

# Use and Management of Public Open Spaces in Kathmandu Valley

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## Abstract

Public open space is an open area that is freely accessible to all people without any restriction for social, cultural, environmental, economic, and political uses. For the purposes of the research, public open space encompasses open spaces and parks where public access is unrestricted at least during daylight hours and people do not need to pay. This research employs a case study approach to explore the users' opinion for assessing the use and management of public open spaces focusing on three POSs of different hierarchy, scale, location, similar function and responsible management agencies located in Kathmandu Valley namely UN Park, Shankha Park and Suryamukhi Garden. To evaluate the usage of open spaces, six aspects are considered: Access and linkages, Comfort and Image, Inclusiveness, Engagement, Use and activities, and Management. Also the concepts and theories of management and various models have been discussed and related to the study areas. A mixed methods approach was considered for data collection, including questionnaire survey, interviews, observation, and also collection of required information from journals, documents and past researches related to the study. According to the results, it can be inferred that these public open spaces are not well maintained, the spaces lack sitting spaces, infrastructures, regulation and timely monitoring and maintenance. The most important reason for dissatisfaction among the users is lack of maintenance and inefficient management. The study also found out the advantages and deficiencies in each of the open spaces despite being managed by the federal government, municipality or community. In order for these POSs to best serve the many facilities and services, it is crucial that they be made accessible, user-friendly, appealing, and functional with consideration for management prospect in the planning phase itself.

## Keywords

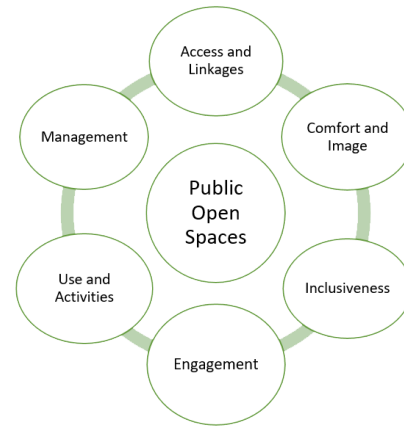
Public open spaces, User's perception, Parks, Management

## 1. Introduction

Public Open Spaces (POSs) have different interpretations and can be defined in numerous ways according to the context in which they are situated. Public open space is defined as the outdoor place which is accessible to the public and is of free access without any restrictions. It could be owned by government, non-profit organization or private individual providing public access. Public open spaces such as parks and green spaces are key elements of the built environment. In the context of urban areas, public open spaces provide space for recreation, enhancing people's well-being, social interaction and livability of an area. Thus, public open spaces form an essential part of urban life. Public open space is more valuable in the dense cities of

developing countries where individual households do not have open spaces and people use public open space as a place for enhancing social capital and well-being for social interactions and establishing relations in the society. Kathmandu Valley is one of the most rapidly urbanizing cities of Nepal. The public open spaces have changed dramatically with traffic, parking, improper management policies and encroachment. The demand of public open spaces is also increasing with the rapid and haphazard urbanization in Kathmandu. There is lack of community and public access to safe open and green space which has impacted the urban life of the people residing in the valley. The problems with the management of contemporary public spaces are a significant issue that has failed to receive adequate consideration from government agencies. [1]

There is now a growing consensus among scholars that an effective management of public space can improve the quality of modern life and create sustainable urban environments.[2] As such, this research shall examine three public open spaces in different areas of the Kathmandu Valley, explore its use, the existing policies, the challenges faced by the responsible management agencies, and possible strategies for their proper management. The public open spaces in this research are limited to open space in new development areas and public parks and do not include palace squares, civic squares, religious open spaces and privately/ institution owned open spaces. Open spaces which are not freely and readily accessible to the public are not included in this study.



