IMPROVING URBAN AREAS IN NIGERIA THROUGH THE GREEN AREA APPROACH

by

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ABSTRACT

The value of green spaces in any urban environment should not be underestimated. This paper examines the need to improve urban areas, the benefits of offered by green areas, the challenges militating against the improvement of urban areas in Nigeria through the green area approach. The exploratory research approach was adopted in this paper; relevant and related literatures were explored and reviewed. Data was obtained from secondary sources. Some of the challenges found out from the study which affected the improvement of urban areas in Nigeria included; rapid rate of urbanization, less attention to development priorities and limited budget for physical planning matters/green area development, The recommendations to improve urban areas were suggested; priority attention should be paid to physical planning, such as preparation of a green city plan, review of existing building codes that promote the use of green technologies, financing of green projects and investments should be a major priority, citizens involvement, tackling of informal settlements/slums, and attitudinal change.

Keywords: Environment, green areas, sustainability and urban areas

INTRODUCTION

In recent times, the state and future of our urban areas has become worrisome to urban planners, city managers and other professionals in the built environment.

Within the urban environment, there are multi-faceted urban challenges that make sustainability considerations paramount to professionals in the built environment. These challenges in come in different dimensions, such as ecological - water

quality and quantity, biodiversity erosion, implications of the chemical impact on the ecological systems of the hinterland and in terms of the competition over land use among different functions. World over, changing values, lifestyle and standards of living are being experienced due to the increasing rate of urbanization in our cities. Economic, cultural and geographical reasons account for these changes which vary from country to country to the degree. These changes have also led to the transformation of some rural areas to urban areas with or without emphasis on environmental conservation. In most cases, green areas have been not been incorporated in these changes to resolve natural longing of people.

In Nigeria, urban areas are settlements with a population of 20,000 persons and above. Also, all local government headquarters are regarded as urban areas. It is evident that in most of the cities in Nigeria, the ecological, aesthetic

and recreational value of urban green spaces have been eroded and the establishment of urban green space systems is no more seen as indispensable elements of the urban landscape. Today, the provision, design, management and protection of urban green spaces are at the top of the agenda of sustainability and liveability. Urban green areas play a key role in improving the liveability of our towns and cities. The quality and viability of cities largely depend on the design, management and maintenance of green as well as open and public spaces in order to provide their role as an important social and visual way. Urban green spaces are not only an important component in housing areas, but also in business, leisure, retail and other commercial developments (Baycan-Levent, 2002). In land use planning, green areas are categorised as open space. Green areas are planned spaces or places prepared with grasses/shrubs, flowers, trees, benches or other decorative or

urban furniture elements used as recreation parks or playgrounds. Public open spaces are green spaces, that can range from playing fields to highly maintained environments to relatively natural landscapes. They are generally considered open to the public, open spaces could be privately owned, such as higher education campuses, neighborhood/community parks/gardens, and institutional or corporate grounds.

Justification of the Study and Review of Related Literature

The green area is an important component of the green cities concept. This concept is rooted in environmental sustainability aimed at solving urban problems. However, in order to achieve Sustainable Development Goals (SDGs), there is need to incorporate green areas in our urban plans. Sustainable Development Goal 11 emphasises on the need to build sustainable cities and communities. Our cities can be sustainable for all, if green spaces/areas are consciously created in our cities and communities. Also, improved environmental quality and better quality of life can be achieved. Green area also plays a crucial role for healthy and responsive working and learning environment.

Also, provision of employment opportunities through job creation e.g. green collar jobs. In the cities of Vancouver and Seoul, green collar jobs have been on the increase and have been projected to increase extensively (Table1).

