Exploring the Usability of Urban Open Spaces, the Nexus between Tourism and Well-being Upticks in a Mixed-use Settlement

John Adekunle Adesina[1] iD

Nnezi Uduma-Olugu[2] iD

Michael Adeloye Adebamowo[3] iD

Winchester Ndum Fuh[4] iD

Xiaolan Tang[5] iD

Yujie Ren[6] iD

Abstract
Extremely urbanized areas have withstood numerous urban disputes, disturbances, and catastrophes related to urbanization, affecting tourism. This study adopted the European Environment Agency's (EEA) urban greening framework. It aims to create an urban open space conducive to city dwellers and tourists. One of the key features is creating a healthy ecosystem and ensuring that the needs of the park users are considered. A quantitative research methodological approach was used, and five hundred (500) copies of the questionnaire were sent out to respondents, who included park users, tourists/visitors, homeowners, and traders. A total of 422 correctly completed copies of the questionnaire were retrieved and used for analysis. Thus, an 84,4% questionnaire administration and retrieval success rate was achieved. The data collected were analyzed using simple percentages and frequency counts for demographic, building type, income, employment, and risk impact information about the respondents and the proposed urban intervention. On-site assessment of the urban area was captured using Google Maps to acquire updated land use data and aerial imagery of the study area. The study identifies five open spaces within the settlement, and the challenges and tourism possibilities, such as maintaining its historic urban character and reviving the streets and neighborhood parks, were uncovered. The study concluded that policies for landscape and urban design that incorporate green infrastructure into the open spaces for sustainable urban revitalization and tourism development. It recommended innovative and adaptive urban design strategies to boost tourism through effective streetscaping using nature-based greenery and beautification.

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[1] University of Lagos, Lagos, Nigeria; Nanjing Forestry University, Nanjing, China. johnadekunleadesina@gmail.com

[2] University of Lagos, Lagos, Nigeria. nnezi.udumaolugu@gmail.com

[3] University of Lagos, Lagos, Nigeria. madebamowo@unilag.edu.ng

[4] Nanjing Forestry University, Nanjing, China. ndumwinchesterfuh@gmail.com

[5] Nanjing Forestry University, Nanjing, China. xiaolant@njfu.edu.cn

[6] Nanjing Forestry University, Nanjing, China. renyuzie@njfu.edu.cn

INTRODUCTION

Urban green areas provide many benefits, including improved health, air quality, city beautification, and community cohesion (Rusli *et al.*, 2024; Selanon; Chuangchai, 2023; EEA Report, 2020). Derivable health benefits include mental health, like spending time in nature can reduce anxiety, stress, and depression, which can be achieved through physical activity like walking, jogging, and cycling. These activities help to reduce pollution-related diseases, knowing that greener cities have improved air quality and are cooler (Abdel-Razek *et al.*, 2024; Bertiato, 2024). The green spaces have a lot of environmental benefits through reduced greenhouse gas emissions, carbon storage and sequestration, oxygen production, and reduced stormwater runoffs (Ojobo *et al.*, 2024; Sugiama *et al.*, 2024). The use of green spaces can help enhance the ecological health of urban settings while promoting social interaction, The community gardens can provide access to fresh fruits and a biophilic connection with nature while providing a platform for community activities, which improve social cohesion (Abdel-Razek *et al.*, 2024; Adesina *et al.*, 2024b). Parks and gardens connect people with nature in dense urban neighborhoods, and these thriving landscapes can withstand life and nature support systems and functions under the sudden and usual stress of sudden disasters in the form of urbanization by human activities that cause the effects of climate change. Puttitaweesri *et al.* (2024) studies opined that human survival depends upon adapting to the settlements in life-sustaining ways, designing places that reflect the interconnections of air, earth, water, life, and culture. This connection makes the dwellers feel and understand places that are functional, sustainable, urbanized, meaningful, and artful. Physical survey and assessment of the urban settlement of Mushin, a mixed-use urban settlement of Lagos metropolis, affirm this through various contrasting features concerning physical changes and transformation, pattern, and structure that come with time and years of various urban interventions. In the present context of resilience and development, there is an accelerating trend of urbanization resulting from a surging influx of people from rural areas to urban centers, thereby struggling with the basic facilities and amenities that can hardly be sufficient or never adequate to meet the total population living in the metropolis (Adesina *et al.*, 2025).

### *Nexus Between Urban Development, Open Spaces, and Tourism*

Due to factors including a robust global economy, a growing middle class, technology advancements, and reasonably priced travel, tourism is a significant driver of growth in both established and developing nations (Chen *et al.*, 2023; Wang *et al.*, 2024; Zhang; Qian, 2024). Chen *et al.* (2023) stated that according to pre-pandemic data, there were 1.4 billion foreign visitors in 2019 and USD 1.7 trillion in tourism-related export revenue. With 570 billion USD, Europe has long been the area with the biggest tourist spending, followed by Asia and the Pacific (435 billion USD), the Americas (334 billion USD), the Middle East (73 billion USD), and Africa (38 billion USD) (Zhang *et al.*, 2024). Both expenditure and arrivals have grown at the fastest rates in Asia (+7% and +7%, respectively). A +7% increase in arrivals was equally distributed across Africa, indicating a renewed interest in visiting the continent. To guarantee long-term sustainability and economic growth, locals, business owners, and other stakeholders should encourage tourism with a focus on urban settlements with specific historical values. While encouraging cross-cultural understanding and its impact on the flow of cross-cultural exchange is vital, excessive tourism can have detrimental social effects and raise resource demand (Ojobo *et al.*, 2024). The growth of tourism, specifically in the city, enhances the socioeconomic attribute that directly benefits everyone: locals, workers, and visitors alike (Xia et al., 2024; Cristea et al., 2015; Yoo et al., 2024; Salama; Patil, 2024).

There is a need to address the environmental challenges of the future of both tourism and ecotourism through the role of green infrastructure interventions (Shi *et al.*, 2024; Selanon; Chuangchai, 2023). Urban greenery and infrastructure are more resilient and more capable of meeting health, social, environmental, and economic objectives than 'grey' infrastructure (Adesina *et al.*, 2025). Green infrastructure is an integrated approach to land use with inherent ecological values, a habitat of natural environment in which a particular species of wildlife lives. These urban open spaces are characterized by both physical and biological features, with a species' habitat is the place where

it can find food, comfort, shelter, protection, and mates for reproduction (Naghibi *et al.,* 2024; Adesina *et al.,* 2025). The physical factors are soil, moisture, range of temperature, and light intensity as well as biotic factors such as the availability of green and the presence anthropogenic activities which are instrumental to the development of urban parks (Cruz; Neves 2024; Lee, *et al.,* 2024; Adesina *et al.,* 2024b; Tang; Adesina, 2022a). Liveable cities and improved tourism development have certain habitat needs for the conditions in which they will thrive, most especially within an urban space, considering the numerous benefits of urban green spaces (Figure 1).

Figure 1 - Benefits of urban green spaces
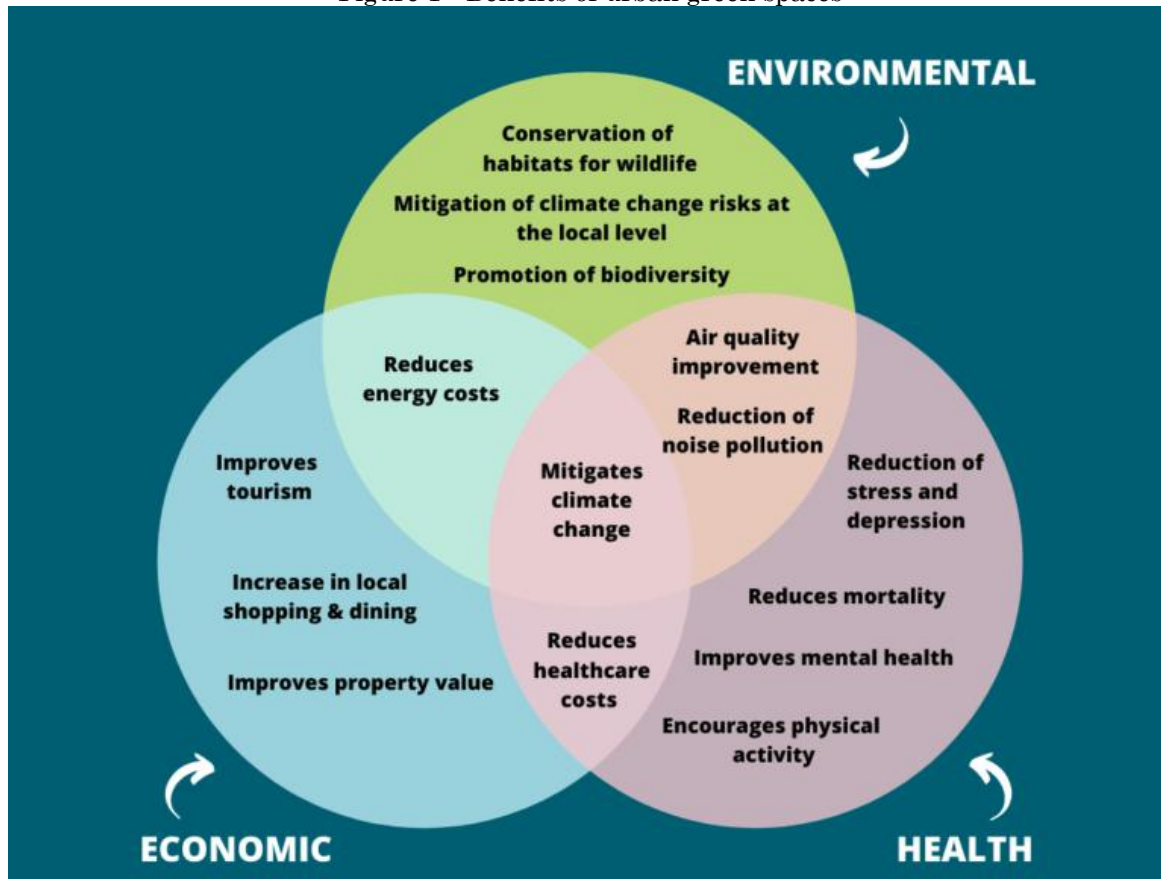
Source: Newcastle University (2025).

