

Attitudes of Lagos Residents to waste disposal as major causes to yearly flooding

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Keywords:

Waste, disposal, flood control, household, elites, cities Abstract: This paper highlights the attitudes of Lagos residents to waste disposal as the major causes to yearly flooding in the city. It also presents data from an evaluation study of environmental sanitation in six communities spread across three Local Government Areas (LGAs) in Lagos State. The data were analysed descriptively using simple percentages. The paper shows that house hold levels seem to be the best way to start addressing the twin issues of waste disposal and flood control in Nigerian cities. The major findings regarding waste disposal relate to vendors, LAWMA, dumping inside gutters and burning. It therefore suggests result/task oriented use of household resources at the community level to tackle the hydra headed problem of waste disposal and thereby control annual floods that maroon Lagos city yearly. Further still, the expected responsibilities of the Household/ Community, Local Government Areas and the State levels in reshaping the attitudes of people at each level are discussed in the paper. By way of conclusion, the need to incorporate this approach into physical planning in the urban areas is highlighted in the paper.

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INTRODUCTION

The world has just crossed the point at which 50 percent of humanity live in urban areas Sachs (2003). By 2020, more than half of the population of developing countries will be urban based Sachs (2003)). Albeit urbanization opens countless opportunities for economic development as the processes also create challenges that can prevent the urban promise from being fulfilled

Many Nigerian cities first and foremost need urban planners who should take into account social, cultural and mental state of refuse generation and disposal of same. The generation of refuse emanates usually from individual and house hold levels, thus, any effort therefore that is put in place to dispose waste must start from the household level-individual and family levels. Many Nigerian cities usually have big and large markets which are heavily patronized daily or on special days by huge human traffic. These centres generate monstrous waste too. In Lagos city for year 2002 alone, a total of 1,668,104 metric tonnes of waste were generated, collected and disposed in landfills sites. Out of this, the total industrial waste collected was 101,776 metric tonnes, forming only 6.10% of the total waste collected while the rest 1,566,338 metric tonnes forming 93.90% was domestic waste(LAWMA 2004).

Generation of refuse is a must, because it is part of living, a side effect of living or even the outcome of living. Human obstinacy and lawlessness are usually responsible for making refuse become sources of irritation or nuisance. This they do, by

dropping refuse indiscriminately and by many of their anti-social behaviours such as blocking drains and gutters with garbage that always lead to annual flooding during the rainy seasons. There is no Nigerian city that can be exempted from this yearly problem. Most of the refuse generated in many Nigerian cities can be divided into two, biodegradable and non-biodegradable. This paper will focus on the former since we shall be concerned with household and community levels. The study that generated the information in this paper was the evaluation of JICA Community Based Health interventions in six communities after three years of operation. The interventions included Malaria prevention, Child survival activities and Environmental sanitation efforts.

Literature Review

Urbanization in many developing countries is a movement by itself, unaccompanied by industrialization and is already resulting in the proliferation of slums and shanty towns and diseconomies rather than economies of scales. This has led to major anti-social activities and to making the cities unsafe and insecure both for life and property(Rafael M Salas1980).

Population growth continuously generates an increasing demand for a variety of goods and services. Most of these goods and services such as food, grains fishery products, wood, minerals, water, energy and also how to dispose of waste constitute problem (Rafael M. Salas 1980). The promotion of growth, alleviating poverty, and

protecting the environment are mutually supporting objectives in the long run. In the short run,however, the three objectives are not always compatible, and decision makers often confront difficult choices in pursuing them simultaneously. One of the difficult choices that are usually left within the 'cracks' is waste management (World Bank Report 1987). Thus without safe drinking water, the urban poor live in unsanitary conditions and are hurt most by noise, constant flooding, and refuse pollution (World Bank Report 1987).

Asimov (1974) has observed that as people multiply and live closer together in cities, all kinds of waste products form in this small area. There are leftoverfoods ("garbage") and human wastes such as food wrappers, plastics and other discarded and unwanted materials generated in greater quantity that cannot be disposed of are example of "pollution" Part of these refuse end up in drains and gutters, clogging and blocking them, thereby creating flooding and destruction of properties whenever it rains. Here lies the synergistic and close relationship between effective garbage management and flood control. A study funded by Japanese International Cooperation Agency(JICA) in some communities in Lagos in late 2005 put the foregoing in proper perspective.

