International Journal of Applied Research

Tanmay Choksi
M. Plan Student, Department of Architecture, Master of Urban and Regional Planning, G.C Patel Institute of Architecture, interior designing and Fine Arts, Veer Narmad South Gujarat University, Surat, Gujarat, India

Anand Kapadia
Associate Professor, Department of Architecture, Master of Urban and Regional Planning, G.C Patel institute of Architecture, interior designing and fine arts, Veer Narmad South Gujarat University, Surat, Gujarat, India

Evaluation of infrastructure facilities and perception of pilgrims at Palitana

Tanmay Choksi and Anand Kapadia

Abstract
Background and Objective: Religious tourism seems to be one of the most preferred tourism after business tourism in Gujarat. Palitana is one of the very important pilgrimage destination among six religious sites in Gujarat. The main objective of this study was to assess the existing infrastructure and institutional framework for tourism in Palitana town and identify the gaps as well as to study perception of pilgrims at Palitana.
Methodology: Data collection was done in two phases. Primary data collection was done by using 16 item questionnaire was used to evaluate tourist perception. 100 tourists were evaluated by convenience sampling. Secondary data collection was done from the existing review of literature and various government sources to find out the existing infrastructure facilities. Road network, transport facility, water supply, Sewerage and solid waste management, accommodation facilities, recreational facilities and tourist inflow were included in secondary data collection.
Results and data analysis: 79% of tourists' purpose was purely religious and they all were Jains. 84% of tourists used road transportation and among them 33 tourists used private vehicle for transportation. Among 11 facilities assessed local transport and water facility were the lowest rate i.e 2.74 And 2.65 respectively. Major issued faced by the tourists were Uncleanliness, Lack of public toilets, Lack of hygenic food, Lack of filtered water, Bad condition of IPT, High Doli Expense, Stray animals, High doli expense, Lack of recreational activities, No information center/trained guide, Poor railway connectivity and Encroachment.
Conclusion: Development strategies for Palitana should be focusing on providing basic amenities to the tourists. This includes food, water, accommodation, transportation and hygienic environment and should be given first priority. Further, strategies focusing on advancement of the tourist places can be formulated.

Keywords: Pilgrims, Palitana, infrastructure

1. Introduction
Tourism as an industry is gaining greater importance. The multi-faceted nature of this industry acts as an impeller to economic prosperity through balanced growth. The importance of tourism is getting worldwide projection and now many developed and developing nations have economies structured on tourism. Travel has received a major boost in all countries because of increasing attention from the respective governments to facilitate tourism.

Religious tourism seems to be one of the most preferred tourism after business tourism in Gujarat. Wherein, 32 % of tourists come as pilgrims and 59% travel to Gujarat for business purpose. To promote business tourism in Gujarat can be somewhat difficult due to various obstacles. To name some, the nature of tourists; time-bound visits; prohibition of liquor and also purpose of their visit is too focused for them to involve in other activities, which makes it impractical to cater to this type of tourism. In contrast, tourists coming for religious purpose are relatively less time-bound, prefer to stay longer and visit more religious places and are willing to spend in the name of God, and some pious tourists are usually more frequent or repetitive tourists are expected.

At the same time Gujarat has myriad pilgrimage destinations. There are six major religious sites identified by Gujarat Government namely, Dwarka, Somnath, Girnar, Dakor, Ambaji, and Palitana. Palitana is located in Saurashtra region of Gujarat state, 51 km south west of Bhavnagar. It is a part of the Bhavnagar district famed for its remarkable temple sites, cities, beaches, and wildlife.

Corresponding Author:
Tanmay Choksi
M. Plan Student, Department of Architecture, Master of Urban and Regional Planning, G.C Patel Institute of Architecture, interior designing and Fine Arts, Veer Narmad South Gujarat University, Surat, Gujarat, India

The town is connected by means of the National and State highways to the other cities of Gujarat like Bhavnagar and Ahmedabad. Palitana is very important place for Jains as it encompasses Shatrunjaya hill – a mountain, where the first Tirthankara (God) of Jainism is said to have meditated.

