



*International Journal of Development and Sustainability*

Online ISSN: 2186-8662 – [www.isdsnet.com/ijds](http://www.isdsnet.com/ijds)

Volume 1 Number 3 (2012): Pages 976-993

ISDS Article ID: IJDS12091805



Special Issue: **Development and Sustainability in Africa – Part 1**

# Urbanization, housing and environment: Megacities of Africa

Olusola Oladapo Makinde \*

*Department of Architecture, Ladoke Akintola University of Technology, Ogbomosh, Oyo State, Nigeria*

## Abstract

This paper takes a look at urbanization, housing and environment in Africa megacities; it enumerates the problems caused by the continued influx of migrant into cities, and state the government, private and public organization effort in solving these challenges. It found out that with proper management, the chilling prospect of a serious deterioration in quality of life could be averted. The report noted that continuing migration from rural to urban areas will expand the number of megacities, and it concedes that megacities are often plagued by environmental deterioration, inadequate housing, traffic congestion, social alienation slums, crime and homelessness. Etc. The paper, observed that megacities are important to a country's economic development, and also provide residents with a satisfying quality of life, if properly managed. The report looked for ways of solving the problems to a significant degree and observed that nearly in all cases, the gaps between demand and supply are management related, and recommends ways of improving the quality of citizen life by provision of adequate and quality housing, reduction in land costs, healthy environment, clean water and sanitation services, security within the city, employment opportunity, bolstering urban farming, and improving public transportation and make sure that the megacities are beneficial to the environment as well as to the national economy. The paper admits that the solutions are far from easy. It is difficult to predict what will happen if there are shortfalls in the financing of megacity growth and management.

**Keywords:** Urbanization, Housing, Environment, Megacities, Africa, Challenges

*Copyright © 2012 by the Author(s) – Published by ISDS LLC, Japan*

*International Society for Development and Sustainability (ISDS)*

**Cite this paper as:** Makinde, O.O. (2012), "Urbanization, housing and environment: Megacities of Africa", *International Journal of Development and Sustainability*, Vol. 1 No. 3, pp. 976-993.

---

\* Corresponding author. E-mail address: [makindeolusola2012@yahoo.com](mailto:makindeolusola2012@yahoo.com)

## 1. Introduction

This paper considers the future of Africa mega-cities and discusses urbanization, housing, environmental policies and planning strategies appropriate for facing the challenges of their urban growth and development. A megacity is usually defined according to the United Nation as a metropolitan area with a total population in excess of 10 million people. Some definitions also set a minimum level for population density (at least 2,000 persons/square km). A megacity can be a single metropolitan area or more metropolitan, depending on the definitions and boundaries being used. The world at present has 25 mega-cities as shown in Table1 and plate2 bellow. The two principal African metropolitan areas being dealt with in this paper are Cairo and Lagos. Concerns about the future of mega-cities in Africa are unique in many respects. This is because of the challenges toward urban development. Secondly, they are expected to grow rapidly for some time to come. Africa is one of the fastest-growing regions in the world in terms of both total population and urbanization. Africa's urban population has been projected to increase by over 200 million between 2000 and 2010 (Rondinelli, 1990). Thirdly, they embody the major tribal, ethnic, and regional diversities that characterize their political systems. Finally, they emerged under world colonialism and settler regimes, exhibit common experiences in political and civil development, and share burdens and hopes that are inextricably linked to Africa's unique position within the world economic and political system.

The increase in the number of megacities causes huge problems, especially in Africa and Asia. Scientists reckon that until 2030 urban growth will mostly take place in developing countries. As a consequence, housing conditions are often very poor. Although most of the world's megacities are located in the developing world, there are three major reasons why the developed world should clearly pay attention to them. First, because what happens there affects the rest of the world; secondly, megacities are key instruments of social and economic development. Thirdly, they offer new market opportunities to both the developing and developed world. Not always, but in a number of cases, a megacity is also the capital of a country or province. The three fastest growing megacities are Mumbai, India; Tokyo, Japan; and Lagos, Nigeria (Ribeiro, 1990). Megacities have both positive and negative features. They generate a higher-than-average proportion of the nation's output of goods and services and are centers of innovation in science, the arts, and lifestyles; contain many of the cultural assets of most country; and offer some of the best opportunities for people to lead full and satisfying lives. My discussion, therefore, while dealing with general housing patterns, environmental processes, and policy directions, will not leave out many city-specific issues and recommendations.