According to the 1991 census, Lagos had a population of 5.7 million (NPC1991).In fact Lagos State accounts for about 5% of Nigerian population and a UN study project reported Lagos to have over 10 million by the year 2000, thus making it to be a mega city (FHI 2000). Yetmost of the Nigerian cities including Lagos are unplanned with open gutters or drains causing floods everywhere whenever it rains. The only exemption to such ugly scenes of flooding after rains are the GRAs (Government Reservation Areas) and private estates in all Nigerian cities where the elites reside, because they are usually kept free of indiscriminate dumping of garbage they are like oases in the deserts. A study on Socio cultural Attitude of the people of Lagos to Flood done by (Simpson, 2004) revealed high anti-environmental practices of waste disposal by Lagos residents. Administratively, Lagos is divided into series of Local Government Areas (LGAs) which are the lowest level of government structure. In each of the LGAs, are service functions such as education, information, agriculture, health etc.; under health is the branch where environmental health issues are expected to be managed by Sanitarians, Public health superintendents and other public health officials

Theoretical Orientations

The mounting garbage issues are veritable problems in many cities of the developing countries. In urban studies a parallel shift toward a radical orientation has emerged. Castells (1977a) and others have reformulated the urban question.

They have attacked the belief that urban form emerges through neutral process of individual process of decision-making. For Castells and Harvey (1973) urban areas and their problems can be understood only in terms of the conflicts between classes, which are a direct outcome of capitalist mode of production, urban form, urban issues, urban governance, and urban ideology which too can be understood only in terms of the dynamic of the capitalist system.

Space is socially determined; just like the outcome of conflicts between the different social classes. 'Urban disorder was not in fact a disorder at all: it represented the spatial organization created by market forces and derived from the absence of social control of the industrial activity'(Castell 1977a:14-15). State planning can reduce such disorder but cannot remove it, because resources are allocated on the basis of a struggle between competing groups. Ideally the process of planning allocates these resources fairly all among groups and integrates society through its decisions but unfortunately, it does not operate that way. Those who wield political power influence planning decisions against the interests of the powerless. Planning does not serve the public interest because there is no such interest (Simmie 1974, Saunders 1980). One can therefore explain partially, the orientation of the centralization of garbage control in many cities in Nigeria with the above postulations.

The role or the influence of power elite is not left out either, in a world of unequal opportunities it is therefore not surprising that managing cities should also yield unequal outcomes. Indeed it can be argued that cities serve elite groups, one should therefore expect planning methods that perpetuate the power elite which accounts for many Nigerian cities, where the elites have taken over the roles which belong to the community level for the simple reason of cornering resources and controlling the powerless. In Lagos for the year 2002, the revenue generated from the collection of refuse, which included the subvention from the State government, and direct deduction from the LGAs waste collection was Naira=N= 291,658,940.00 or 24,304,911.70 per month, while the calculated cost of collection per tones was 191,37 naira.

A total number of about 340 commercial and industrial premises are currently being serviced by LAWMA yielding an average of 12 million naira revenue per month(LAWMA 2004). As a result of centralizing the process, the elites are able to award contracts for refuse pick up at the household level, thus paying huge sums to their contractors for activities which could have been efficiently handled by community members generating the garbage. One can easily observe the inequality of the elites' position when one discovers that mountain of garbage rarely characterize the

exclusive reserved areas and estates sections of the cities where they reside. Close observation by objective individual will reveal that they often ensure prompt removal of their own garbage using government apparatuses.

Study Areas

Surulere LGA is a complete urban area, created out of the Mainland LGA. It has a population of 635,246 according to the 1991 census. Some parts of the LGA represent urban slum areassuch as Iieshatedo and Orile communities.

Mushin LGA area is one of the oldest LGAs in Lagos State and it is entirely urban. However, there are certain parts of this LGA that can be classified as urban slums such areas include Odo Eran, and Idiaraba communities. According to the National Population Commission figures of 1991, Mushin has a population of 741,778.

Ajeromi Ifelodun LGA was carved out of Ojo LGA. It harbours the most densely populated slums out of the three LGAs specifically, and for the entire State in general. Areas such as Oridilu, and Amukoko of the LGA are sprawling congested houses with little or no ventilation. The population of the LGA according to National Population Commission (NPC) was 815,680 in 1991.

METHODOLOGY

Based on discussion with the authorities and the officials of the three Local Government Areas the estimated population of the six communities was put at 63,671 for the currentstudy. The assumption that the Women of Reproductive Age(WRA)alsoforms fifty percent of the population in any community was also upheldfor this study. This figure 63,671 was divided by 2; this gives 31,836 and to obtain the sample size, 5% of 31,836 was calculated arriving at 1,591.