This study is aimed at articulating green open spaces towards reshaping the psycho-emotional well-being of the city residents and for the revitalization of the depleting urban spaces for tourism development in the Lagos urbanized and mixed-use settlements. In many developing nations, the general attitude in green open space planning is often articulated exclusively through spontaneous action and direct urban intervention to a visible problem, with no long-term plan; it is only criticized for the short-term effects that are set against limited time frames (Adesina, Liu, Tang, Ren, 2024a; Tang; Adesina, 2022a). The study examined the extent to which the landscape and urban spaces of Palm Avenue, Mushin, have survived the changes that have assailed the area to ensure a thriving habitat in the Lagos metropolis. How does this urban landscape attract visitors and boost tourism activities? To achieve this, the following objectives are to be pursued: determine the factors that have led to the change in land use of Palm Avenue and its environs by taking an inventory of existing open spaces and the impact of urban transformation. It also focuses on how to create a strategic and sustainable tourism framework for the conservation of urban spatial configurations. This study explored an assessment of the open spaces along the mixed-use settlement and the restoration of the degraded landscape, the usage,

and status of the open spaces. It finally proposed the provision of modern urban design solutions using smart nature-based technologies, designs, and urban greening policy. This form of masterplan development for the metropolis helps to reshape the morphological elements of constantly changing urban spaces through green resilience planning, adaptation, temperature reduction, oxygen production, carbon credit actuation, and climate change mitigation to attract tourism prosperity for the people.

LITERATURE REVIEW

It is becoming more and more clear that urban green areas not only enhance people's physical and mental health and well-being but also encourage sustainable urban and city's lifestyles (Li *et al.*, 2024; Adesina *et al.,* 2025; de Sousa; da Silva, 2025; Conti *et al.,* 2021). When applied to individuals with impairments, these long-term health and sustainability benefits have more impact and can eventually improve their quality of life. When it comes to equitable access to public spaces, health care, and social opportunities, people with disabilities, the homeless, low-income earners, and workers who are often overlooked and get less attention (García-Quijano *et al.,* 2023). Coutinho *et al.* (2025) stated that at the global, population, and individual levels, the study highlights the importance of green spaces in cities and recognizes the direct and indirect advantages that individuals with disabilities get through active and passive ways. Therefore, this study makes the case that the creation of sustainable urbanism must give priority to and involve people with disabilities in the planning process because they are the group that has the most potential to advance public resources (such as those related to the environment, society, and economy) and bring towns closer to being truly sustainable, smart and habitable (Figures 1 and 2). Urban areas may be transformed into vibrant landscapes and sustainable ecosystems with the aid of sustainable urban greening technologies (Raihan, 2024; de Santana *et al.*, 2023; Silva *et al.,* 2022). Urban farming, vertical greening, indoor

greening, green walls, green roofs, green facades, green courtyards, green balconies, and articulated bioswale systems for natural storm-water management and urban temperature regulation are examples of this contemporary invention and techniques used to revitalize the city thereby enhancing the city for prospective tourists and city dwellers (Tang; Adesina, 2022b; Li *et al.,* 2024; Peng *et al.,* 2025).

Tourism Development in a Depleting Urban Landscape

Tourism planning, city development, living conditions, and the sustainability of urban ecosystems are all severely hampered by the city's rapid urbanization (Cifelli, 2022). City administrators attempt to find informal land on the outskirts and within the cities to meet their housing demands, therefore jeopardizing the need for urban parks and recreational activities (Chemin *et al.,* 2021). This outcome has turned into a troublesome consequence for planned urban growth and appropriate land usage. The majority of cities are characterized by poor housing, slums, a lack of recreational and tourism infrastructure, transportation issues, low productivity, poverty, crime, and juvenile delinquency. The fast rate and constant pace of urbanization have also created several difficulties and issues that are comparable to those in other cities of the world. Tourism, urban growth, and socioeconomic and environmental viewpoints may be used to analyze growth. The majority of urban residents underestimate land use decisions and have very little experience with developing tourism, so they are unaware of its importance or the possibilities it might provide for their cities and towns (Cruz; Todesco, 2022; Fratucci, 2009). These uncontrolled urban growth processes are typically the primary cause of urban environmental issues, and a lack of leisure activities, which can have physical, mental, and emotional repercussions (Figure 2). Nevertheless, due to poor planning, cities' greenery, like urban trees and open spaces, resources are fast running out, and communities have also lost out on the chance to optimize the advantages of the resources already in place (da Cruz *et al.,* 2024; Lins, 2022).

Figure 2 - Urban Greening Strategies
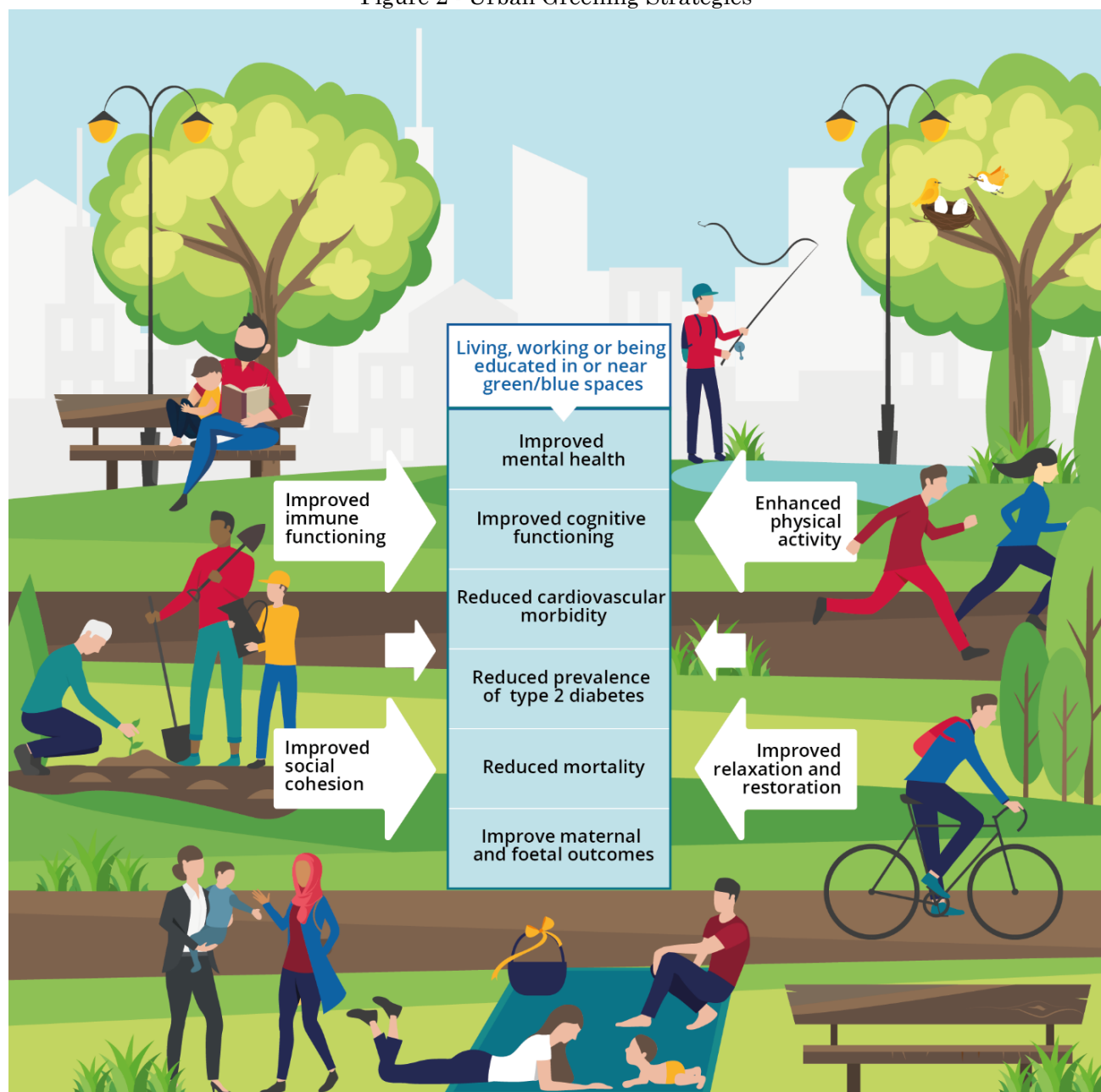
Source: EEA (2020).

