AN EMPIRICAL ASSESSMENT OF THE STATE OF ENVIRONMENTAL MANAGEMENT IN NIGERIA CAPITAL CITIES: EXAMINING CORE INDICATORS OF AN ENVIRONMENT-FRIENDLY CITY

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Abstract

It has been observed that daily interactions of millions of Nigeria population estimated at 186.5 million by PRB (2016) with their immediate environment have serious implications on her landscape, environmental aesthetics and atmospheric well-being. Urban decadence, proliferation of slums, deforestation, congestion and all forms of pollution are some of the resultant effects of man's interaction with his environment which is having adverse effects on Nigerian major cities. Increased industrial activities have engendered more carbon emission in the country and it is estimated at 26.1 million tons per annum, the fourth highest in Africa (PRB, 2016). This paper examines the state of environmental management in the state capital cities of Nigeria in the light of five research-proven indicators of environment-friendly cities. The paper applies qualitative method using the indicators to examine which state capitals are really environment-friendly out of the 37, including the Federal Capital Territory (FCT), Abuja, in the country. Results show that only five state capitals out of 37 can be referred to as environment-friendly cities in Nigeria. Recommendations that can spur others to follow in their footsteps by adopting global best practices that makes a settlement environment-friendly were given.

Keywords: environment-friendly, cities, indicators, Nigeria

1. INTRODUCTION

In 2011, the world population hit 7 billion (Population Reference Bureau, 2013). The world is undergoing the largest wave of urban growth in history: already, over half the world's population is living in towns and cities, and by 2030 it will increase to 5 billion, with urban growth concentrated in Africa and Asia (United Nations Organization, 2011). Africa is currently experiencing the highest rate of urbanization, with a four-fold increase

in urban dwellers anticipated between 1990 and 2020, to reach 500 million people (Babanyara, et al. 2010). Nigeria's situation is not far from this because according to 2006 Census, more than seven cities in Nigeria have population exceeding 1 million while the populations of her two largest metropolitan cities-Lagos and Kano, are currently over 9 million each. Furthermore, the proportion of population living in urban centres in Nigeria rose from 15 per cent in 1960 to 43.3 per cent in year 2000 (FGN, 2009). This rose to 48 per cent in 2006 and in 2013 it was about 50 per cent and is projected to rise to 60 per cent by the end of 2015 (PRB, 2013; Babanyara, et al. 2010). The number of urban centres with population of 20,000 or more increased from 56 in 1953 to 359 in 1991 and 450 in 2000 (Oyeleye, 2001). Presently, there are more than a thousand of Nigeria settlements that has over 20, 000 inhabitants (FGN, 2009). Since the city is regarded as the engine of growth which propels national economic development; the effects and problems emanating from cities' uncontrolled population increases have undoubtedly constituted critical challenges to sustainable urban development. A recent UN Report on Nigeria indicates that the annual urban population growth rate is 5.8 per cent resulting in a total urban population of 62.66 million or 43 per cent of the total population (UN-Habitat, 2007).

These explosive rates of growth have not only progressively complicated and exacerbated inter-related problems of human settlements and environment, but have also greatly accelerated poverty (Adesoji, 2011). That is why poverty once known with countryside or local environments in Nigeria is now also visible in towns and cities. Also, with population density of 549 persons per square kilometre of arable land in 2016 and carbon emissions of 26.1 million tons as of 2013 (the highest in West Africa), Nigeria remains one of the deadliest and most environment-unfriendly places for human habitation (PRB, 2016). As a matter of fact, only South Africa (128.5 million tons), Egypt (58.1million tons) and Algeria (36.6 million tons) releases more carbon into the atmosphere than Nigeria in the entire Africa (PRB, 2016).