The Research instrument was a questionnaire titled "Lawanson Community Partners for Health Evaluation Study" divided into seven sections to capture information on Malaria, Child survival activities such as immunization program and environmental sanitation efforts in the six communities.

The questionnaires were administered on WRA (14-45) years and care givers of children aged below five years. This paper focuses on environmental sanitation with emphasis on refuse disposal.

RESULTS

Over 80% of our respondents fall within the ages 21-45 and this is consistent with the objective of the study to interview women of reproductive age (WRA), and about the same figure were married according to table 1.1 below.

Table 1.1 Marital Status of respondents

	Frequency	Percent
Single	147	10.4
Married	1167	82.6
Divorced	44	3.1
Widow	19	1.3
Other	7	0.5
No response	29	2.1
Total	1413	100

Source: Community Field Survey, Lawanson Community Partners for Health

Table 1.2 Educational level attained by Respondents

	Frequency	Percent
Primary school	342	24.2
Secondary school	729	51.6
Post- Secondary school	251	17.8
No School	66	4.7
Don't know	2	0.1
No response	23	1.6
Total	1413	100

Source: Community Field Survey, Lawanson Community Partners for Health

Table 1.2 above shows the low level of education of respondents, only 17.8 % had post- secondary education while 51.6% had secondary and 24% had primary school education.

Table1.3: Estimated Monthly Income

	Frequency	Percent
10,000 naira and below	979	69.3
10,001 -20,000	273	19.3
20,001 -30,000	107	7.6
30,001 -40,000	34	2.4
40,001 -50,000	16	1.1
50,001 -60,000	4	0.3
Total	1413	100

Source: Community Field Survey, Lawanson Community Partners for Health

Table 1.3 makes clear that most of our respondents belong to the lower socio economic status only 10% earn between 20,001 and 40,000 naira per month, while 1.4% earn between 40,001 and 60,000 naira per month. A whopping 69.3% earn less than 10,000 monthly while 19.3 earn between 10,000 and 20,000 naira per month.

Table 2.4: Source of Drinking water

	Frequency	Percent
Borehole	464	32.8
Public taps	460	32.6
Taps inside the house	295	20.9
Bought from the vendor	130	9.2
Stream	52	3.7
No response	12	0.8
Total	1412	100

Source: Community Field Survey, Lawanson Community Partners for Health

The sources of drinking water of our respondents are borehole (32.8%) Public taps (32.6%), taps inside the house (20.8%), and Vendor (9.2) as depicted by table 2.4 above.

Environmental sanitation activities: Respondents said that they usually dispose their refuse through vendors (Surulere 44%, Mushin 19% and Ajeromi 37%). At least 6.3% of our respondents in the three communities dispose their refuse inside the gutters. This certainly represents a very large segment of the population if the entire LGAs and State are considered. One can easily see the relationship between very poor garbage disposal methods and yearly perennial flooding of the entire city of Lagos. They also use LAWMA for refuse disposal (Surulere 23%, Mushin 42%, and Ajeromi 36%) Respondents that are prepared to participate in weekly environmental exercise gave the following information (Surulere 19.1% Mushin 36.4% and Ajeromi 43.7%) while monthly environmental sanitation exercise gave following information (Surulere 37.1%, Mushin 40.1%, and Ajeromi 23%). Weekly environmental activities seem, to be common where there are large marketssuch as Ajeromi while residential areas seem to prefer monthly environmental activities such as in Mushin and Surulere. The respondents (75%) believed that government can improve their environment through proper drainage constructions, refuse disposal, proper involvement of the community members and efficient use of Sanitary Inspectors or Public Health Inspectors preferably at the community levels.

Table 2. 5 Methods of Refuse disposal

Methods of refuse disposal	Frequency	Percent
Through Vendors	687	48.6
LAWMA	295	20.9
Refuse dumps	120	8.5
Burning	110	7.8
Inside the gutters	89	6.3
Burying them	8	0.6
On the roads	3	0.2
Inside undeveloped plots	1	0.1
No response	100	7.0
Total	1413	100.0

Source: Community Field Survey, Lawanson Community Partners for Health

Vendors and LAWMA seem to be enjoying the confidence of the respondents in terms of refuse disposal, (48.6% dispose their refuse through vendors, while 20.9% do the same through LAWMA) others were refuse dumps 8.5%, burning 7.8% and inside the gutters 6.3%, while burying them and putting them on the roads accounted for 0.8%. The fact that inside gutters, burning, burying them and putting them on the roads got mentioned at all as sites for refuse disposal, suggests that there are serious problems. One can easily see the connection between poor refuse disposal methods and blockage of drains and flooding. The need for communities' involvement,

participation and ownership of garbage management can be seen here.