The urban ecosystem approach must be included in tourism planning and the urban planning system at the urban policy level by stakeholders to guarantee that long-term benefits are maximized, particularly concerning biodiversity loss, urban heat island reduction, and climate change adaptation (Sousa-Santos; Silva-Pereira, 2020). Given its critical role in the sustainable and climate-conscious development of all metropolitan areas, architects, landscape architects, engineers, geographers, and urban planners/designers must rise to the occasion and make efficient plans for this physical, smart structure and resilient outlook of the environment. Open spaces should be incorporated into all growth and regeneration plans from the beginning, as they offer several environmental and quality-of-life advantages. To link tourism to the preservation of a city's historical and cultural values, environmental outlook, and ecosystem services, it is important to highlight the user's perceptions. It relates to the sustainable use and

management of urban open spaces, it is necessary to embrace modern technology, share experiences, and increase public knowledge of their significance in the metropolis (Tang; Adesina, 2022a; 2022b; Qadir; Fatah, 2023; Adesina et al., 2024a).

Tang & Adesina (2022a) opined that following the biodiversity conservation model of urban forest, the urban green spaces and adequate trees have the potential to improve human health and well-being, conserve species, provide habitat for wildlife, and enhance climate change mitigation and adaptation. It is a significant motivator and boost for tourism development and investment, authorities also need to be mindful of other societal trends and new environmental issues (Metilelu, 2022). Kusimo *et al.* (2021) stated that urban planning and design for the environment are affected by the outdoor visual surroundings, and they affect people's psychological health and should be specifically considered when making design choices. It is therefore imperative to conserve Lagos metropolis's urban environment to achieve the efficiency of energy in buildings for residential use (Kusimo *et al.*, 2021). The majority of planners are somewhat sensitive to environmental aesthetics, and some concrete empirical data demonstrates that aesthetic advantages are more significantly considered. According to this study, the significance of intentional urban greening extends beyond aesthetics and encompasses a variety of effects on users' emotional and psychological states, while this also demonstrates how it contributes to the reduction of atmospheric heat. Urban parks and gardens are essential for cooling cities, offering safe paths for bicyclists and pedestrians, and serving as places for leisure, socializing, and physical activity. Green areas are crucial for mental well-being in a natural setting and may also help treat moderate depression and lower physiological stress (Amaral; Flores, 2025; Qadir; Fatah, 2023; Kusimo *et al.*, 2021).

Urban Green Infrastructure, Urban Grey Infrastructure, and Blue Infrastructure

Roads, urban settlements, hydropower plants, dams, and parking lots are examples of grey infrastructure that negatively impacts environmental coherence and contributes to urban morphological features, deterioration, and a loss of urban-nature connection (Li, Wang, Chang, 2024; Peng *et al.*, 2025). Given the mandate to construct neighborhood parks in all

available open spaces within the city, the traditional infrastructure planning arrangements put in place by the Lagos State government through the Ministry of the Environment (MoE) and Lagos State Parks and Gardens Agency (LASPARK) are unable to handle the new challenges. Urban agriculture, green walls, and green roofs/gardens—some aspects of sustainable ecological urbanism and its network interconnectivity—must be integrated into the urban landscapes. In contrast, greenery is a linked structure of green space that preserves environmental characteristics and functions while offering corresponding advantages to society, therefore increasing the tourism development possibilities and opportunities (Peng *et al.*, 2025; Adesina *et al.*, 2024b).

This study revealed the research gaps within the context of metropolitan areas where abandoned open spaces are prevalent, prompting a need for urban green spaces to meet the growing city demand. Understanding residents' preferences and perceptions of transformed spaces is vital for effective urban design and tourism development (Shi *et al.*, 2024; Selanon; Chuangchai, 2023; Amaral; Flores, 2025). This study delves into residents' preferences and perceptions regarding the transformation of such open spaces into livable spaces worth visiting for enhanced city well-being and their positive eco-benefits and negative risk impact on the people. It finally established how these urban intervention preferences and perceived health benefits shape the value of transformed spaces through sustainable urban strategies in the Lagos metropolis.

MATERIALS AND METHODS

This study deployed a quantitative research design approach. Copies of the structured questionnaire were used, and the urban dwellers were interviewed within the selected study area. The direct survey and descriptive analysis of the existing site conditions, in which the existing status of the independent situations was obtained. The study used Google Map to retrieved the aerial photographs of the settlement and AutoCAD (2024) to digitize the existing building types and condition of the open spaces, the current road interconnectivities, and circulation possibilities that has determined the current land use by city dwellers, nearby commercial and industrial

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activities, the community, and tourists. The updated maps show the layouts, buildings, and plots within the study area. It highlights the road networks and five catalytic hotspots areas of focus and zoning of the core area, and their population density. The sampled frame and population densities of the study area, commercial activities are assessed for an effective urban sustainable planning system. This methodological approach raised awareness of the multifunctional benefits of environmentally conscious infrastructure, put together the existing land use, core area (through zoning), and the road hierarchies and connectivity. The study adheres to this at every step to foster sustainable growth and create solid community-driven tourism to reshape the psycho-emotional well-being and the depleting urban environments, to boost ecotourism. Lagos landscapes have expanded and changed with the shifting urban trends, but urbanization has never been so well-balanced with varying urban design preferences occasionally taking center stage. Palm Avenue, a famous street in the Mushin Local Government Area of Lagos State, was previously designed to be a residential estate post-independence of Nigeria in 1960, but it is now a bustling mixed-use neighborhood with residential, administrative, religious, and commercial activity. These private dwellings were initially constructed are later converted to other uses because of the growing economic activities and the general commercialization of the metropolis.

Study Area

Mushin is located in the central part of the Lagos Mainland. Located in the Mushin Local Government Area of Lagos State (Figures 3 and 4). It is geographically located in the region of latitude 6º 32"43′N and 6º33"30′N and longitude 3º21"07′E and 3º22"02′E. Mushin is a suburb of Lagos, Nigeria, located in the southwest of the country. It is a densely populated local government area (LGA) that is known for its markets and cultural diversity. The study is centered within the heart of the Lagos metropolis, and the site selection criteria are based on the following considerations: it is 10 km north of the Lagos city center, and it is next to the main road to Ikeja. Figure 3 shows the study area at the intersection of roads from Lagos, Shomolu, and Ikeja. Its geography is a central location with easy access to other parts of Lagos and home to several parks and green spaces, including Oniwaya Park and the National Stadium complex. Its economy is home to a large industrial estate with commercial enterprises including cotton spinning and weaving, shoe manufacturing, and bicycle and motorized-cycle assembly. Also, home to a large central market for agricultural produce, and the people have a high sociocultural status known for its vibrant markets, cultural heritage, and active economic life, a hub of commercial activities, and a rich cultural tapestry, reflecting the diverse population that resides there. It is bordered by Isolo Road to the left and Agege Motor Road to the Right. The three major roads that cut across the Community are Ladipo Road (2.56km), Palm Avenue Road (1.45km), CAC Road (0.98km), and directly adjacent to Palm Avenue and Kumuyi Road, which is also a residential neighborhood. Some of the prominent Residential Neighborhoods are Adekitan Street, Akinsola Crescent, Oduntan Street, Owhin Street, Olasehinde Street, Buhari Street, Silva Street, Omodigbo Street, and Sebanjo Street, among others.