Shatrunjaya (the place of victory) Hill is perhaps considered to be one of the holiest pilgrimage sites for the Jain people. The temples are dedicated to the Jain Tirthankars means god and goddesses and even the priests leave the temples at dusk. The hilltops are bounded by sturdy stone walls and the temples have been grouped into nine tunks (enclosures)- each having several minor temples arranged around a central temple.

2. Objective of the study
- To assess the existing infrastructure and institutional framework for tourism in Palitana town and identify the gaps.
- To study perception of pilgrims at palitana.

Following information's were included in primary data collection

Tourists Profile	• Rating of tourist facilities
Religion	Accomodation
Purpose of visit	Road
Travel pattern	Local Transportation
Mode of transportation	Drinking water
Type of vehicle	Sanitation
Frequency of visit	Shopping
Type of accommodation	Other attractions
State of origin	Safety
Tourists Age	Banking facility
Gender	Food
Average expense	Healthfacility
	(Tourists were asked to rate the existing tourists' facilities out of 5 with 1 being the lowest and 5 being the highest. From all given choices, local transportation, drinking water facility and food facilities were given very low ratings)

❖ Secondary data collection
Secondary data collection was done from the existing review of literature and various government sources to find out the existing infrastructure facilities. Road network, transport facility, water supply, Sewerage and solid waste

3. Methodology and data collection
Data collection has been done in two parts: Primary survey and secondary survey. Primary survey will be mostly concentrated to understand tourist perception. Secondary survey will include study of demography, landuse and infrastructure of Palitana. For primary data collection total 100 tourist sample were selected using convenience sampling. The 16 item questionnaire was used to evaluate tourist perception. Questionnarie was consisting of following components: general demographics, purpose of visit, travel pattern, mode of transport, frequency of visit, type of accommodation, average length of stay, source of information, everage expenditure, rating of tourist facilities, attractions, problems faced, overall experience, next destination, wish to visit again and suggestions. All the subjects were instructed to fill them after taking their informed consent.

❖ Primary data collection

management, accommodation facilities, recreational facilities and tourist inflow were included in secondary data collection.

4. Data analysis

Table 1: Tourist profile: Religion, purpose & accommodation

Religion	No. of visitors	Purpose of visit						Type of accomodation		
		Business	Leisure	Adventure	Heritage	Social	Religious	Dharamshala	Hotel	Guest house
Jain	79	0	0	0	0	0	79	78	1	0
Hindu	12	0	0	0	12	0	0	12	0	0
Muslim	0	0	0	0	0	0	0	0	0	0
Christian	9	0	0	0	9	0	0	0	9	0
Others	0	0	0	0	0	0	0	0	0	0
Total	100	0	0	0	21	0	79	90	10	0

As Palitana is a religious destination, 79% of tourists' purpose was purely religious, which were Jains. However, non-Jain tourists come here because of heritage value of the place. Except from foreign tourists, all pilgrims and non-Jain tourists preferred to stay in Dharamshalas.
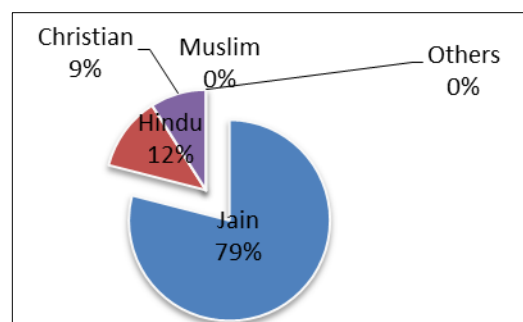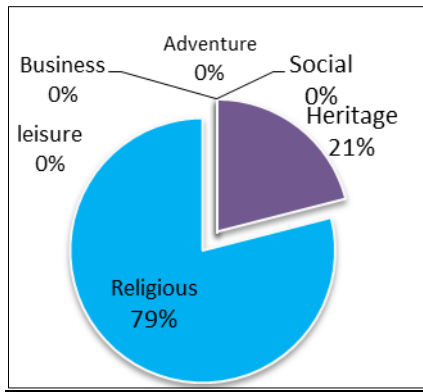

