**IMPACT OF URBANISATION AND DISPLACEMENT ON ENVIRONMENTAL SUSTAINABILITY IN ABUJA, 1991-2022.**

**BOUMO EZONBI, PhD,**

**&**

**CHANGWAK EMMANUEL JONAH, PhD,**

**Faculty of Humanities**

**Department of History and International Studies**

**Nigeria Police Academy, Wudil, Kano.**

**Abstract**

*This study explores the relationship between urbanisation, displacement, and environmental sustainability in Abuja, over the period from 1991 to 2022. The research adopts both primary and secondary data to explore the urban expansion, coupled with large-scale displacement due to infrastructure development and urban sprawl, has placed significant strain on the environment. The research examines how these processes have led to land degradation, deforestation, and loss of biodiversity, water scarcity, and pollution. It also investigates the socio-economic impacts of displacement, including the marginalisation of vulnerable communities and the exacerbation of environmental inequalities. The study highlights key issues such as the destruction of natural habitats, overexploitation of resources, and the increasing vulnerability of the city to climate change-related impacts like flooding and heat waves. Furthermore, it assesses the effectiveness of urban planning policies, including the Abuja Master Plan, in addressing environmental challenges and promoting sustainable development. The findings suggest that while there have been efforts to mitigate the negative environmental effects of urbanisation, the lack of comprehensive enforcement, inadequate infrastructure, and weak governance have hindered progress. In conclusion, this research emphasizes the need for more sustainable urban planning strategies, and inclusive governance to address the environmental challenges posed by rapid urbanization and displacement.*

**Introduction**

The rapid urbanisation of Abuja, over the past three decades has brought about significant socio-economic transformations. Since Abuja was officially designated as the capital in 1991, the city has experienced explosive growth in population and infrastructure. Initially designed to accommodate government institutions, Abuja's expansion has extended far beyond its original boundaries, driven by both migration from other parts of Nigeria and the city's growing importance as a political and administrative hub. This swift urbanisation, while facilitating economic development and modernisation, has also had profound consequences on the environment and the local populations, particularly through the dual challenges of environmental degradation and displacement.

Urbanisation in Abuja has led to considerable changes in land use, with large swaths of natural landscapes, forests, and agricultural land being converted into residential, commercial, and industrial zones. This process has had adverse environmental consequences, including deforestation, increased pollution, and the depletion of natural resources, all of which threaten the city’s long-term environmental sustainability. As the city continues to expand, the demand for land and resources has only intensified, placing greater pressure on Abuja's ecosystems and its ability to support sustainable growth. At the same time, the rapid growth of Abuja has also resulted in the displacement of local communities. As urban areas have expanded, many rural and peri-urban populations have been displaced from their land to make way for development projects. This displacement has had severe social and economic impacts, with displaced individuals and families often facing challenges in securing adequate housing, livelihoods, and access to basic services. Moreover, these displaced communities often struggle to integrate into the urban economy, exacerbating poverty and inequality.

A key feature of Abuja’s urbanisation has been the displacement of rural communities and indigenous people such as Gbagyi, Koro, Gwandara. These groups are often relocated as urban sprawl overtakes agricultural lands, forests, and other environmentally significant areas. Displacement not only disrupts local economies but can also lead to the loss of biodiversity, increased deforestation, and the interruption of natural water cycles. In the case of Abuja, which has grown from a relatively small town into one of the fastest-growing cities in Africa, the consequences of such displacement are intertwined with challenges related to environmental sustainability. This study aims to explore the impact of urbanisation and displacement on environmental sustainability in Abuja between 1991 and 2022. By examining how urban growth has affected the city's environment, as well as the social consequences for displaced populations, this study seeks to understand the interconnectedness between urban development, environmental conservation, and social well-being. Through this lens, the research will highlight the need for more sustainable urban planning practices that not only address the challenges of rapid urbanisation but also ensure the equitable treatment of displaced communities and the preservation of Abuja's natural resources for future generations.