Figure 3 - Map of Nigeria, Lagos, and the study site within showing Mushin LGA (Palm Avenue)
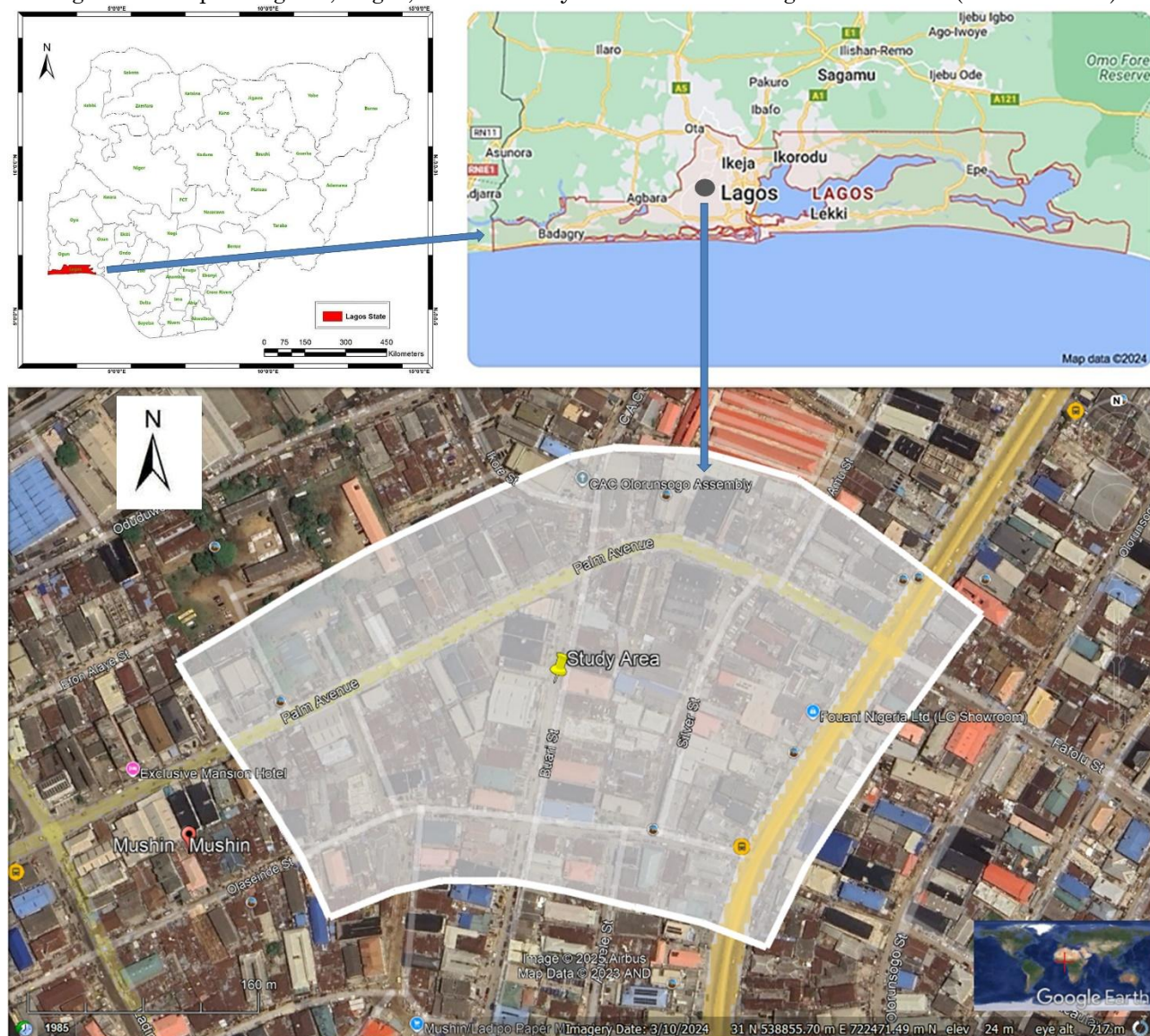
Source: The authors (2024) adapted from Google Maps (2024).

Officially, it had a population of 633,009 at the 2006 census (National Population Commission, NPC, 2023). In 2022, the population was estimated to be around 935,400 people living in this settlement. While some statistics projected that in reality the total population is close to two million. This population forms the sample size and population used for this study.

Sampling Size

The study identified a total of five hundred and thirty-three (533) houses containing over three thousand (3,000) residents participated in this study and out of these total numbers of dwellings

identified, only 422 respondents participated in the survey. To achieve this, a stratified random sampling technique was used to stratify Palm Avenue and the neighboring streets in Mushin Local Government, Lagos, Nigeria, into five zones (Figure 4). These identified zones have five available open spaces that are suitable for neighborhood parks, which can attract visitors and therefore boost urban tourism. These are further categorized into three according to the population density: most densely populated, densely populated, and less densely populated. This selection cuts across all three levels of building types in each street.

Within this selected settlement, five hundred (500) copies of the questionnaire were sent out to respondents, who included workers, traders, homeowners, and others. A total of 422 correctly completed forms were retrieved and used for analysis. This means a total 84.4% success rate was achieved and used for the analysis. The age range of the respondents is between 18-60 years, with an average age of 39 (Table 1). The total area within the Mushin Local Government Area considered is approximately 17,4644.24m[2,] and the Local Government Headquarters, which is the administrative office, falls within this settlement. The 533 buildings sit on 272 plots of land, and many of the plots have two to three buildings and which revealed the level of congestion within the selected area. The total commercial building is 156 (29.3%), the mixed-use building is 113 (26.7%), and the residential building is 68 (16.1%) (Table 3).

Primary data obtained from direct site inventory/survey formed the basic source of information used in this study. This was obtained through the conduct of physical observations and the administration of structured copies of the questionnaire. In the instrumentation in the five selected study hotspots (Figure 4), data collection focuses on the urban attributes for tourism development, sustainability, and people's well-being. The personal attributes of the respondents in the study were gender (male and female), housing types (bungalow, high-rise/multi-level buildings), employment/unemployment status, income, and socio-economic status of the building (commercial, residential, and mixed-use). The research, with the help of trained research assistants, explained all aspects of the questionnaire to the respondents. However, it took the researcher four weeks to administer and retrieve the questionnaire administered in the selected streets connecting Palms Avenue and Ladipo Road, Adekitan Street, Akinsola Crescent, Oduntan Street, Owhin Street, Olasehinde Street, Buhari Street, Silva Street, Omodigbo Street, and Sebanjo Street, among others. The data collected through the questionnaires were analyzed using simple percentages and frequency counts for demographic information about the respondents. It assessed the risk level and severity of the urban intervention impact in the form of landscape degradation and human displacement on the open spaces, existing building facilities, and the people of the host community.

Figure 4 - Lagos Map Showing Palm Avenue and the Study Hotspots

Source: The authors (2024) adapted from Google Maps (2024).

Results: Presentation of Respondents' Demographic Characteristics

This section presents the respondents' demographic data using frequency distribution tables.

Table 1 - Percentage Distribution of Respondents by Age

Age Distribution		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Valid	18-30	285	67.5	67.5	67.5
	31-45	96	23.0	23.0	23.0
	46-60	41	9.5	9.5	9.5
	Total	422	100.0	100.0	100

Source: The authors (2024).

Table 1 above reveals that 285 or 67.5.0% of respondents were between the ages of 18-30 years of age, 96 or 23% of respondents were within the age bracket of 31-45 years, while 41 or 9.5% of respondents were within the age bracket of 46-60 years. This table's results are not surprising since it shows that mostly young adults who are between 18-30 years of age responded to the questionnaire – this is the expected age bracket of the residents and commercial traders doing business along the major streets within the district.

Table 2 - Percentage Distribution of Respondents by Gender

Gender Distribution		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Valid	Male	327	77.5	77.5	77.5
	Female	95	22.5	22.5	22.5
	Total	422	100.0	100.0	100.0

Source: The authors (2024).

Table 2 above shows the distribution of the respondents by gender; 327 or 77.5% of the respondents were male, while the remaining 95 or 22.5% of them were female. This indicates that the majority of the respondents who completed the questionnaire were male. This shows that the dominant workforce of both skilled and unskilled labor is male.

Table 3 - Percentage Distribution of Respondents by Existing Building Types

Physical Developments		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Valid	Mixed-use Development	113	26.7	26.7	26.7
	Residential Buildings	68	16.1	16.1	16.1
	Commercial/Retail Shops	196	46.5	46.5	46.5
	Religious Buildings	13	3.1	3.1	3.1
	Office/Administrative & Others	32	7.6	7.6	7.6
	Total	422	100	100	100

Source: The authors (2024).

