

Unregulated Urbanization and Challenge of Environmental Security in Africa

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Abstract— In Africa, unregulated urbanization is associated with variety of policy issues spanning demographic, economic, and environmental concerns occurring in the context of massive rural-urban migration and rapid urbanization. These lead to structural weaknesses and even breaking points in cities that are not adequately prepared for the uncontrolled influx of rural populations seeking to improve their lives. The growing consensus is that this situation poses one of the major threats to environmental security in the developing world, and that they impact the poor and therefore the most food insecure to the greatest extent. Urbanization is one of the most significant trends in Africa at present, with rural populations migrating at unprecedented rates to urban hubs in search of employment and economic growth. The effect of this includes, among others, the growing of slums, pressure on infrastructure and the social problems, including security that accompany unemployment in an urban setting. Failing to address them adequately, could see emerging markets fall into the trap of replacing rural underdevelopment with urban underdevelopment - a destructive scenario that betrays the enormous potential that is so apparent on the African continent. The challenge of environmental security resonates from energy and climate security, to water and health security. These may affect the total well being of human and its society by making them not to fully access the expected benefits of urban society and may thus hinder its human security. The underlining goal of the concepts of Environmental security is aligned towards achieving sustainable development.

Index Terms— unregulated urbanization, environmental security, challenges, human security, influx of rural population.

I. INTRODUCTION

Currently, Africa is undergoing a demographic evolution that will shape its societies, economies and territories in the years ahead. The United Nations' report has indicated that Africa is going through unequalled population growth as the projected African total population has nearly double from about one billion in 2010 to almost two billion by the year 2040, and could hit 3 billion by 2070. Most critical about this unprecedented growth in Africa is a clear evidence of a growing number of youth that calls for increased attention to the dilemma faced by the youth and the need to take advantage of the potential demographic dividend they could bring.

A. Africa- Location and Size

Africa, has a land area of 30 million square kilometers, is almost three times the size of Canada. While Africa has about

13 percent of the world's population, or some 813 million people, it has less than 1.6 percent of global trade, and 1 percent of global investments. Greater part of the continent lies in the tropical rain forest belt. The region also has a large stretch of desert (Sahara and Kalahari Deserts), woodlands and savannah grassland vegetation. It has many rivers with high potential for irrigation and hydro electricity. Africa has rich biodiversity and many tourist centers, with diversity of cultures and languages.

In almost every country in African, there is that tendency towards having the growing populations in reasonably large cities. This is a common inclination within the cities of developing world, which constitute centres of growth and governance, and equally seen as home to an increasing proportion of the national population in search for a better future. Many countries in Sub-Saharan Africa have recently experienced accelerated urban growth. According to a 2004 UN report on World Urbanization Prospects, in 1950 when sub-Saharan African was the least urbanized region in the world and, steady with colonial era trends, urbanizing was at a slow pace with only 20 million people, or 10 to 15 per cent of the total population, living in urban areas in Sub-region. According to Todaro (2000) this scenario has changed significantly during the post-independence years. Since the early 1970s, Sub-Saharan Africa had the highest urban growth rate in the world, averaging five per cent per annum. The clear-cut demographic definition of urbanization is the increasing share of a nation's population living in urban areas (that is a declining share living in rural areas). Most urbanization is the result of net influx of rural to urban migration. The level of urbanization is the share itself, and the rate of urbanization is the rates at which that share are changing. This definition makes the implications of urbanization distinct from those of urban population growth or those of the physical expansion of urban areas, both of which are often treated as synonymous with urbanization. Urbanization is the effect of the social, economic and political development. It is a feature of development connected with modernization and is a means of and consequences of modernization and has a positive and accelerating effect on development. In Africa, urbanization is an outcome of large concentrations of population in a few large cities (Nsiah-Gyabaah, 2003). Conventionally, in developed countries urbanization accompanied industrialization that is closely associated with rapid and sustained economic growth. On the other hand, most countries in contemporary Sub-Saharan Africa have experienced urbanization in an economic setting of insignificant industrial growth and transformation. Besides,

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this rapid urbanization has occurred at a time when economic growth was more or less stagnant and even declining. Over the years, the Gross Domestic Product (GDP) per capita has hardly increased or has even declined slightly during the same period. A (2003) United Nation (UN) report described Africa as prime example of the phenomenon of 'urbanization without growth'.

