CHALLENGE OF SUSTAINABLE URBAN DEVELOPMENT IN AFRICA: POLICY OPTIONS

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ABSTRACT
It is a truism that the twenty-first century has been marked by a significant shift, a new urban revolution with more than half the world's population living in towns and cities. In Africa, the trend of urbanization is very fast so that the urban continuously outgrowing the rural. Today, the largest urban agglomerations in the world are mainly in the South. More importantly, based on the UN-Habitat, cities in the developing world will absorb 95% of urban growth in the next two decades. One in six people live in disgraceful conditions in overcrowded urban slums, around one-third of urban dwellers, or one billion people, live, or rather, survive with no decent housing and no access to basic services, in precarious conditions that threaten their existence. Crucially, the primary concern of the poor is to earn a living rather than look after the environment. This paper therefore examines the challenge of sustainable urban development in Africa. It indicates that the impact of urban growth on the natural environment is, and will continue to be far-reaching. Patterns of urban development followed in the so-called developed countries over the last few centuries are not likely to be sustained Africa. The paper recommends amongst others that since the effective and efficient operation of cities is essential to economic, technological, social, cultural and political development in Africa is new, perhaps radical, approaches as well as cooperation of all stakeholders are needed to ensure that the natural environment at local, regional, national and global scales can be conserved, restored, protected and left as a legacy for future, largely urban, generations.
Keywords: Sustainable Urban Development, Urbanization, Population, Migration, Growth.

INTRODUCTION
The world is currently undergoing an urban demographic revolution: Between 1950 and 2000, the world's population grew from 2.5 billion to 6 billion. The UN Population Division (2001) estimates that in 2050, between 8 billion and 13 billion people will live on Earth. Today, more than 50% of the world's population lives in urban areas. By 2030, this rate will presumably increase to 60%. In developing countries, only 40% of the population currently lives in urbanized areas but an expected population growth rate of 2.3% in developing countries by 2030 (UN 1999) will lead to an even sharper rise in the urbanization level. Whereas in 1990, 1.4 billion people lived in the urban areas of the Third World, this number will increase to 3.8 billion in 2030. This means (i) that 80% of global growth of the urban population will take place in the poor countries of the southern hemisphere (UN 2001), and (ii) from 2000 to 2030, the urban population in developing countries will grow by 60 million people a year, effectively doubling in the period from 2000 to 2030. From 2020 onward, the majority of people in developing countries will live in metropolitan areas.

Sustainable urban development is not a new issue. Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their needs (WCED, 1987). The primary objective of sustainable development is to reduce the absolute poverty of the world's poor by providing lasting and secure livelihoods that minimize resource depletion, environmental degradation, cultural disruption and socially instability (World Commission on Environment and Development, 1987).

In 1987, the Bruntland Commission report, "Our Common Future," addressed urban challenges related to sustainability and recommended that research should provide a basis for rethinking the way cities are designed, built, and managed. It has been suggested that the building of a "green" city is equivalent to the building of sustainability (Beatley, ed., 2012). Many countries are planning and engaged in building green cities and "eco-cities" as starting points for the building of sustainable development. Yet, it is important to understand cities' sustainability as a broader concept which integrates social development, economic development, environmental management and urban governance, which refers to the management and investment decisions taken by municipal authorities in coordination with national authorities and institutions

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The earth summit (UNCED), which recognized the pressing environment and development problems of the world, and through the adoption of agenda 21, produced a global programme of action for sustainable development in the 21st century. Agenda 21 stresses the importance of partnership in improving social, economic and environmental quality in urban areas. It suggests renewed focus on effective land use planning to include adequate environmental infrastructure, water, sanitation, drainage, transportation and solid waste management, in addition to a sound social infrastructure capable of alleviating hunger (Afonja, 1999).

UNDERSTANDING URBANIZATION

Urbanization is a "process of human agglomeration in multi-functional settlement of relatively substantial size" (Mabogunje, 1985). According to Ujoh et al., (2010), it is the process that refers to the growth both in size and numbers of urban centre. This process, as explained by Adesina (2003), has been responsible for transforming towns, cities and metropolitan areas, while at the same time depopulating the rural setting through a process of direct rural-urban migration. Citing Brockerhoff (2000), Adegun (2011) describes the level of urbanization as the share of a country's total population that lives in urban areas. Thus, the extension of the urban environment in terms of territorial coverage and population has remained a common experience all over the world; while the proliferation of urban centre has been phenomenal from the turn of the 20th century (European Environment Agency, 2006; Ujoh et al., 2010).

