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People's Perceptions of Environmental Quality at Selected Recreation/Tourist Sites in Abuja, Nigeria

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Keywords

People's perception, Environmental quality, Recreation/tourist sites, Environmental sustainability.

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Abstract

Like many destination capitals across the globe, Abuja has experienced an influx of people from within and outside the country to live, work, and engage in tourism (business & and leisure) activities. The influx of people to the city can have implications for its environmental qualities in terms of air quality, waste management, and general human well-being. This study employs a mixed-method approach to examine people's perspectives of the state of these environmental qualities at recreation/tourist sites in Abuja, Nigeria's Federal Capital Territory (NFCT) for its environmental sustainability. Primary data for the study were obtained from government agencies, service operators, community stakeholders, and tourists/visitors within the 6 districts of the NFCT. 300 copies of questionnaires were administered with a sub-total of 50 copies at each of the 6 selected locations. Descriptive and statistical analyses were employed for the study. The study revealed significant positive responses from respondents on environmental quality, including clean air, and waste management education at the six study sites. However, the study findings suggest varying responses from the stakeholders on poor waste management and recommendations of the sites to prospective visitors/tourists based on the sites' environmental qualities. The study recommends improved environmental qualities by the destination authorities in partnership with relevant stakeholders in

	enhancing clean air and modern waste management practices for environmental sustainability and the benefits of prospective and repeat visitors/tourists to the tourists/recreational sites. Similar studies could be conducted in other cities to investigate the similarity or otherwise of the findings of this study.

Introduction

Environmental Quality (EQ) refers to several components of the physical environment and their impact on the surrounding populations (Environmental Quality, 2024). Examples of factors that have the potential to affect the quality of an environment include; air pollution, noise, traffic/congestion, graffiti/vandalism, litter, maintenance, availability of green spaces, and distance from essential amenities (Environmental Performance Index, 2022; Environmental Quality, 2024 Ozcan, et al., 2021). The prevalence of some of the examples of environmental factors can negatively impact an environment, including its tourism/recreation sectors (i.e., leisure/business operations/sites). Nonetheless, planned green spaces, devoid of obvious air population can encourage tourism/recreation-related operations. EQ predicts the state of the environmental conditions of the components of the ecosystem. The concern of EQ is on the value of humans' comfort, health, and safety, but majorly on clean air, land, and water resources, sustainability of enabling environment for human activities and other living creatures of the ecosystems (Cunningham and Cunningham, 2015; Agbebaku, 2021; Ozcan, et al., 2021; Environmental Performance Index, 2024; Environmental Quality, 2024). EQ is measured in terms of indicators relating to environmental quality standards (WHO, 2015; Environmental Quality, 2024). A natural environment with the mix of one or the combination of the threats on atmospheric resources from (a)chemical pollutants such as smoke, soot, carbon monoxide, sulphur dioxide, methane gas, lead, toxic, and particles of pollens (b)land humans'ce pollutants from solid waste substances such as municipal, household, medical, industrial, agricultural, electronics, construction and demolition, institutional, and abandoned vehicles (c)water pollutants from the surface, and groundwater sources such as poor humans attitude, nature of the bedrock, shared pollutants, interactions and associations of the physiochemical and biological parameters may repel environmental quality (Cunningham and Cunningham, 2015; Agbebaku, 2021). Thus, where the mix of pollutants from these EQ indices are not well managed, their maladministration by the concerned bodies may cause human discomfort, poor environmental aesthetics, disease outbreaks, and other health-related problems to residents of the local communities, visitors, and tourist business. An example is Nigeria's Federal Capital Territory (FCT), Abuja with a mixed of administrative, economic, political, socioeconomic, and hospitality functionalities and businesses. Thus, the qualitative state of the environment for tourist businesses varies from community to community. This variance depends on the mix and extent of human attitudes and approaches in handling human basic needs of life such as clean air, water, land, and enabling environment for sustainable

human health and safety as well as the provision of management functions via; planning, organizing, coordination and control of human activities on the components of the environment (Wright and Boorse, 2011).

These managerial functions are essential to the high sprawl urban areas such as the FCT, Abuja which doubles as the fastest growing city and economy in Africa. The call for effective management and control for environmental quality for residents of the local communities, visitors, and tourist businesses became paramount due to the pace of urban growth, development, and increase from one or a combination of the indices of; human population, urban planning and renewal, renew policies, waste generation, water quality, atmospheric pollution, tourism and hospitality, housing and urbanization, quality of building infrastructural development and standard, public health services and facilities, urban green open space and recreation (Cunningham and Cunningham, 2015; Eseigbe, 2021; Majebi et al., 2023). Thus, the focus of the study is to examine the people's perceptions of the state of environmental quality of the local communities and tourist businesses in the FCT, Abuja, and thus, the research gap.

