity is particularly conspicuous within the service provider category, where all respondents are male, offering a glimpse into the cultural and social norms prevalent in the Kashmir Valley.

Examining the age distribution of respondents reveals a predominance of individuals from the young age group, followed by the middle and older age brackets, respectively. This observed demographic trend aligns consistently across the diverse sample groups under study, affirming the active involvement of the younger demographic. Such a demographic composition underscores the potential for youthful participation and the realization of opportunities within the tourism industry.

Further scrutiny of marital status distribution indicates a higher proportion of married individuals within the service provider category compared to other respondent groups. This distinction sheds light on unique dynamics within the service provider segment, potentially influencing work-life balance, commitment, and perspectives on the tourism industry. The nuanced examination of demographic characteristics enhances the contextual understanding of the study area, contributing valuable insights for comprehensive analysis and targeted interventions.

**Table 2.** Demographic and Social Profiles of the Surveyed Respondents.

Sl.No.	Details	Tourists (n = 150)	Residents (n = 150)	Service Providers (n = 150)	Total (N = 450)	
1	Gender	Male	128 (85.33)	140 (93.33)	150 (100)	418 (92.89)
		Female	22 (14.67)	10 (6.67)	0 (0.0)	32 (7.11)
2	Age	Young	119 (79.33)	111 (74.00)	90 (60.00)	320 (71.11)
		Middle	31 (20.67)	35 (23.33)	50 (33.33)	116 (25.78)
		Old	0 (0.0)	4 (2.67)	10 (6.67)	14 (3.11)
3	Marital Status	Married	60	72	96	228

Sl.No.	Details	Tourists (n = 150)	Residents (n = 150)	Service Providers (n = 150)	Total (N = 450)
		(40.00)	(48.00)	(64.00)	(50.67)
	Unmarried	90	78	54	222
		(60.00)	(52.00)	(36.00)	(49.33)

Source: primary data collected by author

## 5. Results and Discussion

To facilitate meaningful analyses, the selected variables pertaining to infrastructure performance are systematically clustered into five distinct dimensions, predicated on their respective roles within destinations. These dimensions encompass: (i) Typical tourism infrastructure, (ii) Public utilities, (iii) Environmental infrastructure, (iv) Soft infrastructure, and (v) Sports and Entertainment infrastructure. Each dimension encapsulates a spectrum of variables that collectively contribute to the overall infrastructure ecosystem of a given destination.

The subsequent sub-sections of this study delineate the performance of variables within each dimension, offering a granular examination of their respective contributions to the broader infrastructure landscape. Through this structured approach, stakeholders gain nuanced insights into the multi-faceted nature of infrastructure performance, thereby informing targeted strategies and interventions aimed at enhancing overall infrastructure efficacy and functionality within destination contexts.

### 5.1. Typical Tourism Infrastructure: Road, Transport, Lodging and Market

Typical tourism infrastructure comprises facilities highly

relevant and beneficial for tourism activities, such as roads, transportation, accommodations, and local markets within tourism destinations.

Table 3 presents detailed information regarding the availability of pavements, the climate resilience of roads, and the maintenance status of roads in surveyed tourism destinations. These parameters indirectly offer insights into the performance of road infrastructure across the surveyed destinations. Notably, a significant proportion of respondents express grievances regarding the deteriorated condition of roads, particularly in Yusmarg, Pahalgam, and Kokernag. The inadequacy of pavement length and visible damages are evident concerns, with most destinations featuring only a few kilometres of pavements primarily at main spots, while link roads often lack such facilities. Additionally, the resilience of roads to withstand harsh climate conditions is notably inadequate, with sporadic maintenance occurrences.

Interestingly, a considerable percentage of respondents acknowledge the climate resilience of roads over the availability of pavements and periodic maintenance. Residents tend to hold a more favourable perception regarding the availability of pavements, climate resilience, and road maintenance compared to tourists and service providers. This disparity can be attributed to residents' localized comparisons with nearby regions, whereas visitors and service providers tend to benchmark against other destinations and regions.

**Table 3.** Availability of Pavements, Climate Compatibility and Maintenance of Roads in the Surveyed Tourism Destinations.

