ASSESSMENT OF URBAN POVERTY, WATER AND SANITATION IN ALIMOSHO LOCAL GOVERNMENT AREA, LAGOS STATE

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ABSTRACT

In many parts of the world millions of people live in informal urban settlements especially in developing countries where lack of resources and inadequate infrastructural facilities lead to degradation of the environment. The aim of this study is to access and examine the incidence of poverty, water and sanitation in Alimosho LGA of Lagos metropolis. The study examined the disparities in the poverty severity experienced at different places over the study area which is being measured with some selected indicators. These indicators include economic, water and sanitation. Economic indicator considered the occupation type and average income of the household head for the measurement of urban poverty. Water indicator considered the source(s) of drinking water, the quality of the available water sources, and the proximity of population to the available water facilities. Sanitation indicator considered households' toilet facilities, households' waste type, households' waste collection & management, household waste disposal methods as well as waste evacuation rate. The study reveals that 44.1% and 38.6% of the population relied on boreholes and well respectively while the 51.6% travelled less than 50meter to get domestic water. Flush/Sewer and direct flush to septic tank are the most common toilet facilities in the area. The study also reveals that about 67.4% of the populations dispose their waste through LAWMA/PSP while 18.5% dump their wastes along in the open places/road sides. The study concluded that the Government Poverty Alleviation Programme should be restructured if not re-designed and should be centered on the 'basic needs' approach.

KEYWORDS: Urban poverty, Water, Sanitation, Indicators, Lagos State

INTRODUCTION

The concern that the poor particularly the "urban poor" to have access to improved drinking water and sanitation has become continuous discussions at national and international scales (Ayeni. 2012). The discussions, however, is not limited to just drinking water and sanitation but including - ensuring wider environmental sustainability, improving the health and livelihoods of the poor, and minimized the risk of communicable diseases that might arise from poor sanitary environment (Poverty-Environment Partnership, 2007; Ayeni, 2012). These are quite important if urban poverty is to be addressed sustainably as the urbanization and its associated problems particularly urban poverty / urban poor are continuously increasing.

In 1970, level of urbanization in developing countries was 25% and rose to 37% in 1994. It is projected to be 57% in 2025 (Eke 2004; Nekabari and Aguiyi 2012). By 2050, about 7% of the world population will be living in urban areas compared to 25% in 1970 (UNICEF 2012). The depth of poverty declined from 19% to 16% in rural areas, while it increased in urban areas from 9% to 12%. Between 1985 and 1992, extreme poverty rose from 10.1 million to 13.9 million in Nigeria while urban extreme poor recorded a three-fold increment i.e. from 1.5 million to 4.3 million people (World Bank, 2008; NBS, 2012; Oyeleye, 2013; Abotutu, 2014; Bakare *et al.,* 2015). Urban areas poverty has been on the increase since 1992. It increased to 69.3%, 63.3% and 70% in 1996, 2004 and 2010 respectively (CBN 2011). These indicate that the problem of urban poverty in Nigeria is becoming more serious and alarming as compared to the rural poverty (World Bank 1996; NBS, 2014; Nehemiah. 2014; Bakare *et al.,* 2015; Nsagha *et al.,* 2015).

The problem has been due to recent high population growth rates and rural-urban migration, which has made the quality of life in urban centre slums worse and urban services over, stretched (Osinnubi, 2003; Serra, 2003, Ikgopoleng and Cavri, 2007; ESA, 2011). Given the above it is therefore important to study the conditions under which the urban poor live in order to provide information, which will help the city and state administrators develop more positive policies and actions towards the poor (Yunling, 2004; Abotutu, 2014). It will also aid in knowing the living standard of the people in the study area and also facilitates comparison of their living standard within the region and with other parts of the country in term of income-expenditure (per capita) and other social welfare performances (Ali *et al.,* 2002).

The issue of poverty in Nigeria especially in the urban areas as exemplified by the situation in Lagos being the commercial nerve of the country has been aggravated by the present trend of rural urban migration coupled with the inability of the urban areas to create the jobs necessary for development (Garland *et al.,* 2007; Ajayi *et al.,* 2014).

Currently Lagos reflects the embodiment of the contemporary decay of urban life as evident in the poor standard of living, congested apartments, degraded environment, crime among others (Thorns 2002; Olajide, 2010; Edensor and Jayne 2011). Statistic released by NBS in 2013 revealed that 51% of male and 54% of female residents of Metropolitan Lagos are poor and live in a condition contrast to prosper, healthy and livable city (NBS, 2014).