The objectives of the study are to examine the environmental quality of clean air, land, water, sanitary conditions, and human safety, and, to examine the impacts of the state of environmental quality on the tourist businesses in the FCT, Abuja. Therefore, the objectives of this study are achieved by asking and analysing the following questions from the people's perceptions, such as: (a) what are the peoples' levels of environmental quality (clean air, water, land, good sanitary conditions) at the recreation/tourist sites within the FCT, Abuja? (b) what are the peoples' levels of waste management techniques (e.g., rudimentary, semi-modern, and modern) in enhancing environmental quality practiced at the recreation/tourist sites within the FCT, Abuja? and (c) what are the peoples' perceptions levels on the recommendations to other visitors on the state of the recreation/tourist sites and environmental qualities within the FCT, Abuja?

The choice of the FCT, Abuja was pre-determined by a combination of factors, including high human population and urban sprawl, serving as the coordinating administrative, political, and cultural hub of the nation. This is in addition to its ability to attract a high influx of international and local visitors owing to its status as Nigeria's FCT. Also, the accessibility and attractiveness of its scenic environments for tourism development, numerous tourists, recreation, and hospitality businesses, and its perceived relative safety and security status within Nigeria make it a good study location. The location is especially important for the study as the influx of persons from adjoining cities, within the city, and overseas for work/tourism can result in several problems. This can include increased threats of environmental concerns that could be detrimental to human health and environmental sustainability, including environmental degradation, urban water crises, environmental pollution, and heat waves where there are deficiencies on the part of the municipal authorities.

Conceptual Clarification

Concept of Environmental Quality

Environmental Quality (EQ): depicts a healthy, conducive, and friendly state of the components of the environment via the atmosphere, hydrosphere, and lithosphere to sustain man and other living organisms of the biosphere (Agbebaku, et al., 2022; Ozcan, et al., 2021; Wright and Boorse, 2011). EQ connotes an environment free of hazards, such as smoke, soot, carbon monoxide, sulphur dioxide, methane gas, lead, toxic chemicals, and particle matters that cause disease and other health problems (Cunningham and Cunningham (2015). According to the study of Odiette (1993) and Agbebaku (2019), a filthy environment repels environmental quality and deters the provision of other essential services for conglomerates to thrive. Any damage done to the components of the environment such as environmental pollution and degradation runs down capital and causes harm that will later reduce the value of the environment's recurrent services. Because of these constraints, there is a need for the environment to be free from mixed pollutants and threats of environmental ill-quality from the sources of air, water, and land resources such as the conglomerates of the tourist businesses, in the FCT, Abuja.

The study of Iqbal (2011) and Agbebaku (2021), states that although there are globally recommended standards for the indices of environmental quality, these indices may vary slightly from country to country depending on some intervening variables. In Nigeria and FCT, Abuja, these regulatory Acts for environmental quality are in alliance with the global recommended standards of the world regulatory bodies. The provisions and accessibility of these measures within the high sprawl areas of the FCT, Abuja enhance the concentration of the tourist businesses and viz-a-viz in the high sprawl and metropolitan areas against residents of the local communities (Agbebaku, 2019; Agbebaku, 2022; Majebi et al., 2023; Majebi et al., 2024).

According to Thomas (2009), and Wright and Nebel (2002), the Clean Land Act (CLA, 1987), is concerned about the safety and hygienic state of the land ecosystem; this connotes that the land ecosystem should be devoid of toxic pollutants and menace of indiscriminate dumps of waste materials that would lead to poor aesthesis, unnecessary blockage of water channels, accumulation of leachates and flow of seepage, devoid greenification of environment, loss of microbial organisms, un-hygienic and sanitary condition and fumigation of their domains. Surveys have shown that where the land resource is not clean and friendly, it repels the activities and concentration of the tourist businesses observed in the low sprawl areas of the FCT, Abuja hence, the FCT, Abuja is in alliance with global standards and recommendations of Clean Land Act.

Tourist Business/Recreation Sites

According to the Tourism Businesses Essentials (2013), the tourist business (TB), means any type of business and ideas in the tourism sector. This type of business includes a tourist home,

hotel, motel, trailer court, recreational vehicle park, privately owned or privately managed campground, lodging intended for short-term occupancy, restaurant, tourism attraction, and tourism activity provider (Tourism Business Essentials, 2013; Majebi, 2017). The TB means a business relating to guiding tourists for touring or for other purposes of traveling and providing services such as food, relaxation, recreation, transport, accommodation, and entertainment for people who are on holiday, research, photography, tours, and display of artworks (Mabogunje, 1999; Eseigbe, 2021). Thus, other types of tourist business ideas are souvenir shops, hiking gear rentals, running a travel blog or becoming a travel blogger, or even providing catering for tour and activity operators (Tourism Business Essentials, 2013).