Indeed, if not properly managed, urban growth may become the source of a broad variety of problems (Liddle and Moavenzadeh 2002):

-Poor standards or even progressive decay in basic public infrastructure (energy supply, access to safe water, sewerage, schools, roads, preventive and curative health treatment, etc)

– Malnutrition, food scarcity, and diseases (HIV/AIDS, malaria, etc)

– Loss of fertile urban agricultural land for settlement purposes

– Lack of sanitation, which leads to groundwater pollution by nitrates and bacteria and causes infections from cholera to tuberculosis

– Poor drainage and poor waste management, entailing the contamination of rivers and streams by sewage outflows and waste disposal, which in turn leads to fresh water scarcity and consequently diseases

– Deforestation of the city's surroundings because of the need for fuel (of mostly low-income households), leading to an entire depletion of the vegetation and the start of gully erosion

– Air pollution and increased greenhouse gas emissions because of increasing traffic, industrial activity, and firewood and litter burning mixed with dust

– Pressure on land use, poor land tenure security, and lack of affordable housing leading to unplanned settlements in the urban periphery and the mushrooming of nearby urban villages

– Poor urban design, neglected public parks and greenways as well as pressure on urban agriculture (Mosha and Cavric 2001)

– Inequality and urban poverty in general, combined with unemployment and low educational levels

BASIC CAUSES OF URBANIZATION

Urbanization and city growth are caused by a number of different factors including rural–urban migration, natural population increase, and annexation. Because rates of natural increase are generally slightly lower in urban than in rural areas, the principal reasons for rising levels of urbanization are rural–urban migration, the geographic expansion of urban areas through annexations, and the transformation and reclassification of rural villages into small urban settlements. The expansion of the metropolitan periphery can be caused both by the arrival of new migrants and by the sub-urbanization of the middle class out of the central city. The relative importance of each of these various causes of urbanization and suburbanization varies both within and between regions and countries.

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For city governments, the challenges include securing the necessary resources for investment in disaster-proof public infrastructure, and renewable sources of energy, and providing incentives to the private sector to create decent employment for large urban populations that are underemployed and have limited access to good housing conditions, clean water, sanitation, drainage and schools. Upper middle income and high-income countries with urban populations that already have access to basic public services face the challenge of becoming more efficient in the use of energy and water, reducing the generation of waste, and improving

their recycling systems. Growth of cities has often gone hand in hand with an increased use of natural resources and ecological systems, driven by economic growth and changes in the economic structure—in terms of a shift from agriculture to manufacturing and then to services. While wealthier cities and people, in particular, may have well-managed resource systems, they also have a greater ecological impact through drawing resources from larger areas. For example, wealthier residents in New York City, Los Angeles and Mexico City contribute greatly to the demand for freshwater from distant ecosystems, whose capacities are consequently affected and whose use generates significant levels of pollution and greenhouse gas emissions at the national and global levels (McGranahan and Satterthwaite, 2003). Thus, urbanization can be an important contributor to high resource use and waste generation, both with ecological effects at the local, regional and global levels.