According to Satterthwaite, McGranahan, Tacoli, (2010) the world's urban population is around 3.2 billion people, more than the world's total population in 1960. Today, urban change are unprecedented, including the world's level of urbanization and the size of its urban population, the number of countries becoming more urbanized and the size and number of very large cities. But these urban statistics tell us nothing about the large economic, social, political and demographic changes that underpinned them. Such as the multiplication in the size of the world's economy, the shift in economic activities and employment structures from agriculture to industry and services and within services to information production and exchange.

In only 200 years, the world's urban population has grown from 2 percent to nearly 50 percent of all people. The most striking examples of the urbanization of the world are the megacities of 10 million or more people. In 1975 only four megacities existed; in 2000 there were 18. And by 2015 the UN (2004) estimates that there were going be 22. Much of the future growth, however, will not be in these huge agglomerations, but in the small to medium-size cities around the world (NRC, 2003). Cities offer the lure of better employment, education, health care, and culture; and they add excessively to national economies. However, rapid, unplanned and unsustainable patterns of urban development are making developing cities focal points for many emerging environment and health hazards.

From the above, it can be conveniently aver that unregulated urbanization occurs when the influx of rural population migrate into urban centres creating shanties, slums and other social and economic vices, a time making significant contributions but their presence or roles are not captured by the national policy and plans. Anthony J. McMichael (2000) observed that the proportion of the world's population living in large towns or cities has grown from around 5% to 50% over the past two centuries. Demographers estimate that by 2030 approximately two-thirds of all people will live in large towns or cities. The human population is thus becoming urbanized. In future, urban populations will have a distinctly higher proportion of older people than they do today as a result of unregulated urbanization with its challenges to Africa environmental security. The economic historian Szepter (1997) argues that in England, which led the industrial revolution, rapid economic growth in the first half of the 19th century disrupted traditional structures of authority, social relationships and ideologies.

Today, unregulated urban migration reflects many things that followed the advent of industrialization, insecurity about the availability of food in rural areas, the search for refuge from conflict and environmental damage and the lure of jobs, amenities and stimulation. Africa, where the relation between

economic development and urbanization is weaker than in other regions, is currently the least urbanized major region in the world. Nevertheless, it is also the most rapidly urbanizing region. In sub-Saharan Africa much of the rapid growth in the urban population reflects a combination of flight from rural poverty and high fertility rates in urban areas. In Latin America, in contrast, urban growth has been driven more by the pull of industrialization and economic opportunity (McMichael, 1997).

B. Urbanization

Urbanization as a concept has been defined in diverse but interconnected ways. To Waugh (1990) urbanization is "a process by which rural areas are transformed into urban areas and which involves the growth of urban populations through the combined effects of migration and natural increase". Another author, Otto (2008) describes urbanization as "a change of employment structure from agriculture and cottage industries to mass production and service industries". Different definitions have perspectives consistent features which characterized urbanization, such as: i) demographic process, ii) necessary element of economic and industrial development, iii) driving force behind social change and (iv) universal phenomenon. In all, urban phenomenon is considered the dynamic result of a complex process of articulation of interactive and often conflicting economic, political, legal and cultural forces. *Fernandes (1998)* saw the urbanization in cities and rural areas in developing countries as a process that have redefined the changing nature of capitalism and more recently, by the process of economic globalization.

C. Urbanization in Africa

Urbanization is a growing phenomenon in Africa and has reflected in the expansion in population and size, especially in the large cities such as national capital and regional or state capitals. Nsiah-Gyabaah (2003) observed that in 1950, Africa was the least urbanized continent with only 14.5 percent of the population in urban areas. However, by 1990, 34.5 percent of the population of 749 million was living in urban areas. The UN has projected that if the trends continue, the urban population would increase to 914 million by 2025, or four times the 1990 level. While urbanization is a global phenomenon, the growth of cities tends to be more rapid in the developing countries especially Africa where annual growth rate is 1.6% compared to 0.8% in the developed countries.

D. Urbanization in Sub-Saharan Africa

The Sub-Saharan Africa, is the least but the most rapidly urbanizing part of the world, nearly one third (32 percent) of the population live in few large cities and major economic activities areas which include industry, manufacturing, commerce and employment are concentrated in cities such as Accra (Ghana), Lagos (Nigeria), Monrovia (Liberia), Nairobi (Kenya) etc. The UN estimates that two out of four people would live in urban areas by 2020 and about 49 percent of the population will be urban by 2025 (UN 1996). There will be more than 20 capital cities in Africa that have a population of 10 million people by the year 2010.