**Figure 1:** Aspects of public open space considered for the study

## 2. Literature Review

### 2.1 Defining Public open spaces

Those spaces which are available without any restriction for social, cultural, environmental, economic, and political uses are known as public open space. Public open spaces are shared resources, which are not closed or blocked up and provide access for people and express conditions of public life, civic culture, and everyday social life activities. [3] POS is also considered as a place for living, place of society, a place of public life, a place of urbanity.[4, 5] There exists a distinct difference between open space and public open space. All forms of open spaces, including private and public open places, are included in the term open space. Public open space, on the other hand, is open area that is freely accessible to all people without any restriction. POS consists of green space and of civic space. For the purpose of the research, public open space encompasses open spaces and parks where public access is unrestricted at least during daylight hours and people do not need to pay. It does not include streets, squares, traditional open spaces, civic spaces and private/ institution owned open spaces.

### 2.2 Aspects of Public open spaces

The paper suggests a theoretical framework to evaluate public open space: a good public open space is accessible, inclusive in nature, provides physical and psychological comfort, engages the users in varieties of activities and is regularly maintained.

Access deals with the proximity, mode of

transportation and time taken to reach the space, and the ability of people to be in the public space and use it.[6] Madanipour (2010) acknowledges accessibility as a key feature of any public space. Comfort in public space depends on various factors such as perceived level of safety, climatic comfort, physical and psychological comfort, convenience etc.[7] The presence of landscape features, attractive views, appearance, no outdoor noise while roaming POS etc. are considered for good image of the public space.[8, 9] The extent of inclusiveness of any public space is determined by the range of activities which take place and the user group it supports.[6] Equitable access, social cohesion and users’ freedom helps in analysing the inclusiveness of the space. Public open spaces should promote an environment where people feel free to act protecting the privacy of the users, all users should have access to the POS and also give opportunity to people to participate in various activities and events.[10] Activities should address different age groups and gender and should also consider the elderly people.[11] One of the most crucial elements in creating successful spaces, improving comfort, and increasing utilisation is maintenance.[12] The management authorities should respect the right of users and provide basic facilities in the space.[13]

### 2.3 Management of Public open spaces

All public spaces, no matter how inclusive, democratic and open, require some form of management so that they can fulfil their various roles effectively. De Magalhães and Carmona [14] conceptualised the management of public spaces as four interlinked processes: Regulation of uses and

conflicts between uses; maintenance routines; new investments and ongoing resourcing of public space; and coordination of interventions in public space. [14] also conceptualised three management models for public spaces and how to deal with coordination, regulation, maintenance routines, and new investments and resourcing of public spaces which are the state-centred model, the market-centred model and the user-centred model.

### 3. Research Setting

The research employs a case study approach to explore the use and management of public open spaces focusing on three POSs. One of the major challenge was the selection of the case areas. They were selected based on different hierarchies, management agencies and similar functions. UN Park was selected since it is a city level open space and is located in the central area of Kathmandu Valley. Shankha Park whereas is a neighbourhood level open space adjacent to the busy ring road and has similar characteristics and function as per UN Park. To see if a new perception could be obtained, Suryamukhi Garden was selected which is in a land pooling area and is of community scale. All these POSs have different management agencies being the Federal Government, Municipality and Community respectively. The study considered users’ opinion for assessing the use and management of POSs.

