



Analysis of the Effects of Parks and Open Spaces on Rental Value of Residential Properties. A Case Study of Sabon-gari, Kano

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ABSTRACT

Urban parks and open space have always been a valuable asset to human communities. They are multi-faceted in the kind of value that they have provided to local communities. While parks are generally accepted as beneficial, it can be challenging for communities to determine the specific economic and fiscal benefits of parks, recreational facilities, and open space. Parks can affect a community's financial well-being, environmental quality, social atmosphere, and health; as well, ongoing maintenance requirements generate costs to be covered. The study showed that the real estate market consistently demonstrates that many people are willing to pay a larger amount for a property located close to parks and open space areas than for a home that does not offer this amenity. The literature review found that parks & open spaces have several positive impacts on surrounding residential communities ranging from an increase in quality of life and property value to tourist attraction and so on. A quantitative research methodology was conducted in the collection of data through a well-designed questionnaire which was structured based on the objectives of the study and the research questions of the research work. A total of 400 questionnaires were administered in the study area, and a total number of 254 were retrieved. The data were analyzed using descriptive statistics, frequency tables, and mean item scores. While an ideal park may produce large increases in real estate value, a park that is poorly suited to a community's needs and/or poorly managed will not produce a largely positive effect. Finally, the following recommendations were made; proper planning and efficient use of open spaces, formulating effective urban planning policies, proper education, awareness, and provision of amenities and open space policies to guide maintenance of parks.

Key words: Urban park, Open space, Residential communities, Tourism attraction, Open space policies

1. INTRODUCTION

In the context of urban planning and design, open space refers to that land use category, of land, not built upon which may be either natural or man-made, or land developed as gardens and recreational grounds, or undeveloped land which has value for recreational purposes, amenity, conservation of land and other natural resources historic or scenic landscapes and for outstanding beauty [1-4] and as a green belt which is essential in checking the growth and decay of urban centers [5]. For urban design purposes, an open space comprises land laid out as essential for public use and managed by a public agency [6].

Open spaces are developed into parks and horticultural gardens. They also affect the urban environment significantly in that they do not only enhance the natural vegetation of cities but also, promote city imageability through the creation of environmental, neighborhood and spatial identity. However, at the micro-level, open spaces in the form of gardens around residential houses complement life and living in the home and are great solace to the human spirit. It is one of the urban values to which a planner should give full consideration [7]. The value of open spaces to city life and living at both the macro and micro scale cannot be over-emphasized. They determine the quality of the physical, human and economic environment of the city [8] and are investments with the qualities of life and change [9]. Open spaces, such as public parks and natural areas provide numerous amenities for nearby residents including buffer zones, space for amenities, social ground, environmental corridors, recreation opportunities, and attractive views. Therefore, a need exists for park and open space professionals to develop means of placing values on the contributions of open spaces to society. Parks & recreation, Crompton [10] outlined the proximate principles that increase the value of properties surrounding such open space amenities. He summarized results of approximately two dozen early studies into a hypothesis.

Crompton noted that some of these studies, ranging in year of publication from the 1870s to the 1980s, exhibited methodological inadequacies and inconsistencies that limit their credibility for current researchers. Using an economic method known as the hedonic pricing technique, in combination with the spatial analyses made possible by the advent of geographic information system (GIS) technologies; it is now possible to conduct far more detailed and accurate analyses of the impacts of open spaces on surrounding property values. Open space planning is closely related to the concept of outdoor recreational facilities planning. They are both concerned with the use of information to create landscape designs for the recreational pursuits of existing and potential users of open spaces. Recreation is any activity voluntarily undertaken for pleasure, fun, relaxation exercises, self-expression, or release from bore doom, worry, or tension, that which is physically or psychologically rejuvenating because it is different from the essential routine of one's life [11]. Recreation particularly outdoor recreation, therefore, represents activity. Outdoor recreational open spaces are generally classified into passive and active spaces. Passive open spaces are often parks and gardens developed with trees, lawns, fountains, and sculptures, sustainable for recreational purposes like meditation and reflection, quiet conversation, strolling, and peaceful relaxation. Characteristically, active recreational open spaces can be readily seen, felt, and perceived, and are such as playgrounds, playfields, children play areas, merry-go-round parks, tennis courts, and swimming pools. Sporting activities that can be provided for in these active recreational open spaces include foot and hand-balling, cricketing, hockey, golfing, fishing festivals, sailing, and polo depending on the type, scale, and level of the service area.