Table 1. Urbanization in Sub-saharan African Regions (1950-2025)

Region	Percent of population in urban areas			
	1950	1975	1996	2025
Sub-Saharan Africa	11	21	32	49
East Africa	5	13	23	3
Middle Africa	14	27	33	50
South Africa	38	44	48	62
Western Africa	10	23	37	56

Source: UN Urbanization Prospects: The 1996 Revision Annex Tables

The urban population of developing countries is projected to reach 50.5 per cent in 2020. Available data from developing regions, confirm that, worldwide efforts to decrease urban inequality and the international community's attempts towards accomplishing the Millennium Development Goals (MDG) and associated targets have given positive results. Despite the increase in the total slum population from 767 million in 2000 to 828 million in 2010 ([UN-HABITAT GUO data, 2010](#)), the proportion of the urban population living in slums in the developing regions declined from 39.3 per cent to 32.7 per cent during the same period.

Table: 2. Proportion of urban population living in slums (estimates and projections (%)).

Region	1990	1995	2000	2005	2010
Developing countries	6.1	2.8	93	5.7	2.7
Africa	6.0	7.2	4.0	1.6	1.3
North Africa	3.4	8.3	0.3	3.4	3.3
Sub-Saharan Africa	7.0	7.6	5.0	3.0	1.7
Asia	4.7	3.3	9.1	4.9	0.6
Eastern Asia	4.3	0.6	7.4	3.0	8.2
Southern Asia	5.7	1.6	5.8	0.0	5.0
South-Eastern Asia	4.9	4.8	9.6	4.2	1.0
Western Asia	2.5	1.6	0.6	5.8	4.6
Latin America and the Caribbean	3.7	1.5	9.2	5.5	3.5
Oceania	4.1	4.1	4.1	4.1	4.1

Notes: (1) Trends data are not available for Oceania. (2) A constant figure does not mean there is no change.

Source: [UN-Habitat GUO data, 2010](#).

E. Challenges and Opportunities of Africa

Nsiah-Gyabaah (2003) posited that Africa is richly

endowed with diverse natural resources including forests, gold, diamond, oil, copper etc. From Angola through Gabon to Libya and Nigeria, there are large deposits of crude oil and other solid minerals. The wealth is enormous, but the richness has not led to a fulfillment of the aspirations of people's sustainable development on the continent. Africa is the least developed continent in the world. As a result of wide spread poverty, Africa has a negative image as a continent in crisis, represented by environmental and social stress, in which disease, hunger, poverty, land degradation, ethnic conflicts and overpopulation threaten human security. The NECA/AfDB (2007) "The Big Table" recognized that, historically, Africa had not gained the best possible benefits from the exploitation of its natural resources. In the 1990s, this was further compounded by African efforts to attract Foreign Direct Investment (FDI) to their natural resources sector, which led to the formulation of excessively generous investment laws and regulations. The meeting further observed that the scale of reforms in Africa did not have any historical precedent.

F. Assessing Urban Risk and insecurity in unregulated urbanization

Security can be seen as the conditions of stability, order, and predictability and are integrated both economically and politically. It provides the capacity to implement people centred development policies and administrative responsibilities; these dovetail into attracting public and private investments, services to the local people, initiating social welfare policies and programme. On the other hand, unregulated urbanization is less than secured with negative tendencies in distributive policies and programme. The unregulated urbanization present a picture of fiscal crisis, squatter occupations or in carrying out allocation and distributive policies as a result of crime, high unemployment or poverty rates, partly resulting from excess of dependent populations. Cities experiencing unregulated urbanization spend time, energy, and resources in trying to overcome a limited though important set of obstacles. These obstacles, lead to crisis conditions that can be explained as manifest threats to the continuance of essential urban functions. Therefore, people who live in unregulated settlements are often systematically excluded from opportunities, decent employment, security, capacity, and empowerment that would enable them to gain better control over their health and lives. As noted in the *Interim Report by the (MDG) Task Force (2004)*, which focuses on improving the lives of urban slum dwellers; the report went further to state that "Much of urban poverty is not because of distance from infrastructure and services but from exclusion. They are excluded from the attributes of urban life that remain a monopoly of a privileged minority—political voice, secure good-quality housing, safety and the rule of law, good education, health services, decent transport, adequate incomes, access to goods and services, credit—in short, the attributes of full citizenship".

Urban poverty is not new, narrowly viewed as an economic issue that is best addressed by economic policies and interventions, is today, driven by globalization and rapid unregulated urbanization. This also needs to be recognized as a social, political, and cultural process that has profound

impacts on public health. Exclusion of the urban poor from the benefits of urban life fosters discontent and political unrest (Mercado, 2007) Within the broader context of health and human development, rapid urbanization of poverty and ill health has been characterized as a new human security threat (Idea, 2006).