## 2. Urbanisation, housing and environment: megacities of africa

Africa which is more or less as a whole part of the developing world is home to two megacities: Cairo (Egypt) and Lagos (Nigeria). Also identify are five rapidly growing cities: Accra (Ghana), Johannesburg-Pretoria (South Africa), Khartoum (Sudan), Kinshasa-Brazzaville (Democratic Republic of the Congo), and Nairobi (Kenya). Just one example for the rapid growth of these cities: Lagos has grown from 300,000 in 1950 to an estimated 15 million by 2007, and the Nigerian government estimates that city will have expanded to 25

million residents by 2015. Africa has large populations and prospects for huge urban growth. In 2005, Asia had an urbanisation level of 40 percent and Africa 38 percent. In spite of political opposition to urbanisation in many countries, rates of urban growth are expected to remain relatively high over the next 25 years, with marked increases in the urban population of both continents and of the world. In 1950, 14.7 percent of Africa's inhabitants were urban, in 2000 it was 37.2% and by 2015 it is expected to rise to 45.3 percent.

Table1. The twenty-five largest megacities, according to criteria (Brinkhoff, 2010)

<b>Rank</b>	<b>Megacity</b>	<b>Country</b>	<b>Continent</b>	<b>Population</b>	<b>Annual Growth</b>
1	Tokyo	Japan	Asia	34,000,000	0.60%
2	Guangzhou	China	Asia	34,000,000	4.00%
3	Seoul	South Korea	Asia	24,200,000	1.40%
4	Mexico City	Mexico	North America	23,400,000	2.00%
5	Delhi	India	Asia	23,200,000	4.60%
6	Mumbai	India	Asia	22,800,000	2.90%
7	New York City	USA	North America	23,400,000	0.30%
8	São Paulo	Brazil	South America	20,900,000	1.40%
9	Manila	Philippines	Asia	19,600,000	2.50%
10	Shanghai	China	Asia	18,400,000	2.20%
11	Los Angeles	USA	North America	17,900,000	1.10%
12	Osaka	Japan	Asia	16,800,000	0.15%
13	Kolkata	India	Asia	16,300,000	2.00%
14	Karachi	Pakistan	Asia	16,200,000	4.90%
15	Jakarta	Indonesia	Asia	15,400,000	2.00%
16	Cairo	Egypt	Africa	15,200,000	2.60%
17	Moscow	Russia	Europe	13,600,000	0.20%
18	Beijing	China	Asia	13,600,000	2.70%
19	Dhaka	Bangladesh	Asia	13,600,000	4.10%
20	Buenos Aires	Argentina	South America	13,300,000	1.00%
21	Istanbul	Turkey	Europe & Asia	12,800,000	2.80%
22	Tehran	Iran	Asia	12,800,000	2.60%
23	Rio de Janeiro	Brazil	South America	12,600,000	1.00%
24	London	United Kingdom	Europe	12,400,000	0.70%
25	Lagos	Nigeria	Africa	11,800,000	3.20%

UN studies indicated that by 2005, half of the world's population lived in urban areas, a huge jump from the 30 percent living in urban areas in 1950. Some 3.2 billion of the world's 6.5 billion people live in cities today, and the number will increase to 5 billion- an estimated 61 percent of the global population by 2030 (UN Commission on Population and Development). In the cities, where most resources will be consumed, and most pollution and waste will be produced, nearly all of the expected increase in the world's population will

occur in developing countries. Current patterns of urban development and human activity have led to environmental degradation, and have created a threat to continued human existence, and to the sustainability of life on earth. It is possible to make the cities more live able through effective planning (Implementation and Monitoring of planning projects and policies) and community action. Human settlements in developing countries carry a great burden from rapid, unplanned development. Communities face the problems of inadequate funding for basic infrastructure; rapid rate of population growth and relocation, and its consequent slums, urban sprawl, depletion and intensive exploitation of natural resources.

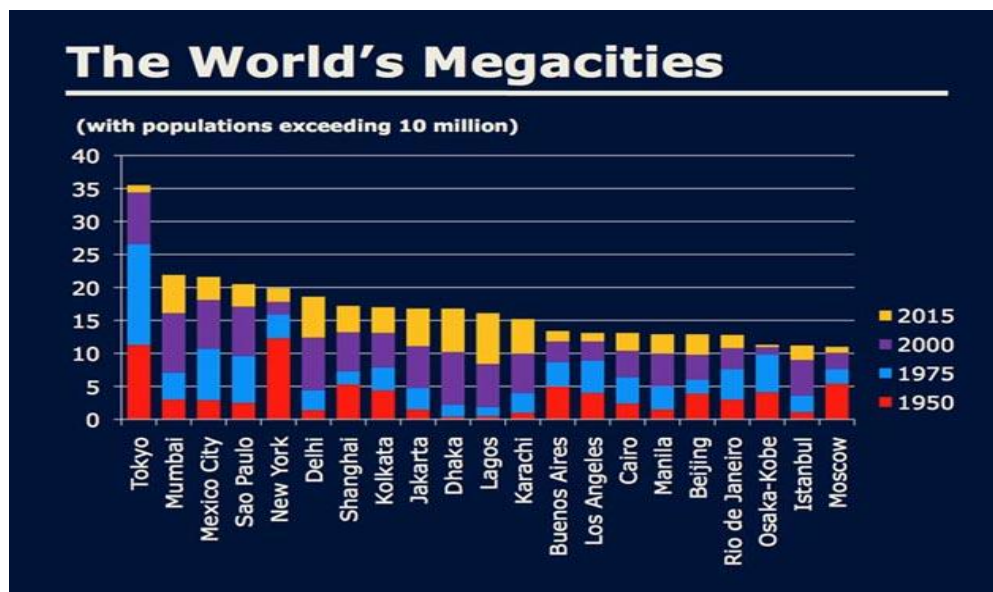


Plate 1. The world megacities (United Nations, 2009)



