

Waste Management in Contemporary Nigeria: The Abuja Example

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Abstract

Environmental hazards of varying magnitude dangerously threaten human and animal lives in most urban centers in Nigeria. As the case of Abuja, Nigeria's federal capital, used in this study revealed, rapid urbanization, rural-urban migration, little or no town planning efforts coupled with attitudinal irresponsibility, lack of political will, ineptitude and graft have independently and collectively created environmental challenge in Nigeria. With human/solid waste decorating street corners and public space everywhere in Nigeria, the study teased out the institutional measures taken to confront waste management in Nigeria. Can Nigeria cope with the consequences of the avalanche of solid waste its citizens produce daily? What values of cleanliness abound amongst the people and why do we have solid waste all around? By adopting the sociological approach, the study answered these and many other questions using archival and survey research methods. As the study found, solid waste management has overwhelmed Nigerian government. Besides, the spirited efforts to combat the problem, which began, for Abuja, in 1999 under President Olusegun Obasanjo has since been relaxed under the incumbent, President Sheu Musa Yar'Adua

I. Introduction.

In a recent online survey by the Sahara Reporters, an online news media focusing on Nigeria, Ibadan and Lagos were described as the filth centers of the world. While Ibadan ranked as the number one dirtiest city in the world, Lagos, despite being the economic hub of Nigeria, was ranked fourth dirtiest city in the world. While the survey failed to enumerate the parameters with which it came about its conclusion as well as other cities and nations ranked in the survey, it nevertheless revealed one important fact – the fact that Nigeria is faced with the problem of waste disposal and management.

Despite any criticism of the Sahara Reporters' survey findings, a trip within and around the cities of Lagos and Ibadan lend credence to the fact that Lagos and Ibadan are indeed dirty. In Lagos, as in Ibadan, piles of rubbish littered the roads and street corners. The situation in densely populated areas such as Ketu, Mushin, Lagos Island, Lagos Mainland, etc (all in Lagos) shows that the unplanned nature of these places imposes considerable limitations on waste disposal and waste management, as most houses were built with no adherence to standard. In densely populated areas such as Oje, Beere, Ojoo, Agbowo, etc (all in Ibadan), no saner rule prevails on building construction. In fact, houses built for commercial purposes were often built with no allowance for set-backs, sewage, etc. In a recent study, Dawodu Oluwaseun¹ maintained that official complicity and graft accounted for the problems as most houses were found to have had no town planning approval. While the above conclusions could serve to explain waste management challenges in Lagos and Ibadan, which, in any sense of the word, could be described as ancient towns, the case of Abuja strikes one as ironic, especially given its relative newness and above all other considerations, the seat of Nigeria's government.

As Aliyu², an Abuja Municipality Area Council (AMAC) official, had noted in an interview, the environmental challenges in Abuja resulted from population growth and the construction boom, which began in Nigeria over the past few years. These, inadvertently have resulted in the daily production of over 3, 000 tonnes of solid waste, most of which could not be disposed properly. Consequently, some of these have been accumulating, causing serious health and environmental damage.

Structurally, the paper is divided into six parts: the first section, which is the introductory session, sets the tone for the entire study. The second section examines the various concepts and terms used in the study. The aim of doing this is to provide insight into the ways and manners such concepts should be understood by readers of the paper. The third section examined the environmental challenges facing the federal capital, Abuja as well as institutional measures taken by government and other stakeholders to combat the problem. In the fourth section, the study

¹ Dawodu Oluwaseun Stephen, *Economic Meltdown and Child Mortality in Lagos, Nigeria*, being text of a paper presented at the 2009 African conference on "Environment, Science and Technology in Africa" at the University of Texas at Austin, USA.

² Not real name, for security reasons.

turns to the challenges facing the Abuja Municipal Area Council in the area of solid waste disposal while the fifth section concludes the study by bringing together the institutional responses to the challenges identified in the previous section as well as suggesting ways to solving the problem.