We can trace the rapid unregulated urbanization to two forces of global and local interaction through the interconnectedness of cities, trade, business, industry, tourism, international travel, information technology, and media that is reshaping the socio-economic determinants at urban centres. Put differently, local and national governance capacity in relation to health systems, housing, transport, property rights, migration, land use policy, working conditions, and employment may be unable to cope with the speed of change brought about by global economic restructuring. Inequity in cities that leads to urban poverty, and poor health, therefore, are also products of global and local forces in the urban setting (Mercado, 2007). Public health can play an important role in ameliorating urban poverty through social processes (participation, social capital, social accountability, and social inclusion) that influence urban governance at multiple nodes (Burris, Hancock, Herzog, Lin, 2007). Addressing unregulated urban issues are urgent public health concerns that require opening a policy space for fairer opportunities and healthier and more equitable urbanization.

G. Socio-economic Problems Facing Cities in Sub-Saharan Africa

[Pieterse \(2010\)](#) observed that Africa has increasingly become an urban continent with an average annual growth rate of 3.3 per cent of urban dwellers between 1990 and 2000, the highest in the world. This expansion of urban population in Africa has persisted at a rate that significantly exceeds the rate of creation of opportunity for gainful employment for the unemployed. Employment is particularly hard to find for unskilled rural migrants. Large numbers of school-leavers of both rural and urban origin remain unemployed for many years after graduation. Some of these unemployed people find shelter with and depend on relatives. This weakens the cities' ability to meet service delivery needs. Others survive through engagement in the informal economy ([Obeng-Odoom, 2011](#)). This growing group becomes part of the urban poor. Hove, Ngwerume and Muchemwa (2013) noted that urban poverty has many dimensions and causes whose main characteristics are deprivation and exclusion. In the anonymous and impersonal setting of cities, poverty has dimensions of both material and psychological deprivation. The growing numbers of the urban poor find insecure shelter in overcrowded slums where lack of water and sanitation, electricity, employment, security and social inclusion are the norm ([Berger 2006](#)). Other features of urban poverty include hunger, poor health due to nutritional deficiencies and unhealthy living conditions as well as limited access to school and health services. Survival has become the major concern of the urban poor. Women and children are often the most vulnerable (Hove et al, 2013). They went further to observe that one consequence of escalating urban poverty is the growing number of street children in African cities. While

some of these children have homes and families but survive by begging or casual work, many have been deserted or orphaned and have no alternative but to live on the street. Their survival is extremely insecure, and, without schooling, they have little hope for any significant future and are unusually susceptible to abuse. For many, prostitution and crime are the only means to survive. In post-conflict countries street children are one of the most visible legacies of armed conflict. In particular, child soldiers, who are often alienated, traumatized and habituated into violence, present a daunting challenge ([Rakisits, 2008](#)). Failing to address these issues adequately, could see emerging markets fall into the trap of replacing rural underdevelopment with urban underdevelopment - a destructive scenario that betrays the enormous potential that is so apparent on the African continent.

H. The Challenges of Unregulated Urbanization

The major challenges associated with unregulated urbanization and the resultant population growth includes:

- Growth of slum and shanty
- Inadequate housing and overcrowding
- Inadequate sanitation, air and water pollution
- Environmental degradation such as deforestation, soil erosion etc.
- Crime and diseases e.g., arm robbery, kidnapping, HIV/AIDS etc.
- Climate change, food insecurity
- Competition for water and land
- Exposure to higher risks of accidents
- Poverty and deprivation and natural disasters

Although some analysts such as Potts, (2012), have questioned the mantra of 'rapid urbanization' in Sub-Saharan Africa, a critical analysis of the continents demographic trends suggest an urban future rather than persistence of its present largely rural character (Grant, 2015). However, as earlier noted, Africa's present urbanization process is severely challenged. At the heart of the challenges is the weak governance and planning of the continent's cities as a sub-sum of the unregulated urbanization. According to Berrisford (2013) planning is very critical for inclusive and sustainable urban development as it offers opportunity to 'regulate land use and land development, provide a sound basis for infrastructure planning, secure the rights of investors protect environmental resources and mitigate environmental risks. Flowing from the above, Watson and Agbola (2013) sadly note, that Africa's cities are growing and changing rapidly, but lack appropriate planning, leading to an increasingly chaotic, inefficient and unsustainable urban development. A widely shared view in the criminology literature is that unplanned neighbourhoods and cities with their socio-economic manifestations of poverty and deprivation can facilitate crime and the fear of crime (see Sampson, 2006; Lersch, 2007; Brunton-Smith and Jackson, 2012; Landman, 2012). Owusu George (2016) further observed that there is a widely held consensus in crime studies that crime and fear of crime are unequally distributed across cities, and that areas of higher poverty are likely to be areas of high crime incidence as well. This conclusion rests on the view that poor areas of cities characterized by high