However, many places across the country, Sabon Gari, Kano State is rapidly losing open space to urbanization. Sabon Gari is the fastest-developing part of the State. The area has become a residential area in the City of Kano bringing a rapid increase in the population of the area. Past population growth has translated into steep land conversion rates throughout the area. This indicates a land-consumptive, low-density pattern of growth. As of 2018, over 89% of Sabon Gari Road had been developed, while only 3% of the total landmass had been protected as parks & open space. Given the current rate of growth and development, if the area does not begin to emphasize land conservation policies and programs for parks and open spaces, an estimated 97 per cent of the area will be developed by the year 2023. Therefore, the study is focused on the evaluation of the effects of parks and open spaces on residential property values at Sabon Gari, Kano State, with a focus on the area of No-man's-land.

2. RESEARCH METHODOLOGY

This chapter discussed the methodology adopted in this study. It explains systematically the step-by-step procedure adopted in carrying out the study. The data collection and analysis were based on the aim and objectives of the study. Research methodology reveals the research design specific methods or strategies of collecting information on the subject of study; this involves personal observation, field survey, content analysis, etc. The study procedures are discussed under the following: design of the study, source of data, the population of the study, sample size and sampling technique, an instrument of data collection, reliability and validity of the instrument, and method of data presentation and analysis.

2.1. Study design

The major research design adopted for this study is the survey research design. This design is used due to the impossibility of the researcher to reach every member of the population. Samples were drawn from the population. During the course of carrying out this research, data were obtained from various sources. The sources of data collection used were both primary and secondary data. The population of the study comprises all male and female residents, 393,300 residents of No-man's-land, Sabon Gari, Kano State.

2.1.1. Sample size

The sample size comprised of the total number of population elements or sampling units that were selected (i.e sampled) for investigation in a research study [12]. The sample size for this research work is determined using the Taro Yamane method as shown in equation (1).

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

Where;

n = signifies the sample size

N = signifies the population under the study

e = signifies the margin in error (it could be 0.10, 0.05 or 0.01)

Using Yaro Yamane method to select the sample size from the population.

$n = ?$, $N = 393,300$, $e = 0.05$

The simple random technique was used to administer the questionnaires to the respondents in the study areas. A simple random sampling technique is a sampling method that gives equal probability for the selection of all members of the target population, the size of the sample is dependent on the population.

2.1.2. Validation of the instrument

This is a test to show that the instrument of data collection measures exactly what it is intended to measure. The instrument of the study was verified and validated by pre-testing and pilot study. This was conducted on 70 individuals within the sample size to pre-test the efficacy of the questionnaire. The feedback received was used in the final draft which enhances its reliability.

2.1.3. Data Collection and analysis

400 questionnaires were administered to respondents through a simple random sampling technique in the study area and collection of data through the primary source of questionnaires and interviews of the dwellers in No-man’s-Land, Sabon-Gari, Kano State while the secondary source of data collection includes authorities in this area of research interest, textbooks, journals, official records, etc. Obtained data were coded and analysed descriptively with the aid frequency tables using the relative frequency of responses. A simple percentage was used to analyse the data obtained for the research.

3. RESULTS

This chapter focuses on the presentation, analysis, and interpretation of data collected through the use of a questionnaire distributed to the residents of No-man’s-land, Sabon Gari, Kano State. It also presents the results and discussions from this study. Table 1 shows the number of copies of questionnaires that were distributed and retrieved from the residents of No-man’s-land, Sabon Gari, Kano State. The table indicates that 400 copies of questionnaires were distributed and only 254 copies representing 63.5% of the questionnaires returned while 146 copies representing 36.5% of the questionnaires were not returned.

Table -1 Number of respondents

Item	Frequency	Percentage
Numbers of distributed	400	100%
Numbers retrieved	254	63.5%
Numbers not retrieved	146	36.5%
Total	400	100