II. Conceptual and Theoretical Framework

In this section, the study tries to explain some of the basic concepts and theories used. These include environment, environmental security, waste, solid waste disposal, globalization, etc. the advantages of this section is that it enables the study to explain how the various concepts are used in the course of the study as against their general usages. To begin with, what do we mean when we talk about the environment and how is the concept used in this study? By environment, the study refers to all of the external factors affecting an organism. It could also mean all the circumstances, people, things, and events around an organism, a person, a community, etc that influence an organism's life. These factors or circumstances may be other living organisms (biotic factors) or nonliving variables (abiotic factors), such as temperature, rainfall, day length, wind, and ocean currents. The interactions of organisms, people, societies, etc with biotic and abiotic factors form an ecosystem, a community, an environment, etc. Even minute changes in any one factor in an ecosystem, a community, etc can influence whether a particular person, plant or animal species will be successful in its environment or not.

Having examined environment as a concept, what then is environmental security? To facilitate a better understanding, the study first looks at security and later environmental security. Security is traditionally regarded as largely a matter of a state's military or a state's defense by military means. At its most fundamental level, security is believed to connote the effort to protect a population and territory against organised force while advancing the state's interests through competitive actions. When this definition of security gained currency, the state was considered as the sole entity capable of guaranteeing a nation's security. As such, state-centered definition of security dominated discussions in international relations, diplomatic, and other related studies, especially since the end of the World War II. This perspective, needlessly, led to a conception of threats and crisis as mainly military challenges and has traditionally been countered with police

or military actions. This narrow perspective meant that other issues outside the purview of the military are not regarded as security issues.

However, the oil crises of the 1970s led to a paradigm shift from the traditionalist conception of security to a more liberal view. As a fall-out of the oil crisis, issues of economic, environment and resource scarcity became acceptable as security issues. Further advancement in security scholarship came with the collapse of the Soviet Union, as Western economies began to focus on trade and economic competition, thereby making economic competition one of the security fortes of the 21st century. This refocusing was hinged primarily on the fact insecurity describes anything that is capable of increasing the stress-level of the society, cause panic and could affect a people's well-being. Therefore, it has been widely accepted that issues such as population growth or decline in developing nations, competition over scarce resources, and trans-boundary migration, erosion, pest invasion, drought, landslide, etc could result in severe security-threatening situations like conflicts, wars, displacement, etc.

From the above consideration of security, one can argue that environmental security includes any action or sequence of events that threatens drastically and over a relatively brief span of time to degrade the quality of life for the inhabitants of a state, or threatens significantly to narrow the range of policy choices available to individual, group or even government of a state. Environmental security therefore covers wide range of issues than was generally thought.

Waste is capable of different interpretations and meanings. Waste could be any material which has been used and is no longer wanted, for example because the valuable or useful part of it has been taken out. Waste could also mean an opportunity not taken i.e. when one does not take advantage of an opportunity when it is available. Such opportunity is said to have been wasted. It could also mean when something is surplus to requirement; such thing is said to have lie in waste. From these and many more ways through which the term could be understood or used, it is in the first sense - as any material which has been used and is no longer wanted, because the valuable or useful part of it has been taken out – that waste is used in this paper. From the foregoing, a waste disposal or a waste disposal unit is therefore the act of taking away a disused waste. This could be, in a kitchen sink, a small machine that chops up vegetable waste. Or in a society, a unit, usually part of a local government, that oversees the elimination or a proper disposal of waste. Invariably, a waste disposal could be trash-can each individual used in

stowing away disused items or a unit of an organized society that sees to the stowing away of disused items.

By solid waste, we imply that there are different kinds of waste; some in solid state while others are in soluble or solvent state. As far as this study is concerned, emphasis is placed on solid waste. Solid wastes, as it is mostly used, solid waste refers to human and animal excrement or faeces. Solid waste disposal therefore refers to how individuals, societies, or organisation stow away human and animal excrement or faeces. This could be done individually by erecting toilets in houses, offices, public squares and in buses. Alternatively, it could be centrally planned by providing sewage disposal vehicles that go about collecting and dumping away such waste in safer places.

Poverty can be said to refer to specific forms and levels of deprivation, which impose major limitations on normal human functioning and existence (Akinyele, 1994). Poverty is inseparably linked to lack of control over resources including land, skills, knowledge, capital and social connections. (United Nations, 1996).