unemployment rates, family breakdowns, delinquencies and general social disruptions tend to produce alienation and consequently criminal behaviour (Sampson, 2006). While the prevailing conditions of poor areas may produce criminal behavioural tendencies, some analysts have argued that these tendencies can only manifest in the absence of law enforcement agencies such as the police (Fafchamps and Minten, 2005) or guardians as postulated in Cohen and Felson's (1979) routine activity theory.

I. The Rural Areas and the Peri-Urban Interface

Researchers have shown that most of the detrimental effects of unregulated urbanization occur in the rural and peri-urban areas which serve as sources of food, building materials and fuel wood for urban dwellers while serving as sinks for wastes generated from the urban centers. The critical challenges are water and land use change and land degradation, soil erosion, inadequate potable water supply, congestion, poor housing infrastructure, air pollution, garbage and spread of infectious and parasitic disease.

II. ENVIRONMENTAL SECURITY

Anthony Osawe and Basil Ibejunjo (2010) defined "the *environment* as the totality of the factors that surround and affect a living entity within an interactive process." According to them, these factors may be other living organisms (biotic factors) or non-living elements (abiotic factors). They further sub-divided non-living factors into physical sub-factor, such as temperature, natural resources, rainfall, edaphic (soil), ocean currents, etc., and man-made sub-factors such as economic, socio-political, greed, scientific inventions etc. In fact, the environment provides the life-support system that generates water, food, shelter from the sun, clean air, medicine, and other elements necessary for man's continuing survival on earth.

The concept of environmental security first emerged in the Brundtland Commission Report in 1987, but it is first popularized under the concept of human security in 1994 Human development report of the UNDP. In that report, environmental security mentioned as a component of human security (Fell, 2006). Human security has emerged because traditional concept of national security wasn't sufficient for living in a safer world. There are several definitions for the concept of environmental security. All the definitions point out the relationship between natural source scarcity and human safety. According to Varshney's definition, environmental security "is concerned with relative safety from environmental change caused by natural or human processes due to ignorance, accident, mismanagement or design and originating within or across national borders" (Varshney, 2005). Moss defines environmental security as "the condition, which exists when governments are able to mitigate the social and political impacts of environmental scarcity of resources, drawing on their own capabilities as well as the capabilities of inter-governmental and non-governmental organizations. . . Environmental security is thus a function of three sets of factors: (a) current and projected levels of resource exploitation, (b) the social and political impacts of scarcity, and (c) the response capabilities that are available to mitigate the effects of scarcity" (Moss, 1992).

We can therefore aver that ES is the "security of those environmental factors – water, soil, vegetation, climate, and whatever others are prime components of a nation's environmental foundations – that ultimately underpin all our socio-economic activities and hence our political stability." Invariably, the components of the environment that can be secured include a) water, b) soil, c) vegetation, and d) the climate. Water includes freshwater and all other forms of waters within a nation's territory such as, lakes, streams, rivers, seas and ocean(s). This includes mineral and natural resources that are contained within the water body. Soil as national resources also encompasses all the land areas of a country such as flatland, desert, valleys, hills and mountain. It also encases all mineral and natural resources contained within a nation's landmass. Vegetation includes all the types of outgrowth that are prevalent within the land and sea area of a nation. These include both food and cash crops. Elements of the climate which impacts on ES are represented by global warming, deforestation, rising water levels, desertification, loss of shore line, flooding, drought, public health, etc. Environmental security therefore encases all the component of a country's plant, animal and human life in interaction with all the elements of the country's environment (i.e. its air, land and water body).

"The threat to a state's environmental security can be intentional or unintentional, direct or indirect and internal or external in cause" (Frederick, 1993). The multifaceted dynamics involved in climate change and security and the nature of their relation is so complicated that it is difficult to generalize or qualify. Good number theorists argue that climate change may increase the risk of armed conflict only under certain conditions and in interaction with several other socio-political factors. Political instability, economic weakness, food insecurity, and mass migration are others that could contribute. Consequently, the threat to security from climate change depends strongly on the specificities of each country and other contextual factors creating as many potential crisis catalysts as there are different climate and socioeconomic environments.