Plate 2. Lagos, Traffic congestion (Catherine, 2010)



Plate 3. Megacity, mega mess (Tim, 2003)

## 2.1. Megacity uncertain futures

A recent article on mega-cities, Linden (2000), remarks that, four decades ago, cities such as Lagos City and Cairo were relatively attractive places to live, with little traffic along their spacious, cleanly swept boulevards. Now that their populations have quadrupled and their quality of life greatly degenerated, they are held to be the first and second most polluted capitals in the world), their in-migration rates have declined, although people continue to flock to smaller cities. This trend suggests that living conditions in mega-cities can eventually become intolerable. Given the various scenarios of decentralization in response to a combination of market forces and governmental actions, it becomes questionable whether future population growth projections of mega-cities will in fact materialize. Most developing countries perceive the spatial distribution of their population and the resulting primate city patterns as unacceptable, and many governments have attempted to change such patterns through indirect national policies or explicit spatial development strategies.

Recent evidence indicates that at some point in their development, after initial periods of very rapid growth, mega-cities slow down considerably in their population growth rates. Although their populations may continue to increase in absolute terms, they grow at rates lower than those of other intermediate and smaller cities in their systems. Cairo, Calcutta, Mexico City, Buenos Aires, So Paula, and Seoul, among others, are already experiencing such processes, as have mega-cities in advanced countries before them (Renaud, 1981; Richardson, 1989). The United Nations, in fact, has had to revise its large-city population projections

downwards at least three times over the past two decades. Among the cities studied in this paper, Cairo's population growth rate declined from 4.14 per cent in 2000 to about 3.45 per cent by 2007, and its share of national industrial employment declined from 48.0 per cent in 2000 to 35.0 per cent by 2010.

If such trends continue, the processes and problems of concentration at both national and regional levels may eventually give way to the reverse processes and problems of de-concentration and dispersion. This is clearly contingent on active governmental efforts as well as the market processes that tend to spread development outside the mega-cities. In fact, de-concentration within the core regions (largest metropolitan or mega-city regions) would likely precede and signal the onset of a wider process of decentralization within their national urban systems (El-Shakhs, 1992). The fact remains that no one can be certain exactly how big African mega-cities are now, or how rapidly they are expanding or going to expand in the future. However, mega-cities in the LDCs in general, and in Africa in particular, will likely continue to grow rapidly in the foreseeable future. In the process, such growth expands the city's influence and functions over a much wider region, including other cities and rural settlements and a frequently uncontrolled and unplanned periphery. This requires a redefinition of the nature and structure of future mega-cities. Current administrative and political boundaries and definitions of mega-cities in effect lose their meaning. It is equally clear that the pressures, demands, and challenges facing urban governments and planners in mega-cities, as well as their capacity to respond to them, are in large part determined by national and international forces and pressures beyond their control.

### **3. Challenges of megacities**

In many poor countries, overpopulated slums exhibit high rates of disease due to unsanitary conditions, malnutrition, and lack of basic health care. Many countries in the developing world neither have the legal nor the financial capacity to deal with the rapid growth of mega cities. Approximately one-sixth of today's world's population now live in shanty towns, which are seen as "breeding grounds" for social problems such as crime, drug addiction, alcoholism, poverty and unemployment. The process of urbanization presents enormous challenges to governments, social and environmental planners, architects, engineers and the inhabitants of the megacities. Just one example: The London population grew from one million to eight million people in 150 years, while the population of Lagos City grew from 300,000 to over 15 million people in only 50 years.

The increasing number of people living in cities creates demand, in areas such as housing and services. The destruction of our environment and poverty are two other concerns, which city administrations have to take care of, as especially the poor do not have the necessary financial background to tackle these problems. Megacities influence a variety of living conditions for citizens. Although traffic jams, poor air quality and increasing health risks, make life in megacities more difficult, people continue to choose to live there. Therefore it is essential, that more government programs are implemented in order to help improve living conditions for the inhabitants of metropolitan areas. Nevertheless, megacities also offer great chances: Lagos City and Cairo produce around 50% of the income of their countries.

### 3.1. Some challenges faced by megacities

#### 3.1.1. *Slum*

According to the United Nations, the proportion of urban dwellers living in slums decreased from 47 percent to 37 percent in the developing world between 1990 and 2005. However, due to rising population, the number of slum dwellers is rising. The majority of these numbers come from the fringes of urban margins, located in legal and illegal settlements with insufficient housing and sanitation. This has been caused by massive migration, both internal and transnational, into cities, which has caused growth rates of urban populations and spatial concentrations not seen before in history. These issues raise problems in the political, social, and economic arenas. Slum dwellers often have minimal or no access to education, healthcare, or the urban economy.