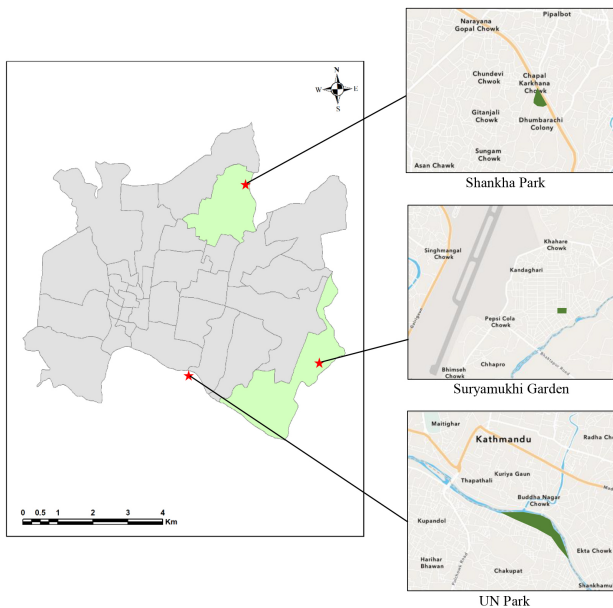


Figure 2: Location of study areas

### 4. Methodology

Interpretivist paradigm is adopted for the research and employs a case study approach to explore the users’ opinion for assessing the use and management of public open spaces focusing on three POSs. A mixed methods approach was considered for data collection, including questionnaire survey, interviews, and observation. A total of 225 questionnaires were filled out by respondents from the three public open spaces (100, 75 and 50 in UN Park, Shankha Park and Suryamukhi Garden respectively). The usage of open spaces was evaluated based on six aspects: Access and linkages, Comfort and Image, Inclusiveness, Engagement, Use and activities, and Management. The observation and questionnaire surveys were carried out multiple times a day and week. Required information were also collected from interviews with key personnel and responsible management agencies, journals, documents and past researches related to the study.

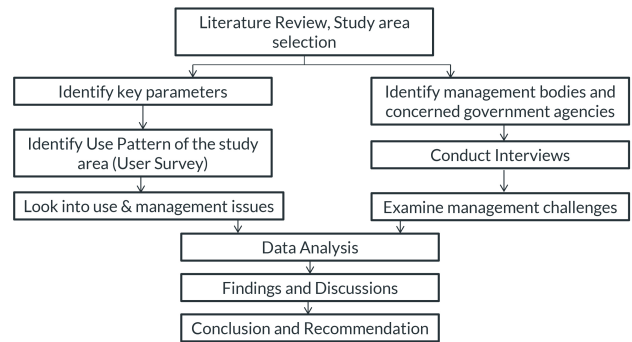


Figure 3: Schematic representation of the methodology adopted for the study

### 5. Results

#### 5.1 Exploring the use of study areas

The aim of conducting case studies was to explore the usage of public open spaces. Further, issues relating to the public open spaces were explored with the participants of the interview.

##### 5.1.1 Respondents Profile

A total of 225 questionnaires were filled out by respondents from the three public open spaces. Male participant’s response rate was higher than that of females in all study areas. Users between the ages of 25 and 39 responded the most to the survey. The majority of those who responded worked in the

private sector, followed by students and then unemployed, lastly being in the public sector.

**Table 1: Characteristics of Respondents**

		UN Park		Shankha Park		Suryamukhi Garden	
Total responses		Count 100	%	Count 75	%	Count 50	%
Age	0-19	19	19%	9	12%	10	20%
	20-39	43	43%	38	50.66%	18	36%
	40-59	26	26%	20	26.66%	13	26%
	60 and above	12	12%	8	10.66%	9	18%
Gender	Male	67	67%	43	57.33%	31	62%
	Female	33	33%	32	42.66%	19	38%
Education Level	High school or below	41	41%	41	54.66%	26	52%
	Bachelor degree	41	41%	26	34.66%	24	48%
	Master degree	18	18%	8	10.66%	0	0%
	Doctorate	0	0%	0	0%	0	0%
User Group	Entrepreneur	9	9%	9	12%	2	4%
	Private sector	19	19%	24	32%	14	28%
	Public sector	9	9%	5	6.66%	0	0%
	Unemployed	23	23%	11	14.66%	6	12%
	Student	32	32%	14	18.66%	19	38%
	Others	8	8%	12	16%	9	18%

**5.1.2 Respondents Behavioural Characteristics**

According to the survey, most people preferred to visit UN Park in the morning, Shankha Park in the morning and Suryamukhi Garden in the evening especially for physical activities where they spend more than an hour. Daytime visit was for informal and social activities. People preferred walking to the public open spaces in all the three cases and could reach within 5-15 minutes. Some visited the parks enroute to their work or home where they spent less than 30 minutes.