Sl.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
1	Pavements	79 (52.67)	91 (60.67)	88 (58.67)	258 (57.33)
2	Climate Compatibility	95 (63.33)	130 (86.67)	101 (67.33)	326 (72.44)
3	Maintenance	86 (57.33)	120 (80.00)	85 (56.67)	291 (64.67)

Source: primary data collected by author

The performance of transport-related infrastructure is assessed by considering factors such as passenger waiting halls, parking facilities, and the condition of vehicles. Respondents utilizing public transportation affirm the presence of passenger waiting halls, albeit insufficient in quantity and suboptimal in condition. The condition of vehicles falls within the moderate range, with some respondents reporting discomfort. Among surveyed destinations, Srinagar boasts adequate

transport facilities, while Yusmarg demonstrates the least. Other destinations exhibit a moderate level of transport infrastructure and services.

Parking availability fails to meet peak tourist season demands, although a majority of respondents commend the spaciousness of parking facilities at tourism sites. Nonetheless, a significant proportion express concerns regarding parking overcrowding during peak seasons (see Table 4).

**Table 4.** Availability of Passenger Waiting Hall, Parking Facilities and Status of the Vehicles in the Surveyed Destinations of Valley.

SI.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
1	Waiting Hall	62 (41.33)	62 (41.33)	67 (44.67)	191 (42.44)
2	Parking	104 (69.33)	94 (62.67)	97 (64.67)	295 (65.56)
	Very poor	9 (6.00)	9 (6.00)	6 (4.00)	24 (5.33)
	Poor	23 (15.33)	23 (15.33)	14 (9.33)	60 (13.33)
3	Status of the vehicles	66 (44.00)	64 (42.67)	64 (42.67)	194 (43.11)
	Normal	49 (32.67)	50 (33.33)	62 (41.33)	194 (43.11)
	Good	3 (2.00)	4 (2.67)	4 (2.67)	11 (2.44)
	Very good				

Source: primary data collected by author

The density of hotels and lodges exceeds that of home stays and resorts in surveyed destinations, with most locations featuring minimal to modest accommodation options. Srinagar boasts the highest number of accommodations, significantly surpassing other destinations. However, the proportion of home stays and resorts remains below ten percent of total lodging establishments. Increasing home stay availability not only provides affordable accommodation options but also offers insights into the cultural distinctiveness of the destination.

Nearly all destinations feature a significant proportion of restaurants, with Yusmarg exhibiting the lowest quantity. Most respondents report the presence of two markets at destinations, with a considerable proportion noting their small to medium size. However, the availability of product choice and range is inadequate, with a vast majority citing limited options and a significant proportion reporting only moderate choices. Moreover, the availability of environmentally friendly products for sale is significantly limited, while the prevalence of plastic usage remains pervasive at destinations (see Table 5).

**Table 5.** Types of Accommodation, Spaciousness of Rooms, and Availability of Restaurants and Markets in the Surveyed Destinations.

SI.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
1	Types Hotels & Lodges	72	72	63	207

Sl.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
		(48.00)	(48.033)	(42.00)	(46.00)
2	Homestays & Resorts	18 (12.00)	12 (8.00)	14 (9.34)	44 (9.78)
	All	60 (40.00)	66 (44.00)	73 (48.67)	199 (44.22)
3	Availability of all ranges of restaurant	97 (64.67)	90 (60.00)	97 (64.67)	284 (63.11)
	Up to 2	117 (78.00)	118 (78.67)	115 (76.67)	350 (77.78)
4	No. of Markets	32 (21.33)	29 (19.33)	29 (19.33)	90 (20.00)
	Above 4 up to 6	1 (0.67)	3 (2.00)	6 (4.00)	10 (2.22)

Source: primary data collected by author

## 5.2. Public Utilities: Telecommunications, Electricity and Water Supply

Respondents have limited access to telecommunication services, highlighting the need for enhanced network provi-

sion. The recharge services from service centers are insufficient and require additional establishments. Table 6 illustrates that while most centers offering recharge services are deemed essential, there are variations among destinations. The network coverage is inadequate, posing challenges for respondents in accessing online services.