#### 3.1.2. *Traffic congestion*

Traffic congestion is a condition on road networks that occurs as use increases, and is characterized by slower speeds, longer trip times, and increased vehicular queuing. One of the megacities, which have huge problems with public transport, is New Delhi. Even though the number of buses has been tripled since the mid-1980ies, the number of consumers, who went from three million to nine million, is still a big challenge. Another megacity with huge transportation problems is Mexico City, where 30 million residents are commuting daily. Only 16% of them use private transportation. During normal rush hours, traffic jams are part of people's daily lives, mostly due to the poor road system. Traffic jams are just as stressful in Tokyo, where the increase in economic growth has created an enormous increase in traffic. Although the facilities, that transport commuters, are among the best in the world, the increasing amounts of commuters pack clean and efficient trains, subways and buses. As Japan is also a leading car manufacturing nation, Tokyo is full of cars, which need more and more highways.

#### 3.1.3. *Urban sprawl*

Urban sprawl, also known as suburban sprawl, is a multifaceted concept, which includes the spreading outwards of a city and its suburbs to its outskirts to low-density, auto-dependent development on rural land, with associated design features that encourage car dependency. As a result, some critics argue that sprawl has certain disadvantages, including, longer transport distances to work, high car dependence, and inadequate facilities e.g. health, cultural. Etc. and higher per-person infrastructure costs.

#### 3.1.4. *Gentrification*

Gentrification and urban gentrification denote the socio-cultural changes in an area resulting from wealthier people buying housing property in a less prosperous community. Consequent to gentrification, the average income increases and average family size decreases in the community, which may result in the informal

economic eviction of the lower-income residents, because of increased rents, house prices, and property taxes, this type of population change reduces industrial land use when it is redeveloped for commerce and housing. In addition, new businesses, catering to a more affluent base of consumers, tend to move into formerly blighted areas, further increasing the appeal to more affluent migrants and decreasing the accessibility to less wealthy natives.

### *3.1.5. Health*

Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or damages the natural environment into the atmosphere. Many urban areas have significant problems with smog, a type of air pollution derived from vehicular emission from internal combustion engines and industrial fumes that react in the atmosphere with sunlight to form secondary pollutants that also combine with the primary emissions to form photochemical smog. Smog is also caused by large amounts of coal burning, which creates a mixture of smoke and sulfur dioxide. Air pollution, which is mainly caused by car / airplane emissions and factories, represents a big challenge within city boundaries. Especially, ground-level ozone is an air pollutant with harmful effects on the respiratory systems of people and animals. As a consequence, many people, esp. children, suffer from asthma and several allergies.

The combination of high population density, poverty, and limited resources makes megacities in the developing world an ideal environment for the incubation of all kinds of diseases, from cholera to tuberculosis to sexually transmitted infections, which in an age of rapid transportation can almost instantaneously be transferred to the rest of the world. Some of the largest cities in the world have some of the worst experiences with these topics. The most common diseases include respiratory ailments, fevers, gastrointestinal infections, diarrheas and dysentery. Many people die from these diseases, not being aware that they are infected, and thus unknowingly passing the infection on to other people. In Africa, the major factor of health in Cairo is related to air pollution. The main part of air pollution is caused by traffic jams. The carbon monoxide level in some areas is three or four times higher than what is considered dangerous. Northern and southern winds drive toxic fumes from the lead zinc and cement factories into the city.

### *3.1.6. Environment*

Megacities influence a variety of living conditions for citizens. Although traffic jams are getting worse, air quality is poor and health risks are increasing, people continue to choose living in cities. Therefore, city administrations as well as national governments have to implement programs, which aim at solving environment problems and at improving living conditions in metropolitan areas. Part of the concern is the climate, which has changed dramatically over the last 100 years. Greenhouse gas emissions from industry, transport and agriculture are very likely the main cause of recently observed global warming. As a joint initiative of countries worldwide, the Kyoto Protocol aims at achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with



the climate system" (Article 2). Another part of the concern is waste management. The disposal of waste in a huge city requires enormous logistics. Cairo for example has to remove masses of waste every day. Due to financial issues, the city has no organized collection of waste removal. As pollution causes numerous health problems, it is essential that city administrations as well as national governments try to reduce the amount of greenhouse gases in order to improve living conditions.

### *3.1.7. Energy*

Megacities are leading drivers of economic and environmental change. Due to rapid population growth and booming economies, consumption of energy as well as of any other kind of resource in emerging megacities is constantly growing. Energy supply is not only problematic due to a lack of infrastructure. In many countries, private investors compete with government agencies in the field of energy supply. As fossil fuels still provide much of the energy in megacities, especially in the developing countries, emissions of greenhouse gases and air pollutants such as sulfur and nitrogen oxides could dramatically increase. The motorization of urban environments all around the world has produced local smog in hundreds of cities. Most of the emissions in cities can be traced back to inefficient energy and insulation systems. Inefficient consumption of natural resources is an imminent threat to future economic growth and general wealth. That is why energy-efficient technologies and products which make use of renewable energy resources could be the answer to people's cry for more energy.