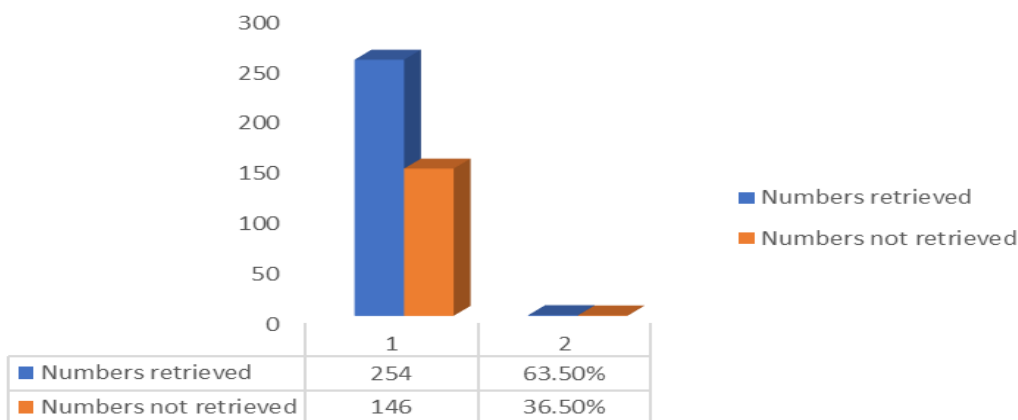


Fig. 1 Questionnaires’ response

Source: Field study, 2019.

3.1. Demographic factors and data analysis

The result in table 2 indicates that 89 respondents representing 35% were Males and 165 respondents representing 65% were females. Fig. 2 shows that 159 respondents representing 62.6% were singles, 80 respondents representing 31.5% were married while 15 respondents representing 5.9% were divorced. This indicates that the respondents were more of singles than married or divorced.

Table -2 Gender of the respondents

Item	Frequency	Percentage (%)
Males	89	35
Females	165	65
Total	254	100

Source: Field study, 2019.

Fig. 3 indicates that 13 respondents fall within the age bracket of 18-23 representing 5.1%, 84 respondents representing 33.1% are within the 24-30 age bracket, 96 respondents representing 37.8% fall within the 31-40 age bracket, 36

respondents representing 14.2% fall within 41-50 age bracket while 25 respondents representing 9.8% fall within the age bracket of 50 and above. This implies that the respondents within the age bracket of 31-40 were higher.

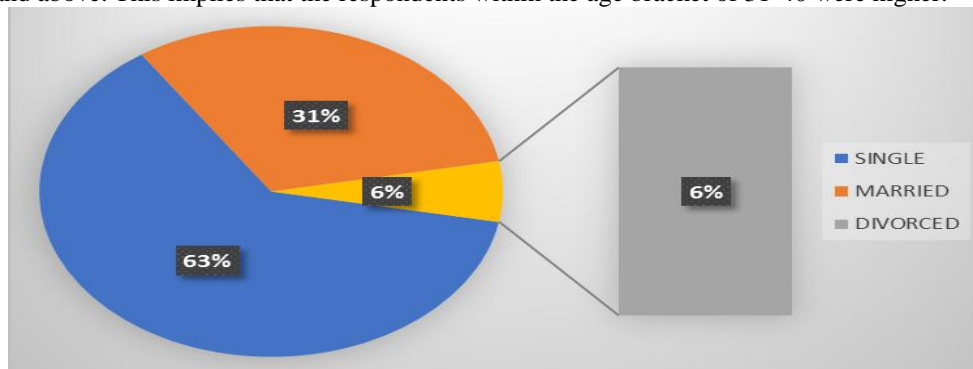


Fig. 2 Marital Status of the respondents

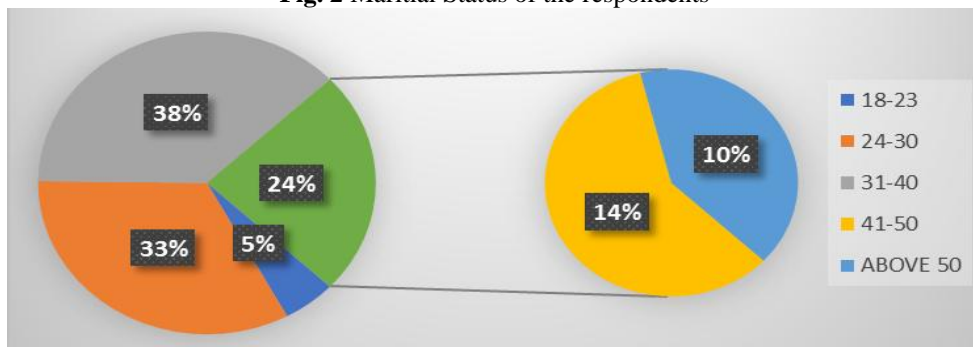


Fig. 3 Age of the respondents

Source: Field study, 2019.