Section 38 of the Federal Environmental Protection Agency Act defines the environment as including water, air, land and all plants and human beings or animals living therein and the inter-relationships that exist between and among them. Degradation connotes reducing the quality of a thing (Oxford Advanced Learners Dictionary). Environmental Degradation can thus be described as the process of reducing the quality of the environment. Koleosho and Adeyinka (2006) refer to environmental degradation as those activities that render the environment unhealthy and unsustainable over time.

Environmental degradation and poverty are inextricably intertwined, resulting in a vicious cycle in which poverty causes environmental stress, which in turn perpetuates more poverty. When the physical environment in and around cities deteriorates, those most affected are the urban poor.

Poverty puts pressure on people to engage in unsustainable and ecologically damaging practices. Bartone (1991) discovered that the urban poor, confined to economically fragile and ecologically vulnerable areas, contribute to the incidence of environmental degradation and urban congestion. According to him, economic disadvantages usually as a result of

unemployment/ underemployment are the root causes of urban poverty and environmental degradation. Environmental degradation creates slums, shantytowns and squatter settlements. Akinbode (2002) corroborates this by saying that the concentration of the poor in unplanned settlements leads to the emergence of slums and shantytowns. The urban poor converge in certain geographic loci within the city. These loci, which have been identified by Aina(1990) as shantytowns are deprived settlements characterized by very high residential density, largely uninhabitable housing, and absence of sanitation, basic infrastructure and social services. George (2002) describes a slum as an environment in which a set of forces interact to give rise to a devalued physical and social image of an area by the larger community. Squatter settlements are uncontrolled illegal and temporary settlements.

Slums, shantytowns and squatter settlements exhibit similar characteristics. These include poor sanitary surroundings, dilapidated structures, high occupancy ratio, physical dullness of surroundings in terms of landscaping and social amenities, inadequate provision or complete lack of public facilities, absentee landlords, low rent, haphazard architectural design and general features of vandalism.

Poverty is an enormous threat to the political stability, social cohesion and environmental balance of our cities and until it is tackled decisively, sustainable urban development will remain a mirage.

As conceived in this paper, the new city of Abuja provided an opportunity to avoid some of the environmental problems associated with other major cities in Africa. The current status of solid waste management in Abuja has been reviewed and recommendations for improvements are made. The existing solid waste management system is affected by unfavourable economic, institutional, legislative, technical and operational constraints. A reliable waste collection service is needed and waste collection vehicles need to be appropriate to local conditions. More vehicles are required to cope with increasing solid waste generation. Wastes need to be sorted at source as much as possible, to reduce the amount requiring disposal. Co-operation among communities, the informal sector, the formal waste collectors and the authorities is necessary if recycling rates are to increase. Markets for recycled materials need to be encouraged. Despite recent improvements in the operation of the existing dumpsite, a properly sited engineered landfill

should be constructed with operation contracted to the private sector. Wastes dumped along roads, underneath bridges, in culverts and in drainage channels need to be cleared. Small-scale waste composting plants could promote employment, income generation and poverty alleviation. Enforcement of waste management legislation and a proper policy and planning framework for waste management are required. Unauthorized use of land must be controlled by enforcing relevant clauses in development guidelines. Accurate population data is necessary so that waste management systems and infrastructure can be properly planned. Funding and affordability remain major constraints and challenges.

III. Context of the Research – The Abuja Metropolis

Before going into the issue of waste disposal in Abuja, it is important to attempt a spatial description of Abuja. Abuja, a city in central Nigeria and capital of Nigeria, is located at the Federal Capital Territory. After 15 years of planning and construction, it officially replaced Lagos as the capital of Nigeria in December 1991. The city is located in a scenic valley of rolling grasslands in a relatively undeveloped, ethnically neutral area. Its planners hoped to create a national city where none of Nigeria's social and religious groups would be dominant. A large hill known as Aso Rock provides the backdrop for the city's government district, which is laid out along three axes representing the executive, legislative, and judicial branches. Government agencies began moving into the new capital in the early 1980s, as residential neighborhoods were being developed in outlying areas. Abuja boasts of being residence to all government ministries, parastatal, corporate headquarters of corporations, as well as a university, the University of Abuja, which was founded in 1988. Besides, Abuja has an international airport and is linked to other cities in Nigeria by a network of highways. Its population, based on the 1999 estimate, is put at 403,000.