**Conceptual Discourse**

**Urbanisation**

Urbanisation refers to the increasing population concentration in urban areas, driven by migration from rural to urban spaces, as well as natural population growth within cities. It involves the expansion of infrastructure, housing, industrial development, and the transformation of land from rural or natural uses into urban functions. Urbanisation is often associated with economic development, modernization, and improved access to services such as education, healthcare, and employment opportunities. However, it also brings about significant environmental, social, and economic challenges. In the word of Jones;

Urbanisation is a rudimentary way in which urban area can be increased is by the expansion of the national acumen, provided that the settling of hitherto unoccupied space is accompanied, if not spearheaded, by the creation of towns. In the past, the movement of settlers into new territory within their country has more often been rural colonization, but today it is difficult to envisage a similar settlement process that would not involve the creation of urban centres whatever the state of economic development of the country.[[1]](#footnote-1)

He further argues that the impact of innovations, the numerical expansion of population, and rural population surpluses are factors promoting urbanisation, he was very critical of countries like Brazil and the Netherlands that point to these phenomena. He observes that it is clear that the factors that promote the process of urbanisation in the world today are multifarious, as well as being simultaneous in their operations and effects. Their differential influence varies from country to country according to an equally diverse range of underlying and predisposing characteristics, though there may be a wide spectrum of apparent identity, or at least similarity, in the forces at work in various countries[[2]](#footnote-2)

**Displacement**

Displacement is refers to the forced or involuntary movement of individuals or communities from their habitual place of residence, often due to external pressures such as urban expansion, development projects, or environmental degradation. In the case of urbanisation, displacement typically occurs when urban areas extend into rural or peri-urban zones, necessitating the relocation of existing residents. Displacement can be both physical and economic, involving the loss of homes, livelihoods, and cultural heritage. Thomas view displacement;

as a forced relocation of existing residents and businesses was once a desired outcome of the "urban renewal" projects of the 20th century. In the 21st century, displacement is a highly contested, hard to trace, effect commonly linked to gentrification and urban revitalization. It is see as the involuntary relocation of current residents or businesses. In contemporary times, displacement is often confused with [gentrification](https://www.planetizen.com/definition/gentrification), but while displacement can result from [gentrification](https://www.planetizen.com/definition/gentrification), it's critical to maintain clear distinctions between the two. In contemporary times, [displacement can result](https://www.urbandisplacement.org/pushedout) from any of a number of possible scenarios: foreclosure, eviction, rent increases, negligent landlords, and environmental catastrophe, for example. In the past, [slum clearance](https://www.citylab.com/design/2011/11/public-housing-posters-new-york-city/407/), [urban renewal](https://www.oregonlive.com/history/2015/02/throwback_thursday_60_years_ag.html), [interstate highway](https://www.vox.com/2015/5/14/8605917/highways-interstate-cities-history) system construction, and [stadium construction](https://theundefeated.com/features/nationals-ballpark-helped-change-washington-d-c-from-chocolate-city/) created waves of displacement some of which actually was an intended outcome of [urban planning](https://www.planetizen.com/definition/urban-planning) projects.[[3]](#footnote-3)

The process of displacement can exacerbate poverty, social inequality, and environmental degradation, as displaced individuals and communities may end up in informal settlements or slums, where access to essential services such as clean water, sanitation, and healthcare is limited. Moreover, displaced communities may face marginalisation, with limited participation in decision-making processes that affect their new living conditions. Together, urbanisation and displacement are interconnected phenomena that shape both the physical and social landscape of a city like Abuja. Urbanisation leads to displacement, and displacement, in turn, influences the environmental and social sustainability of urban growth. The consequences of both processes need to be understood in tandem, as they jointly impact environmental quality, social equity, and the long-term sustainability of cities.

