Space, Population and Waste Management in Ibadan

by

Mudasiru Moruff
Department of Archaeology and Anthropology
University of Ibadan, Ibadan, Nigeria

Abstract

Waste is obviously one of the intractable and unpleasant prices usually paid for urbanization and industrialization. Over the years, in Ibadan, Nigeria the poor management of domestic and industrial wastes has been a threat to environmental health and a nuisance that is eroding civic morality in the city. Through ethnographic study of waste disposal habits in Ibadan (the third largest metropolitan area by population in Sub-Sahara Africa), this paper focuses essentially on the interface between urban space and the waste disposal habits among the urban populace. Thus, we found that the poor collection and disposal of waste, especially in the core area of the city, results in piles of solid waste building up in public spaces, vacant land, in the streets and back yards which frequently clog drainage and sewer systems because of the improper disposal and indiscriminate dumping of wastes into lakes, rivers, streams and coastal waters. This activity obviously attracts disease carrying insects and pests, which in turn cause cholera, diarrhoea, and dysentery (especially in children). In view of the environmental and health hazards caused by these poor habits, there is a need for a holistic approach that would involve changing the ineffective and dangerous waste management habits of people in Ibadan via an integrated waste management project in the metropolis.

Keywords: waste management, urban space, habit, holistic approach, ethnography, Ibadan, Nigeria.

Introduction

Most cities in Nigeria are faced with the twin problems of population increase and rapid expansion. These phenomena have no doubt, brought increasing strain on urban infrastructure facilities. One area in which this strain has become most obvious is in waste management where the existing system appears to be incapable of coping with the mountain load of waste generated and heaped on the surface (Ogunleye, 2003).

Over the last few centuries the scale and diversity of urban wastes generation has increased globally. And by implication, waste products and pollutions has become an unpleasant price usually paid for urbanization and industrialization. But the burdens of wastes are not necessary borne by those that benefit from the development. Perhaps, when human population was low especially when they were non-sedimentary and had little in the way of technology, and thus, waste tend to pose few problems. However, when population increases in a space and engages in high industrial production, waste generation also grows and in some space constitutes both health and environmental problems (Barrow, 2005:249). In many cities of the world, as urbanization is an indication of growth in population, there is an increase in resident and industrial production which creates more wastes. Thus, waste management is a great challenge of urban development. To put it more succinctly, although humans have interacted with the environment from time immemorial, it was not devastating as it is today. Thus the level of degradation of today is of great concern to all and sundry because the issue of the environment poses a serious threat to our survival, such that the three basic human needs of food, shelter and clothing are obtained from the environment. Therefore the protection and development of the environment is the protection of our life and existence. Today as many people dream to live in urban areas, their quality of life and the quality of their environment depends upon how cities look and how they function. Cities are also the places where business is done, investments are made, and where jobs are created, so cities represent the place where the environmental thrives (Barrow, 2005; Ogu, 2000; Omoleke, 2004, Taiwo, Alabi, 2005).

Although the scale and intensity of the problems vary from city to city, or from one state to another, the common set of issues can be identified. These may include: poor air quality, traffic volumes and congestion, high levels of ambient noise and scarcity of quiet areas for sport, play and recreational areas, neglect of the built environment, high level of greenhouse gas emissions, urban sprawl, and the generation of large volumes of waste and waste water. These environmental challenges are serious and have significant impacts on health, the environment, and overall economic performance.

In Oyo state (Nigeria), despite the unrelenting efforts by the successive government to tackle the problem of waste management, especially in the Ibadan metropolis, the challenge has remained intractable, with no end in sight.

And the most visible aspect of this problem is improper solid waste disposal, which manifests in the forms of refuse being thrown on roadways, spread on walkways, and dumped into the drainages. This waste obstructs the free flow of drainages, thereby creating conditions for mosquitoes to breed, and moreover, the problem becomes more compounded during the rainy seasons when the content of the drainages are usually emptied on the highways, and many bury or burning their waste in open space or disposed of it haphazardly by the side of the roads. Hence, these identifiable environmental problems are not only problems of technology and industry, of ecology and biology, of pollution control and pollution prevention, but also social in the sense that environmental problems are problems for society which ultimately threatens existing patterns of social organization and challenge us to change negative patterns of organization created by people who must resolve them.

Thus, the aim of this paper is to explore the interface between space and the waste disposal habits of people in Ibadan metropolis, the core area of the city, where the menace manifest itself most and where residents are most venerable/prone to adverse consequences of environmental neglect which are more pronounced in Nigeria because of particular geologic, climatic and cultural factors coupled with cultural factors and existing lifestyles of people and their reaction to urbanization and the dynamics of their spatial heritage. Therefore, the attainment of sustainable development will remain a mirage in Nigeria and other developing countries if the current rate of urban population growth and environmental decay in not matched with proportionate sustainable and environmentally friendly development practices.