 There is also the challenge of socioeconomic inequalities. Inequalities between rural and urban areas as well as within urban areas have been features of development and urbanization in developing countries (Cohen, 2006; Baker., ed., 2012). The gap between rich and poor neighbourhoods can imply significant differences in access to job opportunities and basic public services such as water and sanitation, electricity education and health, housing and communications. As a consequence, many urban residents in developing countries suffer to varying degrees from environmental health issues associated to inadequate access to clean water, sewerage services, and solid waste disposal. In many cities of developing countries, adequate water and sanitation services are primarily channelled to upper- and middle-class neighbourhoods, while low-income neighbourhoods often depend on distant and unsafe water wells and private water vendors who charge higher prices than the public rate for water delivery (Cohen, 2006). The poor often live in highly overcrowded dwellings in shacks which lack basic infrastructure and services. On the whole, less than 35 per cent of cities in developing countries have their waste water treated, while globally, 2.5 billion and 1.2 billion people lack safe sanitation and access to clean water, respectively (United Nations Human Settlements Programme (UN-Habitat), 2012). Wider urban access to public services, income-earning opportunities and broader social interaction in cities has driven rural-urban internal migration in many developing countries for the past 60 years (Beall, Guha-Khasnobis and Kanbur, eds., 2012). The speed of urbanization has ultimately outstripped the limits of the economic opportunities provided by cities, making poverty a salient feature of urban life.Sprawl and weakened capacities is another basic challenge. Many large cities have also experienced rising sprawl over the past 50 years, challenging urban planning. Wealthier citizens have chosen to reside on the outskirts of cities where they enjoy greater privacy, have bigger homes and better schools for their children, and are spared having to use public transportation and endure the frenzied atmosphere of urban downtowns. As a consequence, the carbon footprint of wealthier inhabitants, households and neighbourhoods is often much higher than that of the rest of urban inhabitants (McGranahan and Satterthwaite, 2003). Small cities with less than 500,000 inhabitants experience a different type of vulnerability. Although there is much diversity in their economic structure, many small cities in developing countries have very weak economies and inadequate communication with more economically dynamic cities. These cities tend to have inadequate infrastructure for provision of basic public services, which may be of low quality. Access may be time consuming, costly and risky (in the case, for example, of public transportation). Poor land management and weak urban planning capacities are part of the problem. The deficiencies in urban governance, institution-building and adjustment to changing land development conditions have reduced real possibilities for improving urban planning (Cohen, 2006).

THE WORLD'S LARGEST AGGLOMERATIONS

Given the increase in total urban population, it is not surprising to discover that the world is experiencing both an increase in the absolute number of large cities and seeing cities reach unprecedented sizes. For example, the average size of the world's one hundred largest cities has grown from under 200,000 in 1800 to over 5 million in 1990 (Hardoy, Mitlan & Satterthwaite, 2001). In 1950, there were only eight cities in the world that had a population of over 5 million. New York, Tokyo, and London were the three largest, containing 12.3, 11.3, and 8.4 million residents, respectively. In 1950, Shanghai and Buenos Aires were the only cities in a developing country that contained more than 5 million residents while cities such as Mumbai (formerly Bombay), Mexico City, and Rio de Janeiro were still relatively small cities: each contained just under 3 million residents. By 2000, there were forty-two 5 million plus cities, thirty of which were in the developing world. Of those forty-two cities, eighteen had surpassed the 10 million mark. In 1950, New York was the largest urban agglomeration in the world with a population of 12.3 million. Today, the record for the

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world's largest agglomeration is held by Tokyo at over 34 million and an urban agglomeration the size of New York in 1950 would barely make it on a list of the world's top ten cities. Nevertheless, it is always important to remember that although the number of very large urban agglomerations is expected to continue to rise, they still account for a relatively small fraction of the world's total population or even the world's total urban population. One particularly alarming trend that has been observed is the rapid growth in the number of new urban residents every year to the world's largest urban agglomerations, although this is partly an artifact of the fact that several very large urban agglomerations in the developing world that had less than 10 million residents in 1975 have now crossed the 10 million threshold. Consequently, the number of people living in vast urban agglomerations of 10 million or more in the developing world has risen dramatically over the past couple of decades. Between 1975 and 2000, the number of 10 million plus urban agglomerations in the developing world rose from 2 to 13 and the number of people living in mega-cities catapulted from 22 million in 1975 to 165 million in 2000 (United Nations, 2004). Furthermore, even this may be a quite serious underestimate if the administrative boundaries of several large urban agglomerations were drawn somewhat more broadly. Because urban growth in developing countries has typically been associated with the physical expansion of metropolitan areas, to the extent that growth occurs outside of official administrative boundaries, it can lead to a serious underestimation of the true dynamics of the metropolitan area.