The importance of Urban Open Green Spaces (UOGS) cannot be ruled out completely from TB. This is because the UOGS enhances the psychological and emotional well-being of humans (visitors and residents) through the services it renders (ACB Consulting Services, 2021; Majebi et al., 2023; Majebi et al., 2024). In the FCT, Abuja, the types of the tourism industry for the TB include the provision of; (a) Accommodation such as inns, resorts, lodges, cabins, guest ranches, hotels, motels, campgrounds, (b) Transportation such as rental cars, charter boats, ferries, water taxis, and motorhomes, (c) Attractions such as museums, cultural centers, art galleries, craft villages, gardens, rocks, theme parks and zoos, golf and country clubs, waterfront park, lakes, and outdoor adventure opportunities, (d) Tour Operators such as outdoor or culinary adventure, motor and boat cruise, cruise and fishing tour operators, local sightseeing tour companies and urban open and green space, and (e) Corporate Planners such as destination management companies, convention service companies and event planners (Mabogunje, 1999; Tourism Business Essentials, 2013; Majebi, 2017; Eseigbe, 2021; Majebi et al., 2023; Majebi et al., 2024).

Accessibility and Attractiveness of Tourist Businesses/Recreation Sites

In the context of urban planning, physical development, and environmental sustainability, the drives for infrastructural facilities, and recreational and tourism enhancement are essentials for human well-being. The establishment of the major tourist business centers (TBC) and supportive urban green spaces (UGS) including parks, gardens, and other greenification areas creates harmony in the built environment that cannot be taken for granted (Majebi, 2017). These facilities and services are some of the essential considerations that need to be put in place by stakeholders, including private and government agencies. This is because there is a spatial connection between and among the components of the urban environment from the mix of natural and modified environments for the well-being of humans and environmental management. Thus, this can be observed from the context of the man's-built environment, infrastructural development and management, accessibility and attractiveness of tourist sites and green space management, tourism development, and human and environmental sustainability (Onokerhoraye, 1984; Akinbode, 1995; Mabogunje, 1999). At the global level, the essence of urban planning for infrastructural and facilities development such as TBC and UGS management is classified mainly for two purposes. These are for human development (relaxation and tourism attractions) and environmental sustainability (ecosystem-friendly and

balanced) (Mabogunje, 1999; Ibrahim et al., 2015; Majebi et al., 2023; Majebi et al., 2024). Thus, the benefits of TBC and UGS facilities and services for human improvement and development include (a) pleasure and site visitation (b) improving our day-to-day lives and human health (c) boosting mental and physical health, (d) promoting peace and relaxation (e) improving air quality and reduces premature mortality, (f) reducing noise, (g) enhancing biodiversity, (h) moderating temperature during hot periods, (i) provision of cool spots and shaded areas, (j) protecting and enhancing safety environment, (k) creating excursion, scientific discoveries and technical jobs (m)improving enabling environment (n) sparking youth's interest in tourism and hospitality ventures, and (o) cooperation with countries around the world. Furthermore, the accessibilities and attractiveness of these facilities and services for improved environmental sustainability are as follows; (a) ecosystem balance, (b) nature-friendly (c) conservation of biotic life, (d) enhancing urban planning and physical development, and (e) aesthetic environment for quality air and land resource (Mabogunje, 1999; Ojeifo, 2005; Ibrahim et al., 2015; Cyril & Olumide, 2016; Obiadi & Onochie, 2018; Agbebaku, 2019; Eseigbe, 2021; Majebi et al., 2023; Majebi et al., 2024).

However, despite the benefits of TBC and UGS facilities and services, they are confronted with several constraints, including (a) a high rate of illegal land use and land use violation (b) compliance to land use of recreational facilities (c) perception in human attitude, (d) difficult to measure how these spaces are used (e) assessment of the financial positive of TBC and UGS, (f) urban mobility to TBS and UGS areas (g) dwelling levels of patronage, distance factors and security, and (h) rising cost of facilities maintenance and service delivery. This is evident in most West African destinations such as the metropolitan areas of Abuja, Nigeria. Nonetheless, in recent times, there has been renewed support from the government and concerned agencies on the development and accessibility of the areas marked for TBS and UGS facilitates based on the original and reviewed master plan for conformity on assigned land use. In addition, the drives for accessibility and attractiveness of TBC and UGS and resuscitation of non-and-low functioning ones to promote tourism and recreational development for improved human health and environmental sustainability have been suggested (Ibrahim et al., 2015; Cyril & Olumide, 2016; Obiadi & Onochie, 2018; Eseigbe, 2021; Majebi et al., 2023; Majebi et al., 2024). The accessibility and attractiveness of TBC and UGS infrastructures, facilities, and services are functions of the levels of regional planning and urban renewal processes of the FCDA that have taken place over time. There is no doubt that these plans have been defined and re-defined, with the master plan of the FCDA towns and cities centers in line with best global practices and standards for TBC and UGS management for environmental sustainability. For effective urban planning and adherence to the original master plan for town and city formation for the NFCT, Abuja, thus, the ethics of town and regional planning need to be upheld and sustained (Paul & Steven, 2010; Ujoh et al., 2011; ACB Consulting Services, 2021; Eseigbe, 2021; AGIS, 2023; FCDA, 2023; Majebi et al., 2023; Majebi et al., 2024). In addition, the accessibility and attractiveness of TBC and UGS facilities and infrastructures determine the values, level of patronage, and justification for the continuous involvement of the service