According to the master plan, Abuja is divided into three phases. The five areas covered by the Phase 1 include Central, Garki, Wuse, Maitama, and Asokoro. In the Phase 2, we have areas such as Kado, Durumi, Gudu, Utako and Jabi. In the Phase 3, the areas covered are Mabuchi, Katampe, Wuye and Gwarimpa. Besides, there are also five sub-urban districts, which are Nyanyan, Karu, Gwagwalada, Kubwa, and Jukwoyi. Along the Airport Road are clusters of

satellite settlements, namely Lugbe, Chika, Kuchigworo and Pyakassa. Other satellite settlements are Idu (The Main Industrial Zone), Mpape, Karimu, Gwagwa, Dei-Dei (housing the International Livestock market and also International Building materials market).

Abuja's Central District is located between the foot of Aso Rock and into the Three Arms Zone to the southern base of the ring road. It is like the city's spinal cord, dividing it into the northern sector with Maitama and Wuse, and the southern sector with Garki and Asokoro. While each district has its own clearly demarcated commercial and residential sectors, the Central District is the city's principal Business Zone, where practically all parastatals and multinational corporations have their offices located.

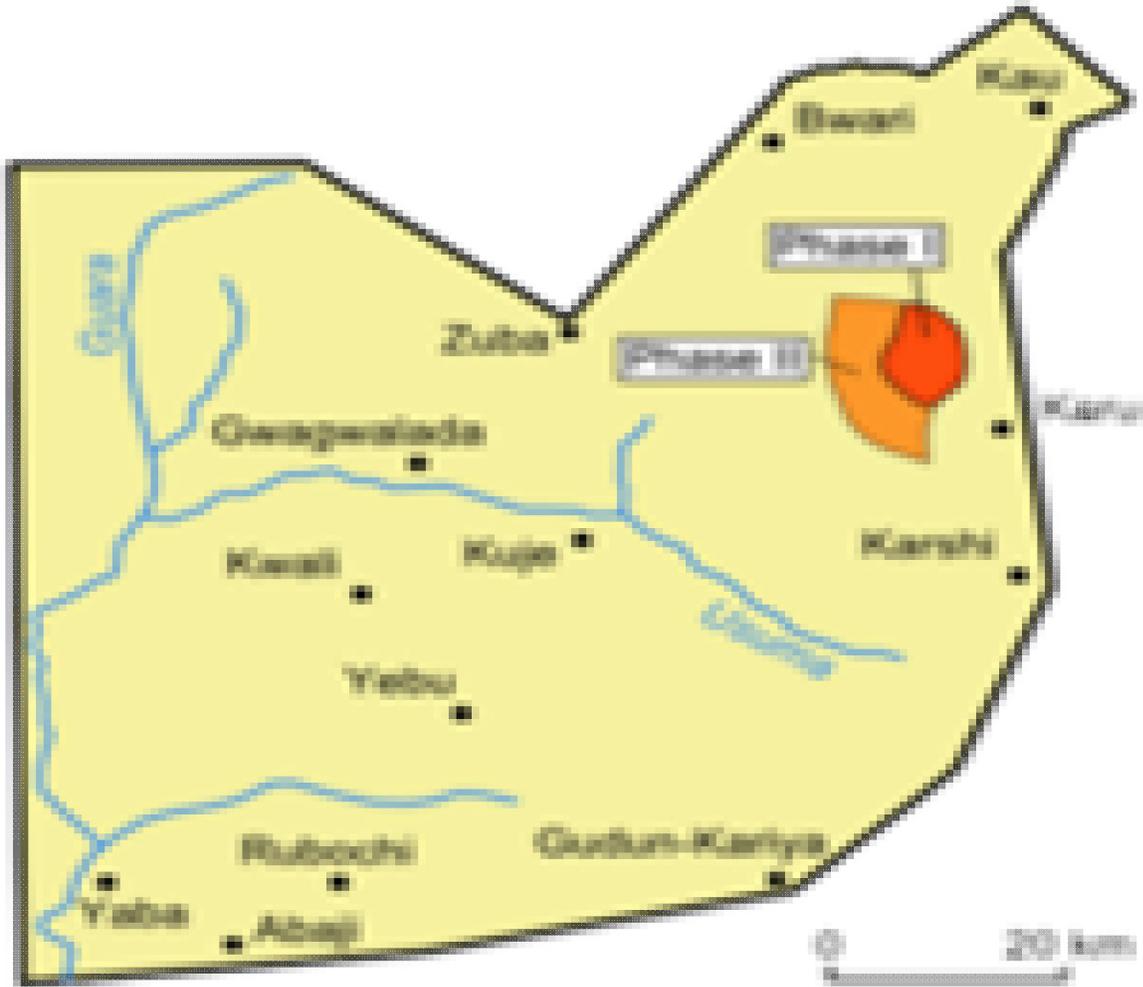
Unlike the Central District, Garki District is the area in the southwest corner of the city, having the Central District to the north and the Asokoro District to the east. Garki is presently the principal business district of Abuja. Numerous buildings of interest are located in this area. Some of them include the General Post Office, Abuja International Conference Center located along the busy Herbert Maculay Way, Nicon Luxury Hotel (formally known as Abuja Sofitel Hotel and Le Meridian), Agura Hotel and Old Federal Secretariat Complex Buildings (Area 1). Although a zoological garden and the Garki Shopping Center are located in Area 2, the area is mainly used for residential purposes. Besides, several banks and other commercial offices are located along Moshood Abiola Way in Area 7. The Headquarters of the Nigerian Armed Forces, namely Army Headquarters, Air force Headquarters and Navy Headquarters are all located in the Garki District.