The importance and values of Geographical Information Systems (GIS) applications in poverty mapping and management are now widely recognized. GIS and poverty mapping are very important instruments for urban poverty assessment (Zhou, 1995). This is because GIS has the potentials to provide cost effective, accurate and display information visually, and aid the understanding of the dynamics of information spatially (Zhou, 1995; Baker, 2008).

It is against this background that the research aims to investigate the interplay between poverty, access to improve water and sanitation condition in Alimosho being one the most populous informal settlement in Lagos metropolis.

STUDY AREA

The Study area is Alimosho local government of Lagos State. It lies between longitudes 3^0 13'30" E and 3^0 17'15" E, and between latitude 6^0 28 N and to 6^0 42'N. It occupies an area of about 173.6sq. Km. It is bounded by River Owo in the northern and western side. Towards the east, it is bounded by Ifako Ijaiye, Agege and Ikeja Local Government Areas. While to the southern part, it is bounded by Oshodi/Isolo, Amuwo Odofin and Ojo Local Government Areas of Lagos State.

The population of Alimosho LGA is about 1,277,714 people (NBS, 2007). It is populated by Aworis Egba/Egbados and Ijebu and non-indigenes in some major settlements such as Ayobo, Idimu, Agege, Omititun, Santos, Akowonjo, Egbeda, Alimosho, Shasha, Orisunbare, Banrneke, Alabata, Alaguntan, Isheri Olofin, Ejigbo and Ogunrombi community.

Due to the continuous increase in population and decline in the formal sector employment in Nigeria particular in Lagos, many households' members in the LGA are mainly in the informal sector and engaged in small businesses including urban agriculture on a subsistence basis (Akunnaya and Adedapo, 2014). Incomes in this sector are low, intermittent and uncertain, and could not maximally support the urban poor.

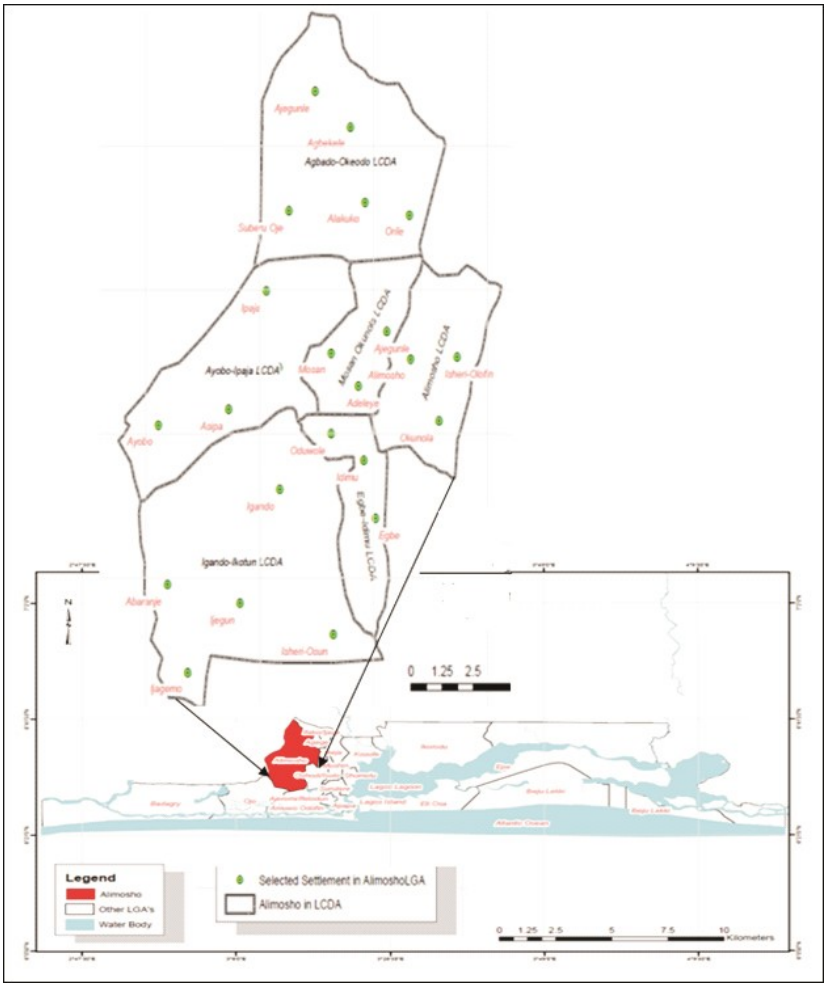

Fig. 1: Lagos State Showing Alimosho Local Council Development Areas.