**Environmental Consequences of Urban Sprawl and Displacement**

The environmental consequences of urban sprawl and displacement in Abuja, Nigeria, from 1991 to 2022 have been significant and multifaceted. Urban sprawl the uncontrolled and often unplanned expansion of the city has been driven by rapid population growth, economic opportunities, and a lack of sufficient planning and infrastructure. Displacement, often as a result of land acquisition for development, has added further layers of complexity to the environmental issues in the city.

Urban sprawl has led to the extensive clearing of forests and natural vegetation to make space for new residential, commercial, and industrial developments. This loss of green spaces has several environmental consequences. Abuja was originally home to diverse plant and animal species. The expansion of the city into surrounding forests and natural areas has led to habitat destruction, threatening wildlife and reducing biodiversity. Green spaces, particularly forests, act as carbon sinks, absorbing CO2 from the atmosphere. Their loss exacerbates climate change by reducing the capacity of the region to sequester carbon. Deforestation makes the soil more vulnerable to erosion, particularly in areas with hilly terrain, such as parts of the city near Aso Rock. Erosion leads to the degradation of soil quality and contributes to the encroachment of desertification in surrounding areas.[[4]](#footnote-4)

With rapid population growth and urban expansion, there has been a heavy reliance on groundwater, often beyond sustainable levels. Over-extraction of groundwater can lead to a depletion of water tables, leaving the city vulnerable to water shortages in the future. As informal settlements and new urban areas expand, waste management systems have struggled to keep up. Raw sewage and industrial runoff often end up in rivers and lakes, polluting vital water sources. Additionally, illegal dumping and poor waste management practices contribute to the contamination of water bodies, which is detrimental to both human health and the environment. Many parts of Abuja have inadequate or poorly designed drainage systems, which, when combined with rapid urban expansion, increase the risk of flooding. Displacement, particularly from informal settlements, often leads to people relocating to flood-prone areas, exacerbating the flood risk and creating environmental hazards.[[5]](#footnote-5)

The rapid increase in the number of vehicles on Abuja’s roads, coupled with inadequate public transportation infrastructure, has led to high levels of vehicle emissions. This contributes to air pollution and has direct health implications for residents, particularly those in high-traffic areas. As Abuja expanded, industrial activities began to take root in certain areas, contributing to the release of pollutants into the air. Factories that lack proper emissions controls contribute to the deterioration of air quality, especially in areas with dense commercial or industrial activity. In some informal settlements and even urban neighborhoods, residents resort to open burning of waste, particularly plastics, which release toxic chemicals into the atmosphere. This contributes to air pollution and has long-term health and environmental consequences.[[6]](#footnote-6)

This has contributed to the Urban Heat Island (UHI) effect, where urban areas experience higher temperatures than surrounding rural areas due to the concentration of heat-absorbing materials like roads, buildings, and pavement. The urban heat island effect has several negative consequences: Increased temperatures in the city mean that residents and businesses need to use more energy for cooling, further exacerbating the strain on the energy grid and increasing emissions from power plants, particularly those that rely on fossil fuels. The elevated temperatures associated with the UHI effect can lead to heat-related illnesses, such as heatstroke, dehydration, and cardiovascular problems, particularly among vulnerable populations such as the elderly, children, and low-income communities. The combination of higher temperatures, poor air quality, and limited green spaces makes urban areas less comfortable to live in, contributing to a decrease in the overall quality of life for Abuja residents.[[7]](#footnote-7)

Displacement, particularly as a result of land acquisition for development projects, has compounded the environmental problems in Abuja. Many displaced people move to areas that were previously less developed or ecologically sensitive, such as wetlands or areas prone to flooding. This encroachment puts additional pressure on these ecosystems, which are crucial for maintaining biodiversity, water quality, and soil integrity. Displaced populations often end up in informal settlements on the periphery of Abuja, where infrastructure is lacking, and environmental conditions are poor. These areas are typically more vulnerable to flooding, air pollution, and waste management problems, contributing to further degradation of the environment. Displacement increases the demand for basic resources like water, food, and fuel. As more people move into already strained areas, the pressure on local resources intensifies, contributing to deforestation (for firewood), depletion of water sources, and increased waste production. The conversion of agricultural land into urban areas reduces the land available for food production, and urban construction often leads to soil compaction, which impairs the soil's ability to retain water and support plant growth. As farmland is lost to urbanization, the ability of local farmers to produce food is diminished. This leads to increased reliance on food imports and threatens local food security.[[8]](#footnote-8)