provider in its operations. This can be seen from the perspective of service delivery, irrespective of its types and nature as a green space, lake, park, garden, mall, ranch, resort center, arts and crafts, and scenic environment. In the Nigerian context, TBC and UGS management within the Abuja metropolitan area is still in the developmental and semi-developmental stages, when compared to those of advanced destinations (FCDA, 2023; Majebi et al., 2023; Majebi et al., 2024). Nevertheless, the benefits of TBC and UGS management are the same and applicable to advanced and developing metropolitan areas at destinations. Nonetheless, there exists a complex relationship between and among communities and nations where these facilities and services are rendered, especially as regards their environmental quality and sustainability.

Study Area

The study area is the Federal Capital Territory (FCT), Abuja. The FCT, Abuja lies between Latitudes $80^{0}25^{1}$ and $9^{0}25^{1}$ North of the Equator and Longitudes 6^{0} 45^{1} and 7^{0} 45^{1} East of the Greenwich Meridian. The FCT is bordered by 4 states: Kaduna in the North, Kogi in the South, Niger in the West, and Nasarawa in the East. It covers a land mass of 8,000. Its size is equivalent to 0.8% of Nigeria. The FCT landmass is more than twice the area of Lagos state (3,535 sq km) and larger than Akwa Ibom state (6,187 sq km), Anambra state (5,235 sq km), Imo state (5,438sq km) and Abia state (6,420sq km). It is in the middle belt of Nigeria and almost at the center of the country. Abuja is the largest and fastest-growing city among other cities in Nigeria. Abuja is in the central part of the country, situated in the west-central region of the African continent. The location of FCT in the middle belt region of Nigeria rids it of the extreme characteristics of the climates of North and Southern Nigeria (Majebi et al., 2023). The dry seasons record the highest temperature when there are few clouds in the FCT. The FCT has two major geological belts, which in turn influence the local soil. These are the Precambrian basement complex and sedimentary rocks. The vegetation of the FCT is predominantly a savannah region found between the rainforest and the poor savanna in a desert environment**.** Hilly and dissected terrains cover 48 percent of the FCT. These features are found along the eastern boundary with Nasarawa state and the Southern panhandle region of the territory. Abuja is associated with varied landforms of mountains, plateaus, and plains with various degrees of socio-economic activities. The area has an average temperature of 25.1^{C} and an average rainfall of 1871mm per annum. The main hilly areas in the FCT are Agwai-Karu Hills, Bwari-Aso Hills, Gawu Hills and Suleja Hills. The plains are the other relief unit of the FCT. This region covers 52 percent of the territory. Some of the plains are naturally dissected types while others are undulating ones. Thus, the major rivers in the FCT are Gurara, Usuma, Mangol, Yewu, Bobo, Afara-Bokwoi, Wuye, Wupa, Itsu, Iku, Tapa, Jabi and Wosika. The geographical territory of the FCT, Abuja, and the 6 provisional area councils that also double as local government areas in operations are centrally located in the map of Nigeria as shown in Figures 1 and 2 respectively. Abuja is administered mainly by six area councils namely: (a) Abaji, (b) Bwari, (c) Gwagwalada, (d) Kuje, (e) Kwali, and (f) Abuja municipal area councils (AMAC). These 6 councils cover a total land area of approximately 7,290 km².



Figure 1: Map of Nigeria Showing Abuja, Nigeria's Federal Capital Territory
Source: GIS and Cartography Unit, LASU (2022).