Table 3 above indicates that 113 or 26.7% of respondents were occupants of a mixed-used building, while 68 or 16.1% of respondents were occupants of residential apartments (either temporary or permanent owners), 196 or 46.5% of respondents were commercial shop owners (some

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of them have more than one retail shop along the Ladipo Road), 13 or 3.1% respondents have their place of worship (church/mosque within the neighborhood). 32 or 7.6% have their corporate offices along Palm Avenue Road. This table shows that 196, or 46.5% who are the majority of the

respondents, were commercial traders; hence, commercial activities are predominant within the study area. This shows that the commercial activities in the selected settlement had overtaken residential areas and other land uses.

Table 4 - Respondents' Perception of Existing Greenery and Open Spaces

S/N	Selected Interview Questions	Frequency	Percentage (%)	Remarks
1	Do you consider the provision of adequate green infrastructure to urban dwellers important?	132	31.28	Developers propose green lawns to their designs before approvals, but it is never installed.
2	Are you aware of the health benefits of urban green spaces?	127	30.09	A high level of green eco-benefit awareness and urban tourism prospects.
3	Is your house a mixed-use apartment? Any existing greenery in your facility?	77	18.24	Existing buildings are being converted to mixed-use without adequate greenery.
4	Any plans to incorporate green roofs and green walls in your building?	20	4.74	Little or no knowledge of green walls, green roofs, and urban agriculture.
5	Are you ready to plant and adopt two trees, a lawn, and a hedge plant for their sustainability?	17	4.02	Little knowledge of the importance of greenery sustainability and liveability through plant (tree) adoption.
7	Sometimes people do not appreciate green infrastructure/green spaces in the metropolis, but rather abuse and misuse them.	29	6.87	Poor understanding of the GI components within the open spaces in the metropolis and the LASPARK greening initiatives.
8	What are the major activities that go on occasionally/always within the available green open spaces?	20	4.76	All kinds of outdoor recreational activities and meetings.
	Total	422	100	

Source: The authors (2024).

Figure 5 - Existing Pictures showing the Condition of the Streets in the Study Area (Palm Avenue)


Source: The authors (2024) adapted from Google Maps (2024).

The study's findings also showed that psychological well-being (control over oneself and events, happiness, social involvement, self-esteem, mental balance, sociability), emotional intelligence, and psychosocial climate were important factors in explaining the social relationships between residents and commercial traders. Respondents stated that the combination of psychological well-being components, emotional intelligence, and the psycho-social atmosphere that predominates in metropolitan areas explains why 49.1% of all people still enjoy social relationships. The existing situation of the settlement indicates the level of degradation, abuse, and misuse of the open spaces (Figure 5, Table 4). The results indicate that exposure to natural scenery, as opposed to the hectic hustle, struggles, and tense urban wide areas devoid of natural features in Lagos, considerably improves the mood of stressed people. The respondents talked about how open spaces are currently being used and how users view them as a means of fostering tourism, social cohesion, community living, physical fitness, and public health.

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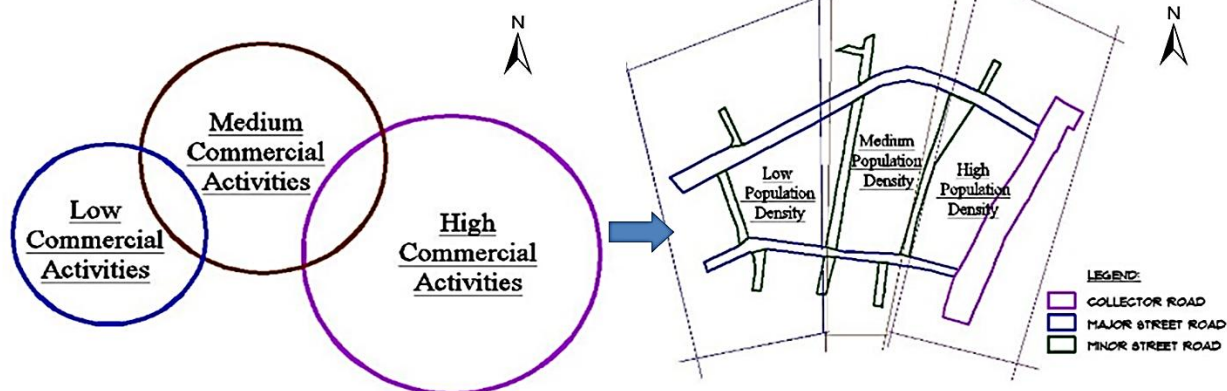
Figure 6 - Spatial Analysis of the Study Area
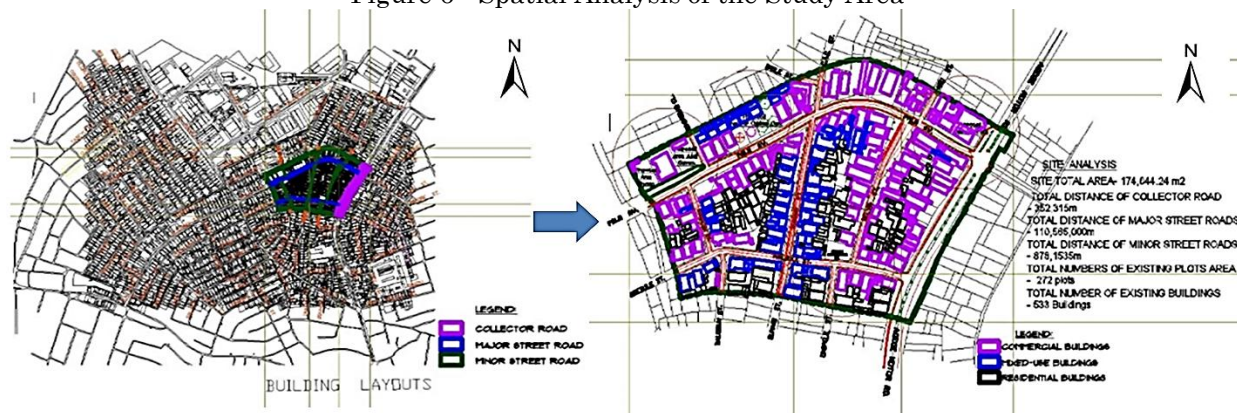
Map showing the layout of the study area and the study area.

Layout showing the 422 respondents' houses, 533 sampled buildings, and 272 plots within the study area.
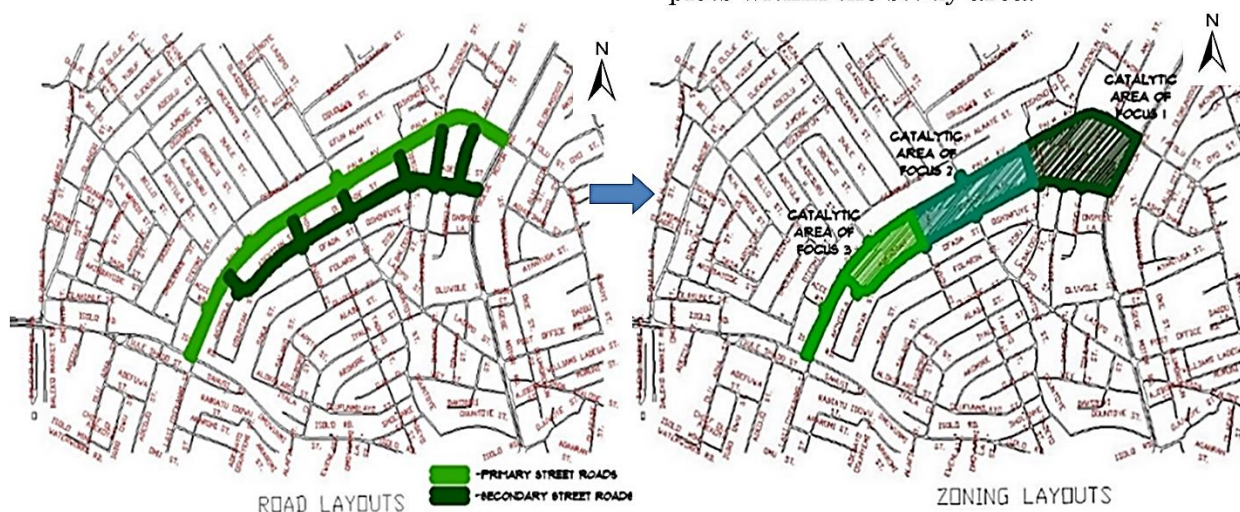
Layout showing the road networks considered for green infrastructure upgrade.

Layout showing the catalytic areas of focus and zoning of the core area.

Bubble diagram of the sampled frame showing the population densities and the road networks.