### *3.1.8. Crime rate*

Megacities, both in the developed and the developing world, are places where social unrest often originates. Such unrest affects the rest of the world. The stresses of slum life manifest themselves in numerous ways - drugs trafficking and consumption, burglary, family violence, diseases, fires, and hopelessness. All of them can easily frustrate people and furthermore destroy even the most ambitious municipal schemes. Vulnerability to terrorism, natural hazards, ecological disasters, war conditions, and food scarcity are also growing in all megacities worldwide. Attacks against embassies, businesses, and travelers directly affect the developed world - even if an attack takes place in the developing world - in the form of tourists and travelling business people, who may fall victims to all kinds of crimes. Exactly those qualities, which make a big city attractive for its inhabitants, can also make it extremely vulnerable and thus a main target for terrorists. A good infrastructure on the one hand evokes the hatred and anger of the fundamentalists, and on the other hand offers them a perfect place to hide. Therefore, many inhabitants of big cities are nowadays more interested in a good monitoring system of public places than in privacy protection. In some cases, cameras are installed in public places

### *3.1.9. Housing and homelessness*

Megacities often have significant numbers of homeless people. The actual legal definition of homelessness varies from country to country, or among different entities or institutions in the same country or region.

Employment and educational opportunities are the main attraction of urban centers. But people, who hope to find a better life there, are often disappointed, as overpopulation puts a huge strain on cities' infrastructures and their ability to provide basic necessities like clean water and decent housing. The staggering rate of urbanization of the 20th and 21st centuries creates its own problems. Many rural migrants who come to Lagos fail to find adequate work, and therefore cannot afford decent housing. Nearly everywhere, where a spare piece of land is available in Lagos, slums emerge along the side of train tracks and highways, and even on sidewalks. Many say addressing land and housing issues should be the city's top priority. The World Bank says 54% of Lagos's 15 million residents live in slums. The problem of slums caused by migration is shared by urban centers throughout the developing world.

#### 4. Case study I: Lagos as a megacity

A megacity is a status conferred by the United Nations and the international system on cities with 10 million persons and above. It is a city with complex functions, and with ability to influence regional and global economies. The Lagos mega-city region is largely the product of the current urbanization and globalisation process in Nigeria, with its promotion of the free market economy, information and communication technology, interstate and transnational corporations and high mobility of financial and human resources. In 1950, with just 288,000 people, Lagos wasn't even a speck on the map of the largest urban centers. Today, the rapidly growing city of 15 million in Africa's most populous country is on its way to becoming the third-largest city in the world. By 2015, the Population Reference Bureau estimates Lagos will reach number three status with a population hovering somewhere around 23.2 million people. The discovery of oil in the 1950s and subsequent oil boom of the 1970s helped by the worldwide oil crisis of that era encouraged waves of migrants to seek their fortunes in the city. In the 1980s and 1990s, the Mega-Cities Project reports that the city grew by more than 300,000 persons per year, despite the 1981 world recession. According to Ayeni, (1981) it was observed that the Lagos government was having problems toward the supply of basic facilities such as water, electricity, good road, quality housing and other basic household amenities. Air pollution was identified has a persistent problem in this city due to smoke-generating vehicles and diesel generators. Public transportation methods have lots of short comings particularly the defective roadways which were poorly constructed and maintained. Others include: frequent roads flooding, potholes, car accidents, inadequate subway and hardly any intra-city rail system that results in disordered and greenhouse gasses from traffic jams. In the area of water quality the city doesn't develop. Flooding is an additional major problem which is due to unapproved buildings on waterways and the disposal of solid waste arbitrarily often in prohibited dumps that block the watercourse which eventually results in overflow. Despite all these shot falls (crime, poverty and chaos) the city still grows in population. The Lagos State Traffic Management Authority was established in year 2000 to monitor and patrol traffic jams toward reducing transportation problems and in year 2003 Lagos city was chosen as one of the cities to launch the New Partnership for Africa's Development (NEPAD) Sustainable Cities Program. The UN will collaborate with Lagos government to handle the fear of its megacity status (Motavalli, 2005).

#### 4.1. Efforts toward ameliorating Lagos megacity challenges

A committee was set up to look at the state of security, sanitation and transportation within the city. To identify problems relating to security, traffic, transportation management, water supply, land use planning, infrastructure development and maintenance, urban renewal and slum upgrading, and to identify the management, information, organizational framework and funding and Propose timeframe for the implementation. Also to formulate policies relating to infrastructure development; and advise on private sector participation. Comprehensive urban regeneration programmed was also launched in 2001 based on the World Bank Study (1995). World Bank assisted project being presently managed by the Lagos Metropolitan Development and Governance Project (LMDGP). The scope of the project included solid waste management, drainage services, potable water supply, roads construction and rehabilitation, and institutional support and the upgrading of distinct slums.