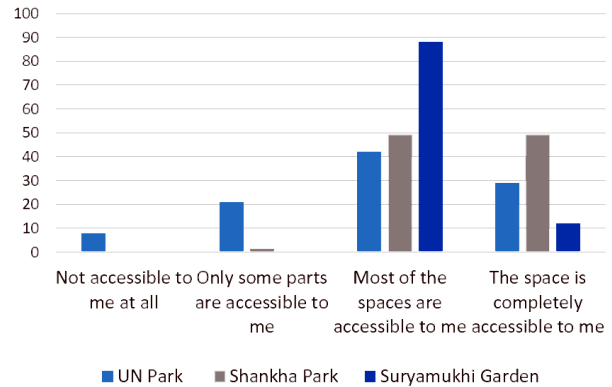
**Table 2: Behavioural Characteristics of Respondents**

		UN Park		Shankha Park		Suryamukhi Garden	
Total responses		Count 100	%	Count 75	%	Count 50	%
What time do you prefer to visit?	Morning	49	49%	30	40%	18	36%
	Day	43	43%	38	50.66%	18	36%
	Evening	26	26%	20	26.66%	13	26%
What is your transportation mode?	Walking	70	70%	36	48%	44	88%
	Bike	25	25%	29	38.67%	6	12%
	Public vehicle	5	5%	8	10.66%	0	0%
How much time does it take to reach?	Private vehicle	0	0%	2	2.66%	0	0%
	0-5 minutes	37	37%	12	16%	30	60%
	5-15 minutes	40	40%	43	57.33%	17	34%
	15-30 minutes	17	17%	14	18.66%	1	2%
What is your purpose of visit?	More than 0 minutes	6	6%	6	8%	1	2%
	Physical activities	53	50.47%	36	36%	27	42.18%
	Informal activities	28	26.66%	35	35%	19	29.68%
	Social activities	17	16.19%	22	22%	18	28.12%
	Quiet activities	7	6.66%	7	7%	0	0%
What is your frequency of visit?	Once a day or more	48	48%	19	25.33%	11	22%
	Few times a week	36	36%	37	49.33%	31	62%
	Few times a month	9	9%	13	17.33%	5	10%
	Only occasionally	7	7%	6	8%	3	6%
How much time do you spend here?	Less than 15 minutes	9	9%	1	1.33%	0	0%
	15- 30 minutes	35	35%	14	18.67%	19	38%
	30- 60 minutes	29	29%	38	50.67%	19	38%
	More than 60 minutes	27	27%	22	29.33%	12	24%

**5.1.3 Respondent’s perception to usage and management based on various aspects of public open spaces**

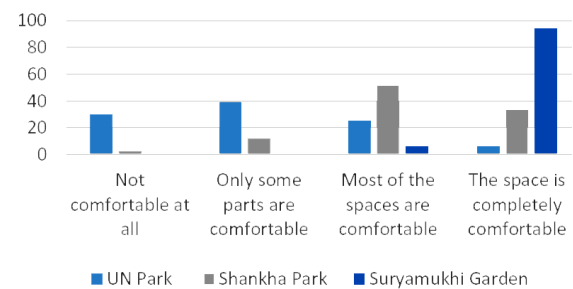
**Access and Linkages:** There is no direct public vehicle route access to UN Park. Thus, most people walk or use private vehicles. Shankha Park is adjacent

to ring road and is accessible to all types of users. Suryamukhi Garden is completely accessible as the users are mostly from the land pooling area. Shankha Park and Suryamukhi Garden are well maintained due to which the spaces are accessible, whereas in the case of UN Park, due to the undulating nature of land and lack of maintenance, few spaces inside the park aren’t accessible.



**Figure 4: Accessibility in the study areas**

**Comfort and Image:** Most of the users in all three open spaces found it safe in terms of crime. None of the three spaces have universal accessibility but are safe for children, women and elderly people. Users expressed their discomfort in the case of UN Park due to need of maintenance for pathway and seating. Most of the users find UN Park attractive due to the wide amount of trees, riverside view, presence of sculptures and also play areas. 100% of the users of Shankha Park and Suryamukhi Garden find the space attractive.



**Figure 5: Comfort in the study areas**

**Inclusiveness:** All the three public open spaces are inclusive in nature in terms of people of all age groups and genders. But universal design has not been adopted in any of these spaces. Thus they are not universally accessible and inclusive of differently abled people. There were less concerns about the security guards, as a means of intimidation or



infringement upon their privacy in UN Park and Shankha Park. Most of the users felt free about their behaviour in all three POSs.