Ibadan Ethnographically

Ibadan is located on an undulating plain with a ridge of eight quartzite hills separating the city into eastern and western sectors, situated at an average height of 200 m above sea level, that is drained by four river basins and surrounded by secondary rainforest and savannah. According to Falola (2009), Ibadan emerged as a city around 1830 at a time of political turmoil in Yorubaland, the cultural region of the Yoruba people in a search for peace and security by the Oyo refugees driven out of their homeland by the crisis that led to the fall of Oyo Empire. Thus Ibadan first served as a camp for refugees before it grow to a full-fledged town, and later it attained the status of a city-state with the largest population in the cultural region of the Yoruba people to represent the largest indigenous city in tropical Africa with Oyo state as the capital (one of the 36 states in Nigeria) situated 128 km northeast of Lagos and 345 km

Southwest of Abuja, the federal capital of Nigeria. Hence, today, the total population of the cultural region of the Yoruba is approximately 50 million people spread throughout West Africa (particularly, Benin and Togo), with the largest numbers of people found in Nigeria.

The city has grown particularly through the establishment of certain institutions and the construction of roads and the railway with the convergence of two major trade routes (through Ijebu and Abeokuta) in Ibadan which accelerated the growth of the city. Today, five primary roads and an expressway from Lagos radials converge in Ibadan from different directions, and thus, most of the South Western States in Nigeria have its hinterland for the procurement of specialized goods and services in the city. And more importantly, the city can be classified into seven morphological sections which represent particular housing–population densities, types and levels of infrastructural facilities, and environmental and sanitary characteristics with the core area consisting of: the older suburb, and the newer eastern and western suburb, the post-1952 suburb, the government-reserved areas (GRAs), and the government-planned residential estates (at Bodija and Oluyole) with more than half of the entire population living in the inner city (Onibokun and Kumuyi, 1999). Hence, the present situation of Ibadan, according to Onibokun (1970) illustrates the typical housing and environmental problems that plague most of the large indigenous urban centers in other parts of Africa, and in Asia and Latin America.

Therefore the core area of city is problematic, because it is:

1.   dominated by a cluster of completely built dwellings and except for the intervening floodable land, and open spaces are almost non-existing in the entire built-up area;

2.   apart from the main road, which divides the core area, it has few roads that cut through the original compounds;

3.   the roads of the city are inadequate for modern motor traffic (hence, prohibiting waste tractors traffic);

4.   the majority of the city part, including the inner core and south-eastern section is unplanned;

5.   the inner core is dense with minimal infrastructure and social amenities (in most parts, accessibility is only available via footpaths), and its "planned" area is really a host of small developments that historically began with colonial enclaves

Considering the above challenges, this presentation is based on a systematic study of the peoples and cultures of the city within a cultural context wherein it is observed from the point of view of the peoples and cultures of the study via qualitatively data collected from twenty communities in the Beere/Oje axis of the Ibadan metropolis where poor waste disposal habit was most visible in 2010 that engaged a selection of informants based on random sampling, and a purposive and snowball sampling approach combined with structured and unstructured interviews of key informants), focus group discussion, and observational techniques were used to elicit relevant data from population of adults who are knowledgeable and astute to the consequences and effects of improper and inadequate waste disposable methods.

In addition, officials and agencies concerned with waste management were sampled and interviewed. In all, a total of 20 key informants, 80 other informants, and five officials of the Waste Disposal Agencies, and the resulting data were analysed descriptively.

Ibadan: Space and People

According to Serena and Ravinder, (1977:4) perceptions of space, like time, differ among cultures and sub cultural groups. Space is perceived in terms of the kinds of social relations that are possible in different places. For instance, in the view expressed by Waltraud (2006:4) "space" holds a prominent position in anthropology as a concept because of its relations to "culture" which seem to be quite obvious: perhaps, spatial relations are a central variable influencing human behaviour and cognition, which is a significant part of the cultural knowledge about space. In this regard, urban space may be classified into safe and unsafe places to sleep, sources of food and good places for hustling or begging. This is because "space" is a constant factor governing, or even determining, the set of actions, beliefs and structures anthropologists have called "culture" and implicitly equated with the physical environment in general.