Recent analysis of four large metropolitan areas in Southeast Asia-Bangkok, Jakarta, Manila, and Taipai-suggest that existing boundaries may be drawn too tightly, missing important recent developments in the underlying spatial dynamics of the city-region (Jones, 2002). Similarly, the number of cities above any arbitrary threshold—half a million, one-million, five-million-has grown. For example, consider the number of cities with more than one million residents. At the beginning of the 19th century, Beijing (then Peking) was the only million-plus city (Chandler, in Cohen, 2006) Even by the turn of the 20th century, there were still only 16 million plus cities in the world. But, by 1950, the number of million-plus cities had grown to 72 , by 1975 it had grown to 195, and by 2000, there were almost 400. According to Cohen (2006) the latest projections, there will be more than 150 new million plus cities around the world over the next 15 years. Increasingly, new million-plus cities will be located in Asia, Africa, and Latin America.

The speed and scale of increase in the world's largest cities and metropolitan areas can create enormous stresses on the immediate and surrounding environment and poses major challenges for sustainable development. A long-standing urban bias in social infrastructure investments has contributed to the widely held belief in the development literature that living conditions must be far better in large cities than in smaller cities or towns. But with the locus of global poverty moving to cities, the long-assumed advantages enjoyed by residents of large cities have been called into question. High rates of overall population growth, together with significant rural–urban migration, have contributed to the rapid and unplanned expansion of low-income settlements on the outskirts of many large cities, which has occurred without a concomitant expansion of public services and facilities.

SMALL CITIES, BIG AGENDA

In thinking about an urban future, it is perhaps only natural to imagine a world in which everyone is living in mega-cities the size of Sao Paulo, Mexico City, Beijing, or Lagos. But that is not correct. In fact the bulk of urban population growth for the foreseeable future will take place in far smaller cities and towns, a point that receives little media recognition. Large cities will play a significant role in absorbing future anticipated growth, but for the foreseeable future the majority of urban residents will still reside in much smaller urban settlements of fewer than 500,000 residents. Nevertheless, according to the most recent estimates of the United Nation's Population Division, the lion's share of the increase in urban population over the next 15 years will continue to be in towns and cities with fewer than half a million inhabitants. Even by 2015, towns and cities under half a million will still account for just over half of the total urban population. By comparison, just under nine percent of the world's urban population is expected to be living in cities of 10 million or more by 2015. When added together, the combined size of the population of smaller cities and towns makes them very significant.

While by no means suggesting that large cities be entirely neglected in the future, there are good reasons for putting smaller cities more centrally on the development agenda (Cohen& Vilar,2005). First, as discussed above, when combined, the total population of smaller cities and towns is demographically very significant. Second, because by definition they are starting from a smaller base, small cities typically grow faster than

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large cities. Third, according to a recent study of urban infrastructure, residents of small cities in developing countries are extensively underserved with respect to basic services. A recent study of the US National Academy of Sciences, which was based on an analysis of data from more than 90 countries, revealed that, across all major geographic regions investigated, residents of small cities suffer a marked disadvantage in the provision of piped water, waste disposal, electricity, and schools than residents of medium or large cities. Furthermore, there is some evidence to suggest that rates of poverty are higher in smaller cities and in many countries levels of infant and child mortality are negatively proportional to city size (National Research Council, 2003).