The combined effects of pollution, loss of green spaces, and the degradation of natural resources have had significant consequences for public health and livability in Abuja. Air and water pollution have led to increased rates of respiratory diseases, waterborne illnesses, and other health issues among the population. Vulnerable groups, such as children, the elderly, and those living in informal settlements, have been particularly affected by the deteriorating environmental conditions. The loss of green spaces has led to diminished opportunities for recreation and outdoor activities, negatively affecting the physical and mental well-being of residents. Additionally, pollution and the degradation of natural resources have made the urban environment less pleasant and more challenging to live in, especially for those in densely populated areas.[[9]](#footnote-9)

**Urban Planning Policies and their Impact on Displacement and Poverty**

Urban planning policies in Abuja, have played a significant role in shaping the city’s development trajectory. These policies have had profound implications on both displacement and poverty, particularly as the city has undergone rapid urbanisation and transformation from a planned capital to one of the largest urban centre in Nigeria. While urban planning initiatives were designed to create a modern, well-structured capital, they have also resulted in unintended consequences, including widespread displacement and the exacerbation of poverty for certain segments of the population.

When Abuja was designated as Nigeria’s capital in the early 1990s, the government sought to create a planned city with organised land use, infrastructural development, and modern urban amenities. The Federal Capital Territory (FCT) Master Plan, which was adopted in the 1980s and began to be implemented in the 1990s, aimed to establish a capital city that would reflect Nigeria’s aspirations for modernisation and national unity. The city was divided into zones for government buildings, residential areas, business districts, and recreational spaces. The Master Plan was intended to prevent haphazard development and provide a well-structured urban environment. Urban policies focused on the development of key infrastructure, such as roads, electricity, water supply, sanitation, and public transportation. This was supposed to make Abuja a model city. However, as the city expanded and the population grew exponentially, the challenges of implementing the plan became evident. The population growth, driven by both internal migration from rural areas and the relocation of government offices and institutions to Abuja, placed pressure on the original urban policies.[[10]](#footnote-10)

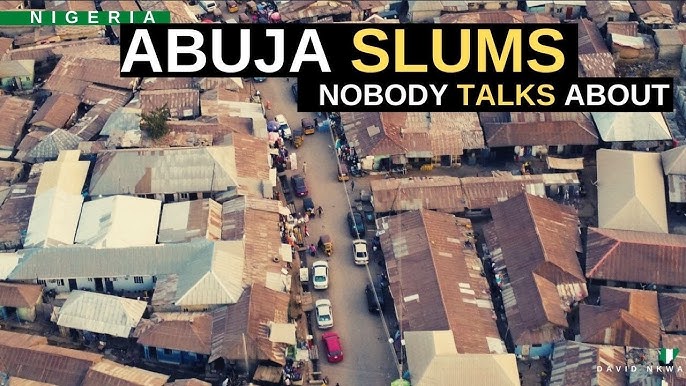
The period from 2000 to 2010 saw substantial urban expansion, accompanied by widespread displacement of communities such as Mabushi, Durumi, Karmo, Pyakasa, Nyanya, and Galadima. The government's approach to land acquisition and urban planning led to the displacement of large numbers of people, many of whom were low-income or rural migrants seeking opportunities in the capital. The government engaged in large-scale land acquisition to develop new residential areas, business districts, and infrastructure projects, often displacing indigenous communities, informal settlers, and vulnerable populations. These evictions, in many cases, occurred without adequate compensation or resettlement options. Many displaced residents found themselves living in informal settlements with limited access to basic services like water, sanitation, and electricity.[[11]](#footnote-11) Displacement disproportionately affected low-income households and rural migrants, who were often pushed to the outskirts of the city. These displaced communities typically ended up in informal settlements that lacked proper infrastructure and social amenities. Without access to affordable housing, these individuals faced poor living conditions, including overcrowding, inadequate sanitation, and increased vulnerability to diseases. While urban policies theoretically provided legal frameworks for land acquisition, corruption, inefficiencies, and weak enforcement meant that some of the displaced residents had no legal recourse to challenge their eviction or claim compensation. As a result, many faced precarious living conditions, adding to their vulnerability.[[12]](#footnote-12)