The identification of urban spaces with certain kinds of people frequently undermines the fulfilment of the goals of urban planning which involve space use, such as housing, school integration, and the location of shopping, entertainment and recreation facilities. And traditional cultural values and behaviour patterns of people affect the functioning of urban services based on these identified categories of planning and usage of urban space. For instance, research on health delivery systems indicates there is a difference in the demand, supply, and use of such services according to social class and ethnic background (Serena and Ravinder, 1977:5).

It is against this background that Ibadan metropolis behaviour and attitude towards toward urban space is formed. For instance, there are about 40 markets in Ibadan, with a lot of street trading activities going on as well. However, the unguided increase in the activities of the informal sector in the city has led to the invasion of all available spaces in all land-use types.

In Oje market, for example, traders place and display their wares on the highways without minding the implications for other road users. Thus, this street trading usually result in the reduction of space for human and vehicular movement, leading to persistent traffic hold up and congestion. The other implication of this is that there is a disruption of original planning in regard the use of space. But what is actually galling is that traders are hardly aware that their activities are contributing to the environmental problem of society and thus increase the generation of waste and further complicate collection mechanisms.

But again as the metropolitan area of Ibadan continues to witness a series of developmental activities, environmental risks arise from a wider array of sources which include air pollution from vehicles; household energy use; industrial and power plants; land and water pollution from solid wastes and untreated sewage and traffic congestion, accidents, and noise. These problems have more direct and immediate negative impacts on human health and safety, especially for the poor and on business productivity.

Another consequence of poorly managed urbanization is the settlement on unstable and risky locations such as along Ogunpa, Kudeti, Ogbere and Orogun, and in the flood plains and hillsides of Oke-Are, Oke-Aremo, Sapati and Mokola in the centre of the city, a phenomenon partly responsible for the Ogunpa flood disasters and soil erosions. And a compounding situation of the urban poor who live in crowded slums within the core residential areas of Ibadan (such as Ayeye, Agbeni, Bere, Oje, Opoyeosa, Gege, Popoyemoja, Abebi, Inalende, etc.) with limited basic infrastructure/services without land and personal security; plus within the city core residential areas, there is a lack of comprehensive water and sewage systems, inadequate garbage collection and disposition and unstable urban environments that increases vulnerability to natural disasters, resulting in the jeopardizing of public health coupled with the lack of parking spaces and a good drainage system as vehicles are indiscriminately parked along the road.

And notwithstanding, in points like Bere, Oke-Dada, Idi-Arere homeless children are camped in garage and sleeping under the bridges (not prevalent in the rural area of Ibadan) wherein they have little or no opportunity to participate in society or in activities leading to improved health educational attainment, personal security, or other benefits of civil society.

Historically, flood disaster has been a problem in Ibadan the first flood of Oranyan swamp in 1902, the Ogunpa overflow in 1924, in 1956 the Ogunpa flood rendered many homeless, in 1960 the Ogunpa flood destroyed 400 houses, in 1963 the Ogunpa river overflowed causing disaster to many homes, in 1978 the Ogunpa river destroyed property worth several million naira (the currency of Nigeria) at Old Gbagi market, Ogunpa Oyo, Omitowoju and Molete (Tomori, 1979); and in 1980, another Ogunpa flood killed about three hundred people and destroyed properties worth millions of naira in a 12 hour downpour of rain, sweeping several people away and leaving others trapped in debris while houses and personal belongings were destroyed, and repeating again in August 2011.

In 1980 devastation due to heavy rainfall caused bridges to fall and dam. Secondly, the solid wastes that had completely blocked the spaces beneath them. Those bridges mostly affected were those along the Ogunpa Oyo, the bridge on Ogbere stream along Iwo Road and Onipepeye. Some buildings along Omitowoju banks of Ogunpa River collapsed killing all occupants. The flood came downstream to Molete with such massive force that swept away buildings, stationary vehicles and buses full of passengers such that dead bodies were found along Ibadan grammar School and the confluence of Kudeti and Ogunpa rivers around St. Luke's bridge at Molete (Tomori, 2001; Onibokun et, 1999; Onibokun, 1974; Mabogunje, 1965; Omoleke, 2004).

Waste Generation in Ibadan: Types and Magnitude

Most cities in Nigeria (especially Ibadan) are faced with the twin problems of population increase and rapid expansion, a phenomenon that has brought increasing strain on the urban infrastructure with an obvious waste management problem where the existing system appears to be incapable of coping with the mountain load of waste generated and heaped on the surface.