SOCIOECONOMIC FRAGMENTATION WITHIN LARGE AND SMALL CITIES

Cities throughout the world exhibit an incredible diversity of characteristics, economic structures, levels of infrastructure, historic origins, patterns of growth, and degrees of formal planning. Yet, many of the problems that they face are strikingly familiar. For one thing, as cities grow, they become increasingly diverse. Every city has its relatively more affluent and relatively poorer neighborhoods. But in developing countries, poorer neighborhoods can have dramatically lower levels of basic services. Consequently, a large number of urban residents in developing countries suffer to a greater or lesser extent from severe environmental health challenges associated with insufficient access to clean drinking water, inadequate sewerage facilities, and insufficient solid waste disposal. A major recent United Nations report on the state of water and sanitation in the world's cities found that water distribution systems in many cities in the developing world are inadequate, typically serving the city's upper- and middle-class neighborhoods but not rapidly expanding settlements on the urban fringe. Furthermore, the current data on the provision of water and sanitation in urban areas is very weak and the true situation is actually far worse than most international statistics suggest (United Nations Human Settlements Programme, 2003). The large projected increases in the numbers of urban residents in the developing world over the next 20–30 years implies that municipal authorities responsible for these sectors face very serious challenges in the years ahead. In many cities, the scarcity of public water supplies forces many low-income urban residents to use other water sources such as private water vendors who charge many times more than the local public rate. Consequently, people in slums often must pay much more for lower quality water than other urban residents (Satterthwaite in Cohen, 2006). Improving public sanitation is another major urban environmental challenge that needs to be immediately addressed in virtually all cities in the developing world. Failure to collect garbage as well as inadequate waste management and recycling policies and practices mean that cities are being inundated in their own waste. In African cities, waste management has been described as 'a monster that has aborted most efforts made by city authorities, state and federal governments and professionals alike' (Onibokun, 1999). As is the case of the water supply distribution network, sewerage systems are far better at meeting the needs of upper- and middle-class neighborhoods than they are of servicing poorer neighborhoods, particularly unregulated neighborhoods on the urban periphery. A major environmental crisis is looming large as many developing countries as cities discharge ever increasing amounts of waste into the air or into freshwater bodies, threatening water quality and aquatic ecosystems.

CONCLUSION

Reducing the negative impacts of ongoing urbanization in developing countries appears to be one of the key challenges for the future of mankind (Brockerhoff 2000, Keiner 2004). In an increasingly urban world, almost half the world's total population and over three- quarters of the population of high-income countries now live in urban areas. While urbanization levels and trends closely mirror global patterns of industrialization and economic development, this is still a remarkable transformation when compared with the situation at the beginning of the 20th Century, when only 13 per cent of the population lived in urban areas and there were just sixteen cities in the world that contained at least a million people. Today, there are almost 400 cities around the world that contain more than a million residents and about seventy percent of these are in less developed countries. Rural–urban migration and the transformation of rural settlements into towns and cities have been important determinants of rapid urban growth but there has also been a general convergence in lifestyles between urban and rural areas as advances in transportation and telecommunication have caused distance and time to collapse. Urban functions are being spread over larger and larger geographic areas so that the traditional distinction between urban and rural areas is becoming increasingly redundant for many purposes.

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POLICY OPTIONS: TOWARDS SUSTAINABLE URBANIZATION
The policy options are discussed under three main heads: good governance, urban regeneration and enhanced infrastructural development as well as improved collaborative role of the third world and other stakeholders.

ENSURING GOOD AND EFFECTIVE GOVERNANCE
Central to the issue of achieving sustainable urban growth is the need for good governance. This should be in accordance with the principles entrenched in the United Nations global Agenda 21; which seek to employ sustainable development strategies to integrate all aspects of development socially, economically, culturally and environmentally in achieving distributional equity and providing adequate social services including health, education, housing as well as functional and livable environment among many others.

URBAN REGENERATION AND ENHANCED INFRASTRUCTURAL DEVELOPMENT
As the population of an urban centre increases, its need for infrastructure such as transportation, water, sewage and facilities such as housing, commerce, health, schools, recreation and others increases (Ujoh et al., 2010); therefore, increasing the environmental carrying capacity of the urban areas is necessary for enhancing the livability of cities in Nigeria. Massive rehabilitation and expansion of urban infrastructure in the country should be taken more seriously. Most of the urban centres require extensive regeneration and upgrading programs. This would improve living condition as well as posit it against the culminating effect of urbanization.

IMPROVED COLLABORATIVE ROLE OF THE AFRICAN FORUM
There is a need for collaborative efforts by all governmental Agencies at regional, national and local levels towards ensuring good governance and sustainable urban development. The New Partnership for Africa's Development (NEPAD) is an initiative for speeding up sustainable development in Africa. Other counterpart initiatives from other third world nations should collaborate to ensure speedy actualization of the UN Global Agenda 21 and Goal 7 of the MDGs Agenda on the sustainability of cities.
To crown it all, mitigating the effects of accelerated socioeconomic globalization and their threat to the natural environment is not only the responsibility of developing countries. In actuality, the destruction of the environment is mainly caused by activities in the urban regions of the highly developed world. Therefore all hands must be on deck.

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