Over the past decade, from 2010 to 2022, urban poverty and inequality have remained significant challenges, exacerbated by the growing gap between the city's wealthier and poorer populations. Despite ongoing efforts to improve infrastructure and develop the city, urban planning policies have not been fully successful in addressing these challenges. The demand for housing in Abuja has led to the growth of informal settlements, also known as slums, particularly in areas outside the originally planned zones. These settlements are typically overcrowded and lack access to basic services like proper roads, water supply, sanitation, and waste management. Many of the residents in these areas are displaced people or those who could not afford to live in formal housing developments. Informal settlements have become a significant feature of Abuja's urban landscape, especially in areas like Kuje, Lugbe, Gwagwa, Kabusa, Galadimawa, Aleita, and Nyanya.[[13]](#footnote-13)

The rapid growth of the population, coupled with inadequate housing supply and unaffordable real estate prices, has deepened the city’s housing crisis. As a result, many urban dwellers, especially low-income residents, are trapped in poverty. These individuals face limited access to job opportunities, healthcare, education, and other services. Poverty is exacerbated by the lack of affordable housing, which pushes many to live in substandard conditions that further limit their chances for upward mobility. Low-income and displaced communities often find themselves excluded from the formal urban development processes, which favor higher-income, well-connected individuals and groups. These communities are left with fewer opportunities to participate in the city’s economic growth, further entrenching the cycle of poverty and social inequality.[[14]](#footnote-14)

The urban planning policies in Abuja have had several unintended environmental and social consequences that have impacted displacement and poverty in the city: Many informal settlements, which house displaced and impoverished people, are located in areas with poor environmental conditions. These areas are prone to flooding, soil erosion, and lack of proper waste disposal systems. Without access to adequate sanitation and infrastructure, these communities face significant health risks and environmental hazards, compounding their poverty and vulnerability. Displaced communities often have limited opportunities for social mobility because they are excluded from the benefits of formal economic growth and development. The lack of adequate education, healthcare, and job opportunities in these informal settlements makes it difficult for residents to improve their living conditions or escape poverty. Urban planning policies that prioritize high-end residential areas and commercial developments often exacerbate social inequality. Wealthier residents and commercial entities typically occupy central locations and benefit from better services, while low-income groups are relegated to peripheral areas. This unequal distribution of resources and opportunities deepens social divides in the city.[[15]](#footnote-15)

**Squatters Settlements and Slums Mabushi**



Source: Arthur’s fieldwork 2024.

**Sustainability in Housing Development and Infrastructure Projects**

Sustainability in housing development and infrastructure projects in Abuja has been a significant challenge, primarily due to rapid urbanisation, limited resources, and the need to balance economic growth with environmental and social equity. As the city has grown, the demand for housing and infrastructure has escalated, leading to both opportunities and challenges in creating a sustainable urban environment. Is an exploration of the key issues, policies, and outcomes related to sustainability in housing and infrastructure development in Abuja over the past three decades. Abuja’s rapid growth, particularly in the 1990s and 2000s, created an urgent need for housing, both for the expanding population and the influx of people due to its status as the capital city of Nigeria. Housing development, however, has faced numerous sustainability challenges.[[16]](#footnote-16)