However, in Ibadan, despite the provision of waste dumpsters (large open-topped waste container for the loading onto a special truck) at some strategic locations within the Ibadan metropolis, most are located close to residential areas, markets, farms, roadsides, and creeks. The composition of waste dumps varies widely, with many human activities located close to dump sites, especially in the core areas of the city. Hence, the growing generation of waste in Ibadan have placed city authorities with unprecedented challenges in managing the situation And according to Barrow (1995), waste and pollution are the unpleasant price paid for urbanization and industrial development. More so, within evolutionist school of thought, "space" in the guise of "the physical environment" was seen as a major factor determining the differences in levels of cultural development (Waltraud, 2006:4).

Plate 1: An open toilet in a public space in Foko area,
Ibadan (Field work: 2010)

Plate 2: A part of the Ogunpa River being gradually blocked by refuse.

(Field work: 2010)

It is very difficult to determine the exact quantities of waste generated in Ibadan, probably due to diverse methods of calculation. However, many studies and researchers have given different estimate from their studies. For example, Maclaren International Ltd (1970) found the average per capita quantity of solid waste generated to be 0.37-0.5kg/day for the core area of the city, Oluwande (1983) estimated the average solid waste generated and its mean production rates per head for three different areas of Ibadan as 0.420kg/day in GRA;0.377kg/day in outlaying areas; 0.35kg/day in the core area, Egunjobi (1986), estimated 0/32kg/day, which implies that 38 million kg solid waste was collected in 1986, using 1.6 million populations estimate for the period as yardstick. And in more recent studies conducted by Haskonning and Konsadem Associate (1994) revealed 0/6kg a day of wastes, with a density of $300kg/m^3$ (Onibokum and Kumuyi, 2000:8) linked to low income towns wherein the rate of waste generation is highly influenced by population and income.

In Nigeria, 25 million tons of municipal solid waste was generated annually, and usually, waste densities and moisture are much higher in developing countries which require different technology and management systems (Cointreau *et al*., 1984). Hence, the density of solid waste in Nigeria ranged from

250 kg/m3 to 370 kg/m3 higher than solid waste densities found in developed countries, and as a result, a higher number of capacity of waste storage and collection facilities is required in order to reduce the effectiveness of compaction vehicles for waste transfer (Ogwueleka, 2009:176).

Table1. Population and Solid waste generation estimates for Ibadan 1992-2000

Years	Population (X10^3)	Waste Generation per Year (X10^3)
1992	3430	751
1994	3620	754
1996	3633	797
1998	3748	821
2000	3850	845

Source: Haskonning and Konsadem Associate (1994)

Table 2: Mean % Solid Waste Composing by weight

	GRA	Bodija	Mokola and Sanngo	Oke -Ado	Agugu	Core Area Oja'ba
Leaves	7.5	4.3	38.2	28.5	32.6	26.5
Food remnants	35.5	9.1	3.6	5.4	6.9	
Paper	15.1	26.2	16.7	19.4	15.2	16.6
Cartoons and rags	1.3	1.5	4.8	6.8	4.5	10.9
Plastics and Polythenes	4.1	8.9	3.7	11.6	4.8	6.1
Tins and Metals	20.8	11.4	16.4	16.4	7.2	12.3
Bones, ash dusts and stones	5.9	11.5	3.0	0.5	1.0	2.2
Miscellaneous	0.8	11.5	3.0	o.5	1.0	2.2

Sources: Complied source from Associated 1993 and Sridhar 1996

In Ibadan, among many other cities in Nigeria, most of the substances composing municipal solid waste are mainly from paper, leaves, bones, ash dust, vegetable matters, plastics, metals, textile, stones, rubber and glass. And in fact, leaves and the vegetable matter constitute the bulk of the waste because raw food materials are brought to the town unprocessed and considering that Ibadan is located in the heart of a rich agricultural land that has a lot of old and unplanned section, the leaves, tins, metals, paper, bone, ash dust, and stones are increasing because of the change consumption pattern of people in the city.

More importantly, different scholars have observed that there is no single method of refuse disposal that is suitable in all circumstances, because waste management has been moving from one agency to another. Thus the choice of a particular method is govern by local factors such as cost, availability of land and labour. However, Omoleleke (2004), Egunjobi (2005) and Ogu (2004) identified six solid waste disposal practices, such as (a.) waste dumping or throw-away culture or disposal in the nearest open space, land or surface water, (b) burying, (c) Burning/ incineration, (d) composting, (e) land filling, and (f) recycling and reuse.