Like the Abuja Central District, Wuse District, which lies in the northwestern part of the city, with Maitama District to its north and Central District to its south, is also a business area. The Wuse Market, the principal market in Abuja, the second most important Post Office in the city, Sheraton Hotel and Towers (Zone 4), Ibro International hotel, the Foreign Affairs Ministry Headquarters (Zone 1) and Nigerian Customs Services Headquarters, Corporate Affairs Commission (Zone 5), Federal Road Safety Commission (FRSC), National Agency for Food and Drugs Administration (NAFDAC) (Zone 7), Wuse General Hospital, and the Nigerian Tourism Development Corporation are all located in the area. Maitama District, which is to the north of the city, with the Wuse and Central Districts lying to its southwest and southeast respectively, is

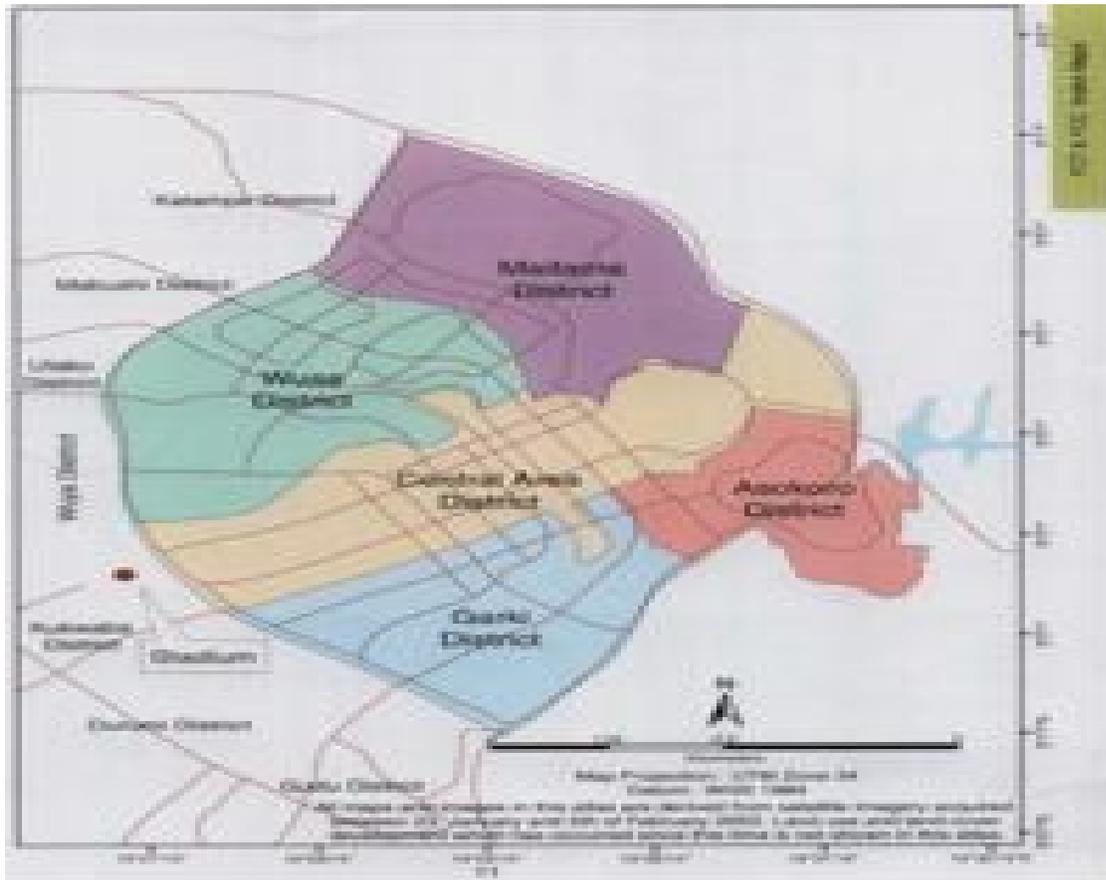
home to the top bracket sections of society and business, and has the reputation of being very exclusive and very expensive. Interesting buildings and offices in this area include the Transcorp Hilton Hotel, National Communications Commission Headquarters (NCC), National Universities Commission (NUC), Soil Conservation Complex, and Independent National Electoral Commission (INEC), The British High Commission, the Maitama District Hospital and many of the European embassies in Nigeria are notable buildings in Maitama.

The doyen of all districts in Abuja is the Asokoro District. Asokoro is located to the east of Garki district and south of Central district. It houses all of the state's lodges and guest houses, houses virtually all of the federal cabinet ministers, the ECOWAS secretariat, and the Presidential Palace (Aso Rock). Owing to the profile of the institutions in the area, Asokoro is the most exclusive districts of Abuja.

The maps below show Abuja and its various districts.



A Map of Abuja showing notable places within the 5 Districts.
Source: www.wikipedia.com



A Map of Abuja showing the 5 Districts.
Source: www.wikipedia.com