MATERIALS AND METHODS

Two main types of data used for the study are; spatial and attributes. These were obtained from the primary and secondary sources. Primary data were obtained through, reconnaissance survey, general household survey, personal observation and structured questionnaire administration. The secondary sources include; published materials from journals, textbooks, government publications and gazettes.

Administration of Research Instrument

Questionnaire was designed and administered randomly to elucidate information on

socio-economic characteristics, access to water and environmental conditions, e.g. sanitary condition, waste disposal methods of the study area. Field observation was also used to establish the information collected through the questionnaire administration.

It was observed during reconnaissance survey that there are six Local Councl Development Areas (LCDAs) in the LGA including 3 relatively small with low population LCDAs - Alimosho, Egbe-Idimu, and LCDA, Mosan-Okunola) and 3 relatively large with high population LCDAs - Agbado-Okeodo, Ayobo-Ipaja, and Igando-Ikotun (Table 1). Therefore, based on LCDA area extent and population proportion, a total number of 203 houses were selected for questionnaire administration (Table 1).

A questionnaire was given to each literate respondent, for easy assessment, the procedure for completing the questionnaire was explained to the respondents. The illiterate respondents were interviewed directly using personal interview method in order to avoid incomplete information.

Table 1: Distribution of questionnaires for the study

LCDA	Selected communities in each LCDA (No of questionnaire)	No of Questionnaire distributed in each LCDA	No of Questionnaire in recovered from each LCDA
Agbado-Okeodo	1. Ajegunle (9), 2. Subaru-Oje (9) 3. Alakuko (9), 4. Orile (9) 5. Agbekele (9).	45	41
Alimosho	1. Alimosho (10) 2. Okunola (9) 3. Isheri-Olofin (9)	28	26
Ayobo Ipaja	1. Ipaja (10) 2. Akiogun (10) 3. Asipa (9) 4. Ayobo (10)	39	34
Egbe-Idimu	1. Egbe (10) 2. Idimu (10)	20	18
Igando-Ikotun	1. Igando (9) 2. Abaranje (8), 3. Ijegun (7), 4. Isheri-Oshun (9) 5. Ijagemo (7)	40	39
Mosan Okunola	1. Oduwole (10) 2. Adeleye (10) 3. Mosan (11)	31	26
Total		203	184

Data Analysis

The results of the survey questionnaires administered were cleaned and analyzed using Microsoft Excel Package, which is used in coding field data for further statistical analysis. However the main thrust of the data obtained are statistically presented in maps. The results of the in-depth interviews and observation and content analysis of the secondary data were also used to complement the primary data. The indicators that were presented in maps include; drinking water quality', 'travel distance to improved

water facilities, waste types', 'waste dispose system', 'waste collection pattern', 'dumpsite location', 'waste evacuation rates', 'Household toilet facilities while information on occupation, monthly income, etc. were presented using descriptive method.

RESULTS

Economic Indicators of Urban Poverty

Occupation

The occupational pattern of the household is a very vital means of determining the household poverty rate. As shown in Fig. 2 the economic indicators assessment revealed that, in Alimosho LGA, 34 (18%), 110 (51.8%), and 40 (21%) of the respondents claimed to be civil servants, self-employed, and unemployed respectively. The highest numbers of civil servants was recorded at Agbado-Okeodo LCDA while the lowest was recorded at Ayobo-Ipaja and Egbe-Idimu LCDAs. The highest numbers of respondents who were self-employed was recorded at Igando-Ikotun LCDA while the lowest was recorded at Egbe-Idimu LCDAs. On the hand, the Agbado-Okeodo also recorded the highest numbers of unemployed respondents while Mosan-Okunola recorded the lowest numbers of unemployed respondents.

Income

The average income of the household head is a factor that contributes to poverty in the study area. Fig. 3 revealed the disparities of households' income within the selected studied LCDAs. The weekly earnings of 62 (33.6%) and 47 (25.5%) of the total 184 respondents sampled was less than N5,000 and between N5,000 and N25,000 respectively. These accounted for 59.2% of the sample population. On the other hand, 59 (32.1%) and 18 (9.8%) earn between N25, 000 & N50,000 and N50,000 and above per week which represent 40.8% of the sampled respondents.

Water Indicators

Sources of domestic water

In the study, three (3) sources of drinking water were identified; these include: Bore-hole, Public tap, and well. It was also observed that most of the population patronizes water vendors particularly people selling their boreholes water for communities' neighborhoods. In addition some respondents claimed rain water as additional water source to them during the raining season. This shows the disparities in the availability of portable drinking water in the study area.