Resilient Habit in Waste Management

In no other city are the menaces of wastes being better explained than it is via Ibadan, Africa's largest indigenous settlement which is in consonance with the World Health Organization (WHO) insinuation that 'about one-third of Africa's disease burden is attributable to environmental hazards' as waste is one of the major contributing risk factors to environmental disease burden on the continent, due to a lack of access to safe water, indoor air pollution from solid fuel combustion, the lack of sanitation and hygiene, and the unmanaged waste disposal management practices among the urban populace (Onyemaechi and William, 2009:863). And consequently, this waste is an unavoidable product of development related activities such as industrialization and urbanization which we can discuss in two categories: municipal waste from domestic sources and hazardous waste from industrial activity with municipal waste management presenting a significant environmental problem for most cities in Africa (Achankeng, 2003:7).

And again, going by the World Health Organization (WHO) definition, waste refers to something the owner no longer wants at a given time and space and has no current or perceived market value. This line of thought represented a broad-based approach toward the classification of what constitutes waste. However, what one regards as waste may not be totally useless, as much can be recycled to produce new products. Thus, wastes may be gaseous, liquid or solid with gaseous and liquid wastes are free flowing and can easily migrate from one place to another and solid wastes as not free flowing. And moreover, the idea of indiscriminate disposal and the dumping of waste has become a habitual practice in Ibadan and in other Nigerian cities because most of the waste dumps are located close to residential areas, markets, farms, roadsides, and creeks with the composition of waste dumps varied that include domestic generated from commercial establishments that occur in different forms, water-borne waste from households, including sewage and usage water, rubbish, human and animal remains as well as chemical and laboratory wastes and household activities and industrial wastes generated from industrial activities such as chemicals, pesticides, paints, grease, inorganic materials, oil sludge, and so on. Hence, apart from various diseases and toxic conditions inherent in and derivable from wastes products, the presence of waste degenerates the aesthetic value of the environment.

There is no gainsaying in that majority of the city including the inner core and south-eastern section is unplanned. The inner core is a dense area with minimal infrastructure and social amenities, and in most parts, accessibility is only by footpaths. The "planned" part of the city is really a juxtaposition of small developments that historically began with colonial enclaves.

However, agricultural activities remained important in Ibadan, like in many other African towns, with about 37 per cent of the population engaged in agriculture, and thus, the people are predominantly farmers, and Akintola (1994) asserts that Ibadan has a large farming population, most of whom are settled in the villages scattered all over the vast territory of the city.
Trading is the primary activity of the city, especially for women whereas craft still employs more people than the government administration, despite the promotion of the city as the headquarters of the Western Province in 1939. Hence, around the second half of the 20th century there was a disappearance of agricultural activities in the city within the area of the five local governments in the metropolis during the 1960s (Fourchard, 2003). And only a few still cultivate, and thus, they are part-time farmers who use farming to support their earnings.

Plate 3: A side view of Bere area in Ibadan

Economically, the development of services in Ibadan changed the occupational structure of the city to craft and trading activities whereas more than 70 per cent of the women are involved in trading activities as the craft and industry sector has become the major sectors of employment for men. Thus, there has been an increased in employment in the informal economic sector of the city in the 1980s (Fourchard, 2003). Thus, trading is well pronounced in Ibadan, perhaps as a result of the buoyant trading activities going on in the city markets which have grown in almost all sections of the city.

186

In this mix, Ibadan also has many international markets that include: Alesinloye market, Shasha market, Bola Ige international market, and Bodija market which is one of the largest foodstuff markets in West Africa, but the markets are not spared of the problems of inadequate planning which is regarded as one of the traditional problems of the city.

In view of the diverse nature of Nigeria and its economic, cultural and socio political problems, we can also consider appropriate strategies and measures that could be adopted for waste management to ensure protection of our environment (Ogbonna et 2002:55). This would include the introduction of modern utilities, and changes in the economic base to the emergence of modern commercial-industrial centres outside the traditional towns centres so that the centre can drastically became more attractive as rural-urban migration begins to occur.

Poor Waste Management: Implications for Health and a Sustainable Environment

One of the observable reasons for the continuing survival of the indiscriminate dumping of wastes and poor conception of space in Ibadan metropolis as mentioned above is the unplanned nature of the core area of the town which makes it difficult for the collecting of waste as one could expect in a fast growing mega city in Nigeria and Africa at large. In other words, there is no concrete and organized means of collecting the household waste on a house to house basis due to the nature of the core area of the city, or for transporting it from the houses to the skips. Though this ought to be the duty of the resident themselves, but because their homes are inaccessible by cars (or truck), the residents are tempted to dispose of their waste indiscriminately at the skips center or another location. And although at each skip is located in different parts of the city, there is no official employee of the state or local government to monitor and manage how people dump or even clean their surrounding environment. Thus, on many occasions wastes are usually seen blown into nearby surroundings, eventually turning the skip place into a dumping site itself, and notwithstanding, there is a lack of political will within the public sector to address this indiscriminate dumping of wastes which is now seen as an urban monster and thus one of the most intricate problems in Ibadan, and in Nigeria at large.