Population densities of the study area and commercial activities flow within the study area.
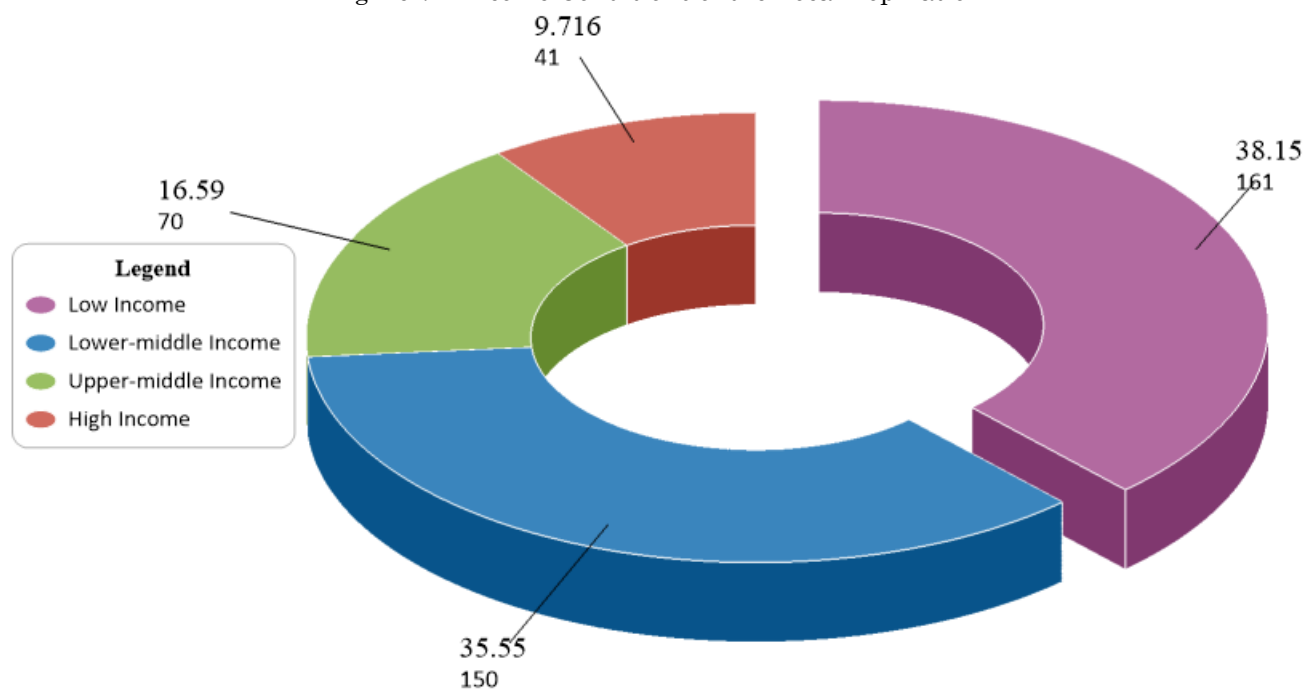
Source: The authors (2024).

The findings also showed that psychological health has a significant role in understanding socioeconomic relationships and population density between residents of the settlement (Figure 6). This may be because individuals who are the main users have higher psychological health in greener urban areas. Additionally, it will raise people's quality of life, which will be reflected in their capacity to think, solve issues, and understand the significance of relationships and emotions.

RESULTS AND DISCUSSIONS

Particularly among the homeowners of Palm Avenue, the general public's knowledge of the availability, usage, status (current condition), and eco-benefits of GI components within the open spaces is regarded as being extremely poor (Table 4). There appears to be a decent degree of understanding of the eco-benefit (30.09%), and they typically would not consider any greenery at

the time of building plan approval before the construction of their building (31.28%). Just 4.76% of respondents said they would engage in outdoor activities in parks and other open places during their free time. When questioned, the respondents usually grasp the need for urban trees, but they are also unaware of the necessity of adding green walls and roofs as part of the building envelope. There are various categories of income earners within the city, which affect the socioeconomic situation of the city. Following the economy's categorization, which is divided into four income levels by the World Bank: low, lower-middle, upper-middle, and high income. Each of these categories is updated each year and is based on the Gross National Income (GNI) per capita. This approach is a commonly used statistic for assessing global economies and aids in classifying nations according to their level of economic development and growth of a city. Figure 7 shows the respondents' income condition, 38.2% are in the low-income class, 35.6% lower-middle income class, and only 9.7% of the respondents are in the category of the high-income class.

Figure 7 – Income Conditions of the Local Population

Source: The authors (2024).

Figure 8 – Employment and Unemployment Rate
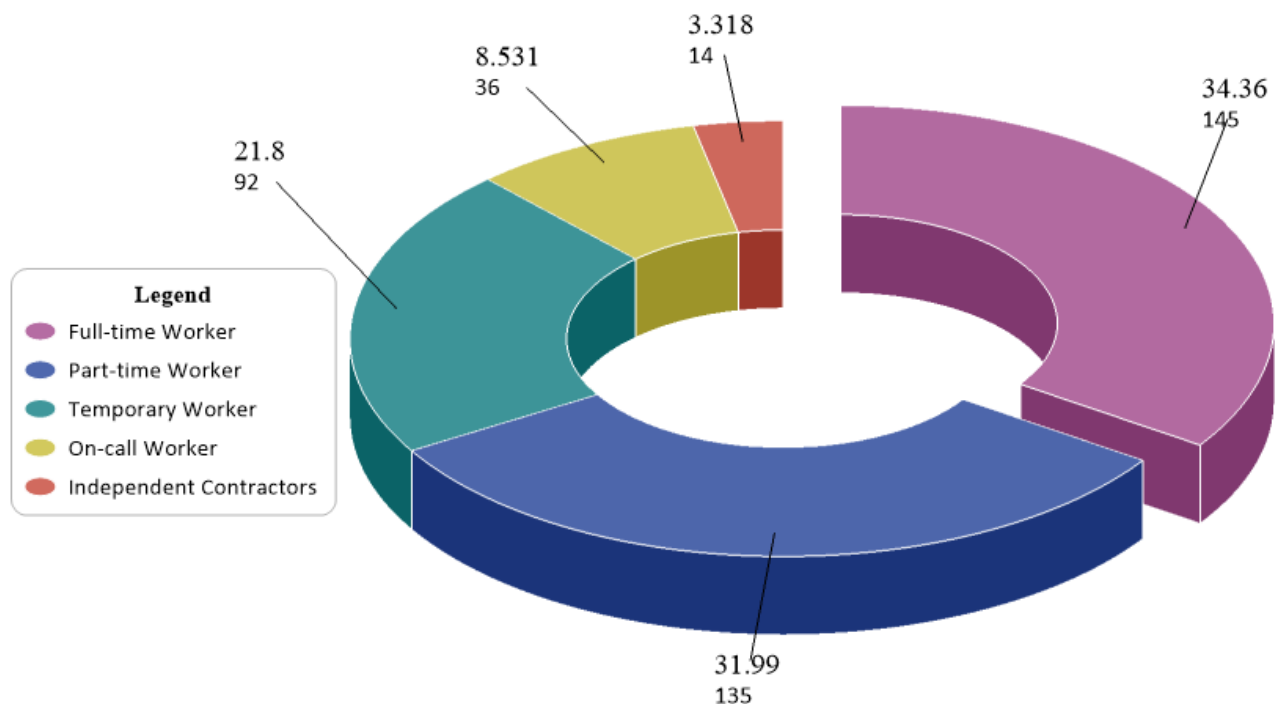
Source: The authors (2024).

Utilizing variables such as work schedule, length of employment, and connection with the employer, employment classification separates employees into numerous categories. Full-time, part-time, temporary, on-call, and independent contractors are typical classifications of workers generally in the metropolis. This employment categorization shows that the full-time workers are the largest population of residents, 34.4% of the study area, but this does not determine their earning/income capacity. Part-time workers are followed with 31.2%, both the temporary and on-call workers are in the category concerning their earning capacity, and they could also be out of job with 21.8% and 8.5% respectively. The last category is the independent contractors (self-employed entrepreneurs) forms the least of this category with only 3.3% of respondents (Figure 8).

Displacement Characteristics of the Building Types and Urban Architecture

Although there may be some advantages to gentrification, such as community regeneration, there are also serious hazards, especially for disadvantaged groups and long-term inhabitants. Since rising rents and property values make it expensive for low-income households, displacement is the most frequent concern. Historical significance and cultural values elimination, a decline in the sense of community, and the loss of inexpensive real estate are all possible outcomes of this. Adding property prices and rents follows population displacement because as an area gains appeal, these factors rise as well, making it unaffordable for many long-term inhabitants, particularly renters. Developers employ a variety of strategies, including legal ones, to evict long-term tenants from their buildings. The loss of cheap housing has raised demand, and investment may result in conversion, which would limit low-income individuals' housing alternatives.