Chart 1: Tourist Religion
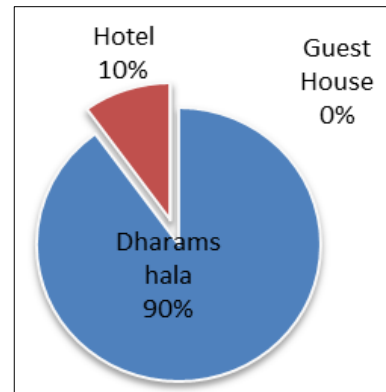
Chart 2: Purpose of visit

Chart 3: Type of accomodation

Table 2: Tourist profile: State of Origin, mode of transportation & duration of stay

State of Origin	No of visitors	Mode of transportation			Type of vehicle			Average length of stay			
		Air	Rail	Road	Public transport	Own	Transport service	1 Day	1 Night	2 Nights	>2 Night
Gujarat	51	0	0	51	6	33	12	28	13	6	4
Maha-rashtra	18	0	7	11	0	6	5	10	8	0	0
M. P	14	0	0	14	0	7	7	3	9	2	0
Rajasthan	8	0	0	8	0	4	4	3	5	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Foreigner	9	9	0	0	0	0	0	0	9	0	0
Total	100	9	7	84	6	50	28	44	44	8	4

Most of the domestic tourists were from M.P. (14%), Maharashtra (18%) and Gujarat (51%) itself. 84% of total tourists used road transportation. Because of rail connectivity with Mumbai, 49% tourists from Maharashtra had used rail services. Air transportation was only used by foreign tourists. Use of public transportation was very less. Over 59.5% of tourists, who used road transportation, preferred their own vehicle. 33.3% of them used transport services and 7.14% of them used public transport. As over 51% of total tourists are from Gujarat and Palitana being a religious place; 44% of tourists were daytime visitors. 44% of tourists stayed for a night. Only 8% of tourists stayed in Palitana for two nights and 4% of them stayed for more than two nights. The number of tourists stayed for at least a night in Palitana is higher in tourists from other state rather than Gujarat
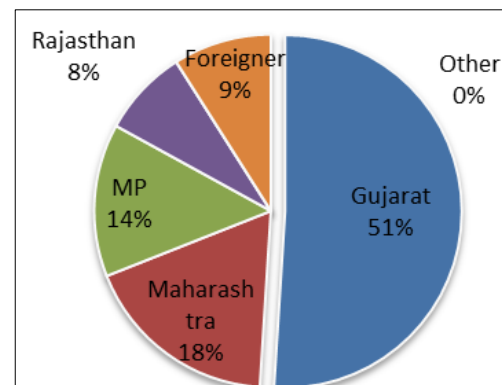

Chart 4: State of origin

Table 3: Tourist profile: Travel behaviour and expenses as per the age group

Age Group	No of visitors	Sex		Travel Pattern			Frequency of visit		Average expense (rs/person a day)
		Male	Female	Alone	With Family	group	First	Repeat	
<18	15	8	7	5	10	0	5	10	2559
18-40	27	17	10	19	12	11	15	12	2753.69
41-60	48	28	20	0	17	16	10	38	2744.84
>60	10	5	5	0	6	4	0	10	2680
Total	100	58	42	24	69	31	30	70	