From the above, it is incontrovertible that Abuja is a well planned city. Given its pattern and design, Abuja contains specifically of business and residential areas. While the pattern and design conformed to international standard, it however imposes considerable challenges on waste and waste disposal requirements.

In residential areas, household waste consists of non-biodegradable items like fruits, vegetables, and other peels; plastics, both broken and intact, metallic wares, leathers, iron, rubber, and a lot of other materials. Biodegradable items of different kinds are found in the business areas of Abuja. In most cases, non-biodegradable items are easily disposed, as they formed critical food items for livestock and manure used in farms. In the case of Abuja, livestock

rearing was at a low scale; hence, most of the non-biodegradable items are stowed away in waste bins, some of which are found directly in front most houses or are dumped carelessly, thereby constituting environmental hazard, at designated refuse-disposal points.

In business areas, the situation is not any better. While most of the disused, biodegradable items are usually stowed away in refuse bins during office hours, they usually found their ways later into refuse dumps or are burnt, in most cases, by gatekeepers and office assistants at the back of most offices.

Another dimension to the waste disposal problem in Abuja is the mixing of both non-biodegradable and biodegradable items. This is common in most parts of Abuja, as increasing population pressure and the need to satisfy their numerous needs or wants have forced many residents to convert residential houses to business premises. In both residential and business areas therefore, a culture of filth persists in Abuja, which now poses a pernicious danger to life and the environment.

IV. Challenges Facing Solid Waste Disposal Unit of Abuja Municipal Area Council (AMAC)

Abuja, since its establishment as a Federal Capital, has experienced a huge population growth. Population explosion in Abuja owes primarily to labour migration, which resulted from the movement or relocation of headquarters of private and public organizations to the city. According to official estimates, Abuja has been growing at 20 – 30% per year.