Figure 9 – Appraisal of Displacement Levels
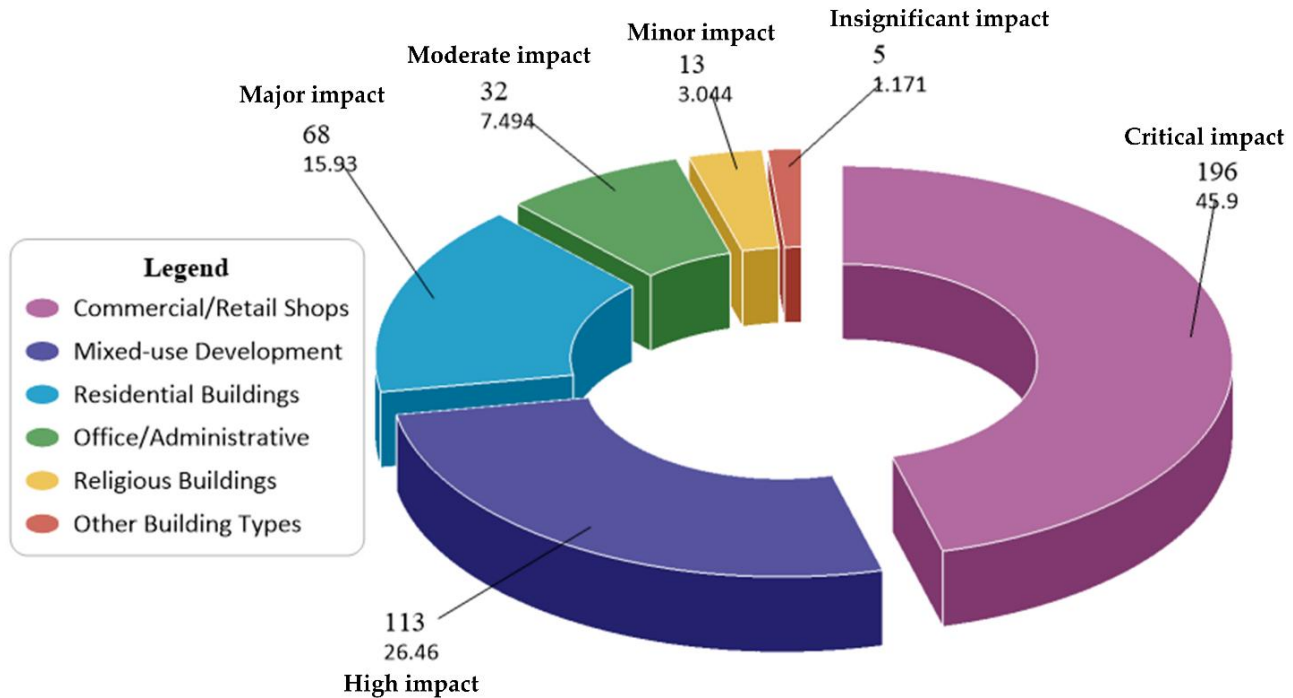
Source: The authors (2024).

The risk assessment and incident complexity and severity are displayed in Figure 9 using the onsite data of the existing building types and open space degradation (Table 4). The term "critical impact" often refers to the maximum degree of impact, which is 45.9%. This indicates a severe or catastrophic occurrence and incident that has the potential to seriously impair operations, injure users, or cause considerable financial or reputational damage. To address the problem at this level, comprehensive urban intervention and quick greening action are frequently needed. Specific instances involve significant environmental issues and all green infrastructure components, service interruptions that impact every user. The additional level of severity is "high impact," which is 26.46%, and this category denotes a serious occurrence that had a big effect on the well-being of the people. For example, the interruption of essential ecosystem functioning is being affected, or a major urban space component is degrading to the point where it affects the metropolis. "Major impact," which is comparable to "high," denotes major influence, 15.93%, although it suggests significant but less severe impacts than a critical impact. "Moderate impact," 7.5%, which denotes a noteworthy, important but non-catastrophic impact, comes next. There is a discernible "minor impact" of

3.04%, which indicates a small or confined impact of this urban intervention. "Insignificant impact", 1.17% denotes little to no environmental impact and is the final category in this study area.

Critical Analysis of the Possible Consequences of this Urban Intervention

The findings from the site assessment and the data received from the respondents (Table 4) revealed the potential risks and impact of this urban revitalization intervention and green infrastructure implementation. This can be categorized into four: environmental risk, cultural risk, economic and social risk, and these all have various levels of displacement and impacts affecting the sustainability of the city.

a. Environmental Risk: Figure 6 shows the spatial analysis according to human socioeconomic existence depends on adjusting in sustainable ways. Human adaptability to urban open spaces depends on creating environments that reflect the links with urban green spaces. By increasing the amount of green space inside a limited building footprint, this research supports the idea that implementing green intelligence urban greening solutions with cutting-edge

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technology is crucial to the development of these public parks. This study categorized these risk levels into six as illustrated in Figure 8.

b. Cultural Risk: Evacuation has led to a surge in homelessness, instability, destitution, and unemployment because people are unable to locate cheap choices, which is progressively undermining cultural variety and community identity. Alterations to the identity and character of the neighborhood, individuals with diverse demographic experiences and behaviors replace permanent residents, and redevelopment frequently results in a change in the social and cultural composition of a community.

c. Economic Risk: Decline of Small Enterprises of the residents that are affecting the neighborhood's character and identity, which have impacted local startups close as a result of rising expenses and changes in demographic trends (shift). This loss also eradicates cultural values, and the neighborhood's distinctive history and customs may be lost as a result of the inflow of foreigners (tourists). These growing living expenses can affect people's money and general happiness, even for those who want to stay in the area. This influences the health inequalities, economically disadvantaged and minority inhabitants may experience higher levels of stress, anxiety, and trouble obtaining therapy as a result of gentrification, which can worsen already-existing city living conditions.

d. Social Risk: Expanded psychosocial separation in the form of social connections may become weaker, and people may become more isolated as a result of being uprooted and losing ties to their communities. Increasing violence, which may cause some forms of criminality to spike and may force out those who are more susceptible to crime in the city. The general public services, such as educational institutions, transit, and facilities, may experience strain when a community grows. Disparities in living standards, and not all locals may profit equally from intervention economic effects, with low-income people frequently suffering the most.

Urban Open Spaces and Tourist Development

The relevance of retrofitting urban open spaces for tourist growth was shown by the respondents during their examination of the sorts of activities and utilization of the spaces. In determining the degree to which individuals think that going to green areas enhances their mental health, greenery and urban trees are important factors. This emphasizes the need for green interventions and social promotion programs to encourage urban inhabitants to use green spaces. Urban spaces' general social and economic well-being can also be enhanced by the increased tourist traffic, which can stimulate local economies and promote cross-cultural interactions. In addition to bridging the gap between public spaces and technology breakthroughs, strategic use of digital outdoor advertising may make urban experiences more inclusive and participatory for both locals and visitors. Owners of real estate preserve the top levels of the structure as their residences while designating the bottom floor for business purposes. Socioeconomic relationships, psychological well-being, control over oneself and events, happiness, social participation, self-esteem, mental equilibrium, sociability, emotional intelligence, and psychosocial climate were all shown to be significantly positively correlated.

Metropolitan Space Evaluation and Valorization

Enhancing the intrinsic worth, function, or usage of a physical space or a space-related notion is sometimes referred to as the valuation of the area. This might entail several tactics, including increasing a space's use, connectivity, attractiveness, or profitability. In the context of Mushin open space revitalization and urban development, valorization could entail modernizing infrastructure, enhancing public spaces, or reusing old structures to create new home or business districts. Additionally, it can entail drawing in residents and businesses, boosting tourism, and encouraging community involvement. The technique of turning research results or concepts into something real that adds value, such as innovative design concepts and services, or technology, is referred to as "valuation" in the context of innovation, and research is the focus of this study.

The findings of this may entail turning research into a business, starting spin-offs, or

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disseminating research results in a form that is more widely read. The appraisal of the current situation of the urban open spaces in the space economy refers to the utilization of space resources and capabilities for pragmatic or economic purposes, such as ecological asset extraction, satellite technology, or space tourism. This may entail the creation of a worldwide tourism development, the attraction of investment, and the development of innovative green and smart technologies to enhance a resilient city like Lagos. The onsite site survey identified approximately 600 existing urban trees and a few hedges and ground cover that are currently stunted and poorly maintained. The study proposed an average of 20,000 urban trees every year to help make up for the deficiency in urban green cover within the area (Figure 10).