Abuja has faced a severe housing shortage due to its rapid population growth and the influx of people from rural areas. According to estimates, there has been a continuous housing deficit, with thousands of new units needed each year to meet the demand. This shortage has primarily affected low- and middle-income groups, with the wealthier population being able to access housing in formal developments. As formal housing options became increasingly unaffordable, informal settlements emerged around the edges of Abuja. These areas, also known as slums, lack proper infrastructure, sanitation, and services, making them highly vulnerable to environmental degradation and poor living conditions. Informal settlements such as Kuje, Nyanya, Mabushi, Idu, Mpape, Utako, and Lugbe have become home to many displaced people who were unable to afford housing in formal developments.[[17]](#footnote-17)

The rapid development of housing estates has led to the clearing of large tracts of land, contributing to deforestation and loss of green spaces. Urban sprawl has encroached on sensitive ecological areas, including wetlands and hillsides, which exacerbates soil erosion and reduces biodiversity. Housing development projects have often been accompanied by increased demand for resources such as water, electricity, and materials. The depletion of these resources, coupled with inadequate infrastructure to manage waste and wastewater, has strained the sustainability of housing developments. Many of the informal settlements face poor access to water and sanitation, exacerbating health risks and environmental challenges. Over the years, the Nigerian government and private developers have made efforts to address the affordable housing crisis, including the development of low-cost housing projects. However, the implementation of these projects has been inconsistent due to funding issues, land acquisition challenges, and the high cost of construction materials. The lack of truly affordable housing options has made it difficult for low-income families to access proper shelter, perpetuating social inequality. While public-private partnerships have been pursued to improve the housing sector, these projects often focus on middle- and upper-income housing, leaving low-income communities to rely on informal or substandard housing.[[18]](#footnote-18) Thus, despite some progress, Abuja has not yet achieved widespread affordability and accessibility in housing development.

Infrastructure is a critical aspect of urban sustainability. In Abuja, infrastructure development has generally been designed to accommodate the growing population, but several sustainability challenges have arisen in parallel. The city’s road network expanded rapidly to accommodate increased traffic, but the lack of a comprehensive public transportation system has resulted in heavy reliance on private cars. This has led to **traffic congestion**, increased air pollution, and carbon emissions, contributing to urban inefficiencies and environmental degradation. Although there have been attempts to develop public transportation options (e.g., Bus Rapid Transit (BRT) systems and the Abuja Light Rail), these projects have faced delays and insufficient funding, leading to minimal impact on reducing traffic congestion and pollution.[[19]](#footnote-19)

Traffic Jam along Asokoro-Nyanya-Keffi Expressway



Source: Culled from Ezonbi, Boumo “A History of Urbanisation and Land Administration in Nigeria: Abuja, 1976-2010” PhD Thesis, Department of History, Benue State University, Makurdi, 2015, 329.

With rapid urban growth, the demand for clean water has significantly outpaced supply, exacerbating water scarcity in Abuja. Groundwater extraction has become a primary source of water, but over-extraction has led to the depletion of groundwater reserves. Meanwhile, many parts of the city still rely on poorly managed water supply systems, leading to inconsistent access to clean water. Effective sewage and wastewater management systems have not kept up with the city’s expansion. This has resulted in poor sanitation and pollution of water bodies. Inadequate sewage treatment and waste management practices have also contributed to the spread of diseases in informal settlements.[[20]](#footnote-20)

As Abuja expanded, the generation of solid waste increased significantly, but waste management infrastructure has often been inadequate. Waste collection services have struggled to meet the demand, and illegal dumping of waste is common in informal areas. The improper disposal of waste has led to environmental pollution, including contamination of water sources and the spread of waste-related diseases. The increasing number of vehicles on the road, coupled with inadequate industrial pollution controls, has contributed to rising air pollution levels. Poor urban planning, including a lack of green spaces, has intensified the **urban heat island effect**, where urban areas become significantly hotter than surrounding rural areas due to human activity and the built environment.[[21]](#footnote-21)

