

PROSPECT OF URBAN GREEN SPACE FOR SUSTAINABLE DEVELOPMENT IN NIGERIA.

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ABSTRACT

This examines the predominant role of urban green space as an integral factor that could influence sustainable development. Urban green space provides people with accessible areas where they can reap the benefits of the natural world. It fulfills many functions in urban context that benefits the quality of life of the people and also seen as an important mechanism for regenerating conserving, beautifying and managing the environment sustainably. To this end the paper highlights certain key factors of urban green space that contributes to environmental sustainability in Nigeria. These include concept of urban green space and benefits, the potential threat to urban green space and possible solution among others. This highlights how they help keep a sustainable environment and development.

Key words: Green space, Green cities, Environment, Sustainability

INTRODUCTION

Urban Green is the totality of all public open spaces in urban areas predominantly characterized by vegetation that combine to make up the urban green environment. An urban green space is directly used for active or passive recreation; or indirectly used by virtue of its positive influence on the urban environment, serving the diverse needs of people and thus offering a good quality of life in cities. Urban green is a system that consists of all kinds of public green spaces including parks, gardens, squares, cemeteries and allotments as well as woodlands and areas for nature and landscape conservation set within the wider urban environment. The development of our natural environment into an urban landscape has eliminated vegetation that is crucial to a healthy and sustainable environment (Carter & Fowler, 2008). There are a number of ways in which green spaces can be effectively implemented into an urban environment. The Environmental Protection Agency (2014) defines green spaces as areas with any type of vegetation, whether it is grass, shrubs, or trees. Urban green spaces are often made for recreational areas or for simple aesthetics, but there are a number of ways in which green infrastructure can also contribute to assist in resolving many environmental issues, such as storm water runoff and greenhouse gasses, while also having a monetary gain through savings (Gale, 2014). In recent times, there has been a growing interest in green space research due to evidence that nature positively impacts human wellbeing

(Frumkin, 2013; Taylor and Hochuli, 2015). The quality of the urban environment depends very much upon the quality of the green spaces.

In many African countries, the attitude towards green space planning is, often expressed solely through an induced action and direct intervention to a pressing problem. Consideration is centered only on the short-term effects that are set against limited time frame. Few of Nigerian cities where little attention has been given to urban green space include Abuja and Lagos amongst others (Abegunde, 2008). Like many other third world nations, rapid urban development in Nigeria has caused lack of green spaces in urban settings (Daramola and Eziyi, 2010). This has contributed to the problems and issues related to urban pollution, heat island, erosion and flood (Omar *et al.*, 2000). Also, the challenge of global warming, rapid depletion of the ozone layer, and changes in the ecology of urban environment occasioned by increasing population, overcrowded habitations and uncontrolled exploitation of natural resources which posed great threat to life have accounted for the promotion of green space in the built environment (Hales, 2000). The possibility for the sustainable landscaping of the urban spaces in Nigeria is currently far from being realized. It seems that the outdoor environment had been forgotten as a space that needs to be consciously organized for social relationships for the city inhabitants (Fadamiro and Atolagbe, 2006). The development of urban green space is manifested through conservation of existing green belts in cities, tree planting, soft landscaping, urban agriculture, creation of green parks and gardens among others (Okunlola, 2013). Urban green space is beneficial due to the positive effects it can have on the environment.

CONCEPT OF AN URBAN GREEN SPACE

Urban Green Space is those cities that are environmentally friendly, best described as a loose association of cities focused on sustainability. The emerging 'green cities' movement encompasses thousands of urban areas around the world all striving to lessen their environmental impacts by reducing waste, expanding recycling, lowering emissions, increasing housing density while expanding open space and encouraging the development of sustainable local businesses. However, urban green requires developing high quality urban environments for all; reducing transfers of environmental costs to areas outside the city and ensuring progress towards sustainable consumption.

This can be achieved by interconnecting the benefits of green city.

SUSTAINABLE DEVELOPMENT

This is the development that meets the needs of the present, without compromising the ability of future generations to meet their own needs. However, it is not surprising that almost all urban development programmes set down ideas and ideals to develop cities in a more sustainable way, especially concerning the environment and its social dimension. The improvement of green spaces and the enhancement of knowledge about the added value they can bring (ecological, economic, social, environmental, etc.) has per se a positive impact on the sustainability of urban areas. It is well known that sustainability cannot be reached alone by environmental measures if these are not accompanied

by measures to increase the well-being of the population and the recognition of those that take decisions on the future of the urban areas. Sustainable development of cities and development of urban green spaces are very important, since almost half of the country's population now live in urban area. Moreover, there is an urgent need to improve the lifestyles of urban people with a special focus on considering the environmental impact of human activities by raising awareness to the rational use of energy, water and food consumption and natural resources for environmental sustainability. Finally, the role played by green spaces in our urban environments can no longer be ignored by today's policy makers, hence the benefits need to be evaluated to inform future planning and to ensure that existing green spaces are reviewed and adapted to meet the people's need.