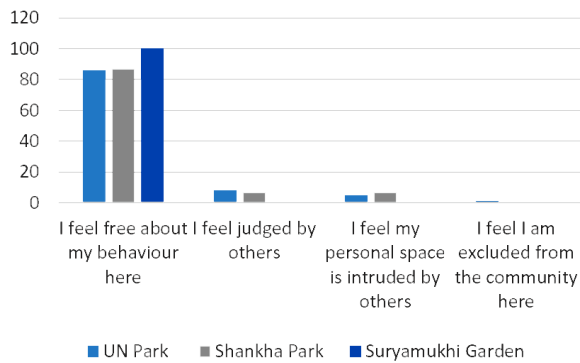


Figure 6: User freedom in the study areas

**Use and activities:** The survey recorded a higher percentage of users in this physical activities category, i.e., 53%, 48% and 54% in UN Park, Shankha Park and Suryamukhi Garden respectively. Sports activities can be seen in UN Park such as volleyball, cricket, football and badminton. Shankha Park has a temple inside the park premises due to which socio-cultural activities are also observed. Suryamukhi Garden due to its accessibility and being inside a neighbourhood area has all groups of users. People also come for social gathering and strolling. Many people come on Saturdays for family outing.

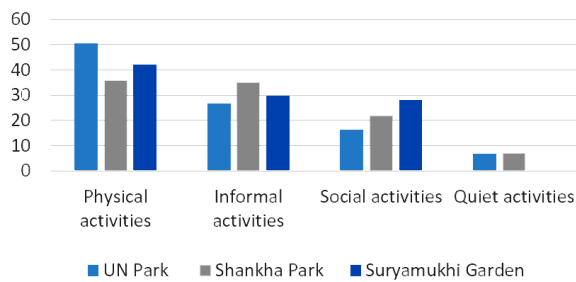


Figure 7: Activities in the study areas

**Engagement:** The users perceived a greater ability to participate in events and activities at the open spaces. Events are held during Teej, Dashain, Shivaratri where people from far distance come to the park and participate in the events. Elderly people also come for socialising and various bhajan programs. Most of the activities in UN Park are male oriented thus female users felt that they could not participate.

**Management:** The survey reveals that the users are dissatisfied with the lack of maintenance highly in the case of UN Park, followed by Suryamukhi Garden

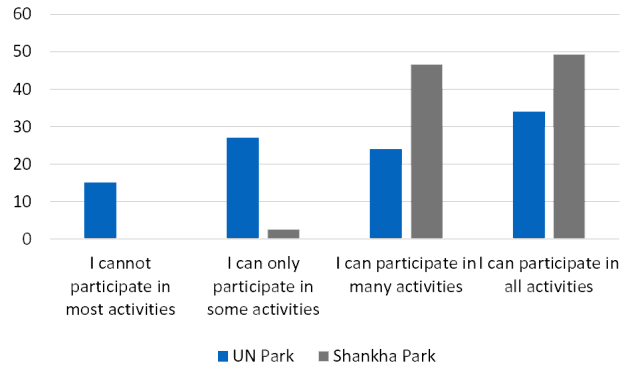


Figure 8: Participation in activities in the study areas

and finally Shankha Park. UN Park despite being a city level open space does not have the required amenities and is not well maintained. Shankha Park after its renovation has less issues to be catered for maintenance. Suryamukhi Garden is maintained regularly by the user groups. The evaluation of the users for the management of the POSs reveal that the management is poor in the case of UN Park. People are comparatively satisfied with the management in the case of Shankha Park and Suryamukhi Garden.