**Challenges of Balancing Urban Growth and Environmental Conservation**

The challenges of balancing urban growth and environmental conservation in Abuja have been a complex and ongoing struggle. As Nigeria’s capital city, Abuja has experienced rapid urbanisation due to its political, economic, and social significance. However, this growth has often come at the expense of the environment, leading to various ecological and sustainability challenges. The balance between promoting urban development and preserving the natural environment has been difficult to achieve due to competing interests, limited resources, and the pressures of urban expansion.[[22]](#footnote-22)

Abuja’s population has grown exponentially since it became Nigeria’s capital in 1991. The city’s population surged from just over 300,000 in 1991 to more than 3 million by 2022, with projections for further growth. This rapid urbanization has placed tremendous pressure on the city’s infrastructure, housing, and natural resources.[[23]](#footnote-23) As the city expanded, urban sprawl became a major issue. Large tracts of land, including forests, wetlands, and agricultural areas, were cleared for housing developments, commercial areas, and infrastructure projects. This expansion often ignored ecological considerations, resulting in the loss of valuable ecosystems and biodiversity. The demand for land for residential, commercial, and industrial purposes has led to the encroachment on environmentally sensitive areas. Areas of natural beauty and ecological significance, such as the Aso Rock and Jabi Lake, have been surrounded by development, which compromises their preservation.[[24]](#footnote-24)

Abuja’s rapid urban expansion has contributed to significant environmental degradation, with several key challenges emerging over the last three decades. The development of new residential areas, roads, and commercial zones has led to extensive deforestation in and around the city. Forests and woodlands have been cleared to make way for construction projects, leading to a loss of habitat for wildlife, soil erosion, and reduced carbon sequestration. Deforestation has also contributed to the city's growing heat island effect, where urban areas become significantly hotter than surrounding rural areas. Planned green spaces, parks, and recreational areas were initially incorporated into Abuja’s master plan. However, over time, many of these areas have been repurposed for development or left neglected. The loss of green spaces has reduced the quality of life for residents, increased air pollution, and reduced opportunities for environmental education and recreation.[[25]](#footnote-25)

The loss of vegetation, especially in areas that were cleared for construction, has resulted in significant soil erosion. The removal of trees and plants that would otherwise stabilize the soil has left large parts of the city vulnerable to erosion, particularly in hilly and sloped areas like those around Aso Rock and Maitama. Erosion has caused infrastructural damage, increased sedimentation in water bodies, and degraded agricultural land in the surrounding areas such as Shehu Shagari way and Yakubu Gowon way. Rapid urbanisation has resulted in increased demand for water while straining the existing water supply and drainage systems. Improperly managed storm water runoff from roads, construction sites, and residential areas often leads to flooding, especially during the rainy season. Water pollution from untreated sewage, waste disposal, and industrial discharge further exacerbates the problem. The lack of comprehensive water management systems has made it difficult to maintain a sustainable supply of clean water for residents and businesses.[[26]](#footnote-26)

The increased number of vehicles, industrial activities, and burning of solid waste in Abuja has contributed to poor air quality. Vehicle emissions, especially from older cars, industrial activities, and the burning of refuse, have all exacerbated air pollution. Poor air quality can have negative health implications for the population, especially for children and the elderly. Construction activities, traffic congestion, and industrial operations have led to elevated levels of noise pollution. This can impact the health and well-being of urban residents, contributing to stress, sleep disturbances, and other health-related problems.[[27]](#footnote-27)

Urban planning and policy development in Abuja have faced several challenges in integrating environmental conservation into the city’s growth. Although Abuja was initially designed as a well-planned city with a master plan to guide its development, various issues have hindered the balance between urban growth and environmental preservation. The Federal Capital Territory (FCT) Master Plan, developed in the 1980s, outlined a vision for Abuja as a modern, well-structured city that balanced urban development with environmental sustainability.[[28]](#footnote-28) However, over time, many of the principles of the master plan have been ignored or deviated from due to rapid population growth and unregulated land use. Informal settlements and illegal developments have proliferated on land that was initially designated for parks, green spaces, or ecologically sensitive areas. These unplanned developments often lack environmental considerations, exacerbating the city’s environmental challenges. Government enforcement of zoning laws and urban planning regulations has been weak, leading to widespread unauthorized construction and land use changes.[[29]](#footnote-29)