3.2. House preference and open space

The result in table 3 shows that 104 respondents representing 41% indicate that they prefer a house with open space, 93 respondents representing 36.6% indicate that they prefer a house without open spaces while 57 respondents representing 22.4% indicate that they are undecided about what they prefer. Fig. 4 indicates that 117 respondents representing 46.1% of the sample size indicate that the open space is landscaped while the remaining 137 respondents representing 53.9% indicate that the open space is not landscaped. Conversely, table 4 shows that 169 respondents representing 66.5% agree that the availability of open space affects rental structure in the study area while 85 respondents representing 33.5% of the sample size disagree that the availability of open space affects rental structure in the study area. There are similarities with observation of Daramola and Ibem [13], Dennis and Nigel [14], and Fademiro and Atolage [15].

Table -3 House Preference

Would you prefer	Frequency	Percentage (%)
House with open space	104	41
House without open space	93	36.6
Undecided	57	22.4
Total	254	100

Source: Field study, 2019.

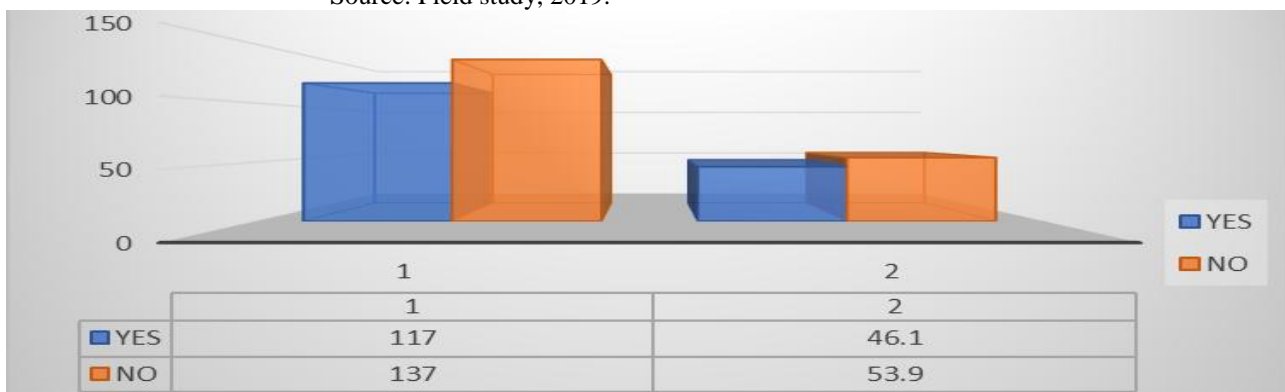


Fig. 4 Landscaping of open space

Source: Field study, 2019.

Table -4 Does Open Spaces affect Rental Structure of Blocks of Flats?

Rental Structure	Frequency	Percentage (%)
Yes	169	66.5
No	85	33.5
Total	254	100

The table above shows graphical presentation of rental values of the various types of residential properties in the area of No-Mans-Land. The rental value of duplex and bungalow has been on the increase compared to self-contained and tenement apartment. The results in Table 5 and Fig. 5 shows a numerical and graphical presentation of rental values of the various types of residential properties in the area of No-Mans-Land. The rental value of duplex and bungalows has been on the increase compared to self-contained and tenement apartments.

Table -5 Rental value trend of Residential Properties in No-Mans-Land

Residential Properties	2015	2016	2017	2018	2019
Duplex	600,000	700,000	800,000	950,000	1,200,000
Bungalow	700,000	500,000	350,000	300,000	270,000
Self-Contained	120,000	100,000	90,000	85,000	80,000
Tenement	50,000	47,000	45,000	40,000	35,000
1 Bedroom Flat	150,000	140,000	130,000	125,000	110,000
2 Bedroom Flats	400,000	350,000	300,000	270,000	200,000
3 Bedroom Flats	700,000	670,000	650,000	550,000	500,000

Source: Field study, 2019.