Table 2.6: Methods of sewage disposal

Method of sewage disposal	Frequency	Percent
Water system	901	63.8
Pit toilet	393	27.8
Inside canal	36	2.5
Burying them	28	2.0
Inside gutters	22	1.6
Bush-undeveloped plots	2	0.1
No response	31	2.2
Total	1413	100

Source: Community Field Survey, Lawanson Community Partners for Health

Water system is used by 63.8% of our respondents, followed by pit toilets 27.8% and inside the canal 2.5%. This table is provided to allow us to see the relationship between sewage and refuse disposal.

Findings

Sources of drinking water in the three communities include boreholes, public taps, water taps inside the houses, water vendors and streams in that order. Refuse disposal methods were through vendors carting away rubbish, LAWMA. Refuse dumps, dumping inside gutters, dumping inside bushesundeveloped plots of lands, and burning by fire. Sewage disposal methods include water system, pit toilets, inside canals, burying them, inside gutters and bushes- undeveloped plots of lands.

Incorporation of House hold level Approach at Community level for garbage management and flood control in Nigeria.

Constitutionally, household garbage/refuse issues lie within the purview of the LGAs but, these constitutional responsibilities have been usurped by the State. This has led to roles obligation confusion for both the LGAs and the State which has led to inefficient and ineffective garbage collection in many cities in Nigeria. If the LGAs are too far from the household levels in terms of garbage collection and flood control, certainly the States are extremely distant and surely out of place to do anything meaningful on garbage management.

Lagos city with the World Bank assistance has not worked very well because of the neglect of the human aspects of such as (behavioural, cultural and norms) of the project. The House hold level Approach calls for collaboration with members drawn from various sectors at different levels- the State, the LGAs, and the community levels. A (CSI-UNESCO) project on the prevention of floods around the Lagos island (NIOMR, 2000; Clean Up Nigeria (2000); Simpson, 2007) suggest active involvement of communities in addressing the problem of floods in Nigeria, and gauging such participatory efforts through bottom-up policy thrusts. The State will play the major policy and

technical roles. The LGA which is the administrative head of the communities will have significant responsibility for health services in general and will play major role in the execution, implementation and coordination of the entirehousehold level approach. The Community members who are generating the garbage must be at the drivers' seat for getting rid of the garbage.

Expected responsibilities of the House hold at the Communities

The multi-sectoral members at this level include kings, chiefs, quarter chiefs or leaders, the Community Based Organizations (CBO) such as landlords, different types of artisan groups living as tenants, age grade associations, church groups, mosque groups, local banks, and other community associations such as traditional healers of various shapes. The institutional focus will be PHC facilities, which will serve as logistic and information centre for the entire activities.

Each WARD must be mobilized, sensitized into forming Community Based Action Committees (CBAC) Note that this must be different from the political wing of the ruling party at the lowest level. The streets that make up each WARD must have a minimum of two member representatives, the total members in a setting must be 80% women and 20% men. On the WARD by WARD basis these people must be brought together for broad based orientation and simplified teaching using local dialects on Fundamental Human Democratic participation, Women empowerment, Environmental/Refuse management and Flood control methods. People must be made aware of their obligations and responsibilities visa-vis welfare of the entire communities environmental issues.

After the orientation and training each WARD should be made to have democratically elections where executive members such as Chairperson, Vice chair, Secretary, Financial Secretary, Treasurer and PRO will be elected for three years. Community members should be encouraged to invest in garbage collection by constructing carts and employing youths and able bodied people for continuous collection for pay thereby creating gainful employment for community members. Every community's household will have cards which will be unique and specific to each community for garbage collection and payment with the assistance of the local bank. Modalities for collection should be simplified such that every household within a catchment area will actually be involved in the scheme.

Functional maps of each ward must be drawn boldly and large enough as working tools. Their elected officers and the technical officers who must be qualified Public Health Inspector will ensure that theirenvironments are kept clean. At this level there must be monthly meeting at the community hall or community school or a venue agreeable to all community members. At the meeting issues of garbage management and flood control must be exhaustively discussed. Local dialect should be medium of communication at this level, issues of sanction for erring community members also lies here. The lodgement of money collected at the local bank will be the responsibilities of the CBAC officers and Public Health Inspection officersposted to the WARD by the LGA.

