THE NEED FOR INTEGRATION OF WASTE MANAGEMENT SYSTEMS INTO ANAMBRA STATE CAPITAL MASTER PLAN

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ABSTRACT

The urbanization trends and industrialization in most cities have led to a rapid growth in the volume of waste generated. The urban population is growing faster than the urban authorities' capacity for waste collection and disposal, a condition which has led to inadequate waste management in most cities. Most governments fail to integrate waste management systems into their masterplan; an action which has complicated waste management in the cities. The waste management situation in Nigeria and Awka were discussed and the issues which aggravate waste management problems were highlighted. The aspects of waste management needed to be incorporated into the master plan development were pointed out. The reviewed works show that rapid urban expansion without effective environmental consciousness translates to unsustainable development. Hence, the need for incorporating waste management in master plan development in Awka capital territory cannot be over emphasized as inferred from the foregoing.

Keywords: urbanization, waste, management system, Master plan, Integration

INTRODUCTION

The urbanization trends and industrialization in Africa have led to a rapid growth in the volume of waste generated in the continent's cities. In developing countries, particularly in Africa, urban residents suffer to a great extent from severe environmental and health challenges associated will insufficient access to clean drinking water, inadequate sewage facilities and solid waste disposal (United Nations, 2003). In most countries, the urban population is growing faster than the urban authorities' capacity for waste collection and disposal, a condition which has led to inadequate waste management. The migration of several greener pasture seekers with different cultural background and from different localities has virtually turned the cities into a “no man's land” resulting into a situation whereby the environmental maintenance becomes fundamentally a no man's business (Omuta, 1988). Most developing countries including Nigeria have solid waste management problem different from those found in developed and industrialized countries in areas of composition, density, political and economic framework, assess to waste for collection, awareness and attitudes (Ogwueleka, 2009). This problem is most common in the cities where the numerical strength of dwellers are steadily on the increase. Therefore, this paper examined succinctly the waste management in Nigeria and narrowed it to Awka capital. The problems, difficulties and solutions were highlighted for the preparation of good master plan for the state capital.

Waste Management situation in Nigeria

In Nigeria, waste management is inadequate and ineffective in many urban and rural areas as reported by the Federal Environmental Protection Agency (FEPA, 1992) in its' report for United Nation Conference on Environment and Development (UNCED) (FEPA, 1992). The main version of the National Assessment Report of the World Summit in Sustainable Development (2002) declared that Nigerian cities are considered among the dirtiest in the world (WSSD, 2002). The mountainous heaps of solid waste that deface Nigerian cities is a clear indication that solid waste management system is unsustainable and grossly inefficient.

The operation of existing solid waste management systems is grossly inefficient because of some obvious factors. These include lack of adequate personnel, problems of institutional relations (Agunwamba, 1998), poor city structure and urban planning, lack of equipment and poor enforcement of the existing environmental laws. All these have resulted in reckless dumping of refuse by all and sundry, defacing the cities, rendering streets impassable, and thereby disrupting both human and vehicular traffics which translated into loss of productive man-hours.

Omuta, (1988) posits that the volume of waste generated does not invariably measure the degree to which the environment will be polluted. If, according to him, the waste can be evacuated and disposed of, satisfactorily, and as far as it is generated and collected, there would be no accumulation. Hence, it is when evacuation and disposal perpetually lag behind the rate of generation that solid waste becomes an environmental nuisance. Wastes should be routinely evacuated. Solid waste management therefore concerns the interplay among generation, storage, presentation, collection and disposal (Omuta, 1988).

The Federal, State and the Local government are all involved in waste management in Nigeria. The federal government oversees other state and local agencies and authorities that manage waste in the country. However, it is the major responsibility of the state and local government to manage waste. Practically, state agencies step in to either compliment the efforts of the local councils or take over waste management due mainly to lack of fund. Hence, the responsibility of waste services varies between many cities.

Issues Which Aggravate Waste Management Problems in Nigeria

Some of the issues which aggravate waste management problems are discussed below according to the government, the agencies and the public.

The Government

Generally, government lack political will to take pertinent decisions on issues pertaining to waste management. In most of the states, it has been observed that government hinder the progress of their state agencies by inadequate financial and technical support, inadequate human resources and lack of appropriate legislations that would boost their performance. Implementation of good environmental policies might be stopped completely or delayed because some people in power are either adversely affected or they do not appreciate the need for environmental protection (Adewole, 1992). This undermines the efforts of the agencies. It is the duty of the

government to supply the agencies with sufficient man power but most agencies in the states do not have qualified personnel who will plan, monitor and execute waste management plans. Poor funding is one of the most serious problems hampering solid waste management in Nigeria (Ogwueleka, 2009; Adewole, 1992).

Government in most cases do not have adequate waste management plan. Interviews conducted revealed that requests from most agencies to map out dump sites are being delayed or turned down by the government. This explains the reason why the few dumpsites available are always full and in most cases are badly located.

In most states, there are no enforcement mechanism put in place to combat laxity and non-compliance to "polluter-pay-principle'. This has largely worsened the waste management problem. In most cases, there are no adequate environmental awareness campaigns to enlighten the people. Government is oftentimes pathetically incapable of enforcing discipline and encouraging loyalty which ordinarily they could do by rewarding excellence and punishing mediocrity. The family/relationship ties, fear of juju and undue political interventions make it more difficult. This makes the workers to play truancy thereby frustrating the agency.