Table 1: Projected green collar jobs

City	Number of Jobs	Target year
Vancouver	20,000	2020
Seoul	1,000,000	2030

Source: Haq (2011)

Green collar jobs could be provided particularly in Nigeria where millions of people are unemployed. Generally, the green industry satisfies the demand for green development and also ensures the implementation of environmentally conscious design, policy, and technology to improve conservation and sustainability. Green areas are part of the green infrastructure. According to Kramer (2014), one benefit of green infrastructure is that people can usually see and enjoy it, often right in their front yard, on their building's roof, and in their neighborhood streets and parks. Green infrastructure affects the look and feel of a neighbourhood for the better but people are more likely to be happy with the results if they had a hand in deciding where it will be and what it will look like. In the city of Nantes, the percentage of citizens living within a 300m perimeter around a green space has been 100% since 1999 and has not decreased (all public green areas

combined taking into account surface span and parceling. In most cases, green infrastructure projects are government driven and such projects vary widely by country. According to OECD (2009a), such projects can be significant, representing over 51% of the total stimulus package in Belgium, 18% in France, and 32% in Korea. In China, green stimulus investments accounted for nearly 40% of the USD 586 billion package. All these green investments are aimed at preserving or enhancing environmental quality, reducing resource consumption and improving the quality of lives (Girouard, 2010).

Benefits of Green Areas

1. **Ecological Benefits**

Green areas provide ecosystem benefits ranging from maintenance of biodiversity to the regulation of urban climate. Comparing with rural areas, differences in solar input, rainfall pattern and temperature are usual in urban areas.

Solar radiation, air temperature, wind speed and relative humidity vary significantly due to the built environment in urban areas. Urban areas experience heat effect which is caused by the large areas of heat absorbing surfaces, in combination of high energy use in urban areas. According to Haq (2011), urban heat effect can increase urban temperatures by 5°C. Aside from these human benefits, well designed urban green areas spaces can also protect habitats and preserve biodiversity. Green areas usually function as protection hub for reproduction of species and conservation of plants, soil and water quality. They provide visual relief, seasonal change and link with natural world. A functional network of green spaces is important for the maintenance of ecological and biodiversity aspects of sustainable urban landscape, with greenways and use of plant species adapted to the local condition with low maintenance cost, self-sufficient and sustainable (Haq, 2011).

2.   **Environmental Benefits**

Green areas have environmental benefits. Green areas are scenic places of interest that attracts holiday makers and tourist. They serve as aesthetically pleasant places and aid to improve visual amenity. According to Arigbede and Abbas (2012), green areas do not only improve visual amenities but also serve as an interconnected network of ecological systems that conserve air, water, microclimate, energy resources and enrich human quality of life.

In terms of pollution control, there are different form of pollutants in urban areas which includes chemicals, particulate matter and biological materials, which occur in the form of solid particles, liquid droplets or gases. Air and noise pollution is common phenomenon in urban areas. The presence of many motor vehicles in urban areas produces noise and air pollutants such as carbon dioxide and carbon monoxide. Emissions from industrial areas such as

sulphur dioxide and nitrogen oxides are very toxic to both human beings and environment. The most affected by such detrimental contaminants are children, the elderly and people with respiratory problems. Urban greening can reduce air pollutants directly when dust and smoke particles are trapped by vegetation (Haq, 2011). Green areas filter pollutants and dust from the air, they provide shade and lower temperatures, and they even reduce erosion of soil. Noise pollution from traffic and other sources can be stressful and creates health problems for the urban populace. Bilgili and Gökyer (2012) estimated that the overall costs of noise to be in the range of 0. 2% - 2% of European Union gross domestic product. Urban green spaces in overcrowded cities can largely reduce the levels of noise depending on their quantity, quality and the distance from the source of noise pollution. In the contemporary studies on urban green spaces consider the overall urban ecosystem,

conservation of the urban green spaces to maintain natural ecological network for environmental sustainability in cities. According to Haq (2011), for cities in fast urbanizing and growing economy, there is need to consider the dynamic form of urban expanding to manage effective urban green spaces which will contribute to reduce the overall CO_2 by maintaining or even increasing the ability of CO_2 absorption through the natural ecosystem.