**Table 6.** Availability Recharge Centers in the Surveyed Destinations.

Sl.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
3	Basic	88 (58.67)	63 (42.00)	85 (56.67)	234 (52.00)
		59 (39.33)	87 (58.00)	64 (42.67)	210 (46.67)
	Multiple services	3 (2.00)	0 (0.0)	1 (0.67)	4 (0.89)
		Companies			

Source: primary data collected by author

The performance of electricity infrastructure at destinations is evaluated based on factors such as the availability of street lights, power supply interruptions, and the frequency of power cuts. Power supply interruptions are prevalent across all destinations, particularly during winter months, although the duration of power cuts varies. This highlights the potential for increased adoption of renewable energy sources. Street light

availability also varies among destinations, with discrepancies observed within destinations regarding the functionality of existing street lights. Dysfunction and maintenance needs of street lights are apparent in several locations, underscoring the necessity for prompt attention. Furthermore, the availability of high mast lights is insufficient in most places, indicating a deficiency in such facilities.

**Table 7.** Hours of Power Supply Interruption per day in the Destinations.

Sl.No.	Details	Tourist (n=150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)	
1	Hours of power cut	45	15	15	75	
		(30.00)	(10.00)	(10.00)	(16.67)	
		Up to 6 hrs.	72	66	71	209
		(48.00)	(44.00)	(47.33)	(46.44)	
		Above 6 to 12 hrs.	31	63	51	145
(20.67)	(42.00)	(34.00)	(32.22)			
	Above 12 hrs.	2	6	13	21	
		(1.33)	(4.00)	(8.67)	(4.67)	

Source: primary data collected by author

The majority of respondents expressed satisfaction with the functionality of water supply systems (see Table 8). However, there is a need for improvement in the quantity, quality assurance, and functionality of public taps. The availability of toilets and bathrooms is a significant issue across all destinations, adversely impacting destination hygiene and the quality

of tourism resources. Consequently, a considerable proportion of respondents highlighted the importance of improving hygiene and sanitation facilities. The lack of specified facilities at tourism spots poses challenges for visitors and diminishes their overall experience.

**Table 8.** Sufficiency of No. of Water Taps, their present status and availability of Toilets Bathroom facilities in the Destinations.

Sl.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
1	Sufficiency of water tap	88	108	114	310
		(58.67)	(72.00)	(76.00)	(68.89)
2	Toilets and Bath rooms	27	34	34	95
		(18.00)	(22.67)	(22.67)	(21.11)

Source: primary data collected by author

### 5.3. Environmental Infrastructure: Sewage, Solid Waste and Pollution Control

The lack of drainage infrastructure in most destinations significantly impacts the functionality of environmental infrastructure (refer to Table 9). Srinagar stands out with ample drainage coverage, while other destinations exhibit considerable deficiencies in this regard. Inefficient management of drainage water due to damages and breakdowns leads to widespread interruptions in functionality. Issues such as sewage water stagnation and canal blockages are prevalent in several areas, necessitating urgent attention. Moreover, direct disposal of sewage water into water bodies is observed in various locations, highlighting inadequate sewage treatment

measures. The scarcity of sewage treatment plants is particularly striking, with destinations like Yusmarg, Gulmarg, and Kokernag lacking any such facilities.

Solid waste management infrastructure status is reflected in factors such as the distance between dustbins and the availability of large sinks (refer to Table 9). Surveyed respondents indicate a shortage of large sinks at key destination points, with dustbins often placed at distant intervals. Additionally, treatment plant functionality is perceived to be poor by respondents. It is evident that some locations lack these essential facilities, forcing stakeholders to resort to waste dumping in roadside areas, forests, water bodies, and open spaces. Both residents and state service providers acknowledge the inadequacy of waste collection and transportation vehicles to handle the increasing volume of solid waste in Kashmir Valley.