Moreover, rural-urban migration which is the most prominent of all the forms of internal migration in Nigeria is another factor contributing to urban congestion in Nigeria. One main implication of rural-urban migration in Nigeria is the reduction of man-power in farming activities in the rural environments from where most of the staple foods are produced and consequent overcrowding, unemployment or underemployment and increase in land values and crime waves in her urban centres. The rural areas of Nigeria used to be the highest supplier of human labour especially in agriculture, but the trend changed since the discovery of oil in the 1970s. With flamboyant lifestyles associated with white collar jobs in cities after oil boom in Nigeria, agricultural pursuits became unattractive to the rural peasants, especially the youth. Consequently, they systematically abandoned farming by selling or mortgaging their farmlands and moved out of rural environment for frivolous urban life, wage labour and other get-rich quick jobs. These constitute mainly slum dwellers in Nigeria cities; 40 to 60 per cent of who have inadequate sanitation and are the most vulnerable to sanitation-related diseases because they are the most exposed to ill-managed human wastes (Adekola, et al. 2014; Paterson et al. 2007; Tipping et al. 2005). Thus, Nigerian cities of today face numerous problems such as uncontrolled urbanization, deteriorating environment, urban decay, un-cleared refuse, flooding, erosion, pollution of all forms inter alia. This congestion exerts pressure on the environment as people look for means of livelihood. It also increases global warming as high rate of deforestation for developmental activities are always going on and the health and socio-economic effects of all these on the environment are better-imagined.

Human beings use the environment in three basic ways. One, as a resource bank- the environment supplies them with raw materials needed to maintain their existence as well as their social and technological structures. Two, as a habitat – people require more space per individual than any other species and three, as sink for wastes- human beings produce more waste than other species (Babanyara, 2010; Ndahlahwa, 2005). As people migrate to towns and urbanization increases, these three all-important usages of the environment manifest themselves in various dimensions both positively and negatively. The most common challenges of rapid urban growth in Nigeria include urban congestion, increase in crime waves, unemployment, massive deforestation, increase in industrial activities leading to increasing greenhouse effect and particularly environmental degradation which is the crust of this paper. When urban centres grow without proper planning, it causes growth of slums and a typical slum in Nigeria has certain basic challenges one of which is lack of drainage. One major consequence of this is flooding.

Nigeria has experienced series of flooding in recent times. On 2nd July 2012, many Nigerian coastal and inland cities experienced heavy downpour for several hours and residents of Lagos were gasping for breath due to the flooding that ensued. There were gridlocks on major roads, causing people to cancel or postpone appointments due to inability to move and thousands of stranded commuters had to pay increased fares to the few bus drivers who were willing to risk travelling on the roads. Also in July 2012, flooding in Ibadan metropolis caused some residents of popular quarters which were badly affected such as Challenge, Oke-

Ayo and Eleyele to flee their residences in order to save their lives while a few bridges collapsed. At least 39 people were killed this same July 2012 due to flooding in Jos, the capital of Plateau State. Heavy rainfall caused the Lamingo Dam near Jos to overflow sweeping across a number of neighbourhoods and approximately 200 homes were submerged while roads and bridges were washed away, obstructing relief efforts. Over 12,000 people were affected by the flooding in six districts of the State, while hundreds were rendered homeless. Besides destruction to lives and property, flooding pollutes all water tables which may cause outbreak of epidemic such as cholera. All these are unnecessary evils that can simply be avoided if there is proper environmental management especially in the areas of good drainage system and proper waste disposal. Series of illegal buildings in unapproved places and careless throwing of solid wastes around exacerbated the effect of the flooding. Also, if people are environment-sensitive and friendly, excessive rural-urban migration is checked and there is proper drainage, Nigeria may not suffer as such from the nasty effects of flooding as we have today.

From the foregoing, being environment-friendly in the present day Nigeria is a not negotiable as the consequences of improper environmental management as briefly discussed above are better imagined. There are many big cities in Nigeria, but this paper shall deal with her state capitals, including the Federal Capital Territory (FCT), Abuja. These shall serve as proxy for how other cities in Nigeria should be managed and to check whether they are environment-friendly. None of these cities has less than a million population and most discussions in this paper shall revolve around them. The main objective of this paper therefore is to find out the state of environmental management in Nigeria state capitals as a proxy for other cities. It is to know how environment-friendly Nigerian cities are based on certain carefully chosen and research proven criteria set by the authors. This will severe as a springboard for other cities in Nigeria who want to save her environment from the excruciating effect of urban congestion.