J. Climate Change and Food Security

Osawe, Akhimien and Aigbokhaibho (2015) observed that climate change has become relevant because of its effects on human lives and the future of the world. Specifically, it affects food security, livelihood and social safety very adversely and in so many ways. Climate change refers to a statistically significant variation in either the mean state of the climate or its variability, persisting for an extended period of 30 years. This has been considered as one of the most important global environmental challenge facing humanity with implication for natural ecosystem, agriculture and health (Senapati, 2009). "that market failure, social friction, narrow self-serving coalitions, lack of capital, cognitive limits to ingenuity, and growing costs of research are more likely outcomes of climate change in the developing world. It is this ingenuity gap – or the inability to address resource scarcity by innovation, that eventually makes these countries more prone to instability and conflict. Lower economic productivity both state repressive capacity and public grievances by reducing the state's revenues, weakening its distribution capacity, and,

consequently, lowering state legitimacy” Buhaug et al. (2008). This argument underlines the complex links that are hypothesised in explaining the link between climate change and security.

Many African countries which have their economies largely dependent on weather-sensitive agricultural production system like Nigeria that rely on rain fed agriculture are particularly vulnerable to climate change. Climate change has three major effects Resource scarcity cited as a consequence of climate change when expressed in per capita may stem from two effects, acting in combination or alone: a decrease in volume of a resources due, for example, to low levels of precipitation; and/or higher demand driven by demographic grow (and /or higher per capita consumption). Secondly, Natural disasters are either geologically or climate-related. Concerning climate-related natural disasters, two have the greatest impact on the situation of populations. Thirdly, Rising sea levels have impacted crisis-triggering processes in the coastal areas over the past 40 years in different parts of the continent. Countries in the coastal region are concerned by the phenomenon including creeping erosion (Trémolière, 2010).

Urbanization brings major changes in demand for agricultural products both from increases in urban populations and from changes in their diets and demands. This has brought and continues to bring major changes in how demands are met by the farmers, companies, corporations, and local and national economies who benefit (and who lose out). It can also bring major challenges for urban and rural food security. Climate change poses a particular challenge for management of freshwater resources. Increased flooding, drought, increasing temperatures and desertification and could intensify water-related interstate disputes. Declining quantity and quality may compound socio-economic and development challenges particularly in regard to food security.

Food security has been understood by many as the availability of food in the world market place (FANTA, 2003). However, Osawe et al (2015) noted that global food availability does not translate into household food security because food in the world market may not be affordable to the poor and the vulnerable, especially those living in the unregulated urban areas in developing countries. Interestingly, climate change affects all the four dimensions of food security. That is to say that the availability of food alone does not signify food security because it may not be accessible and affordable to all people and communities at all time.

K. Environmental Degradation and Health Effects

Environmental degradation such as deforestation, soil erosion etc are important factors in determining the quality of life in urban areas and the impact of the urban area on the broader environment. Some urban environmental problems include inadequate water and sanitation, lack of rubbish disposal, and industrial pollution (Kolsrud and Torrey, 1992). Unfortunately, reducing the problems and ameliorating their effects on the urban population are expensive. The health implications of these environmental problems include respiratory infections and other infectious and parasitic

diseases. Beyond the traditional risks of diarrhea disease and respiratory infections in the urban poor and the adaptation of various vector-borne infections to urbanization, the urban environment poses various physicochemical hazards. These include exposure to lead, air pollution, traffic hazards, and the “urban heat island” amplification of heat waves. As the number of urban consumers and their material expectations rise and as the use of fossil fuels increases, cities contribute to the large-scale pressures on the biosphere including climate change (McMichael, 2000).

Capital costs for building improved environmental infrastructure for example, investments in a cleaner public transportation system such as a subway and for building more hospitals and clinics are higher in cities, where wages exceed those paid in rural areas. And urban land prices are much higher because of the competition for space. But not all urban areas have the same kinds of environmental conditions or health problems. Some research suggests that indicators of health problems, such as rates of infant mortality, are higher in cities that are growing rapidly than in those where growth is slower (Brockerhoff, and Brennan, 1998).

L. Environmental Effects of Urban Waste Management

Solid waste management is the one thing just about every city government provides for its residents. While service levels, environmental impacts and costs vary dramatically, solid waste management is arguably the most important municipal service and serves as a prerequisite for other municipal action.