Another related problem is finance, poor funding from government agencies responsible for both environmental and waste management is cogent reason for poor collection and the disposal of refuse. In fact, this has compelled state agencies, especially the state waste management board to relied extensively on hiring vehicles and personnel on a monthly basis during the monthly environmental exercise, and maintain a few staff on a permanent basis (Field work, 2010). However, there are private operators who are assigned with certain areas, and also the waste management fee is insufficient to cover the cost for waste management. Third, environmental agencies do not have adequate capacity to handle the increasing solid waste due to limited budgets, and the low morale of environmental protection agencies workers (due to poor remuneration and stagnation in promotion) also affect solid waste management effectiveness.

Another worrisome situation is the lack of institutional arrangement, expertise and people to run solid waste management activities in Ibadan and its environment perfectly, because the majority of the workers have little or no functional background or training in related disciplines which could help manage the task. Hence, there is no reliable measurement of generated waste as non-appreciation of the magnitude of the waste management is a problem, and there is no collaborative effort from the informal sector as well as from the communities and industries in the city by way of contribution or campaign against the improper disposal of waste, expect when a government official arrives to collect un-authorized money and gift from commercial centers, during their routine visits to their offices. And notwithstanding, the pattern of settlement in Ibadan is also of major concern wherein traffic congestion and narrow roads contribute to the inefficient waste collection which contributes to high solid waste collection cost.

In most cities of Nigeria, compaction trucks are used, hence, they are expensive, difficult to repair, and maintenance of the equipment is difficult and because compactor trucks are designed to handle low density waste in contrast to the presence of large organic matter and high density of Nigeria, the process of compaction become unnecessary. And therefore, vehicles become obsolete and too expensive to operate and maintain. However, several types of trucks are used in many parts of Nigeria, with no real results to do a lack of coordination in policy development. For example, in the tables below the numbers of vehicles used and maintain by the Oyo State Waste Management Authority is listed, demonstrating a host of vehicle and human resources scattering which contributes to the ineffective management of resources, and thus solid waste.

Table3: Functional Vehicle for Waste Collection in Ibadan, 2010

S/N	TYPE	TOTAL (NO)
1	Mitsubishi Canter Truck	20
2	Bedford Tipper	2
3	Toyota Tipper	2
4	Skip Eater Leyland	6
5	Leyland Ro-Ro Truck	2

Source: Oyo State Solid Waste Management Authority

Table 4: Human Resources for Waste Collection in Ibadan, 2010

S/N	CATEGORY	PENSIONABLE STAFF BY CATEGORY	NON PENSIONABLE	TOTAL
1	Admin staff	9	-	9
2	Environmental Health Officer	32	3	35
3	Technicians/Mechanics	8	5	13
4	Drivers	28	1	29
5	Welders	3	3	5
6	Vulcanizers	4	7	11
7	Cleaners	-	4	4
8	Gatemen	-	2	2
9	Typist	-	10	10
10	Clerical GD Account	-	5	5
11	Dump Attendant	-	1	1
12	Computer Operator	-	1	1
13	Camera Man	-	1	1
14	Work Shop Attendant	-	1	1
15	Security	-	38	38
16	Motor Boys	-	29	29
17	Voluntary NGO Staff WAIC MAN 'O' WAR	-	12	12

Source: Oyo State Solid Waste Management Authority, Ibadan, 2010**.**

Such spending therefore only adds to particular health problems that arise from inadequate waste disposal habits and practices, which: typhoid fever, diarrhea, cholera, hepatitis, hook worm infestation, skin diseases, malaria, etc. Thus, new strategies must be advanced for sustainable environmental development in Ibadan, and throughout Nigeria.

Strategies for Advancing Sustainable Environmental Development

In every human society, culturally unique ways of thinking about the world unite people in their behaviour. Anthropologists often refer to the body of ideas that people share as ideology. Ideology can be broken down into at least three specific categories: beliefs, values, and ideals. People's beliefs give them an understanding of how the world works and how they should respond to the actions of others and their environments. Particular beliefs often tie in closely with the daily concerns of domestic life, such as making a living, health and sickness, happiness and sadness, interpersonal relationships, and death.

People's values also tell them the differences between right and wrong or good and bad. Ideals serve as models for what people hope to achieve in life. Thus people in all types of societies organize themselves in relation to each other for work and other duties, and to structure their interactions.