The study did an architectural simulation of the study area, assessed the five open spaces, and road networks, and proposed adequate urban trees as illustrated in Figure 10. The open spaces introduced eco-parks and fitness points with adequate greenery. The open spaces are strategically situated, and they are closer to the three classifications of building types. Open Space 1 is closer to the commercial buildings, Open Space 2 is closer to both the mixed-use and commercial buildings, and Open Space 3 is closer to the commercial buildings and the main highway that connects the settlement. Open Space 4 is in the mixed-use area, and finally, Open Space 5 is right in the middle of the three categories of building types. Figure 11 shows the 3D illustrations and the positions of the proposed 2,500 trees and the visuals of the parks for the use of both residents and tourists.

Figure 10 **-** Existing and Proposed Urban Trees for a Sustainable Streetscaping Project
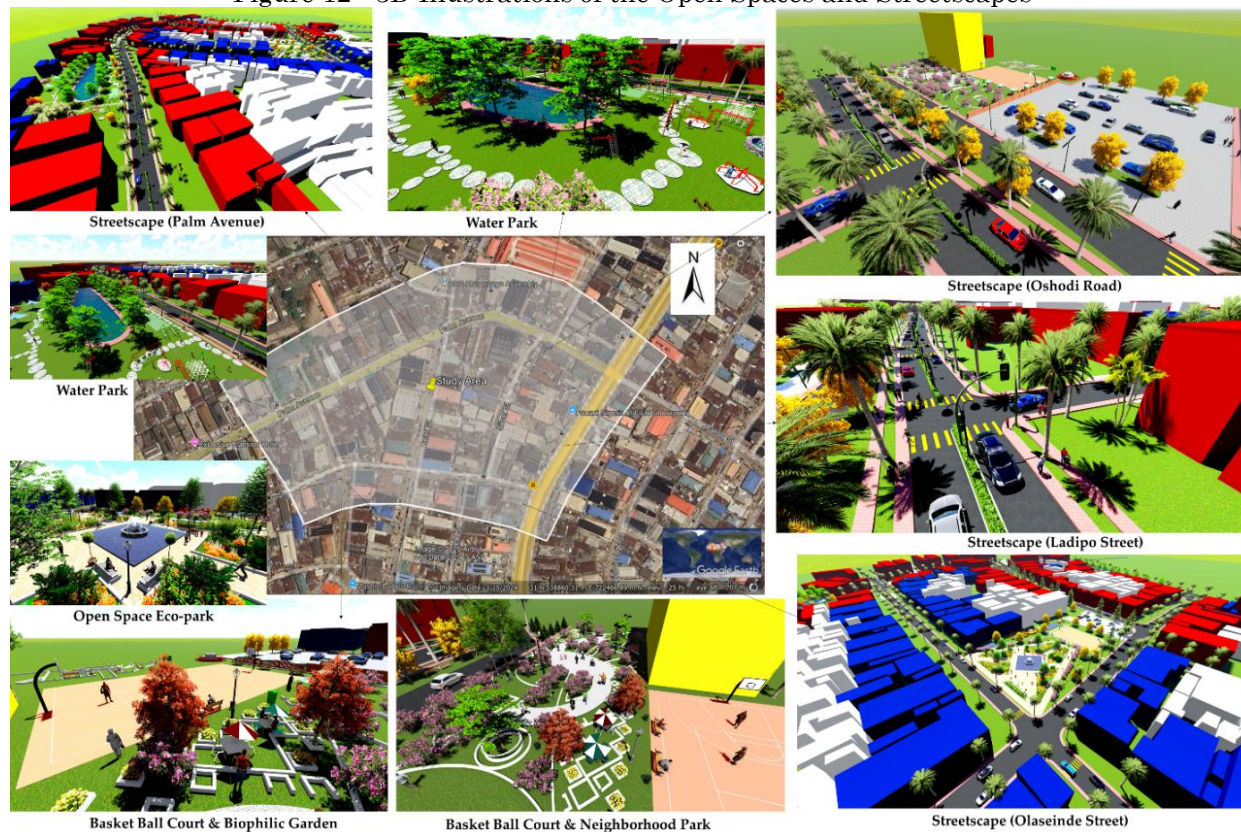

Source: The authors (2024). Edited from Google Maps (2024).

Figure 11 - Landscape Design Approach for Sustainable Open Spaces and Streetscapes

Source: The authors (2024).

Figure 12 - 3D Illustrations of the Open Spaces and Streetscapes

Source: The authors (2024).

The findings and illustrations showed that various modified open spaces with urban forms elicit unique preferences, physiological reactions, and connections to the city (Figures 10-12). In particular, looking at the tourism potential was linked to notable improvements in the city, indicating a link between more human engagement, both for locals and tourists, and higher levels of empathy and wellbeing. The importance put on this settlement for its health advantages is further shown by the respondents' feedback and updated data of improved comfort, relaxation, and general mood, as well as their strong preference for urban design and tourism over unaltered settings. According to the study, improving the risks of this urban strategy for low-income residents, incorporating long-term residents in planning and development processes, can help guarantee that their needs are taken into account and that the advantages of gentrification are distributed more fairly. Affordable Housing Initiatives can aid in preventing homelessness by putting policies and initiatives in place that give priority to low-income neighborhoods and safeguard already available affordable units. Tenancy safeguards for urban inhabitants can assist preserve low-income tenants' rights by enforcing eviction avoidance strategies and bolstering tenant security.

CONCLUSION

This study concludes that how higher-income people move into impoverished urban areas, improve housing, and draw in new brands, usually displacing existing residents in the process, is known as metropolitan gentrification. Negative effects of gentrification typically include forced relocation, the encouragement of discriminatory conduct by those in positions of authority, and an emphasis on areas that exclude unskilled residents and those with low incomes. There are not many open areas for leisure and social integration in the city anymore. An interest in linking the usage of the park and tourism has to focus on areas that are already developed in commercial centers and central business districts. The following suggestions might be taken into account while establishing urban tourism in the city;

a. Sufficient appropriateness research to determine the best greening alternatives.
b. The urban landscape has to be safeguarded against further deterioration for it to support human usage.
c. There is a need for a quick approach to a thorough analytical evaluation of the eco-benefits that the urban open spaces can provide to the users.
d. Strategic planning is necessary to highlight these eco-benefits and how creative urban models may support the development of tourism.
e. This study involves discussions on the advantages urban open spaces offer and how to describe them in terms of the environment, society, and economy.
f. The study explores connections between biological and cultural variety and examines the relationship between green areas and social cohesiveness.
g. The study proposed a need for more research to examine urban tourism as a brain marker for emotional healing in urban green spaces and the long-term positive effects of open spaces on well-being.
h. Through the thoughtful creation of green spaces, this study emphasizes the critical role that urban design plays in promoting tourism and supporting psychological well-being and proposes a paradigm change toward more inclusive, health-promoting urban settings.

The study concludes that outdoor public parks are excellent examples of urban green spaces that represent a variety of city people's identities and demands for tourist growth. Geographical and cultural context are important, and each park incorporates local history, culture, and natural aspects. A common characteristic throughout all parks is strong stakeholder involvement, which can range from community participation to public-private partnerships. With an emphasis on extensive tourist renovation, the study area's five designated hotspots demonstrate adaptive reuse and creative urban design solutions that meet both practical and aesthetic objectives. Sustainability is a major factor, and parks incorporate native vegetation, green infrastructure, and eco-friendly procedures. Prioritizing accessibility and inclusion guarantees that parks cater to a variety of user groups. The planned park fosters social cohesiveness in a mixed-use, varied community while growing into a significant cultural and economic center. Lastly,

the findings highlight the need for early stakeholder engagement, flexible and multipurpose space design, sustainability, inclusivity, local identity reflection, and long-term maintenance planning. To create dynamic, inclusive, and resilient urban parks, these insights highlight the significance of community engagement, adaptation, and environmental considerations. The study provides the people who are mostly the low-income or lower-middle income earners, city administrators and stakeholders, urban planners, and designers with useful recommendations for constructing effective public parks and gardens statewide across the metropolis.

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AUTHORS CONTRIBUTION

John Adekunle Adesina: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Software, Visualization, Writing – Original Draft and Writing – Review & Editing; Nnezi Uduma-Olugu: Project administration, Resources, Supervision, and Validation; Michael Adebamowo: Supervision, and Validation; Winchester Ndum Fuh: Software, and Visualization; Xiaolan Tang: Supervision, and Validation; Yujie Ren: Supervision, and Validation.

All authors supplemented and improved the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.