Different agencies have provided their definitions of Municipal Solid Waste: By OECD, (2008): Municipal waste is collected and treated by, or for municipalities. It covers waste from households, including bulky waste, similar waste from commerce and trade, office buildings, institutions and small businesses, yard and garden, street sweepings, contents of litter containers, and market cleansing. Waste from municipal sewage networks and treatment, as well as *municipal construction and demolition is excluded*. By PAHO, (2005): Solid or semi-solid waste generated in population centers including domestic and, commercial wastes, as well as those originated by the small-scale industries and institutions (including hospital and clinics); market street sweeping, and from public cleansing. By IPCC, (2006): The IPCC includes the following in MSW: food waste; garden (yard) and park waste; paper and cardboard; wood; textiles; nappies (disposable diapers); rubber and leather; plastics; metal; glass (and pottery and china); and other (e.g., ash, dirt, dust, soil, electronic waste).

As cities rapidly grow, so does the amount of waste that they generate. Changing human consumption patterns and the changing structure of economic activity generate various types of waste that must be appropriately managed to ensure sustainable development and a decent standard of living for all urban residents. Solid waste management is the one thing just about every city government provides for its residents. While service levels, environmental impacts and costs vary dramatically, solid waste management is arguably the most important municipal service and serves as a prerequisite for other municipal action. With more than two million informal

waste pickers, is now a global business with international markets and extensive supply and transportation networks. Locally, uncollected solid waste contributes to flooding, air pollution, and public health impacts such as respiratory ailments, diarrhea and dengue fever. In lower income country cities solid waste management is usually a city's single largest budgetary item. In low-income countries, in particular, rapid urban growth is putting extraordinary pressure on limited urban resources for the provision of these essential basic services, Further straining capacity in urban management. Furthermore, inappropriate policies have contributed to the growth of life-and health-threatening slums, urban waste management services are often woefully inadequate (UN-HABITAT, 2014).

M. Environmental Sustainability

To understand the problems posed by the current trajectory of this process of urbanization in Africa region, an understanding of the desired outcome – namely, sustainable development – is required. The Brundtland Report defines sustainable development as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.” It has two key concepts: (i) the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and (ii) the idea of limitations imposed by the state of technology and future needs ([Sarre and Smith, 1991](#)). Rogers, Jalal and Boyd identified three pillars of sustainable development: the economic, ecological and socio-cultural or political ([Rogers, Jalal and Boyd, 2008](#)). Applying this concept, sustainable development requires a careful cost-benefit analysis in order to craft development and environmental policies that will reinforce environmental protection while sustainably improving the welfare of local people. In discussing sustainable development it is critical to distinguish the concept of human security from the more conventional concept of national security.

N. Environmental Security and Human Security

Akiyode (2012), states that national security is primary to human and socio-economy development. Nevertheless, the sustainable development of every nation must be anchored on its socio-economic development which will require veritable and practicable human security tenets for its success. Conventional security is dependent on human security, where the latter complement national security by protecting people from range of menaces (Commission on Human Security, 2003). Human security thereby depicts the assurance of life in every society. It is also in the steps towards reducing poverty, achieving economic growth and at the end preventing conflict (Millar, 2006). Human security is knitted with sustainable development. They are co-joined together in an inseparable manner. It is interlaced with the developing concept of environmental security. This is because the concept of environmental security advocates for the security of man/woman in relation to his/her environment (Akiyode, 2010).

O. Human Security

The concept of environmental security first emerged in the Brundtland Commission Report in 1987 but it is first

popularized under the concept of human security in 1994 Human development report of the UNDP. In this report, environmental security mentioned as a component of human security (Fell, 2006). Human security has emerged because traditional concept of national security wasn't sufficient for living in a safer world.

While national security focuses on the defense of the state from external attack, human security is about shielding individuals and communities from any form of violence or insecurity. The terms human security originated in a UNDP, (1994) report which sought to highlight new concerns about global security and the importance of addressing chronic threats to human life. The report criticized narrow concepts of security that focus mainly on state security while paying little attention to the security concerns of ordinary people in their daily lives. Neethling, (2005) defined human security as the “comprehensive view of all threats to human survival, life and dignity and stresses the need to respond to such threats”.

For ordinary people, security is a much more global concept and concern. It means protection from the threat of disease, hunger, unemployment, crime, social conflict, political repression and environmental hazards. Succinctly, human security is an analytical instrument that shifts attention in security analysis from the state to the individual ([UNDP 2006](#)).