Urban development problems in Abuja could therefore be viewed from both socio-economic and environmental perspectives. As noted earlier, the location and relocation of government and private companies' headquarters have forced majority of workers to become resident in Abuja. The increasing socio-economic opportunities made available by the fact that the city is still under construction, facilitate ever increasing number or influx of young, unemployed men and women into Abuja. This development has spurred high economic cost of most services in the city. Cost of renting or leasing houses, shops, offices and spaces are higher in Abuja than anywhere else in Nigeria. Increasing population in Abuja has resulted in the proliferation of slums and shantytowns, most especially in adjoining villages. Therefore, squatter settlements and shanty-towns spread rapidly in and outside the city limits. The

proliferation of these shantytowns results in the unwieldy expansion of the city, which poses a major planning problem as the provision and management of roads, drainage and sewage systems among other infrastructure, proves very difficult. Furthermore, shantytowns cause increases in the incidence of urban poverty, diseases and epidemics, environmental pollution, urban conflicts and crime.

Although the Abuja Municipal Area Council (AMAC), other local councils in Abuja and the central government's Federal Environmental Protection Agency have devoted considerable attentions to waste disposal and the attainment of a healthier environment in Abuja, a lot still needs to be done. Daily, waste disposal vehicles are deployed to the different districts to collect and dump wastes or refuse in the three landfills available in the city. As Aliyu, cited above, had noted, currently in Abuja, a lot of heterogeneous waste is generated and the volume and type have been on the increase both in the residential and business areas. NEST (1999) estimated that of the 4.5 million tonnes of waste generated in Nigeria in 1999, a little below 1.5 million tonnes was generated by each of Lagos, Abuja, Kaduna and Kano. In another study, NEST estimated that about 40 million tonnes of waste would be generated in Nigerian between 2005 and 2010. What this translates to mean in the case of Abuja and other major urban centers in Nigeria is that waste generation in Abuja, a year to the expected date, would be in the regions of 3 or 4 million tonnes. Given 3.5 percent estimated annual population growth rate, the tendency is that the estimate for the major cities and Nigeria at large may exceed projection.

Using Purchasing Power Parity (PPP) method, it is believed that urban poverty, in Nigeria, may exceed the estimated 100 percent for between 2005 and 2010. As Jensen (1990: 13) had noted, following population pressure in most cities in the developing nations, the cost of waste disposal is expected to rise. This development would invariably lead to increasing government spending, if the environment must be made safer and devoid of waste.

As currently is, the nature of waste disposal in Abuja is mixed. Besides waste collection and dumping in the landfills, no attempt is made at sorting out biodegradable wastes from non-biodegradable wastes before disposing wastes, in most cases, through burning. Besides, government, public understanding of waste disposal and management is limited and, in most cases, jaundiced. Although government, at different times, have used public private partnership

to carry-out basic social services to the citizens, waste collection, management, and disposal are contracted out to waste collection and disposal services. Graft, lack of monitoring and vested interests has prevented private involvement in the governance or management of waste disposal.

As noted by the Director-General of the Federal Environmental Protection Agency (FEPA), of the 300 tonnes of waste generated in Abuja daily, only 40 percent was cleared. He attributed the reason for this low level of attention to lack of machinery and personnel. To this end, street corners, road junctions, and sundry places within the Federal Capital Territory have become refuse dumps, which constitute environmental hazard to the people.

V. Conclusion: Institutional Responses and Way Forward

The municipality reckons that there is now a daily build-up of at least 300 tonnes of solid waste in and around Abuja, the Federal Capital. Despite its 2, 000 workers and about 50 trucks, the municipality cannot keep pace with the daily solid waste production in Abuja. *“We need more and better resources to keep the city somehow clean”*, said Aliyu, adding that weak public support for waste management was a *“serious problem”*.

This problem is not peculiar to Abuja alone. Similar situation has been reported in Ibadan, Lagos, Calabar, Port Harcourt, etc. In fast-growing residential areas in particular, there has been a build-up of waste material, posing a direct health and environmental hazard to the people, most especially children who play nearby and/or those who try to eke out a living by scavenging anything of value from the rubbish heaps.