2. LITERATURE REVIEW

Taking issues of environmental management serious is a recent development in Nigeria. Issues relating to environmental consciousness started in the 1970s during General Buhari/Idiagbon's military rule. The regime started War Against Indiscipline (WAI) in 1977. People all over the country would stay indoors and take care of their immediate environment and clear their drainages every last Saturday of the month between the hours of 7am and 10am before going out. Except those on essential duties such as military men or medical personnel on emergency cases, all vehicular movements and commercial activities are suspended between 7am and 10am to allow for this very intensive cleaning. Most states of the federation did not initially take this serious until some form of enforcements commenced. However, the paradigm shift in environmental sanitation now in Nigeria is that it is no more a monthly routine; rather, it is now a daily household decision to see that one's environment is clean. Various forms of environmental sensitization programs and jingles from the government and NGOs now air almost daily in the media which propel people to take care of their environment every day and also conserve the grassland to prevent sheet and gully erosions so that we can all live in greenish and aesthetic environment.

This review is based on causes of environmental degradation in Nigeria capital cities and effects of such on them. Over 50 per cent of Nigerians now live in cities and this is expected to increase to 60 per cent by year 2025 (PRB, 2015). People want to live in cities and enjoy all the associated benefits nowadays more than ever. In a bit to do that, Nigeria cities are becoming degraded as their capacities are being stretched beyond their carriage (Babanyara, et al. 2010). Certain factors stimulate cities degradation and poor environmental management in Nigeria capital cities; two of which will be discussed in this section. Number one of such is excessive rural-urban migration. In search employment opportunities, comfort, business and higher standard of living, people move en-mass into capital cities in Nigeria. Push factors from rural areas and pull factors in urban areas make large number of people to leave rural areas every day not only in Nigeria but generally in developing countries, especially in search of jobs (Adekola et al., 2016; Adesina, 2013; Salami, 2013). This is also aggravated by recent creation of new state capitals with massive influx into their capitals which contributed immensely to urban decay in them as the resources available were stretched beyond their carrying capacities. Towns such as Yenagoa, Ado-Ekiti, Gusau, Abakaliki, Jalingo and Dutse were relatively semi-urban before they emerged new state capitals and doubled their populations within a decade as a result of rapid urbanization. Transport system and service provision took a new turn as new roads were constructed and old ones rehabilitated and/ or expanded to accommodate the current surge in the volume of traffic and travellers. Research has shown that transport improvement encourages population explosion as towns grow along main routes (Ogunbodede, 2005). Many capital cities in Nigeria cannot cope with this supersonic speed of growth as resources are not correspondingly expanded thereby leading to environmental degradation and growth of slums.

As a practical way to justify the above; authors observe the growth pattern of Nigeria's five main mega-cities since 1991which are also state capitals and the results were alarming. Shown in Table 1 below is the population size of the five (5) biggest megacities in Nigeria according to 1991 and 2006 population censuses. It also shows the 2013 estimates and a projection into year 2050 based on the population growth rate of 2.8 per cent annually (PRB, 2013). Keeping the growth rate of 2.8 constant, all these megacities will out-double their present population by 2050. The current trend of uncontrolled rural-urban migration especially to Lagos and Abuja is alarming and can best be described as "provocative in-migration influxes."

Table 1: Nigeria Megacities and Trends of Population Growth, 1991-2050

S/N	City	1991 Census	2006 Census	2013 Estimates(CIA)	2050 Projection
1	Kano	5, 632, 040	9, 401, 288	10, 304, 000	28, 645, 120
2	Lagos	5, 685, 781	9,113,605	10, 203, 000	28, 364, 340
3	Ibadan	1, 228, 663	1,343,147	2, 726, 000	7, 578, 280
4	Abuja	378,671	1, 406, 239	1, 857, 000	5, 162, 460
5	Port Harcourt	440, 399	1, 382, 592	1, 947, 000	5, 412, 660

Sources: a) Federal Government of Nigeria, Official Gazettes, 1992 & 2009

b) 2050 Population is Authors' Projection based on the growth rate of 2.8% per annum

From Table 1 above, if the present growth rate remains unchanged, Kano, Lagos and Abuja will add approximately 18.3 million, 18.1 million and 3.3 million to their present populations respectively by year 2050. All of them also grow at an annual rate of 1.8 per cent. The question is what becomes of Lagos, Kano, Abuja, Port Harcourt and Ibadan if they all out-double their present population by year 2050 without corresponding increase in food production, manufacturing, services provision and especially environmental management? If government does not expand the economic base of these cities correspondingly with their population growth, environmental degradation, poverty, hunger and unemployment in their harsher and stiffer degrees loom. Most influxes into Lagos, Abuja and Port Harcourt are from the countryside or rural areas. Every massive outmigration from rural areas leaves such with certain crisis and even to the urban areas thought to be their pavilion. These crises centre mainly on productivity, food shortages, particularly for the 'urban parasites', and dwindled per capita income which, no doubt, manifest a serious crisis of poverty.