Fig 1: Green Space Action Cycle

BENEFITS OF URBAN GREEN SPACE

Green spaces are known for making valuable environmental, social and aesthetic contributions to the urban environment. They also play an important role in relation to the quality of neighborhoods and are notable in contributing to the delivery of community value. The roles and benefits of green

spaces are extensive and multifunctional and to aid better understanding, these are categorized according to their ecological and environmental, social, and economic relevance. However, green space can bring different benefits in different ways and with diverse outcome.

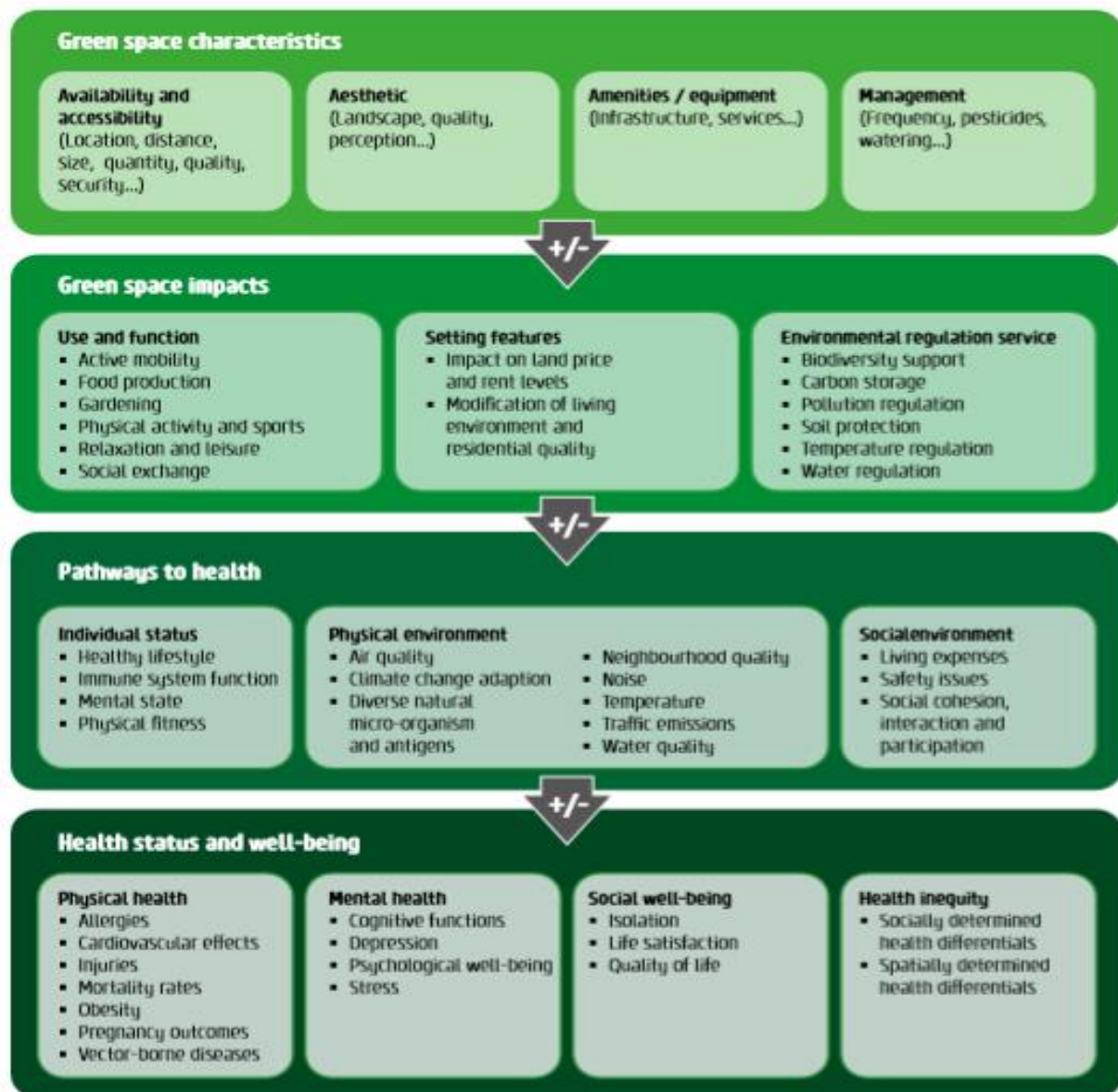


Fig 2: Impact of Urban green space on health and Environment

Source: developed from a figure created by A. Roué-Le Gall in Milvoy & Roué-Le Gall (2015).