The Agencies

In most agencies, it has been observed that unnecessary bureaucracy and lack of understanding of roles and responsibilities has lead to centralization of decisions, chaos, confusion and ineffectiveness in waste management. There is often weak monitoring and no checks and balances. The executives of most agencies/ministries are not experts rather government use the position to compensate politicians thus making it difficult for them to tackle most of the problems as soon as they arise.

Most of the agencies in Nigeria do not have good maintenance culture. They do not maintain their trucks as and when due and in most cases they lack man power to effect repairs on the trucks. Hence, after a while the agency will run out of trucks that would evacuate waste, leading to accumulation of waste in the whole city.

Waste collection by municipal workers is usually inefficient since most workers hardly feel the need to do government work well. The generally low morale of public service workers due to poor remuneration and stagnation in promotion affects their performance. This leads to corruption as some of the workers demand money from people before evacuating their waste. Such practice could make some people to refuse to pay their sanitation levy.

Most of the environmental agencies do not have data on waste management. The poor quality of data on urban wastes complicates attempts to analyse and identify options for addressing key problems caused by urban solid waste. Moreover some waste technologies like Waste-to-Energy, composting etc cannot be embarked upon without sufficient data on the waste volume and characteristics.

The Public

In Nigeria, the general publics' attitude towards waste management is very poor. Ignorance, materialistic tendency and apathy have often prevented people from adopting good environmental practices (Adewole, 1992). Most people find it difficult to cooperate with their co-tenants in either keeping their surrounding clean or paying sanitation levies. People in some cases dump waste at any vacant plot, public space or even burn it in their

house thereby polluting the air. During rainfall, people dispose of their wastes into the drain which blocks the drains, dirties the roads and pollutes the receiving water body. Street trading and hawking pollutes the environment. It makes people in most cases to throw the wastes from moving vehicles thereby keeping the highways untidy. Indeed, the entire problems can come to an end if people can behave themselves and be patriotic and law abiding citizens.

The Situation In The State Capital

In Awka presently, evacuation has been fairly prompt and likely to be better if some of their several challenges are overcome. Some of the challenges include the following;

1. Poor Waste collection coverage

Due to some obvious reasons, ASWAMA finds it very difficult to cover the entire city for waste collection and are yet to promptly collect the areas they cover.

2. Dump site

Due to the terrible nature of the makeshift dumpsite, trucks get stuck and this delays disposal of waste as other trucks with waste would always stand by until the stuck truck is pulled out. The streets will be adorned with wastes no matter the efforts if there are no easily accessible dumpsites to dispose these wastes. Besides, the dumps are not promptly pushed

3. Enforcement

Enforcement is the key to sustainable waste management especially in developing countries. No matter the money you spend and efforts you make, the streets will still look dirty without enforcement as people would prefer to leave empty receptacles and dump on ground, drop refuse anywhere, burn their waste and also refuse to pay their sanitation levies. I doubt if ASWAMA still take people to court presently.

4. Receptacles

The receptacles distributed in the city are not enough to allow for proper city cleanliness. Thus, pockets of illegal dumps are seen along most streets as people cannot find a place to conveniently dispose their waste

5. Poor Attitudinal Behaviour

During rainfall, people dispose of their wastes into the drain which blocks the drains, dirties the roads and pollutes the receiving water body. Besides, people hardly pay their sanitation levies as most strongly believe that it is the duty of government to dispose of their wastes.

Aspects of Waste Management for Incorporation into Master Plan Development

Poor city planning and bad road networks deter efficient waste collection and disposal. In some cases, vehicles make very few trips to the dumpsite in a day due to traffic jam occasioned by bad road networks. This leads to accumulation of wastes along the streets. Urban areas are supposed to be laid out so that each individual house or building is easily accessible. Lands in most cases are often allocated and building plans approved without considering the health and environmental aspect of the building plan. Every house should have an access route that would enable waste collectors to have their way for waste evacuation.

Government should intensify efforts in pulling down “illegal” structures so as to not only prevent other environmental problems like flooding, but also to boost the aesthetics status of the state. Non

mapping of collection points/absence of motorized bins along the streets and unavailability of waste bins at strategic points makes people to dispose of their wastes indiscriminately. Most times, the agencies find it difficult to find a space to place the receptacles along the streets simply because this was not considered ab initio in the master plan and the design of the roads. Thus the issue of waste bins/ receptacle placement in the city should be properly mapped and integrated in the master plan.

The spatial location of the dumpsites should be carefully chosen and incorporated in the master plan so as to prevent issues that relates to dumpsite in the city which most times complicates waste management problems.

An area should also be mapped out for the scavengers (real waste managers) for collection and sale of the recyclables

These aforementioned strategies should be complimented with

- the provision of enabling legislation for successful implementation of waste program and development of integrated policies on waste minimization, reuse, recycling and disposal:
- aggressive enlightenment campaign, recycling program and a formidable government support for scavenging.
- Environmental awareness and education programme, including environmental community carnivals, environmental training programme, workshops, seminars and briefing sessions. Public participation of this magnitude would encourage greater understanding of the problem and its solution.

Furthermore, there is need to ensure that up-to-date baseline map of Awka and a detailed topographic map of Awka is incorporated as it would help in situating necessary infrastructures for good waste management in the capital territory

CONCLUSION

Rapid urban expansion without effective environmental consciousness translates to unsustainable development. The need for incorporating waste management in master plan development in Awka capital territory cannot be over emphasized as inferred from the foregoing. The challenges of proper city waste management in Nigeria and Awka have been discussed and the aspects of waste management which is crucial in the master plan development of the capital city were also highlighted. Hence, it is worthwhile to incorporate this crucial aspect of waste management systems into the Master plan.

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