Secondly, industrialization is another critical stimulant of environmental degradation in Nigeria due to what they attract and their level of environmental consciousness in their operations. Agglomeration of industries in an urban centre is a pull factor for labour (mostly able-bodied young folks) from surrounding local communities to the centre because industries require large labour. This is why Lagos and Port Harcourt keep growing because they are the most industrialised cities not just in Nigeria but also in the entire West Africa. Lagos Metropolitan City is a home to many manufacturing, service, telecommunication and chemical industries. It also has the busiest port (Apapa Port) in West Africa. Additionally, until very recently when many banks began to move their headquarters to Abuja, many of them used to have their headquarters in Lagos. All telecommunication companies in Nigeria such as MTN, Globacom, Etisalat, Airtel and others have their international headquarters located in Lagos. All these explain the provocative influxes into Lagos as young folks come searching for jobs. Port Harcourt on the other hand is home to many oil companies in Nigeria. Shell, Chevron and others have their operation main base in Port Harcourt besides Eleme Port which is the second-largest Port and also one of the busiest in Nigeria and West Africa. Cities like these can't escape massive influxes of both skilled and unskilled labours which may subsequently lead to overpopulation. This consequently causes urban sprawl, congestion, environmental degradation the cities do not have enough decent accommodation to cater for the daily influx. That is why urban residencies in Nigeria metropolitan cities like Lagos, Ibadan, Port Harcourt and Abuja have been unconsciously separated into three tiers of living residencies. There are quarters for high income earners, middle income earners and low income earners in line with what Adekola, et al. (2014) discovered in Ibadan. These low income residencies are usually the urban slums where housing is relatively cheap for average Nigerians who live on less than 1.25 dollars per day. Oshodi, Ajegunle and Apapa Olodi are a good example of this in Lagos.

What are the effects of population bomb and environmental degradation in Nigeria capital cities? A few of the contemporary challenges facing Nigeria cities as a result of uncontrolled rural-outmigration are environmental hazards, environmental pollution and growth of slums which are briefly discussed here. Two key features of unplanned cities in Nigeria, especially Ibadan and Kano are poor drainage and poor waste management system which they do pay for seriously during the peak of raining season. Erosion and flooding are two key devastating environmental hazards in Nigeria during every raining season (Adekola, et al. 2014). While flooding has devastating effects on buildings and other properties, the effect of erosion is felt more on arable land especially in eastern Nigeria. Degradation caused by erosion in Nigeria is occurring at an increasing and alarming rate, aggravated by such factors as increased agricultural activities, civil construction works, deforestation, bush burning, over grazing, drainage blockage, poor water management, urbanization and increased population pressure (Babanyara, et al. 2010; Morenike, 2008). Also, damaged drainages make rainwater to flow without proper channelization. This is aggravated by garbage disposed improperly that usually obstructs natural flow of water which consequentially results in flooding. Sometime the greater damage is not even to buildings; rather, the damage to drinking water sources. Ibadan and some other settlements in Kwara, Benue, Plateau and Ogun States will forever count their loses on the account of the flooding which washed away many farmlands, destroyed properties worth of millions of naira and in which more sarcastically, many people lost their lives including women and children between June and July 2012. That was the worst flooding in Ibadan besides the Ogunpa flooding over four decades ago.

Another effect of uncontrolled urban population in Nigeria is poor housing and growth of slums. Population bomb currently bedeviling major cities in Nigeria in recent times has caused diverse urban problems like overcrowding, deplorable environment, poor living condition, poor infrastructure and homelessness among several others (Adekola, et al. 2014). Until very recently when the administration of Governor Babatunde Raji Fashola paid critical attention to the condition of Oshodi, Lagos, it was then a gory site to behold. Heaps of solid wastes in tons used to scatter all over, rickety buses packing passengers like corpses; very elastic traffic gridlock, proliferation of garage boys and thugs and every form of social vices were the order of the day at Oshodi before the intervention of Fashola's administration to give the place a face-lift. Massive influx of people into towns together with poor attitude of most state and local governments toward environmental management and waste disposal is what causes environmental ugliness mostly. Since Nigeria capital cities especially these five metropolitan cities employ almost 80 per cent of all white-collar jobs in Nigeria, this has aggravated housing challenges in their cities as a result of rapid population growth. Housing inadequacies, particularly for the low income earners, has been complicated by inflated real estate values, influx of rural in-migrants, deplorable urban services and infrastructures, and a lack of implementation of planning policies.