**Table 9.** Sewage Water Management Infrastructure in the Destinations.

SI.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
1	Inoperative of drainage	110	116	106	332
		(73.33)	(77.33)	(70.67)	(73.78)
	Block	19	39	25	83
		(17.27)	(33.62)	(23.58)	(25.00)
2	Reasons	59	60	58	177
		(53.64)	(51.72)	(54.72)	(53.31)
	Lagging	32	17	23	72
		(29.09)	(14.66)	(21.70)	(21.69)
3	Treatment Plant	36	44	40	120
		(24.00)	(29.33)	(26.67)	(26.67)
4.	Availability of big sinks.	54	57	53	164
		(36.00)	(38.00)	(35.33)	(36.44)

Source: primary data collected by author

Table 10 illustrates the presence of pollution control establishments across destinations, including air pollution monitoring centers, their operational status, and the availability of vehicle pollution testing centers. However, the number of air pollution monitoring centers is limited, with only approximately 35 percent of respondents confirming their existence. Furthermore, the collection of air pollution

samples and the monitoring of air quality status are reported to be infrequent. Given Kashmir's status as a destination with a multitude of environment-related tourism products, continuous monitoring of vehicle pollution levels is imperative to mitigate pollution levels. The surveyed information indicates a scarcity of pollution testing centers for vehicles in all destinations.

**Table 10.** Pollution Monitoring Establishments in the Destinations.

SI.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)	
1	Pollution Monitoring & Testing	Rarely	38	17	33	88
			(69.09)	(54.84)	(60.00)	(62.41)
		Regularly	16	11	19	46
		(29.09)	(35.48)	(34.55)	(32.62)	
	Effectively	1	3	3	7	
		(1.82)	(9.68)	(5.45)	(4.96)	

Source: primary data collected by author

#### 5.4. Soft Infrastructure: Health Care, Banking and Tourism Information

Destinations highlight the presence of emergency healthcare services, albeit only at essential points within the destinations. Apart from Yusmarg, hospitals in other destinations offer healthcare services with limited bed capacity, necessitating travel for higher-level diagnostic and treatments (refer to Table 11).

Over 60 percent of respondents confirm the availability of banking institutions, although Yusmarg lacks such facilities. ATMs are accessible in destinations except for Yusmarg, with a higher proportion of respondents reporting uninterrupted

functionality. However, a significant proportion of respondents advocate for an increase in ATMs and improvements in cash availability and functionality.

Nearly all destinations host tourism information headquarters, albeit variations exist in mobile information centers, installed displays, and the number of tourist guides. A significant proportion (57.33 percent) of respondents affirms the availability of tourism information at destinations. However, concerns are raised regarding the reliability of information provided by tourism websites, questioning their adequacy and accuracy. There is a pressing need for an increased quantity of displays with proper design, alongside the enhancement of tourist guide skills.

**Table 11.** Health Care, Banking and Tourism Information at Destinations.

Sl.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)	
1	Health	Emergency	105 (70.00)	70 (46.67)	90 (60.00)	265 (58.89)
		Health Centre	115 (76.67)	99 (66.00)	116 (77.33)	330 (73.33)
		Medical Shops	108 (72.00)	97 (64.67)	109 (72.67)	314 (69.78)
		Very low	26 (17.33)	22 (14.67)	18 (12.00)	66 (14.67)
		low	29 (19.33)	36 (24.00)	22 (14.67)	87 (19.33)
2	ATMs.	Medium	78 (52.00)	67 (44.67)	78 (52.00)	223 (49.56)
		High	15 (10.00)	21 (14.00)	25 (16.67)	61 (13.56)
		Very high	2 (1.33)	4 (2.67)	7 (4.67)	13 (2.89)
		Centres	95 (63.33)	68 (45.33)	95 (63.33)	258 (57.33)
3	Information	Displays	90 (60.00)	70 (46.67)	96 (64.00)	256 (56.89)

Source: primary data collected by author

### 5.5. Sports and Entertainment Infrastructure: Grounds, Cafeteria and Theaters

The existing sports infrastructure at destinations falls short of meeting requirements, with a notable absence of specific playgrounds across most locations (refer to Table 12). The

condition of open grounds and sports equipment is substandard. Over 49 percent of respondents highlight a lack of children's play items and emphasize the need for improved facilities with higher quality standards. Several destinations exhibit a conspicuous absence of cafeterias, with only one or two theatres available in a select few locations.