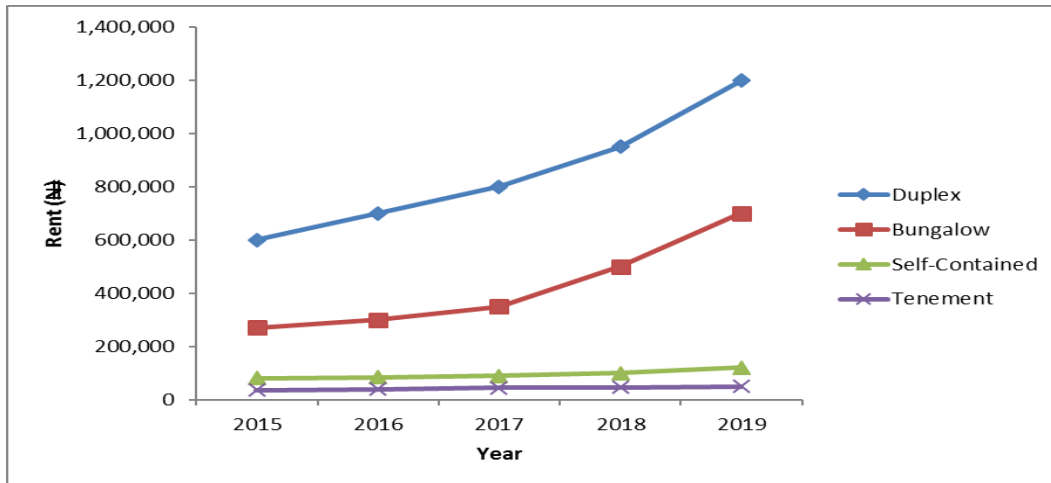


Fig. 5 Rent of apartment

Fig. 6 shows a graphical presentation of the rental value trend on Block of Flats in the area of No-Mans-Land. The rental value of 3 Bedroom and 2 Bedroom has increased over the past five years. Also, there has been a slow but steady increase in the rental value of 1 Bedroom in No-Mans-Land.

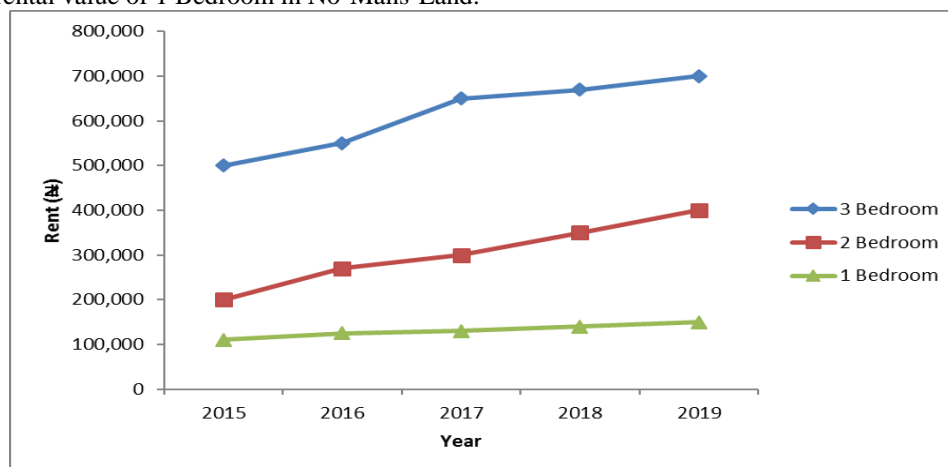


Fig. 6 Rent at No-Man's Land

Source: Field study, 2019.

Findings from Table 6 reveals that parks & open space has several benefits beginning from promoting a healthy lifestyle having an MIS of 3.5 ranking 1st, followed by aeration & ventilation with an MIS 3.4 ranking 2nd, followed by space for outdoor activities with an MIS of 3.2 ranking 3rd, followed by attracting investments with an MIS of 3.1 ranking 4th, followed by boosting tourism with an MIS of 3.0 ranking 5th, followed by the provision of space for recreational activities with an MIS of 2.8 ranking 6th, followed by privacy between residents with an MIS of 2.8 ranking 7th, and lastly making the environment cool with an MIS of 2.7 8th. However, findings from Table 7 showed that sanitation and maintenance is the major way to improve the conservation of parks and open space with MIS of 3.5 ranking 1st, followed by an increase in awareness with an MIS of 3.5 ranking 2nd, followed by the employment of securities to protect parks with an MIS of 3.0 ranking 3rd, followed by charges on the users with an MIS ranking 4th, and lastly charging taxes on the residents of the study area with an MIS of 2.7 ranking 5th. The results are in line with the work of Ayatamumo [16], Banon [17], and Chadwick [6].