3.   **Economic Benefits**

Green areas provide economic benefit through energy savings and increase in property values. The use of plant materials to reduce the energy costs of cooling buildings has been increasingly recognised as a cost effective reason for increasing green space and tree planting in temperate climate cities. Plants improve air circulation, provide shade and they transpire. This provides a cooling effect and contributes to lower air temperatures. A park

of 1.2 km by 1. 0 km can produce an air temperature between the park and the surrounding city that is detectable up to 4 km away. A study in Chicago has shown that increasing tree cover in the city by 10% may reduce the total energy for heating and cooling by 5 to 10% (Haq, 2011). On the other hand, for property value, areas of the city with enough greenery are aesthetically pleasing and attractive to both residents and investors. The beautification of Singapore and Kuala Lumpur, Malaysia, was one of the factors that attracted important foreign investments that assisted rapid economic growth. Still, indicators are very strong that green spaces and landscaping increase property values and financial re-turns for land developers, of between 5% and 15% depending on the type of Project (Haq, 2011).

4.   Social and Psychological Benefits

Green areas are great places that offer opportunities for social interaction. People to meet interact and communicate face-to-face exchanging pleasantries, taking photo shots and so on. Some also serve as event centres, picnic venues crusade grounds, campaign grounds as well as business places. People satisfy most of their recreational needs within the locality where they live. Kim *et al* (2010) noted that certain benefits may be derived from exposure to virtual versions of the natural environment. For example, people who were shown pictures of scenic, natural environments had increased brain activity connected with recalling happy memories, compared to people that were shown pictures of urban landscapes.

Urban green spaces serve as a near resource for relaxation; provide emotional warmth. According to Hartig (2007), when open spaces are attractive and accessible, people are more likely to engage in physical

activity. In Mexico City, the centrally located Chapultepec Park draws up to three million visitors a week who enjoy a wide variety of activities (Haq, 2011). Urban green spaces allow children to expel their extra energy and improve their ability to focus when needed both at school and home. Urban green space has been proven to be helpful for cognitive development. With urban green space giving children the opportunity to get outside and expend energy, children are more focused in school and have a better working memory and reduced inattentiveness. Recreational activities and playing at the park gives children opportunities to interact with other children and develop a social circle and social skills in general (Braubach *et al,* 2015). Also, children with a good social network feel socially included, promoting more confidence and well-being in their everyday lives. Overall, the bonding experiences that result from urban green

spaces tie in with a child's cognitive and social development (Jennings, Larson and Yun, 2016).

5.   **Health Benefits**

People who were exposed to natural environment, the level of stress decreased rapidly as compared to people who were exposed to urban environment, their stress level remained high. Certainly, improvements in air quality due to vegetation have a positive impact on physical health with such obvious benefits as decrease in respiratory illnesses. According to Kingsley (2019), urban open space access has also been directly related to reductions in the prevalence and severity of chronic diseases resulting from sedentary lifestyles, to improvements in mental well-being, and to reductions in population-wide health impacts from climate change. The connection between people and nature is significant for everyday enjoyment, work

productivity and general mental health (Haq, 2011).

Challenges of Improving Urban Areas in Nigeria

1. **Rapid Rate of Urbanisation:** One of the most pressing issues in Nigeria today is rapid urbanization. The rapid pace of urbanisation has overwhelmed most cities as they the struggle to develop infrastructure, mobilise and manage resources, pay wages/salaries. The magnitude of this problem in Nigeria is a serious one when consider the amount of housing required yearly to accommodate the teeming urban population, building of Million kilometres of roads and other urban infrastructure. The nature of these investments will have significant effects on the potential of Nigeria to be green. Also, the unpredicted nature of migration with lack of

adequate data may pose a lot of drawbacks for the implementation of green city model (Ekong, 2017). Another challenge posed by increasing urbanization is the placing of pressure on space for development. This has led to the proliferation of slums, characterised by grossly inadequate social amenities such as schools, health facilities and lack of green areas for recreation.

2. **Less Attention to Development Priorities:** During the 60s, development in Nigeria was sectoral and the emphasis was on economic planning less attention was given to physical planning. During these periods, national development plans were prepared based on the three regions (West, East and North). The main objective was to accelerate economic growth, the first national development plan focused on economic growth rather

than the living conditions of the people. On the other hand, in the second national development plan, town planning was considered as a social overhead and only 7% of the total allocation was went into housing, water and sewerage (Town Planners Registration Council of Nigeria, 2014). In the third national development plan, 2.6% of the total revenue was allocated to town planning. In recent times, less attention is still given to development priorities due to the trending challenging security issues in Nigeria e.g banditry, kidnapping, terrorism and so on. The trend of budgetary allocations in the country has not really changed; Table 2 shows the budgetary allocations for security and housing in the country from 2014 - 2018.