The federal government has at sundry times been massively involved in housing issues. Several housing laws and acts have been promulgated which include: Employees Housing Scheme (Special Provision) Act (Cap 107); Land Use Act 1978; Mortgage Institutions Act, 1989(Cap 231); Federal Housing Authority Act, 1990(Cap 136); and National Urban Development Policy of 1997, among several others (Salami, 2013). The housing reforms also involved the establishment of the Federal Ministry of Housing and Urban Development in July, 2003 which was saddled with the responsibility of adequately addressing the complex problems of the urban sector. Also, as part of the efforts to bring about further restructuring of existing structures, a new Federal Ministry of Works and Housing has recently been created. Yet, housing challenge in Nigeria urban centres is still enormous. The involvement of the public sector in housing in Nigeria has been more of policy formulation than housing delivery. As identified by Adesoji (2011), urban housing challenge in Nigeria does not rest on lack or absence of policies but on ensuring an appropriate operational framework for its implementation. It also lies on imbibing the right political will, economic determination and organized democratic approaches in the resolution of the housing crisis. Decent accommodation in Lagos, Abuja and Port Harcourt for instance costs a lot of money. Many urban poor are either partially destitute or make do with living in slums which have relatively cheaper prices but can have serious health consequences because of poor environment, especially indecent waste disposal. Research has confirmed that poor and dirty environment contribute to higher infant mortality than in clean and decent areas (Adekola, et al., 2014).

Poor environmental management and excessive urban congestion will definitely cause environmental pollution. Environmental pollution is a serious challenge in major urban centres in Nigeria. The primary causes of this include poor sanitation, poor solid waste disposal, effluent discharge, rapid and unplanned urbanization, mining, and increasing use of chemical fertilizers and insecticides. Surface runoffs collect different garbage including human feaces and these are moved into rivers, dams and sometimes into wells (Babanyara, et al. 2010). In fact until very recently, poor waste disposal is perhaps the most serious environmental challenge in Nigeria. This makes some Nigerian cities very dirty and unattractive with very offensive stench emanating and spreading from scattered refuses around towns. The increasing accumulation of refuse in cities forms breeding grounds for various diseases-causing germs such as

mosquitoes known to be the primary transmitter of malaria (Adekola, et al. 2014). The health hazards posed by rain water mixing with waste and percolating through porous soil are enormous, ultimately contaminating ground water which forms the prime source of drinking water for many cities in Nigeria. Also, industrial wastes represent a special category of urban environmental problems. Textile plants, breweries, slaughterhouses, sugar refineries, pulp and paper plants and petroleum industries discharge raw, untreated and often toxic liquid effluents into open drains, channels, streams and lagoons (Babanyara, et al. 2010). Such toxic and non-toxic wastes from degrade the land and render most surface and underground waters around urban areas unsafe for human, agricultural or recreational use. This is the typical challenge faced in many places in Niger Delta region of Nigeria where intensive oil exploration activities are on twenty four hours a day. Their water table is polluted making availability of safe drinking water a major challenge. That is why water supply especially for drinking is costly in that whole region especially at state capitals.

Air pollution on the other hand is caused by oil production and gas flaring through the release of toxic gases such as methane, carbon-monoxide, sulphur oxide, nitrogen oxide, etc. into the atmosphere as they mix with atmospheric moisture and release acid rain. Besides, there are other consequences ranging from respiratory illness, skin problems and crop contamination caused by this. The damages attributed to the natural gas industry have particularly high costs, especially for residents of the Niger Delta (Okeagu et al. 2006). United Nations Commission on sustainable development (UN, 2004) reported that; Nigeria has about 5,000 registered industrial facilities and some 10,000 small scale industries operating illegally within residential premises. In metropolitan cities like Kano, Lagos and Port Harcourt; coloured, hot and heavy metal-laden effluents especially from textile, tannery and paints industries are discharged directly into open drains and water channels, constituting direct dangers to water users and biota downstream(Babanyara, et al.). Many factories located on river banks use the rivers as open sewers for their effluent, especially in the Niger- Delta. The petroleum industry represents the greatest threat to water quality in the Niger-Delta Region of Nigeria especially in Port Harcourt.