Table -6 Merits of open space

S/N	Merits	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1	Total	MIS	Ranking
1	Provides space for outdoor activities	137 548	69 207	21 42	27 27	254 824	3.2	3 RD
2	Provides space for Recreational activities	73 292	68 204	95 190	18 18	254 702	2.8	6 TH
3	Creates privacy between residents	61 244	84 252	97 194	12 12	254 704	2.8	7 TH
4	Provides aeration and ventilation	121	107	26	-	254	3.4	2 ND
5	Makes the environment cool	94 376	65 195	51 102	22 22	254 695	2.7	8 TH
6	Boosts tourism	117 468	62 186	44 88	31 31	254 773	3.0	5 TH
7	Promote healthy lifestyle	142 568	91 273	21 42	- -	254 883	3.5	1 ST
8	Attract investment	101 404	90 270	63 126	- -	254 800	3.1	4 TH

Source: Field study, 2019

Table -7 Ways to improve the conservation of Parks and Open Spaces

S/N	Ways to improve the conservation of parks	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1	Total	MIS	Ranking
1	Charge taxes on the residents	22 88	84 252	45 90	103 103	254 533	2.1	5 TH
2	Charges on the users	102 408	50 150	33 66	69 69	254 693	2.7	4 TH
3	Sanitation and Maintenance	137 548	104 312	13 26	- -	254 886	3.5	1 ST
4	Employment of Security	97 338	102 306	55 110	- -	254 754	3.0	3 RD
5	Increase in Awareness	138 552	97 291	19 38	- -	254 881	3.5	2 ND

Source: Field study, 2019.

4. DISCUSSION OF FINDINGS

The siting of parks and open spaces in a residential area influences the value and price of residential properties in that location. Parks and open spaces amongst many others are one of the factors that increase the value of the land. From the research study, it was discovered that people are willing to pay a higher price for a property that is located in an area with parks and open spaces than a property that is not. The research discovered that the merits of parks and open in the area are the promotion of a healthy lifestyle amongst the residents, provides aeration and ventilation, provides open space for outdoor activities, attracts investments, boosts tourism, and provides adequate space for recreational activities. This agrees with several studies [18-21].

The research also discovered that there are few demerits of parks and open spaces with urban densification as a major demerit followed by an increase in noise pollution, pollution of the environment, and harbouring of criminals. Finally, the researchers discovered that the best way to improve parks and open spaces is by regular sanitation and maintenance of parks and open space, increase in awareness of the merits of parks and open space, employment of security to guard the parks, charge individuals for the use of parks and open space and also payment of taxes by the residents of the area where the parks and open space is sited.

5. CONCLUSION

Open space is an essential part of any urban development and serves several functions that are expedient for basic living. However, the continuous growth of urban areas without effective management and monitoring of their use has led to environmental consequences such as dilapidated parks that have become hideouts for criminals, illegal structures, lack of adequate facilities/amenity and open space policies, lack of a capable agency in handling development and maintenance, poor intergovernmental relationships, shortage of landscape, financial constraints and lack of citizen inclusiveness in participation. Simply put, these negative effects of mismanagement have resulted in poor quality and further decay of the built environment. As this paper has observed these setbacks in open space management and made suggestions in dealing with the problems, it will become a journey to better prioritizing, channeling human, finance, and functional institutional resources to abate the dire consequences of a nation's dwindling open space reserve. In conclusion, it can be stated that parks and open spaces affect the rent and values of residential properties in No-man's-land, Sabon Gari, and the merits of parks and open spaces on residential properties in No-man's-land, Sabon Gari, Kano State is high.

6. RECOMMENDATIONS

The following suggestions are made towards addressing the management issues of open spaces in Nigeria:

- i. There is a need for proper planning and efficient use of open spaces in Nigerian cities.
- ii. There is a need for a more precise approach to urban development in order to achieve efficiency and effectiveness.
- iii. The strict enforcement of statutory guidelines for development by formulating effective urban planning policy.
- iv. To combat cities deformed by degradation and dilapidation of open space structures and facilities; there is a need for urban land monitoring, development control, and effective management.
- v. The need for well-designed and landscaped open spaces to enhance the aesthetics of the environment. This should include tree plantings, shrubs, grassing, ground cover, rocks, and water fountains these add to the beauty of the environment by providing shade, beauty, circulation, serenity, and well-being.
- vi. Provision of amenities and open space policies to guide the maintenance of parks.
- vii. Conversion of unutilized and empty lands constituting nuisance in the cities to be designed as public open spaces in addition to the few existing ones.
- viii. Proper education and awareness should be delivered to the public.

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