Environmental benefits

The environmental benefit will be streamlined to the following factors. This includes urban climate and air quality

Urban Climate: An urban green space is an appropriate way to reduce urban heat island effect and provide comfort to the nearby dwellers. The heat island effect is a phenomenon that occurs in more developed and urban areas in which the temperature is hotter than in the surrounding suburban and rural areas. In some cases the difference in temperatures can be as high as 22 degrees Fahrenheit (Environmental Protection Agency, 2014). The urban heat island effect can result in numerous negative side effects for residence of the community. For example, higher temperatures result in greater energy consumption and air conditioning costs, and in the

most extreme conditions can even result in health complications (EPA, 2014).

Air Quality: The presence of trees in urban green space has been related with improvement in air quality due to trees capacity of removing pollutants from the atmosphere (Nowak *et al.*, 2006). By having green spaces in urbanized areas, plants and greenery tends to provide improved air quality and reduced heat. Considering any sound urban planning or policy to improve air quality, it has to be supplemented with green space.

Ecological benefits

Urban green space can help protect the local flora and fauna and also acts as wildlife habitat system that helps to restore and maintain ecological functions and services. Ecological benefits from urban green spaces also include e.g. regulating services, noise and

pollution reduction, local climate regulation etc. High biodiversity of species results in stable ecosystems that can provide many ecosystem services for ecological and other benefits. Urban environments can be important in providing scope for conservation of species in the city (Dearborn and Kark, 2010). Urban vegetation such as green roofs can be the habitats for many insects, spiders and herbs (Brenneisen, 2006).

Social benefits

Urban green space provides environment to facilitate social contact. Social interactions take place more frequently in a preferable environment than other places. In recent times scholars have emphasized the importance of Urban green spaces as an ideal spaces for people to meet each other, or as a focus for the community, both formally and informally (Woolley, 2008). They also provide space for socializing, political discourse and cultural expression (Li, 2014). The existence of trees (and their shade) as well as grass in public areas can be an attraction for people to spend more time outdoors, which improves social interaction among the members of the community.

Also, urban open space is an important means that positively influences the physical health and well-being of the residents. Physical benefits can be derived through frequent contacts with green environments (Hill, 2002).

Economic Benefits

Economically, the benefits include:

- reduced congestion cost while reducing carbon emissions
- Increasing property values and attracts development
- Serving as economic development tool
- Providing neighborhood linkages.
- Increasing tourism potential.
- Improved quality of life.
- Improved health of local residents.
- Providing ecosystem services.
- Strengthening community cohesion.
- Providing community gathering space.

POTENTIAL CHALLENGES TO URBAN GREEN SPACE AND POSSIBLE SOLUTION

Urban green spaces will inevitably be threatened in an environment where urban space is limited and there is a relative shortage of housing and land available for development. Urban green space costs money to maintain. Where green space is perceived as being run down, it may be at greater risk of being developed rather than refurbished.

Resource constraints and reductions in public spending are likely to have a disproportionate impact on urban green space as it has to compete with other public services that have higher priority or political sanction, as has happened in other developed country (Allender *et al* 2012). In the absence of a robust

scientific basis for the benefits of urban green space, it is difficult to make the case for allocating scarce resources to an endeavor for which there is limited information and which could be perceived as simply a "fad".

Furthermore, urban green space planning cannot be seen in isolation from other local government priorities such as transport and housing. Efforts to engineer towns and cities are often beleaguered by poor integration between planning, transport, housing, and other policies. Training, communication, and an understanding of the levers for change are essential prerequisites for urban planners to be able to address the joint concerns of urban planning as embodied in green space planning. Another potential threat to public green space is where the space is available but access to it is restricted. This is often seen where urban land is redeveloped for housing and green space is provided but is only accessible to residents. This is an attractive approach for developers, as the "exclusive" green space may increase the retail value of the property; however, such approaches inevitably increase inequities in access. Similarly, urban green space initiatives to make more deprived neighborhoods healthier and more attractive can drive up property values and displace the residents for whom the initiatives were designed to be of benefit (Wolch *et al* 2014)

CONCLUSION

Urban green spaces as an important contributor are a significant part of sustainable development. Urban green spaces play a key role to improve the environment through landscape enhancement, better air quality and noise reduction which results in improved quality of life of the people. Therefore there is a broad unanimity about the importance and value of urban green spaces in cities towards planning and constructing sustainable or eco-cities of 21st century. The ecological benefits bestowed in green spaces which range from protecting and maintaining the biodiversity to helping in the mitigation of change cannot be overlooked in today's sustainable development plan. Furthermore, the most sought benefits of urban green spaces are the environmental, social and ecological benefits. The promotion and conservation of urban green space is in the hands of local and regional authorities. However, urban green space planning should be put in place, in addition to the practice of horticulture as a means to urban development that should be firmly supported by federal and state governments.

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