Communities' inclusion as part of the urban renewal process which allows communities to priorities their needs and inform the executing agency. Communities' slum upgrading studies are being continuously undertaken by the Government for the improvement of identified communities. The impact of these interventions on the social context and environmentally degraded areas, and the institutional reforms of the state and local government capacity will re-establish them as functioning hubs of the city.

##### 4.1.1. Toward solving urban issues

The Nigerian Institute of Town Planners (NITP) at national, state and local chapter levels has on-going programmed to enlighten the government and the public on planning policies, financing, monitoring and implementation. The Government and the consultants on development projects organize stakeholders' forum to include communities in the planning and decision making process to mitigate the already identified environmental problems. A bottom-top approach rather than the traditional top-bottom approach is now in place at the local level, the state level and the federal level. At the local level, planning is brought to the grass roots through public enlightenment programs. At the state level, policies execution and also implementations of development programs such as public transport.

## 5. Case study II: Cairo as a megacity

Cairo needs no introduction to most readers. It is the largest city in both Africa and the Middle East, capital of Egypt for over a thousand years, and an important political and cultural focal point in the region. The population of Greater Cairo is currently around 14-15 million inhabitants, which represents almost a quarter of Egypt's population of 67 million inhabitants and almost half of the country's urban population. Cairo is a "primate city" and has maintained its urban dominance over the last few decades. The second largest city, Alexandria, is only 30 per cent the size of Cairo and below this there is a grouping of provincial towns in the 200,000 to 400,000 population range, none of which contains even 5 per cent of Cairo's population. The face of "modern" Cairo began to appear in the late 1860's. Only 300,000 people lived in the city then, half as many

as in the 14th century, when it was the most populous capital in all of Europe and the Middle East until the plague of 1326. In the 1860's and early 1870's, the new Suez Canal and the Cairo- Alexandria railroad reinforced Cairo's role as an East-West trade center of the early industrial age.

Cairo is one of the most important megacities in the whole world. It is a city that has a great increase in population with the beginning of the year 2000. It is becoming more pivotal because it determine how there citizen live on this planet on that new century. This century is not the century of small areas. It is of huge cities, which have significant and complicated problems that have to be resolved by constructing well-planned projects. As the capital and primate city of Egypt, the economy of Greater Cairo largely reflects that of the nation and, indeed it probably contributes half of the Gross Domestic Product.

In spite of many calls for decentralization of the bureaucracy, government is heavily concentrated in the capital, and it also contains most of the higher-order private sector services. With the establishment of industrial zones in the new towns, Cairo has also become the focal point of most modern manufacturing. Finally, Cairo has a well-developed tourist economy, catering both to Western tourists and Gulf Arabs, and it also enjoys an important position as a regional Centre for conferences. Cairo has many crucial problems, these include: overpopulation, traffic problems, air pollution, housing, high crime rate, health problem, slums, land use, poverty employment and all kind of pollution are notable, consequently; it has to be considered as a megacity. In my point of view, these are very weighty problem that is capable of defining Cairo as a megacity Status.



Plate 4. Lagos, capital of Nigeria (Catherine, 2010)



Plate 5. Cairo, capital of Egypt (Tim, 2003)

## 6. Panacea to the problems faced by African megacities

### 6.1. Construction of new housing units

The construction of new housing units in African cities remains the essential component leading the way in the state development. The ability to provide modern accommodations for millions of aspiring urban dwellers has also directly prevented the proliferation of slums and large-scale shantytowns.

### 6.2. Development of public transportation

The ability to move efficiently through an urban area is paramount to opportunity and quality of life. When one thinks of megacities such as African Cities, automobile gridlock often comes to mind. The development of public transportation, including extensive underground subway networks, ensures citizens will have other options to move around besides motor vehicles. The more connected by different forms of a transportation a city is, the more opportunity people have to live where they want and have access to a wider geographic range of job options.

### 6.3. Land-use and zoning flexibility

The often-overlooked reality of zoning and land-use regulations plays a much greater role in the shaping the character of megacities than it is given credit for. The cities should be limited to construction of low-rise buildings that can lead to the growth of overcrowded sprawling slums. Cities, should allow for high rise building. Cities should promoting construction of high-rise buildings that could leave room for ample green spaces. Furthermore, cities should not be limited by 'urban growth boundaries' and most allow development

to occur on newly annexed land outside of traditional urban cores. Even traditionally 'dense' cities should allow for new development outside of their traditional centers such as downtown areas. Critically, these nominally suburban or even "exurban" expansions should not be mere bedroom community; they should frequently be attached with intense economic growth which includes commercial, industrial and technical development.