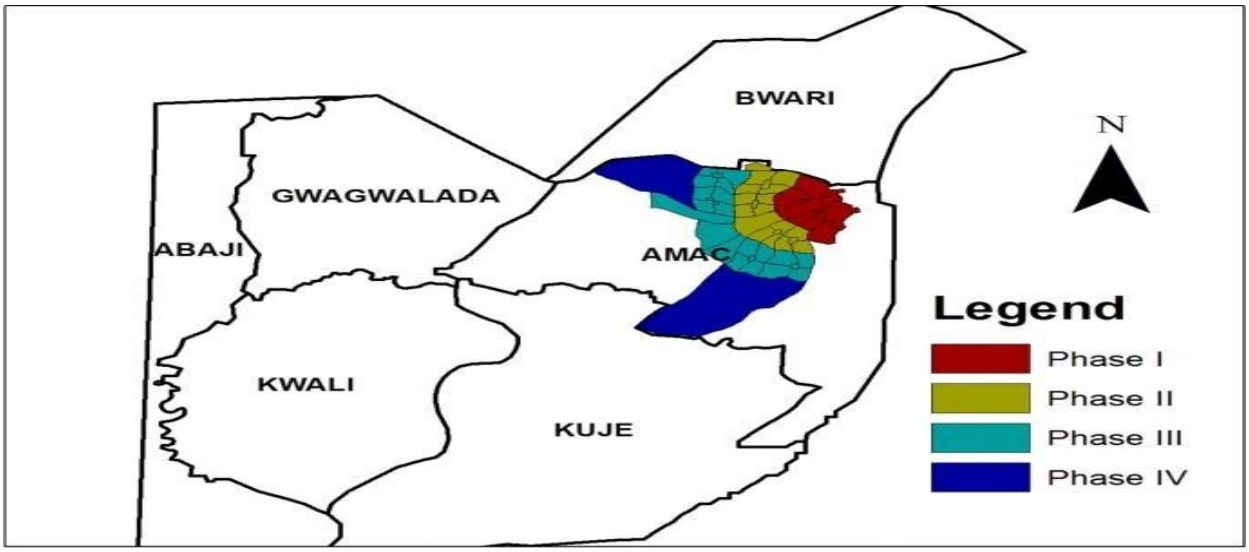

Figure 2: The FCT**,** Abuja; Locations of the 6 Municipal Council Areas
Source: Google Map, Ministry of Land and Survey, Abuja (2023).

A survey conducted by the researchers showed that the activities of tourism and hospitality businesses vary from one provisional area council to another and are not evenly distributed. For this study, the selected tourist attraction centers with measurable practices, provisions, facilities, and services per area councils include (a) AMAC Area Council; such as Central Park,

Trukadero Place Hangout Spot, The Dome Hangout Spot, Blucabana, Blake Resort, Millennium Park, Jabi Lake/Mall Amusement Park, and Jabi Boat Club (b) Bwari Area Council; such as The Conservation, National Conference for Domestic and Eco-Tourism and Millenium Tower (c) Kuje Area Council; International Conference Centre Vacations, Jabi Lake Mall Vacations, Abuja Stadium Vacations, National Hospital Abuja Vacations, Aso Rock Vacations, Ecowas Secretariat Vacations, National Assembly Vacations and Magic land Amusement Park Vacations (d)Gwagwalada Area Council; such as Zuma Rock, Geologic Formations, 2023. Nike Art Gallery. Art Galleries, Motley Travels. Nature & Wildlife Tours, City Tours (e)Kwali Area Council, such as Dr. Ladi Kwali Pottery Center, and (f) Abaji Area Council; with no trace of tourist attractive center respectively. Thus, in the Kwali and Abaji provisional area councils, the study made use of the facilities and services of attractive gardens and parks such as the urban open and green spaces in these dual area councils to complement the deficiencies of non-tourist attraction sites in the Kwali and Abaji area councils respectively as discussed in the methodology. The selected UOGS used in Kwale Area Council were art and craft village, pottery, and garden tourist sites while those of Abaji were farm sites, open bars, and gardens respectively. Nonetheless, despite the importance of these attractions to the aesthetics, recreation, tourism, and overall economic development in the Abuja metropolis, Pona et al.'s (2021) study shows that the city is faced with poor environmental quality problems, including air pollution, waste management issues (see Figure 3) as with many Nigeria's and some African cities (Pandey, 2022). This can influence people's perceptions of the tourists/recreation sites in the city with implications for appropriate measures from the Abuja municipality officials and other destination stakeholders.