Therefore, the adverse impacts of waste management are best addressed by establishing integrated programs where all types of waste and all facets of the waste management process are considered together. And in other words, there is fundamentally a dire need for a developmental paradigm shift from being what is the case to what ought to be the case. This ultimately implied a shift from the top-down approach to a bottom-up approach to our development planning and strategies, a process that should be more sustainable than what we have now. Perhaps as a discourse in anthropology, people's understanding must be taking into consideration at all the time, and thus suggests a holistic strategic approach that would involve local people for betterment of their lives.

In this context, Integrated Development Planning (IDP) may be useful, a process by which the planning efforts of different spheres and sectors of government and other institutions are coordinated at the level of local government. Hence, a way that brings together various economic, social, environmental, legal, infrastructural and spatial aspects of a problem to a plan in a way that would enhance development and provide sustainable empowerment, growth and equity for the short, medium and long term.

Conceptually, "integrated" mean, combining different parts to form a whole. However, development also means growth, evolution and progress that are aim at improving the quality of life of the community or society, and thus, a critically important management tool to help transformation, growth and development at local government level. And in this mix, the plan also enables active citizens' participation in the process of municipality as they set new developmental visions for the area that can be covered a variety ways and thus improve the quality of life of the community via the enhancing of opportunities and maximizing of choices (Falola, 1996).

Clearly, the municipality must take responsibility for the leadership of and participation in the process as they not only drive the process and ensure participation, but also be involved via: landlords/landladies, tenants, indigenes and non-indigenes alike, government agencies, CBOs, NGOs, etc. And indeed, the internal arrangements for the management and execution of the process will differ from municipality to municipality, but it should be as high-profile and high-powered as possible. This will indicate the seriousness of the municipality's commitment. Smaller municipalities might not have the technical capacity to undertake the IDP process themselves, thus they can outsource it to professional consultants.

However, this does not relieve the municipality of its responsibility. Business and labour organisations, NGOs, CBOs and civics should be encouraged to participate and assist, because they represent the interest groups within the society. Likewise, women and women's organizations, traditional leaders should be encouraged to participate in this activity as all work to promote the concept of sustainable development.

And most importantly, the broader community must not only be consulted, but they should actively be involved in all aspects of the process. Hence, strategies for achieving an integrated stainable waste management in Ibadan among many other policy frameworks should include education and awareness programs, developing collaborative approaches to integrative management, the strengthening of existing laws and the ensuring of compliance, and in the encouraging of local and private sector participation (Cheru, 2004). This integrated management approach should also involve the relegation of local and state governments to an oversight function in the monitoring the waste disposal efforts of community based or private companies. And in short, the government should use its funds to ensure that private and community organizations operate satisfactorily in a accountable fashion.

Conclusion

Since the poor collection and disposal of waste in Ibadan, especially the core area of the city, results in piles of solid waste building up in public spaces, vacant land, and even on streets and back yards, frequently clogging drainage and sewer systems, as evidence in the improper disposal and indiscriminate dumping of wastes into lakes, rivers, streams and coastal waters, there is an urgent need to seek workable solutions via the application of a planned, cultural, integrated, and sustainable economic process based upon progressive development of the city of Ibadan particularly, and Nigeria generally.

If these suggestions were taken, implemented adequate and properly adopted, it will result in the enculturation of correct environmental management practices that would prevent the further deterioration of the physical urban environment; and the possibility of achieving an integrated and sustainable development in all facet of life in Nigeria in the nearest would be assured.

In other words, by applying an integrated holistic approach that takes into account key factors affecting waste generation, storage, and final disposition, the long-term goal *should* be to develop an integrated waste management system and to build a technical, financial, and administrative infrastructure to manage and sustain a renewed approach. However, when pursuing this holistic approach (or piecemeal), managers should ensure that the program is appropriately tailored to local conditions so that that practical environmental, social, economic, and political need and realities are balanced.

Second, waste personnel need to be trained in management solid waste issues (policy formation for community based programme, waste reduction and recycling, preparation of legislation), the existing vehicles should be replaced with the same or very similar equipment to reduce operating costs, measurement stations should be installed in some of the landfills, the construction of new transfer station should be made to reduce operating cost, and community participation and involvement should essential to all waste management projects (Ogwueleka, 2009).

Finally, the momentum of the infrastructural development of the city has not been sustained over the years, resulting in a huge infrastructural gap, and with a rising population, the city is under pressure to develop a new infrastructure. This is partly because many of the people in Nigeria view Ibadan as home, and thus a place of importance. And given it close proximity to Lagos state, the nation's economic, financial and commercial capital, Ibadan has a crucial role to play in the development of Nigeria in the nation's economic, industrial, commercial and infrastructural development, which include healthcare system, housing, transportation, communication, waste management, and electricity future. Thus, a good/efficient infrastructure remains one of the top priorities for business and economic growth, and a necessary aspect for sound social and political transformation (Babalola, 2009).