The share of tourists above 40 years of age is 58%, because of the nature of the destination; which is spiritual. Almost 69% of tourists were travelling with family and 31% of with group. As Palitana is very important and sacred place for the Jains, they do visit this place repetitively. That's why share of the tourists with repetitive visit is over 70%. Average expense per day per person is increasing with respect to the age, mainly because of travelling expense and expenditure of Doli
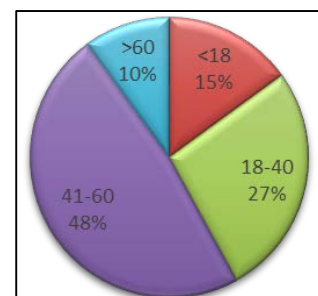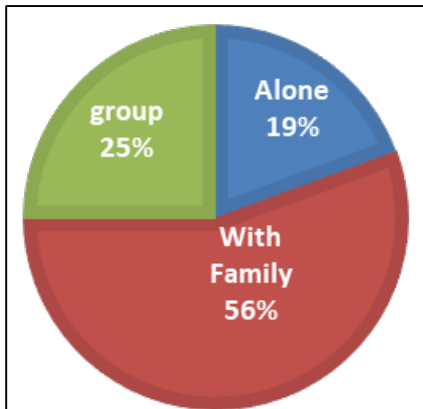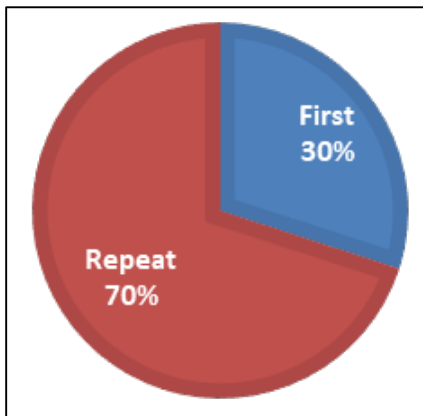

Chart 6: age group

Chart 7: Travel pattern

Chart 8: Frequency of visit

Chart 9: Rating of tourist facilities

Table 4: Rating of tourist Facilities

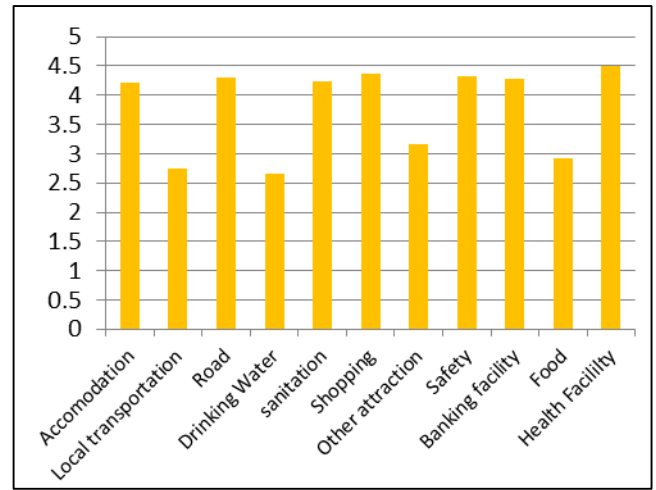| Facility	Rating out of 5
Accommodation	4.22
Local transportation	2.74
Road	4.31
Drinking water	2.65
Sanitation	4.23
Shopping	4.37
Other attraction	3.16
Safety	4.33
Banking facility	4.27
Food	2.93
Health facility	4.5

5. Major Findings

After having conversations with tourists and asking them about problem faced, some issues arose. These issues are listed in descending order in table 5. Uncleanliness of streets has emerged as the most frequently told problem by tourists. Particularly the Taleti road, which is used by the most of tourists, remains busy with movement of tourists. It is having small commercial shops, a cloth market and food market. There is no provision of dust bins on road neither by Palitana Nagarpalika nor by private shopkeepers or vendors. Though it is maintained by sweeper twice a day, it remains unclear. There is also no provision of public toilet on this road.

Though the distance from the accommodation to the pilgrimage site is not much, local transportation is being used by most of the aged persons because of their inability to walk. The vehicles used for public transportation are rickshaws, which are not comfortable for the most of the tourists. Almost all dharamshalas use borewell to provide drinking water to the tourists. This water is unfiltered and hard to digest. So, many tourists prefer mineral water bottle which is easily available in market. All dharamshalas provides food also, but the same time they follow regulations of Jainism, and so, they do not provide food at night. Tourists, who do not strictly follow this rule, have to rely on restaurants and food vendors. There are very few multi-cuisine good restaurants and tourists have to take their dinner on foot paths, encroached by food vendors, which can be unhygienic for them.