Expected responsibilities of the Local Government Areas:

The multi-sectoral members at this level will include the department of Primary Health Care (PHC), Environment, Information, Education, Police, Community and Rural development, Social Welfare, Local heads and chiefs. The Medical officer for Health (MOH) or his/ her representative must be in charge of operations at this level. His or her team must include Environmental or Public Health Officers Minimum of two public health officers must be assigned to each WARD for a minimum stay of three years before they are transferred to another ward. With these officers standing by the community, the Executive Committee will be able to determine a trend regarding community awareness on squalor, filthiness and effective garbage management and flood control. This will make these environmental officers to be part and parcel of the community they are serving. The predatory perception and task force mentality existing between them and the community members will thus, be eliminated. These public health inspection officers with their technical know-how will maintain graphs on the boards in their various offices about each ward's level of performance.

In WARDS where there are markets, CABC should be set up along materials/commodities being sold. Markets are well organized in Nigerian cities, regular dues are paid for garbage collection, thus, CABC will bring efficiency and accountability to the process. A large market can have as many as five to ten CABCs with their account in each bank but with fewer Public Health Inspection officers. In these large markets 2-6 public health officers supervising the environmental conditions and garbage management should be adequate. At this level, representatives of communities are brought up together for comparing notes and ideas such that best practices are encouraged. At this level. community members will start imbibing good behaviour regarding refuse disposal, after they have known their roles and obligations as a result, of continuous cultivation of the community members, it is only then that electronic media and radio/television jingle can reinforce positive behaviours. In fact, at this level electronic media,

specifically television can be very useful and effective in covering and organizing the community meetings.

Expected Responsibilities of the State:

In 1975, during the implementation of the Basic Health Services Scheme (BHSS) the precursor of Primary Health Care (PHC) every State of the federation and those that were carved out of the existing ones, established Schools of Health Technology (SHT) where Public Health Inspection officers charged with maintenance of clean environment were usually trained. This category of health professionals are still being trained all over the nation with little or nothing to do even at the community level because of loss of vision on their parts and the part of Local and State governments. What the Public Health Inspectors are doing in most States of the federation is predatorily harass uninformed food sellers and vendors with a view to extort money from them, this they do once or twice a month from their officers at the LGAs. Some other times, they usually sit in the LGA secretariats talking or teaming up with the task force people to harass poor market sellers. They have no business sitting at the LGA secretariats but at the Community or household levels working with ordinary folks. They are begging to be fully utilized with proper schemes of service similar but much better than what they were doing during the colonial administration.

Their contemporaries in the advanced countries are usually satisfied with cities and counties employment because the job security is sure and the pay is good and better.

The multi sectoral members at the State level will include all State ministries such as Health. Environment, Information (Radio and Television), Education, Agriculture, Women and Social The roles and Development and NGOs. responsibilities of the State include ensuring that garbage collectors get their rubbish deposited at the approved landfills or dumpsites with ease. Training of health professional such as environmental/ public health inspection officers, who will systematically deployed to the LGAs for onward transfer to the community and ward levels to ensure clean environments. Policies and regulation as well as research efforts should be encouraged for the effective management of refuse, with the results and outcomes of such, naturally filtering into the LGAs and community levels. For example, issues such as refuse derived fuel (RDF), methane gas for cooking and production can further be exploited at this level. In addition, the issue of recycling plastic/polythene materials, paper materials and biodegradable fertilizer industries will certainly lead to the emergence employment opportunities. There must be active collaboration between the

State, LGAs and communities to work out pick up schedules that must be enforced by the State.

CONCLUSION

Refuse generation is an indispensable aspect of human activities in every society, and has to be continuously tackled. A systematic, simple but firm approach with deep house hold rooted life is the only way out. The kernel of this approach within the Community, will lead to the rearrangement of power blocks i.e sharing the power base of the eliteswith community members This is called empowerment, not or locales. removal of the elites' power but sharing some with the community members. Public private sector participation at the community level seems the most realistic way to look for solution for many social problems bedevilling many developing societies. One needs to be reminded that all the advanced cities of the western world where Nigerian rulers run into at the slightest opportunity are kept running in clean and healthy condition as a result of the kind of "bottom up" approach which is being suggested in this paper. The cleaners in the advanced cities work at nights usually under the guides of the cities, counties and or towns which employ and pay them as well. The mounting waste problem and seemingly intractable yearly flooding in many cities in Nigeria can be effectively managed and controlled if the policy makers are ready to be innovative by moving away from centralized management styles.

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