As the study shows, wind and rain, in recent times, are spreading pollution: in Ibadan and Lagos, and estimated thirty million residents have no integrated sewage system. As UN Children’s Fund (UNICEF) had noted, about 12 percent of children in most Nigerian cities have access to sanitation and 32 percent to improved drinking water. Consequently, water-borne disease such as diarrhea kills thousands of children annually.

Nigerian cities may be on the brink, and, as the Director of Waste Management in the nation’s capital had noted, *“we have no resources to cope”*.

Some lessons could be learnt from the foregoing on the prevalent waste disposal problems in the Abuja metropolis. These relate to Physical/Environmental, Cultural/Sociological and Managerial.

- *Physical or Environmental Problems:* include conflicting land uses such as the infiltration of commercial land uses on housing as the case in Gwarinpa; complete succession on Wuse and Maitama districts; poor aesthetics and unsightly cityscape, high building density and high rate of building collapse such as the recent one at Utako, and invasion of informal shanties in planned areas. Infrastructure problems include narrow and poorly constructed roads, mostly without provision for drainage. Other environmental problems include traffic congestion, pollution (noise, atmospheric, and water), and flooding etc. These problems are particularly prevalent in areas that are inhabited by the poor. Due to the rapid population expansion and rapid urbanization being witnessed in the city, more people, especially the poor inhabit ecologically vulnerable areas such as Nyanyan, Gwangwalada, Jabi among others. Although the Abuja Public Health Bye law recommends a room occupancy rate of 2 persons per room, as at 2004, occupancy rates vary from 1.4 in low density areas to 3.6 in medium density areas and 8.0 in high density areas. It was as a result of this that tens of thousands of people were evicted by the immediate past FCT Minister, Nasir Ahmad el-Rufai, who also demolished most of the illegal structures and shanty towns in 2003.
- *Sociological or Cultural Problems:* Prevalence of miscreants i.e. Almajiris, crime and juvenile delinquency, ethnic clashes, high population density, public ignorance and apathy, environmental health crises. All these issues are dominant in the shanty towns. Almajiris are mainly located in the slums of Kubwa, Gwangwalada and Zuba. Land disputes and extortion, usually accompanied by widespread violence are quite common in these areas and other emerging settlements around the Federal Capital. Environmental health crises are quite common in low income areas. High incidences of sexually transmitted diseases were recorded in the low income settlements of Kubwa, Gwangwalada and Zuba (Nwokoro and Okusipe, 2002). Political skirmishes are also widespread in low income areas. Crime is also higher in the low income areas of Kubwa (853 reported cases) and Zuba (800 reported cases).
- *Environmental Management Problems:* administrative bottlenecks, technical inadequacies, and lack of manpower, lack of public participation and corruption. These include the loopholes in the Land Use Decree of 1978 that are yet to be

revised, close to three decades later; selective implementation of the Urban and Regional Planning Decree 88 of 1992, paucity of qualified officers on the field and the inability of government to remunerate workers adequately. Community participation is also not being implemented. Planning is still basically “for the people”, rather than being “with the people”. Therefore, planning ends up not being sustainable as the people do not feel a sense of responsibility to their environment. Furthermore, the problems of the Federal Capital are compounded because Abuja is a city that does not have citywide administration. There is an overlap of functions and activities by both the local governments, and the Federal Government and consequently, friction, conflicts and wasting of public funds occur. This corroborates the opinion of Okoye and Olatunbara (1993) who posit that if constituent local governments of a large metropolis plan and manage their own sections of the area, there are bound to be conflicts and narrowness in outlook. Overlapping of functions of the various environmental management agencies is also an issue.

From the above, there is no gainsaying the fact that government is aware of the impact of unclear and improperly disposed wastes on the environment; it appears as if government has become overwhelmed by the problem. What seems reasonable in the present circumstances is to step-up the private public partnership in waste collection, sorting and disposal. Besides the fact that this would help in cleaning up Abuja and other city centers, it would also help in creating employment, most especially in the area of waste recycling.

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