Fig 1: Plastic Wastes on streets

Table 5: Major findings

Uncleanliness	69%
Lack of public toilets	55%
Lack of hygenic food	48%
Lack of filtered water	44%
Bad condition of IPT	40%
High Doli Expense	34%
Stray animals	31%
Lack of recreational activities	27%
No information center/trained guide	24%
Poor railway connectivity	20%
Encroachment	15%

Fig 1: On Street Food and Cloth Market

Pilgrims, who cannot climb the mountain, use Doli. Doliwalas often command exorbitant price for the trip during the peak season. This needs to be managed properly. There are also some labors that carry luggage and kids and come along with a pilgrim.
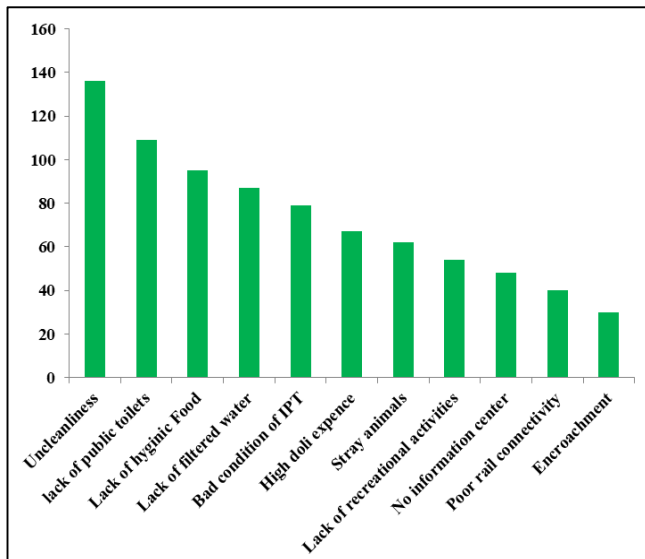

Fig 2: Doliwalas carrying a pilgrim

Recommendation
Recommendations are given to the problems emerged out of tourists perception findings. Most of the recommendations are based on fulfilling the demand and infrastructure gaps. The main implementing agencies are Palitana Nagarpalika and Non-Governmental Organizations (NGOs)

PROBLEMS	RECOMMENDATIONS	IMPLEMENTING AGENCY
Uncleanliness	Provision of dustbin	Palitana Nagarpalika
Lack of public toilets	Provision of public toilets	Palitana Nagarpalika
Lack of hygienic food	Provision of multi cuisine restaurants	NDOs
Lack of filtered water	Maintenance of filtration plant	Palitana Nagarpalika
Bad condition of IPT	Better IPT service vehicles	NDOs
High doli expenses	Provision of grants to doliwalas	NDOs
Stray animals	Provision of Panjarapol	Palitana Nagarpalika
Poor railway connectivity	Provision of special trains in peak seasons	Railways
Encroachment of public spaces	Provision of space to vendors	Palitana Nagarpalika
No information center/trained	Provision of TIC/guides	Palitana Nagarpalika

Development strategies for Palitana
a.   Improvement of Taleti road
1.   Public toilets at regular interval
2.   Provision of dustbins where required
3.   Removal of encroachment

b.   Provision of hygienic food and water
1.   Strict regulation for using disposable materials on selling any food product
2.   R.O. water plant to provide purified water for all dharamshalas

3. Provision of multi cuisine restaurants

c. Development of other tourist spots

Though Palitana is a pilgrimage destination, there is a need for recreational activities. It is necessary to develop other tourist spots to attract foreign and non-Jain tourist. There are some places of interest like Jain Museum, Rohishala, Gheti ni paag, Dam Tirtha which can be developed.

Conclusions

Palitana is very important pilgrimage place for Jains. They have been coming here for centauries for worship. Over 90% of tourist visiting this place are Jains. As tourists come here for pure religious purpose, they do not demand or expect any extra ordinary facilities. Non-Jain and foreign tourists come here because of heritage and architectural values of the place, but they follow rituals and discipline of Jainism. For betterment of the place, there are few NGOs and trusts, working effectively in Palitana along with the co-ordination with urban local body.

Most of the tourists coming in Palitana are from Gujarat – domestic tourists. Even, tourists from Maharashtra, especially from Mumbai are basically Gujarati Jains. Because of poor rail connectivity mainly with Ahmedabad and Mumbai, use of private vehicles and transport service providers is very high. This leads to access expenditure for tourists and thus they spend less amount of money in other related activity. Because of less recreational activities in town, tourists tend to leave this place earlier. Average duration of stay is maximum two days for the most of the tourists. Jains do make visit of this place once in a year or two years. First time visitors are young generation people. Old age people often come in a group sponsored by a person or a trust. The number of person of a group ranges from 10 to 1000 people sometimes. Except from four months of monsoon, flow of tourists is consistent and that's why it is necessary to keep maintaining all tourist facilities and keeping it functional.