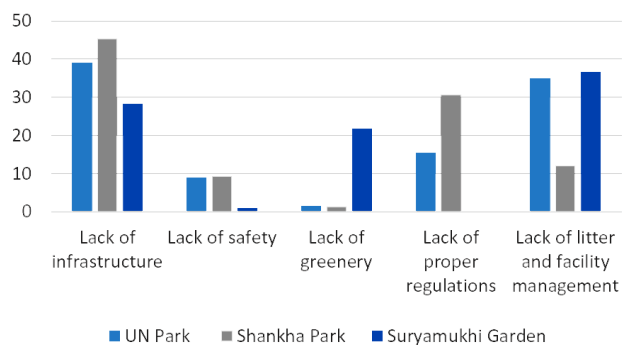


Figure 9: User perspective regarding management in the study areas

## 5.2 Exploring the management of study areas

High Powered Committee for Integrated Development of the Bagmati Civilization (HPCIDBC) under Ministry of Urban Development is responsible for the management of UN Park, Kathmandu Metropolitan City, KMC is responsible for Shankha Park and User Committee (Suryamukhi Samaj) is responsible for Suryamukhi Garden. Specific rules are set by the User Committee in Suryamukhi Garden. Each parks have their specific opening and closing time but challenge exist in UN Park as there exists a suspension bridge which is open all the time. The finance for the maintenance is entirely on the government funding

expect for Suryamukhi Garden where the users contribute both financially and also labor for cleaning and place keeping thus enhancing sense of belonging. There are less human resources in UN Park as compared to its size and no designated personnel for the place keeping in the case of Suryamukhi Garden. Need for maintenance prevails in all the three study areas.

## 6. Discussion

### Findings on use of open spaces:

The findings of the survey reveal the state of public open spaces in terms of its utilization and management. Regarding the use of the public open spaces, in the aspect access and linkages, Harnik [15] emphasizes that accessibility should also consider the distance for senior citizen, mothers with toddlers and children rather than only healthy adult. Unfortunately, all the three POSs do not consider this factor. People have also travelled more than 30 minutes to reach the POSs due to no open spaces being of such scale in their proximity in the case of UN Park, great ambience after renovation in the case of Shankha Park, green and comfortable quality in the case of Suryamukhi Garden. Mehta [6] argued that users experienced psychological comfort due to attractive and pleasant views which holds true for all the POSs. People are highly satisfied in the case of Shankha park since it was recently renovated. Also the study areas had poor climate responsive design with few sheltered spaces and none in the case of Suryamukhi Garden making it difficult to be functional during monsoons. Regarding the aspect inclusiveness, people could freely access all the parks regardless of the age, gender and status. Users should feel free while inside the parks regarding their behaviour, which holds true in all the case areas. Concerning the aspect use and activities, people come for various physical, social, informal and quiet activities in these spaces and the activities in these spaces should consider all age groups and genders with different characteristics. The areas are thought to be free from crime but they lack comfort and cleanliness. From the result, it can be inferred that these public open spaces are not well maintained, the spaces lack sitting spaces, infrastructures, greenery, regulation and timely monitoring and maintenance. The most important reason for dissatisfaction among the users is lack of maintenance and inefficient management.

### Findings on management of open spaces:

Despite the open spaces being of different hierarchy and managed by different agencies, the most significant challenge impacting the maintenance was a lack of funding. The shortage of human resources, especially for tasks involving direct maintenance, enforcement, and coordination of activities was a key problem. Another issue is short-term development costs versus long-term maintenance concerns. Parks are being designed in a large amount during the last few years but the maintenance aspect should be highly considered for its long term sustainability. The study revealed that models have their own core advantages: the ability to draw resources from a much wider area in the case of Federal Government, more sensitivity and responsiveness to cater the needs and demands in the case of Municipality and the potential of public engagement and sense of belonging in the case of community. However, these models also have potential disadvantages, from the lack of flexibility and less attention due to the wider scope of the Federal Government, to the spatial inequality in terms of resources in the community model. Public open spaces that are administered by the community and include local residents demonstrated successful management.

## 7. Conclusion and Recommendation

This paper has illustrated an approach for assessing public open spaces in terms of usability and management. The three study areas evaluated through questionnaire survey showed that these spaces were used for various physical, social, informal and quiet activities. And despite being managed by various agencies, had similar issues regarding financial challenges and lack of awareness among the users. The involvement of the private sector and the local community in public open space management could be a means to reduce the resources respective authorities require to managing public spaces. The management and maintenance is also associated with visitor behaviour in public open spaces. Thus educating users of public open space into better behaviour, hence lowering the need for management and enforcement in the first place itself could be a long term solution. Local businesses in the private sector can provide a variety of contributions to the management of public spaces. The management of most of the public open spaces is dependent entirely on government funding which needs for alternatives.

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