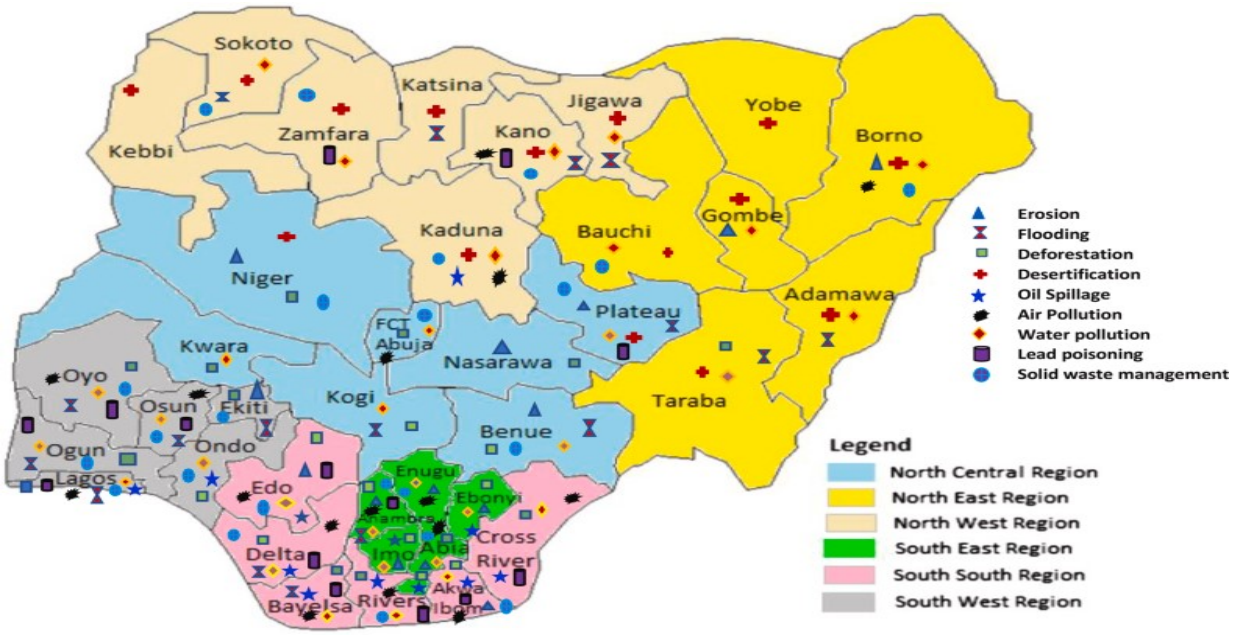

Figure 3: Map of Nigeria showing different locations and environmental problems.
Source: Pona et al. (2021)

Research Methods

This paper is an empirical study and a combination of content analysis of articles from literature and empirical studies. The study was carried out within a six-month duration. These periods cut across 2 seasons of dry and wet. The study duration was from March/April (summer) to August/September (autumn). This duration was to enable the researchers to solicit the necessary information on the objective of the study. In addition, was to derive firsthand information about the levels of patronage of the sector and enabling environment for clean air, water, land, and human health and safety. Primary data were collected from the field of the survey through questionnaire administration, and granted interviews were applicable. These dual sources of information constitute the study's research instruments. Other primary data sources employed for the study include Data on the population study area were sourced from the National Population Commission (NPC), Abuja. Data on the administration of urban space management, tourism, and hospitality businesses were sourced from the FCDA, AGIS, service operators, and government agencies. Data on facilities and services of tourism and hospitality businesses were sourced from service operators (residents and visitors/tourists) and appropriate agencies (private and public). Data on the state of environmental quality, aesthetics, and safety were sourced from service operators (residents and visitors/tourists) and appropriate agencies (private and public). Data on the socio-economic activities of the tourist businesses were sourced from a combination of sources such as (a)service operators, clients, FCDA, FCT, and AGIS. Data on the map(s) of the study area were sourced from the office of AGIS, FCDA, Ministry of Land and Survey, Abuja. To get primary data, the total communities of 818 communities across 6 provisional council areas were surveyed and the ideal and major communities selected for the study, the selected communities per area councils constitute the sample frame. To achieve this, 80% of the communities in each of the 6 provisional council areas were covered to solicit information on the subject matter. In doing this, A total of three hundred (300), copies of semi-structured and dual questionnaires as well as oral structured interviews were designed, constructed, and administered for this study. The questionnaires were structured in line with the 4-Point Likert Scale measures such as Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD). The 300 copies of questionnaires were administered at a default number of 50 copies each across the 6 provisional area councils, selected communities, and tourist sites. The questionnaires were administered to some sets of respondents such as residents/local communities, indigenous service operators' visitors/tourists, and foreign service operators respectively.

However, owing to the constraints of tourist business sites in the Kwali and Abaji area councils, the busiest urban open and green spaces, bar and garden facilities, and services were used for the study. Thus, from the default sub-number of 50 questionnaires administered per provisional

area council, 10/50(10%), of the sub-number, were administered to service operators, 5/50(5%), were administered per authorities of the 6 area councils while the remaining 35/50(35%), were administered to visitors/local communities and tourists/foreigners respectively. Thus, these sets of questionnaires were administered in each of the 2 seasons. Half of the default sub-number of 50 copies of questionnaires, that is 25 copies were administered to service operators 5/50(5%), 2.5/25(2.5%), per authorities of the 6 area councils, and 17.5/50(17.5%), to visitors/local communities and tourists/foreigners.

The distribution of the questionnaires comprises of the responses of; visitors/residents/local communities, tourists/foreigners, facilities managers, supervisors/foremen, and environmental personnel at each of the visited offices, facilities, service centers, and area councils. In each of the selected sites, community, and service providers, the administration of the semi-structured questionnaires and constructed interviews were done through systematic random sampling techniques. Consequently, in each of the selected tourist sites used for the study, the provisions of the ranking were carried out into the ranking of high or 1st class facilities and services, moderate or 2nd class, and low or 3rd class. In addition, in each of the area councils, the 1st 5-most high sprawl areas with a high-levels concentration of tourism and hospitality industry, the 2nd 5-most moderate sprawl areas with a semi-moderate-levels concentration, and the 3rd 5-most-low sprawl areas with a less-levels concentration were chosen for questionnaires administration. The questionnaire was administered simultaneously across the selected centers and facilities at an interval of 2 hours, same day through the period of 7 days for 2 months per season. This was inclusive of a weekend (Monday to Sunday), due to the level of patronage recorded during the weekdays at the study facilities. The distribution of the questionnaires during these periods was possible with the assistance of field personnel and communication technology. The choice of the selected facilities and service providers for the administration of the questionnaire was characterized by a combination of factors. This includes (a) state of environmental quality (b) compliance with the land use act on recreational facilities (c) geographical location across the city center (d) management of the physical and modified environment (e) level of patronage, (f) level of facility and services rendered (g) aesthesis and environmentally friendliness (h) urban space management (i) scenic landscapes, and (j) proximity of facilities and security.