3. MATERIALS AND METHOD

Sources of Data: This is an empirical and exploratory research and data for the paper was mainly from primary source. A personal reconnaissance survey and later serious and in-depth physical visit to all the states capitals discussed in this paper was undertaken by the lead author. That afforded us the privilege to gather information on facilities on ground based on the research-proven criteria we set on what an environment-friendly city should have. We also made use of some secondary materials most of which are cited in various sections of this paper to back up our claims on what an environment-friendly city should look like.

Study Area: With the current population of approximately 183 million people (PRB, 2015); Nigeria is the most populous Black Country in the world. It is located on longitudes 3^0 and 15^0 East of the Greenwich meridian and latitudes 4^0 and 14^0 north of the equator. She is bounded in the north, west, east and south by Niger Republic, Benin Republic, Republic of Cameroon and Atlantic Ocean respectively and Abuja is her Federal Capital Territory (FCT). Nigeria population grows annually at 2.5 per cent (PRB, 2014). Nigeria has 36 state capitals plus Abuja, the Federal Capital Territory making 37. The five biggest cities and state capitals in Nigeria as stated above and upon which most discussions in this paper are based along with other state capitals are Lagos, Kano, Port Harcourt, Ibadan and Abuja.

Method of Analysis: Guided by existing empirical and theoretical literature (Babanyara, et al., 2010; Morenike, 2008; UN-Habitat, 2007; Paterson, 2007; Ndahlahwa, 2005; Tipping, et al. 2005), authors carefully selected five (5) main indicators of an “environment-friendly” city with which we mirrored Nigeria state capitals to see which of them are qualified to be called as such. We referred to the indicators collectively as FCP- facilities, culture and practices of an environment-friendly city. For a city to be termed environment-friendly; these facilities, culture and practices must be available and must be imbibed by all residents. These indicators are: Having an effective and efficient Waste Management Board (WMB), having a non-moribund ministry of environment, embracing effective horticulture and greening of the environment, having an effective and efficient transport management agency/authority and having a central and well-managed motor park where passengers load and offload

4. RESULTS AND DISCUSSIONS

All discussions in this paper are based on these indicators with respect to Nigeria state capitals, especially the five biggest metropolitan cities. The state of environmental management in Nigeria state capitals and other cities were qualitatively analysed in the light of the above carefully chosen indicators. State capitals and other cities that meet up are called environment-friendly or otherwise. Our analyses are purely

descriptive as discussions are based on on-ground facilities from our reconnaissance survey. The criteria are therefore taken one by one and each discussed briefly in relation to Nigeria state capitals.

4.1. Having an Effective and Efficient Waste Management Board (WMB)

Having an effective and efficient waste management board is a sign-qua-non to achieving a clean environment. Research has shown that settlements that are very serious with having a clean environment do not joke with this essential WMB (Tipping, et al., 2005). Lagos, Benue and Kwara States are front liners in this essential service-oriented board in Nigeria as shown in Figure 1 below for Lagos Metropolis. Abuja municipal waste management board also ensures that daily parking of solid waste around town for onward recycling is done. Most states in the South East though have this ministry but are not very efficient.

Figure 1: Lagos Waste Management Authority (LAWMA) and Staff on Duty

Source: lawma.lagstate.gov.ng

4.2. Having a Non-moribund Ministry of Environment

Ministry of environment in many states in Nigeria are mere a bunch of workers who are mainly concerned about collecting salary at the end of the month. In fact, besides Lagos State, Kwara State, Niger State and FCT (Abuja) most other ministry of environment can be described as 'moribund'. This ministry among other functions should deal with cleaning the environment, ensure that solid wastes are moved to the appropriate place for recycling as shown in Figure 2 below or buried, clean city drainages for free flow of water, ensure that city roads, especially access roads are in good condition and so on. However, there are ministries of environment where these functions are not reflected in their immediate vicinity let alone other cities within a state. Oyo State ministry of environment is putting up her best in the last few years but the resources available is not commensurate to the volume of work in Ibadan being the largest city in West Africa.