Reference

Achankeng, 2003. Globalization, Urbanization and Municipal Solid waste management in Africa: *African studies Association of Australasia and the Pacific 2003 Conference Proceeding-African On a Global Stage*.

Babalola, R. 2009. Infrastructural Development of Ibadanland – The way forward. A keynote addresses at the 2009 'Ibadan week conference', organised by CCII, Ibadan.

Barrows, C.J. 1995. Developing the Environment: Problems and management: Longman Groups Ltd. London.

Brewer, J. D. 2000. *Ethnography: Understanding Social Research*. Open University Press, Buckingham-Philadelphia.

Cheru, F.2004. Globalization and urbanization in Africa: the limits for effective urban governance in the provision of basic services. Springer, Vol. 13(4): 234-245.

Egunjobi, L. 2005. Issues in Environmental Management for Sustainable Development in Nigeria. Springer, Vol. 13(1).

Falola, T. 2009. *Being Paper delivered at the Annual Adegoke Adelabu Memorial Lecture* organised by Ibadan Foundation, Ibadan, Nigeria.

Falola, T. 1996. *Development Planning and Decolonization in Nigeria*. University press of Florida, Florida.

Fourchard, L. 2003. "Urban slums Reports". The case of Ibadan. Nigeria. Ibadan: IFRA, University of Ibadan, Nigeria, 1-27.

Low, S.M.1996. Spatializing Culture: The social production and social contraction of public space in Costa Rica: *Journal of American Ethnologist*, Blackwell, London, Vol. 23(4)861-879.

Mabogunje, A.L. 1965. Urbanization in Nigeria. A constraint on Economic Development: *Journal of Economic Development and Cultural Change*, Part 1 Chicago, The University of Chicago press, Vol. 13(1):413-438.

Ogbonna, D.N; Ekweozor I.K.E; Igwe, F.U. 2002. Waste Management: A tool for Environmental protection in Nigeria: *Journal of Ambio*, Allen Press on behalf of the Swedish Academy of Sciences, Vol. 31(1):55-57.

Ogu, V. J. 2000. Private Sector Participation and Municipal Waste Management in Benin City, Nigeria: *Journal of Environment and urbanization*: SAGE, New York City, vol.12 (32).

Ogunleye, F. 2003. Environmental Sustainability in Nigeria. The "Awareness" imperative: *Journal of African Issues,* African Studies Association, Vol. 31(2): 41-52.

Ogwueleka, T .C, 2009. Municipal Solid waste characteristics and management in Nigeria *Iran. Journal of Environmental Health*. Sci. Eng., 2009, Vol. 6, No. 3, pp. 173-180.

Omoleke, I.I. 2004. Management of Environmental pollution in Ibadan, An African city. The challenges of Health Hazard facing Government and people: *Journal of Human Ecology.* Kamla –Raj, Vol. 15(1):265-274.

Onibokun, A.G. and Kumuyi, A.J. 1999. Managing the Monster; Urban Waste and Governance in African, *IDRC* Canada.

Onibokun, A. G. 1970. Nigeria Cities: Their Rehabilitation and Redevelopment: *Journal of African Studies Review*. Africa Studies Association, Vol.13 (2): 291-310.

Onyemaechi C. Nweke and William H. Sanders, 2009. Modern Environmental Health Hazards: A Public Health Issue of Increasing Significance in Africa. *Journal of Environmental Health Perspectives*, Brogan & Partners Vol. 117, No. 6 (Jun., 2009), pp. 863-870.

Struyk Raymond and Giddings Stephen, 2010. The Challenge of an Urban World. A White Paper by the International Housing Coalition (IHC) from the Rockefeller Foundation.

Serena, N and Ravinder, N. 1977. Urban Systems Analysis: An Anthropological Perspective: *Interfaces*, Part 1, Vol.8 (1):115-119: INFORMS.

Taiwo, A.A. 2009. Waste Management Towards Sustainable Development in Nigeria: A case study of Lagos State. *International NGO Journal.* Vol.4 (4):173-179.

Tomori, M.A, 2007. Ibadan metropolitan area and the challenges to sustainable development Published by Masco Consulting Ltd, Ibadan.

Waltraud, K. 2006. Culture and Space: Anthropological approaches. (Paper presented at the Swiss Graduate programme in Ethnology/Anthropology: "Key concepts in social Anthropology" October), 10-23.