*Table 12. Sports and Entertainment Infrastructure in the Destinations.*

SI.No.	Details	Tourist (n = 150)	Resident (n = 150)	Service Providers (n = 150)	Total (N = 450)
1	Sports infrastructure	82 (54.67)	81 (54.00)	83 (55.33)	246 (54.67)
2	Kids Play	73 (48.67)	75 (50.00)	78 (52.00)	226 (50.22)
3.	Theaters and Cafeterias	42 (28.00)	36 (24.00)	47 (31.33)	125 (27.78)

Source: primary data collected by author

## 6. Conclusions

Infrastructure plays a pivotal role in ensuring the seamless operation and sustained performance of tourism destinations. It is imperative to enhance the existing infrastructure to positively contribute to the overall performance of the infrastructure network in Kashmir Valley. The performance of road infrastructure, overall, is deemed moderate; however, there are significant variations observed among different destinations. Notably, damaging conditions are predominantly noticeable in link roads, with the condition of pavements falling short of desired standards. Issues related to low compatibility and maintenance deficiencies are prevalent in certain destinations, warranting further augmentation efforts.

Comparatively, the performance of public transport trails behind that of private transport, while the condition of vehicles remains within a reasonable range. The types and range of hotels vary significantly, leading to differing influences across destinations. Most markets are characterized by their modest size and a limited availability of environmentally friendly products, resulting in reduced purchasing facilities and limited choices for consumers, which vary both among and within destinations.

The condition of public utilities significantly impacts infrastructure functioning and positively amplifies destination capacity when comprehensively facilitated. However, Information and Communication Technology (ICT) development is lacking, with daily power cuts posing a serious concern. Although water supply conditions are generally satisfactory, there is a need to increase the number of public taps. The

scarcity of toilets and their poor functioning remain significant concerns that must be addressed to safeguard the environment, and continuous functioning of environmental infrastructure is essential.

Despite its significance, the functioning and quantity of infrastructure are not adequately maintained across most destinations, giving rise to numerous issues. Pollution monitoring serves as the basis for observing balance in air and water contamination, with pollution testing serving as an instrumental measure thereof. A notable proportion of respondents express grievances regarding infrastructure performance and advocate for further improvements.

Soft infrastructure, including healthcare, banking, and tourism information, serves as the backbone of the tourism industry and is essential for ensuring a positive response from visitors. However, these sectors have not developed to the extent required, necessitating further improvement to enhance performance. Concerns have been raised regarding the quality of websites and the reliability of information, highlighting the need for consideration. The performance of sports and entertainment establishments falls short of the standard and requires improvement.

In conclusion, the overall performance of tourism infrastructure is hindered by deficiencies and poor operation. Therefore, it is imperative for government and state authorities to take bold steps to provide quality infrastructure at tourism destinations in Kashmir Valley.

## 7. Policy Suggestions

- (i) Destinations necessitate an adequate quantity of in-

frastructure tailored to their specific requirements. Environmental sustainability should be prioritized through the implementation of green infrastructure facilities.

- (ii) Health, water supply, sanitation facilities including toilets, solid waste management systems, sewage treatment infrastructure, and pollution monitoring mechanisms require further enhancements to meet desired standards.
- (iii) Economically disadvantaged tourism destinations necessitate improvements in transport connectivity, Information Technology Centers (ITCs), accommodations, and related facilities. These enhancements are essential for the economic upliftment of the host community and the overall regional development.
- (iv) Capacity building initiatives, adherence to standards, investments in research and development, certification programs, and integrated planning strategies are imperative to rejuvenate the performance of infrastructure and ensure optimal operation in Kashmir Valley.

## Abbreviations

FICCI	Federation of Indian Chambers of Commerce & Industry
GDP	Gross Domestic Product
ICT	Information and Communication Technology

## Author Contributions

Gowhar Ahmad Wani is the sole author. The author read and approved the final manuscript.

## Conflicts of Interest

The author declares no conflicts of interest.

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