These facilities and service centers were spatially concentrated within the Abuja Municipal Area Councils (AMAC) such as Garki 1 and 2, Wuse 1 and 2 districts of the FCT metropolitan area than other area councils. On the other hand, secondary data were sourced from documentary materials including, academic journals, conference papers, theses, textbooks, maps, and plates. Data from the primary and secondary sources were analyzed with the use of descriptive statistical techniques of mean frequency and percentage of a compressed Table. Thus, the distribution and administration of 300 copies of questionnaires across the 818 communities and selected facilities and service providers with the 6 area councils' faculties on the subject matter were presented in Tables 1 and 2 respectively. To reiterate, the objectives of the study include examining the state of environmental quality of clean, air, land, and water in

the FCT, Abuja, and examining the impacts of the state of environmental quality on the tourist businesses in the FCT, Abuja.

Results Presentation

The presentation of the results from Table 1 shows the breakdown analyses of the people; perception levels of the residents/local communities and visitors/tourists on the state of environmental quality, and tourist businesses in the federal capital territory, Abuja respectively.

Table 1: People's perceptions of environmental quality at recreation/tourist sites.

S/No.	Items	SA	A	D	SD
1	There is a higher level of environmental quality (clean air, water, land, and good sanitary and safety conditions) at the recreation/tourist sites.	45(56.25)	15(18.55)	10(12.5)	10(12.5)
2	There are specks of dirt within and around the recreation/ tourist sites which suggests poor waste management.	40(50.0)	20(25.0)	10(12.5)	5(6.25)
3	There is a correlation between poor waste management and environmental quality at the recreational/tourist sites.	30(37.5)	25(31.25)	20(25.0)	5(6.25)
4	Waste management techniques (e.g., rudimentary, semi-modern, and modern) on environmental quality are practiced at the recreation/tourist sites	45(56.25)	15(18.55)	10(12.5)	10(12.5)
5	There is a correlation between the sources of surface and groundwater pollution on human health within the recreation/tourist sites	30(37.5)	25(31.5)	5(6.25)	5(6.25))
6	Environmental quality (hygienic environment) from the activities of visitors is considered good	39(48.75)	21(26.25)	10(12.50)	10(12.50)
7	Littering of the recreational/tourist sites results in environmental ill-quality	45(56.25)	10(12.5)	15(18.75)	10(12.5)

8	Improvement in the attainment of effective waste management, change in human attitudes, and education can enhance environmental quality.	40(50.0)	20(25.0)	10(12.5)	5(6.25)
9	The recreation/tourist sites can be recommended to others because of their environmental qualities.	30(37.5)	25(31.25)	20(25.0)	5(6.25)

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD)
Source: Authors' Field Survey (2023)

The presentation of the results from Table 1 shows the analyses of the people's perceptions of environmental quality at recreation/tourist sites within the FCT, Abuja. The results from Item 1 on there is a higher level of environmental quality (clean air, water, land, and good sanitary and safety conditions) at the recreation/tourist sites show that many (45%) of the respondents strongly agreed with this statement, while about 10% of the respondents disagreed. Despite these positive responses, this finding suggests that there is a need for improvements in the state of environmental quality (clean air, water, land, and good sanitary and safety conditions) at the recreation/tourist sites to enhance sustainability.

The results from Item 2 on there are specks of dirt within and around the recreation/ tourist sites which suggest poor waste management revealed that many (45%) of respondents strongly agreed with this statement. However, only about 10% of the respondents disagreed. This result suggests that there are specks of dirt within and around a few of the recreation/tourist sites which suggests poor waste management and ill-quality and requires improvement on these facilities.

The results from Item 3 on there is a correlation between poor waste management and environmental quality at the recreational/tourist sites revealed that many (30%) of the respondents strongly disagreed with this statement. However, about 20% of the respondents agree with the statement. This result also suggests there is a correlation between poor waste management and environmental quality at the recreational/tourist sites and the need for effective management of these indices that repels environmental quality.

The results from Item 4 on waste management techniques (e.g., rudimentary, semi-modern, and modern) on environmental quality practiced at the recreation/tourist sites revealed that many (40%) strongly agreed with the statement. However, about 15% of the respondents disagreed with the statement. This suggests that the waste management techniques of rudimentary practices on environmental quality are still practiced at the recreation/tourist sites. The results from Item 5 on whether there is a correlation between the sources of surface and groundwater pollution on human health within the recreation/tourist sites revealed that many (over 30%) of the respondents strongly agreed with this statement. However, about 5% of

the respondents disagreed with the statement. This also suggests there is a correlation between the sources of surface and groundwater pollution on human health within the recreation/tourist sites.