Table 2: Budgetary Allocations for Security and Housing

Year	Security (₦)	Housing (₦)
2014	340bn	2.39bn
2015	357bn	1.074bn
2016	443bn	61.40bn
2017	469bn	19.250bn
2018	576bn	35.21bn

Source: FGN (2018) Budget Office of the Federation

Based on the fact that most towns in Nigeria do not have physical development plans such as master plans, subject plans, regional plans, local plans that would have aided development efforts are not geared to acquire such plans, the Nigerian Urban and Regional Planning Decree No.88 of 1992 now Nigerian Urban and Regional Planning Law CAP 138 LFN 2014 was enacted and this law specifies the types and levels of physical development plans to be prepared in Nigeria.

3. **Limited Budgets for Physical Planning**: After independence, Nigeria

started development planning using National Development plans. The first which was concerned with economic growth rather than actual living conditions of people, measures of urban development were neglected in formation and execution, for instance, out of ₦84m allocated to town planning only ₦392m was disbursed (Town Planners Registration Council of Nigeria, 2014). Today, the situation has not changed in most of our cities as physical planning issues are not properly funded. Other challenges that could militate against improvement of our urban areas include; poverty, corruption, non-engagement of professionals in the built environment.

Recommendations

In order to improve urban areas in Nigeria, the following recommendations are suggested:

1. More or priority attention should be paid to physical planning matters e.g. All urban areas in Nigeria should have physical development plans to guide physical development and financing of green projects and investments should be a major priority. Sections 1 - 3 of the Nigerian Urban and Regional Planning Law CAP 138 LFN 2014 specify the types and levels of physical development plans to be prepared in Nigeria. At the Federal level: a National Physical Development Plan, a regional plan, a sub-regional plan, an urban plan, a subject plan. At the State level: a regional plan, a sub-regional plan, an urban plan, a local plan and subject plan. At the local level; a town plan, a rural area plan, a local plan and a subject plan. All these plans are meant to guide and direct orderly development in the country. More so, Ofem and Ufot-Akpabio (2018) stated some of the necessary conditions for planning and developing green cities in Nigeria to include; preparation of a green city plan, review of existing building codes that promote the use of green technologies.

2. Civic engagement: Generally, there is usually a struggle in taking care of

green spaces particularly if there are large ones. The challenge is that these spaces lose their strength if they are just isolated, so that is why it is very important to involve citizens to participate in green projects development and maintenance. For instance, in maintaining green spaces, one thing to do is to cut the grasses low and water them, this will require hiring someone, the lawn and grasses will be maintained by the citizens who are engage in green projects.

3. Tackle informal settlements/slums: One of the challenges planners face today is how to create sustainable cities as the number of people trooping into cities continue to grow rapidly. The strategies that have been adopted in dealing with the informality include a combination of both preventive and curative instruments including; expropriation, inclusionary zoning, land readjustment, community land trusts land and utilities, land sharing and street led

upgrading. These strategies are important for better planning and development of urban areas. In Kenya, these strategies have been adopted in development of Kenya's Urban areas , their policies and legislations have addressed and dealt with existing slums and informal settlements as well as preventing slum formation (Ngetich *et al*., 2015).

4. Attitudinal change: Change of behaviour particularly in the use of low carbon cars, bicycles and alternative sources of energy.

Conclusion

Urban areas in Nigeria cannot continue to grapple with her current scenarios if she must achieve Sustainable Development Goals (SDGs). Therefore, it is imperative that our urban area be improved through the adoption of the green area approach. This approach adopts the green city concept which emphasises on environmental friendliness and sustainability. Urban areas in Nigeria could be better if improved upon just as cities and towns of developed countries. A planned environment is a better

environment. However, in order to ensure the sustainable development of our urban areas, government, non-governmental oraganisations, corporate bodies, professionals as well as the citizenry should rise to the challenge and be at the forefront. The struggle is by and large a battle for all.

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