Development strategies for Palitana should be focusing on providing basic amenities to the tourists. This includes food, water, accommodation, transportation and hygienic environment and should be given first priority. Further, strategies focusing on advancement of the tourist places can be formulated.

Scope and limitation

The study is restricted to assessment of infrastructure related to tourism sector and its related activities for proposing improvement strategies. The study could be expanded into other areas of development as well as for overall development of Palitana

References

1. Dalal Consultants, Engineers Limited. Study Report on Preparation of 20 Years Perspective Plan for Development of Sustainable Tourism in Gujarat. New Delhi: Government of India Ministry of Tourism & Culture 2003.
2. Department of tourism, Ministry of tourism culture. National tourism policy 2002. New Delhi: Department of tourism, Ministry of tourism & culture 2003.
3. GITCO limited. Tourist Flow Information System-Annual Report 2014-15. Ahmedabad: Tourism Corporation of Gujarat Ltd. 2015.
4. IL&FS Infrastructure. Identification of Tourism Circuits across India. New Delhi: Ministry of Tourism, Government of India 2012.
5. Industries, Mines Department Government of Gujarat. Tourism Policy for the State of Gujarat (015-2020). Gandhi Nagar: TCGL. (2015).
6. Jain V. Pilgrimage Tourism Development for Dwarka, Gujarat. Ahmedabad: unpublished 2006.
7. Kulkarni S. A brief report on tourism in India. Corporate Catalyst India Pvt Ltd. 2015.
8. Ministry of Tourism. Report of The Working Group On Tourism 12th Five Year Plan. New Delhi: Ministry of Tourism 2011.
9. Ministry of tourism. Annual Report 2014-15. New Delhi: Ministry of tourism, Government of India 2015.
10. Ministry of Tourism, Government of India. (2012). Second Tourism Satellite Account for India. New Delhi: National Council of Applied Economic Research 2009-10
11. Ministry of Tourism, Government of India. Statement Containing Brief Activities of The Ministry Of Tourism. New Delhi: Ministry of Tourism, Government of India 2013.
12. Ministry of Tourism, Government of India. India Tourism Statistics at a Glance. New Delhi: Ministry of Tourism, Government of India 2014.
13. Ministry of Tourism, Government of India. (2015). Strategic action plan. New Delhi: Ministry of Tourism, Government of India.
14. National Council of Applied Economic Research. Regional Tourism Satellite Account– Gujarat, 2009-10. New Delhi: Ministry of Tourism, Government of India 2014.
15. Patel H. Sustainable Development of Spiritual Tourism in Gujarat. Gandhinagar: Gujarat Tourism Department. 2010.
16. Pilgrimage India. Palitana. Retrieved 2016, from http://www.pilgrimage-india.com/jain-pilgrimage/palitana.html
17. Planning commission GOI. An Approach to the Twelfth Five Year Plan. New Delhi: Planning commission, GOI. 2011.
18. S. Vargheese Antony Jesurajan SP. Dimensions Of Spiritual Tourism In Tuiticorin District Of Tamil Nadu In India – A Critical Analysis. Palayamkottai: Unpublished 2012.
19. Sangeetha R. Scope of Tourism: Indian Perspectives. Chennai: International Journal of Innovative Research in Science, Engineering and Technology 2012.
20. Strategic Initiatives, Government Advisory (SIGA) Team. Diverse Beliefs: Tourism of Faith Religious tourism gains ground. New Delhi: YES BANK Ltd. 2012.
21. Tourism Corporation of Gujarat Limited. Tourism Policy for the State of Gujarat. Gandhi Nagar: Industries and Mines Department Government of Gujarat 2015-20.
22. United Nation World Tourism Organization. International Recommendations for Tourism Statistics New York: United Nations Publication 2008-10.