The results from Item 6 on environmental quality (hygienic environment) from the activities of visitors are considered good revealed that many (over 39%) of the respondents agreed with the statement. However, about 10% of the respondents disagreed with the statement. This result suggests environmental quality (hygienic environment) from the activities of visitors is considered good.

The results from Item 7 on littering of the recreational/tourist sites results in environmental ill-quality revealed that many (45%) of the respondents agreed with this statement. However, about 15% of the respondents disagreed with the statement. This result suggests littering of the recreational/tourist sites results in environmental ill-quality.
The results from Item 8 on improvement in the attainment of effective waste management, change in human attitudes, and education can enhance environmental quality revealed that many (40%) of the respondents agreed with is statement. However, 10% of the respondents disagreed with the statement. This result suggests the improvement in the attainment of effective waste management, change in human attitudes, and education can enhance the environmental quality of an area.

The results from Item 9 on the recreation/tourist sites that can be recommended to others because of their environmental qualities revealed that many (30%) of the respondents agreed with this statement, while about 20% of them disagreed. Still, this result suggests that recreation/tourist sites can be recommended to other tourists because of their environmental qualities.

Discussion
Research Question 1: a) There is a higher level of environmental quality (clean air, water, land, and good sanitary safety conditions) at the recreation/tourist sites?

From the study, Items 1, 2, 3, 5, and 7 from the Table address this research question. The study revealed that a significant number of the residents/local communities, indigenous service operators, visitors/tourists, and foreign service operators strongly agreed with these statements and are aware of a higher level of environmental quality (clean air, water, land, and good sanitary safety conditions) at most of the recreation/tourist sites. However, a few of the respondents disagreed. These findings are consistent with the studies of Majebi et al. (2023), and Majebi and Agbebaku (2023), which suggest a higher level of environmental quality (clean air, water, land, and good sanitary safety conditions) of the recreation and tourist sites in the FCT, Abuja is a function of the accessibility and attractiveness of urban-green-space for

recreation-tourism development and environmental impacts on recreation and environmental sustainability.

Research Question 2: b) There are specks of dirt within and around the recreation/ tourist sites which suggests poor waste management.

From the study, Items 2, 3, 4, and 8 from the Table address this research question. The study revealed that a few of the residents/local communities, indigenous service operators, visitors/tourists, and foreign service operators disagreed with these statements and were not aware of the specks of dirt within and around the recreation/ tourist sites. Consequently, these findings are consistent with the studies of Majebi et al. (2023), Majebi and Agbebaku (2023), and Majebi et al. (2024) which suggest there are some challenges associated with recreation and tourist businesses. These studies recommend that there is a correlation between poor waste management and environmental quality at the recreational/tourist sites and the need for improvement of these sites and facilities to enhance environmental quality.

Research Question 3: c) There is a correlation between poor waste management and environmental quality at the recreational/tourist sites?

From the study, Items 6 and 9 from the Table address this research question. The study revealed that a significant number of the residents/local communities, indigenous service operators, visitors/tourists, and foreign service operators strongly agreed with these statements and are aware of the peoples' perceptions levels on the recommendations of the recreation/tourist sites on the state of environmental qualities of these facilities and service providers. These findings were also consistent with the studies of Majebi (2017), Majebi et al. (2023), Majebi and Agbebaku (2023), and Majebi et al. (2024) which suggest the accessibility and attractiveness of the tourism businesses and development and environmental sustainability are key to urban planning and development. In addition, the studies believed that the improvement in human health is a major benefit of the recreation and tourist sites within the FCT, Abuja, and accompanying facilities.

Conclusion and Recommendations

This study reveals that people's perceptions of environmental quality on the facilities and services of recreation/tourist businesses, development, and environmental sustainability are a function of the assessment of the state of clean air, water, land, and good sanitary and safety conditions of the residents/local communities, indigenous service operators and visitors/tourists and foreign service operators within, Abuja, Nigeria. The state of environmental quality for residents and visitors is key to urban planning and development mostly in Abuja. The improvement in human health is a major benefit of tourist sites, urban open and green spaces management, and accompanying facilities and services. However, the challenges confronting the state of environmental quality in recreational sites/tourism businesses have been revealed by this study. These include specks of dirt within and around the recreation sites/tourism businesses which suggests poor waste management and

atmospheric pollution from automobile sources in the course of service delivery which have implications for environmental sustainability. Nonetheless, the study findings reveal that an improved state of environmental quality, environmental impacts, and sustainability of facilities and services would have a significant impact on the well-being of human health and the aesthetics of the environment and portends good sanitary and safety conditions for the residents and visitors. Still, the study recommends that the government provides the necessary infrastructure and resources and partners with the private sector to engage in honest Public-Private Partnerships (PPP) with an agreed framework for the management of recreation/tourist sites including urban open and green spaces to further enhance environmental qualities at the study sites. It is important that people constantly take cognizance of the fact that clear air, clean water, arable land, and good sanitation are the factors of environmental quality. This is in addition to safety and security which are also necessary for the patronage of the recreational/tourism sites at destinations.

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