While there have been some environmental policies and initiatives aimed at protecting natural resources, enforcement has often been weak or inconsistent. The absence of strong environmental protection laws and mechanisms for monitoring urban growth has allowed for unchecked development that negatively impacts the environment. Urban planning and environmental conservation policies have often been developed in silos, with little coordination between the agencies responsible for urban development, environmental protection, and resource management. This lack of integration has made it difficult to address the overlapping issues of urbanisation and environmental degradation holistically.[[30]](#footnote-30)

The construction of infrastructure projects, including roads, bridges, and housing developments, has significantly impacted the environment in Abuja. While infrastructure development is essential for urban growth and the economic development of the city, the environmental costs associated with such projects cannot be ignored. Large-scale infrastructure projects have led to the displacement of plant and animal species from their natural habitats. The clearance of forests, wetlands, and other sensitive areas for infrastructure development has threatened biodiversity and disrupted local ecosystems. Many housing and commercial developments in Abuja have been built using unsustainable construction practices. This includes the use of non-renewable materials, improper waste disposal during construction, and the lack of energy-efficient building designs. These practices have contributed to environmental degradation and raised concerns about the long-term sustainability of urban growth.[[31]](#footnote-31)

Climate change is another growing challenge for Abuja, and its urban growth has compounded the city’s vulnerability to the impacts of climate change. Increased temperatures, changing rainfall patterns, and extreme weather events such as flooding and droughts have heightened the urgency for climate resilience in urban planning. The rapid urbanisation of Abuja has led to the urban heat island effect, where the city becomes significantly hotter than surrounding rural areas due to the high concentration of buildings, roads, and other impervious surfaces. This not only worsens the quality of life for residents but also places additional pressure on energy resources, particularly air conditioning and cooling systems. Changing rainfall patterns, combined with inadequate drainage systems, have led to more frequent flooding in some parts of the city. Flooding poses a threat to infrastructure, displaces residents, and causes water contamination, creating further challenges for environmental conservation and urban planning.[[32]](#footnote-32)

**Conclusion**

The period from 1991 to 2022 in Abuja underscores a complex interplay between rapid urbanisation, displacement, and the pressing need for environmental sustainability. As one of the fastest-growing cities in Africa, Abuja's transformation into Nigeria’s political and administrative capital has brought about significant socio-economic opportunities. However, this growth has not come without a heavy environmental cost. The unchecked urban expansion has contributed to the degradation of natural resources, loss of biodiversity, and increased vulnerability to climate change. Displacement, driven by both planned infrastructure projects and urban sprawl, has further compounded these challenges, disrupting local communities and straining already limited resources. The urban poor, especially those living in informal settlements, bear the brunt of environmental degradation, facing disproportionate exposure to pollution, inadequate infrastructure, and the loss of vital ecosystem services. In this context, environmental sustainability in Abuja is not just an issue of resource management but also one of equity and justice.

Moving forward, a more sustainable and resilient future for Abuja will require a comprehensive approach that balances urban growth with environmental protection. This involves strengthening urban planning frameworks, enforcing environmental policies, prioritizing green spaces, and ensuring the active participation of all stakeholders, including displaced communities. Only through these collective efforts can Abuja navigate the challenges of urbanization and displacement, fostering an urban environment that supports both its growing population and its ecological health. In sum, while Abuja's trajectory over the past three decades reflects its ambition and development, the city must embrace a model of growth that is environmentally conscious, socially inclusive, and resilient to the inevitable pressures of urbanization and displacement. The lessons learned from this study can inform future urban policies not just in Abuja but across other rapidly urbanising cities in developing nations.

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