Figure 2: LAWMA Managing Director at Lagos Nylon Recycling Plant

Source: lawma.lagstate.gov.ng

4.3. Embracing Effective Horticulture and Greening of the Environment

For any state that will be called environment-friendly, horticulture and greening can never be over-emphasized and this is where states like Lagos, Oyo and FCT have the edge. United Nations has admonished all nations of the earth in number 11 of the Sustainable Development Goals that they should build inclusive, safe and sustainable cities and human settlements for all their citizens. Effective horticulture and greening should be implemented in all states in Nigeria if this is to be achieved. Greening here means that recreation areas should be preserved and kept green for its purpose while trees should be planted to provide shade in major streets in cities as well as serving as cover to buildings during heavy rainfall and strong wind. Lagos, Ogun and Oyo States invest a lot of millions in this regard in the last few years as well as the FCT. Nasarawa State is also waking up recently in this regard as the present administration invested several millions in tree planting recently. In fact, in some states in Nigeria today, it is a crime to tread on flowers or cut down trees in town. However, most states have not done enough to qualify for being referred to as environment-friendly especially states in the South South, South East and North West.

4.4. Having an Effective and Efficient Transport Management Agency/Authority

Having an effective and efficient transport management agency is closely linked to having a good environment. If all manner of vehicles are allowed to load and unload at any time in a city, it will be polluted and rowdy. That is why a city without effective transport management will be a noisy and unfriendly city as air and noise pollutions will be the order of the day there. Morenike (2008) has linked this essential service to contributing to urban slum if not properly managed. This is where Lagos and Benue States rank the highest in the country because they have the best transport management board in Nigeria and that is why Makurdi as a city is one of the cleanest in Nigeria. States such as Imo and Abia in the South East are also doing well in this regard, but states in the north and South West need to wake up, especially Ogun State.

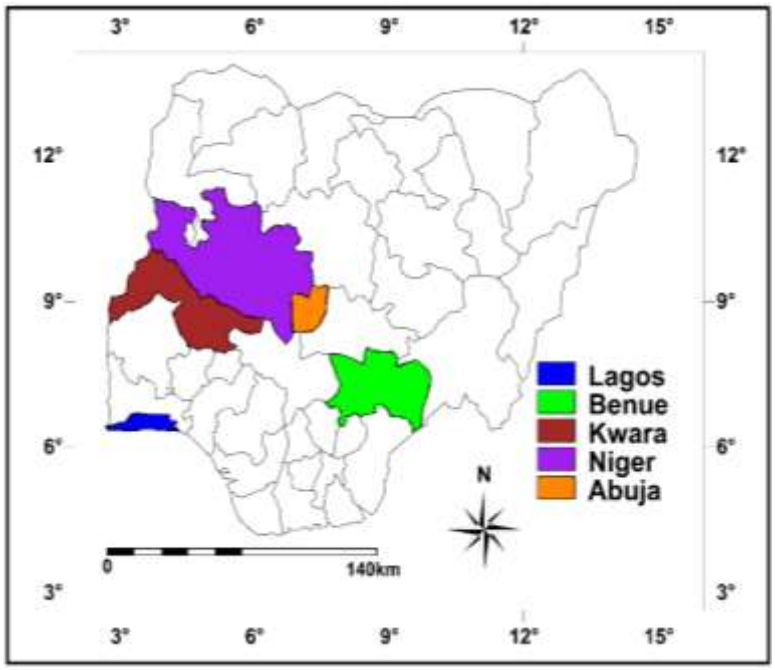
Figure 3: Bus Rapid Transit (BRT) Loading 'Lagosians' at a Bus Stop in Lagos

Source: https://www.google.com.ng/brt/bus&gs/1057

4.5. Having a Central and Well-Managed Motor Park Where Passengers Load and Offload

Loading and offloading goods and passengers anywhere in town is one of the highest indicators of urban pollution, congestion and ugliness in many big cities of Nigeria (Morenike, 2008; Babanyara, et al., 2010). Lagos used to be a perfect example of where this ugly trend was visible. However, the immediate past administration put a stop to that by creating central motor parks and garages where vehicles can load and offload goods and passengers. Other states are trying to follow in the footstep of Lagos; however, only Kwara, Benue, Niger and the FCT are getting it right. Until a city achieves this, there is no way it can be environment-friendly because the natural ecosystem of the city will be tampered with if every car can be parked everywhere and drivers can pick passengers in any part of the city. In fact, it is now a crime in Lagos State for any driver to park and pick passengers anywhere in town.