#### 6.4. Providing economic incentives with special trade zones ('special economic zone')

There should be rapid economic development in cities, the cities must provide enabling environment for domestic and foreign investment. The winners will ultimately be cities that are most business friendly and offer incentives like tax breaks to companies looking to set up operations. Cities are to establish special 'economic and trade zones', usually outside of traditional urban cores. These will be economically successful cities, the zone are Special economic and trade zones that are not actual cities, but part of a larger city. They will thrive because they will be built on more affordable land on urban peripheries, Opening up more investment for construction of state-of-the-art manufacturing and R&D facilities.

#### 6.5. Willingness to learn from outside experts

When it comes to political issues at the Central Government level, it is clear that African countries do not want to be told how to run its country by outside diplomats and foreign policy experts. Yet at the municipal level, Government and business leaders should earnestly open to listening to experts in planning and development from outside its borders. One only needs to take a look at the countless architecture and urban planning practices from the West, Singapore and even Taiwan. This open exchange of ideas that will allows best practices to come to fruition.

#### 6.6. Models of sustainable development

The high rates of land and energy consumption, the severe pollution of air, water and soil at present and the ongoing social fragmentation are not in compliance with the aims of a sustainable development. To cope with this risks and challenges, considering the undammed growth, a spatial concept with a decentralized structure should be under lied that includes the urban and the surrounding rural areas. A regional settlement structure has to be designed which set up on the elements density, mixing of different land uses, poly centrality and capacity of public mass transport systems and public facilities. These are the prerequisites for achieving the ecological, social and economic targets of sustainability. The priority must be to slow down the urban growth. Therefore the living conditions and the economic basis in the rural areas must be strengthened.

#### 6.7. Long-term land use and land management strategies

A long-term land use and land management strategies need reliable economic conditions and authoritative legal regulations. Therefore, considering land policy, fiscal, social and ecological aspects. A sustainable urban

development is required, to prevent land fragmentation and also social fragmentation. A comprehensive urban planning has to be developed and monitoring system must be established. Therefore, building land is one of the long-term tasks to be addressed by the local authorities.

To improve the housing situation at long-term, first the problems of land management and land use have to be solved. This requires legal instruments for more secure access to land and planning techniques for urban development and facilities. This frame must be provided at the national level, providing sufficient urban land for housing and other purposes at a reasonable price and also the indispensable technical infrastructure. Urban land manager must be capable of evolving a coherent vision of the city's future and also mobilizing private investment both for housing and for urban facilities and services.

#### 6.8. Cost and energy saving facilities and innovative transport systems

The provision of infrastructure for the purposes of transport, communications, energy, drinking water, sewage purification and solid waste treatment contribute to the economic development, make the territorial areas more competitive and attractive and promote regional economic integration and social cohesion. To influence city-dwellers' living conditions and economic development the public authorities have to be involved in producing and managing technical urban infrastructure facilities and services such as roads, transport, electricity, telecommunications, water, sanitation and waste treatment and also social facilities and services in the strategic fields of education and health. The systematic extension of public transport systems into the surrounding is necessary to slow down the migration from the rural areas. A rail transit network with different speed and high capacities, passenger transit pivots and parking lots are important elements of an efficient mass public transport system. For example, Shanghai has designed an urban transportation plan which consists of high speed rail lines, urban metro lines and urban light railways in order to limit the quantum of cars, motorcycles and powered bicycles. By means of high-tech, the research and development of intelligence transit systems should be adopted. This is at the same time a policy that reduces energy demand and also the emission of greenhouse gas. But in many cases efficient public mass transport systems are inevitable for these cities.

#### 6.9. Good governance

With the ongoing growth of urban megacities, good governance within the cities becomes highly complex. One of the main problems in governing megacities is their big extension and high population. These cities have to co-ordinate their activities through local units. To shape policy in a local way, it will be necessary to divide megacities into manageable territorial areas and to decentralize some responsibilities to the local actors and initiatives. At the same time it is important to ensure and to organise solidarity between all urban territorial areas and the rural surroundings and the central government. But there is still a need for city or even regional bodies responsible for city-wide or region-wide tasks like mass transit, waste disposal or structural planning. This strategy is largely determined by the objectives and requirements of city-economic and budgetary balances, by the land use planning strategy, the financial policy, credit regulations, education, health policy, land, and tax legislation. People must assume their responsibilities as citizens by participating

in decision-making and implementation. No foreign model of decentralization is transferable and it is possible for countries to be enriched by other experiences and best practices, but they have to develop their own appropriate model.

#### 6.10. Environmental sustainability

African mega cities should build more public transit and developing sustainable building technologies and clean-energy alternatives such as solar, wind, and biomass which should be well founded by government.

#### 6.11. Economy

Sustainable urban development will depend on the creation and maintenance of efficient land and property markets; the development of more and better housing finance options; a greater emphasis on municipal finance and institution building; strengthening of urban utility systems; a growing interest in the preservation of cultural assets and heritage, and the responsiveness to emergencies such as earthquakes and flooding.