First, human security is needed in response to the complexity and the interrelatedness of both old and new security threats – from chronic and persistent poverty to ethnic violence, human trafficking, climate change, health pandemics, international terrorism, and sudden economic and financial downturns. Such threats tend to acquire transnational dimensions and move beyond traditional notions of security that focus on external military aggressions alone.

Second, human security is required as a comprehensive approach that utilizes the wide range of new opportunities to tackle such threats in an integrated manner. Human security threats cannot be tackled through conventional mechanisms alone. Instead, they require a new consensus that acknowledges the linkages and the interdependencies between development, human rights and national security.

Human security and national security should be, and often are, mutually reinforcing. However, it is critical to note that a secure state does not automatically make secure people. Defending citizens from foreign attacks may be an essential condition of their human security, but it is not sufficient.

The CHS, in its final report Human Security Now, defines human security as: “...to protect the vital core of all human lives in ways that enhance human freedoms and human fulfillment. Human security means protecting fundamental freedoms that are the essence of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people's strengths and aspirations. It means creating political, social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood and dignity.”

Human security is also based on a multi-sectoral understanding of insecurities. Therefore, human security

entails a broadened understanding of threats and includes causes of insecurity relating for instance to economic, food, health, environmental, personal, community and political security.

Table: 3, below present a bird eyes view of the types and threats that are associated with them or their interconnectedness in addressing the related insecurity. That is, threats to human security are mutually reinforcing and interconnected in two ways. First, they are interlinked in a domino effect in the sense that each threat feeds on the other. For example, violent conflicts can lead to deprivation and poverty which in turn could lead to resource depletion, infectious diseases, education deficits, etc.

Secondly, threats within, Based on the UNDP Human Development Report of 1994 and the HSU a given country or area can spread into a wider region and have negative externalities for regional and international security. This interdependence has important implications for policy-making as it implies that human insecurities cannot be tackled in isolation through fragmented stand-alone responses. Instead, human security involves comprehensive approaches that stress the need for cooperative and multi-sectoral responses that bring together the agendas of those dealing with security, development and human rights.

Table 3: Possible Types of Human Security Threats

Type of Security	Example of main threats
Economic security	Persistent poverty, unemployment
Food security	Hunger and famine
Health security	Deadly infectious diseases, unsafe food, malnutrition, lack of access to basic health care
Environmental security	Environmental degradation, resource depletion, natural disasters, pollution
Personal security	Physical violence, crime, terrorism, domestic violence, child labour
Community security	Inter-ethnic, religious and other identity based tensions
Political security	Political repression, human rights abuses

Source: UNDP Human Development Report of 1994 and the HSU UN-HSU (2009).

“With human security as the objective, there must be a stronger and more integrated response from communities and states around the globe” (CHS, 2003).

III. CONCLUSION

Urban areas, growing both in population and in land cover, pose threats to the reliability of the continent’s ecosystems and biodiversity at the same time, their growth also create opportunities for conservation. The growing urban populations in Africa are increasing the strain on already inadequate infrastructure with consequent fresh governance challenges. Nonetheless, Africa’s ecosystems can provide foundations for green infrastructure to serve the needs of its urban populations while safeguarding fragile biodiversity. This paper aligns with the view that the socio-economic development of the city will continue to serve as bait to rural

and urban dwellers. Failing to address their needs, could see emerging markets fall into the trap of replacing rural underdevelopment with urban underdevelopment - a destructive scenario that betrays the enormous potential that is so apparent on the African continent. In policy terms, stress concern for public health, nutritional, biomedical and epidemiological policy interventions to improve the nutritional and health status of food insecure individuals and households. Important as they are, their effectiveness is likely to be undermined without a broader definition and understanding of the highly complex challenges of food insecurity and the structural basis of poverty, inequality and food inaccessibility in the rapidly growing urban centres of the continent. A comprehensive and integrated approach to crime prevention should ‘include enhancement of urban safety and security through effective urban planning, design and governance; the development of community-based approaches to enhancing urban safety and security; reduction of key risk factors by focusing on groups most vulnerable to crime; and strengthening of social capital through initiatives that seek to develop the ability of individuals and communities themselves to respond to problems of crime and violence. This integrated approach requires the active involvement of the police, city authorities, communities and other stakeholders. So, urbanization within African context, must see the security-development nexus and the imperative of peace building. Security is not only protecting the integrity of the state but also emphasizes on the sustainability of our environment that provides the basic need of humanity to improve on poverty reduction through enabling policy instruments.

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