Having explained the above in the mirror of the selected indicators, apart from Abuja, the Federal Capital Territory (FCT) and Seat of Power which is expected to be neat and green at all times; only four state capitals, namely; Lagos Metropolis, Makurdi (Benue State Capital), Ilorin (Kwara State Capital) and Minna (Niger State Capital) made the cut. Kano, Ibadan and Port Harcourt though are part of the five metropolitan cities in Nigeria as mentioned in Table 1 above but could not make the cut because not all the criteria were met as at the time of writing this discussion. The states where the cities which met the criteria as environment-friendly cities are located are presented in Figure 1 below;



Source: Author's Field Work, 2016

Figure 1: Environment-friendly State Capitals in Nigeria as at 2016

The above implies that only 14 per cent of Nigeria capital cities, including Abuja the FCT is environment-sensitive and friendly. One shocking but revealing feature of the above information is that only Lagos meets all the criteria from the supposed most-developed South West region of Nigeria. All other four are surprisingly from the north central. That may perhaps be because of their proximity to the FCT, Abuja. However, Lagos is not. Authors are of the opinion that it is a matter of political will by the ruling government and individual level of environmental consciousness of each incumbent governor and/or administration of each state that count. Other partially environment-friendly state capitals in southwestern Nigeria which met part of the above criteria are Ibadan and Akure. Port Harcourt, Benin and Uyo in south-south also met some of the criteria. However, most state capitals in northern Nigeria meet only one or at most two of the criteria. Worst of all, state capitals like Ado-Ekiti, Ekiti State, Owerri, Imo State and Abeokuta, Ogun State still need to do more because they have a long way to go based on the criteria as they barely meet up to one of the criteria. So, all the states that meet up with the above briefly described criteria are called environment-friendly states while those that could not meet up are called otherwise.

5. CONCLUSION AND RECOMMENDATIONS

This paper examines the state of environmental management in Nigeria capital cities among others to see their level of environment-friendliness. A very special feature is the unveiling of research-proven environment-friendly indicators upon which the cities were placed for qualification. From Table 1 above, if the present growth rate remains unchanged, Kano, Lagos and Abuja will add approximately 18.3 million, 18.1 million and 3.3 million to their present populations respectively by year 2050as they all grow at an annual rate of 1.8 per cent. The question is what becomes of Nigeria state capitals of which Lagos, Kano, Abuja, Port Harcourt and Ibadan are significant being the largest if they all out-double their present population by year 2050 without corresponding increase in food production, housing, infrastructural improvement, manufacturing and services provisions? Without any doubt; poverty, hunger, proliferation of slums, unbearable congestion, and environmental degradation in their harsher and stiffer degrees loom. Students,

lecturers, government, NGOs and other policy makers are strongly advised to make these criteria a model for environmental cleanliness in their various locations. Effects of unmonitored or ill-managed rural outmigration and urbanization both on the rural and urban areas where they migrate to were also considered.

It is on the basis of the above eye-opening truths that authors recommend very specially and as a matter of urgency even urban-rural development. Economic policies which target urban areas alone for development are preserving bigger problems for such urban centres in the very near future if corresponding developmental policies are not applied to rural areas which house majority of 'mass-moving' manpower. These poor trickle down economic policies only end up forcing a mass exodus of people from rural areas to urban centres. Moreover, rural economy is broader than and therefore not synonymous to farming. In this 21st century, other ingredients making up the entire rural economy include livestock production, forestry, fishing, marketing, hunting, services, manufacturing etc. Within this diversity of activities in the rural society, massive rural outmigration will definitely slow down because there is no reason travelling long to look for things that are available in your backyard. It is on this basis that we recommend very specially and as a matter of urgency even urban-rural development because as rightly posit by Abass (2008: 105) that the challenge of urban development is, without disputes, the challenge of the future. A practical solution to the challenge of urban growth is, on the other side of the coin, the empirical solution to the rural problems. It is the youth (labour force) who mostly migrate to urban areas with all high expectations of a better life. If rural life is made comfortable, affordable and convenient, rural-urban migration and consequently too rapid congestion, causing environmental degradation as we experience in Nigeria metropolitan cities today will reduce.

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