### **7. Conclusion**

Megacities and urban agglomerations are complex and dynamic systems that reproduce the interaction between urbanization, housing, socio-economic and environmental processes at a local and global scale. Despite of their importance for economic growth, social well-being and sustainability of present and future generations, megacities have not received the level of attention they require. Megacities cover a diverse and broad range of issues that required the urgent attention of the government, especially, where such cities are located within Africa continent. While no single set of best practices would enable all cities to successfully address the challenges of poverty and environmental degradation, the report focuses on areas where urban leadership can have huge benefits for the planet and human development. These include: providing quality housing, healthy environment, clean water and good sanitation services, security within the city, employment opportunity, to the urban poor, bolstering urban farming, and improving public transportation. Additionally, the report recommends devoting more resources to information gathering on urban issues so that city, national, and international entities can better assess development priorities.

Cities must put poverty reduction strategies in place, develop social safety nets and help the poor through vulnerable periods. In the long term there is a need to shape appropriately located development, improve public transport, mitigate environmental health risks, anticipate possible disasters, and invest in bulk infrastructure capacity. Cities need bold, proactive interventions in which each stakeholder is prepared and to think outside the box of their traditional powers and functions, and work collectively to accomplish agreed city strategies.



## References

- Ayeni, B. (1981), "Lagos: Problems and Planning in Third World Cities", St. Martin's Press, New York.
- Batley, R. (1993), "Political Control of Urban Planning and Management", *Managing Fast Growing Cities: New Approaches to Urban Planning and Management*. Longman, London, pp. 176-206.
- Brinkhoff, T. (2010), "The Principal Agglomerations of the World Wikipedia", Free Encyclopedia.
- Catherine, K.G. (2010), "Nigeria: Challenges of Lagos as a Mega-City", National Policy Institute - Wikipedia, the free encyclopedia.
- Davey, K. (1993), "The Institutional Framework for Planning and the Role of Local Government", *Managing Fast Growing Cities: New Approaches to Urban Planning and Management*. Longman, London, pp. 153-175.
- El-Shakhs, S. (1971), "National Factors in the Development of Cairo", *Town Planning Review*, Vol. 42 No 3, pp. 233-249.
- El-Shakhs, S. (1982), "Regional Development and National Integration in the Third World", in Fainstein, N. and Fainstein, S. (Ed.), *Urban Policy under Capitalism*. Sage, Beverly Hills, Calif., pp. 137-158.
- Fainstein, S. and Markusen, A. (1993), "The Urban Policy Challenge: Integrating Across Social and Economic Development Policy", *North Carolina Law Review*.
- Gilbert, A. and Gugler, J. (1992), "Cities, Poverty and Development: Urbanization in the Third World", Oxford University Press, New York.
- Halla, F. (1994), "A Coordinating and Participatory Approach to Managing Cities", *Habitat International*, Vol.18 No 3, pp. 19-31.
- Kasarda, J.D. and Rondinelli, D.A. (1990), "Mega-Cities, the Environment, and Private Enterprise: Toward Ecologically Sustainable Urbanization Environmental", *Impact Assessment Review*, Vol.10, pp. 393-404.
- Linden, E. (1993), "Mega-cities", *Time Magazine*, 11 January, pp. 141-2,
- Onibokun, A.G. (1989), "Urban Growth and Urban Management in Nigeria", In: Stren, R.E. and White, R.R, (Ed.), *African Cities in Crisis: Managing Rapid Urban Growth*, Westview Press, Boulder, Colo., pp. 68-111.
- Onibokun, A.G. and Agbola, T. (1994), "Mega-Cities Urban Environmental Problems And Community Based Initiatives". Unpublished paper: Mega-Cities Project, New York.
- Renaud, B. (1981), "National Urbanization Policy in Developing Countries", Oxford University Press, New York.
- Richardson, H. (1989), "The Big Bad City: Mega-City Myth" *Third World Planning Review*, Vol. 11 No 3, pp. 55-372.
- Rondinelli, D.A. (1988), "Giant and Secondary City Growth in Africa", in Dogan, M. and Kasarda, J. (Ed.), *A World of Giant Cities, the Metropolis Era*, Vol.1.
- Sivaramakrishnan, K.G. and Green, L. (1986), "Metropolitan Management: The Asian Experience", Oxford University Press, New York.

Tacconi, L. and Tisdall C. (1993), "Holistic sustainable development", Implications for planning processes, foreign aid and support for research, *Third World Planning Review*, Vol. 15 No. 4, pp. 411-428.

Tim, M. (2003), "Cairo Megacity", Travel Guides Hotel Reviews; *virtualtourist.com*

United Nation, (2009), "World Urbanization Prospects", *the 2009 Revision*, New York.

White, R.R. (1989), "The Influence of Environmental and Economic Factors on the Urban Crisis", in Stren, R.E. and White, R.R. (Ed.), *African Cities in Crisis*, Westview Press, Boulder, Colo.