Household Water Quality

The availability of water is essential to life and it is regarded as one of the cogent parameters by the WHO in the measurement of poverty within any population. Irrespective of the source of water, the quality of the produced water is of greater importance to the population. The quality of water partly determines the frequency at which the target population treats water-borne diseases. On the average, about 44.1%

and 38.6% relied on boreholes and wells respectively as their major source while the remaining 17% relied mainly on public tap water (Fig. 4).

The perceptions of the respondents on quality of these sources are diverse and varied from excellent to very poor depending on the sources. For instance most respondents using boreholes and public tap waters in all LCDAs classified them as either excellent (particularly for public to water) or good (mainly for boreholes). The majority of population using wells classified it as good or excellent (particularly around Ipaja-Ayobo, Ikotun-Igando & Egbe-Idimu LCDAs) while others (36.1%) classified the quality as fair and poor (mainly the around Agbado-Okeodo, Alimosho, and Mosan-Okunola).

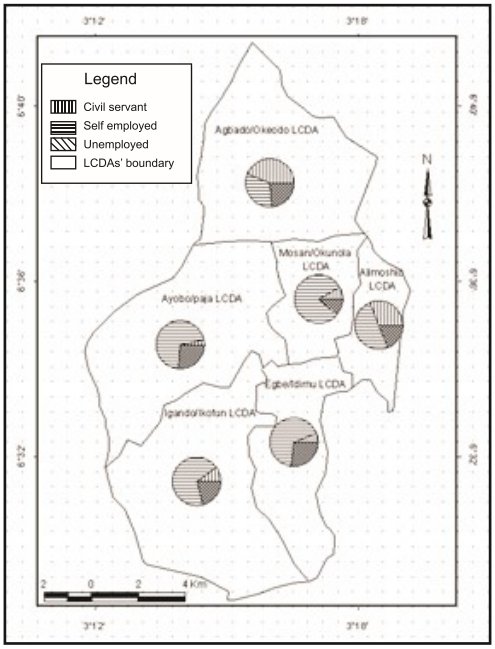

Fig. 2: Occupation

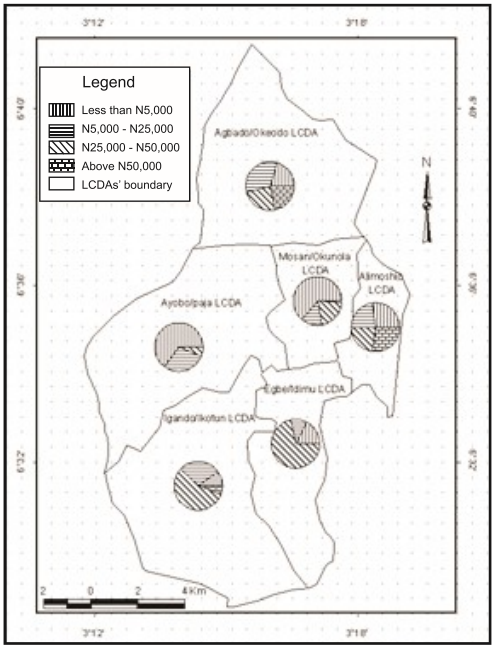

Fig. 3: Income

Quality

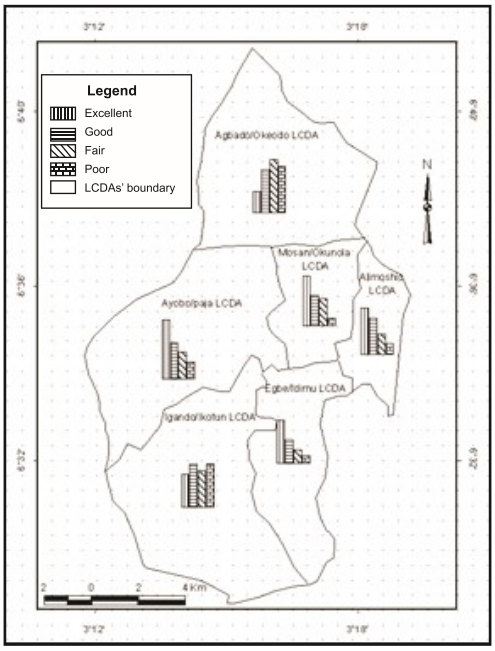

Fig. 4**:** Household Water Quality

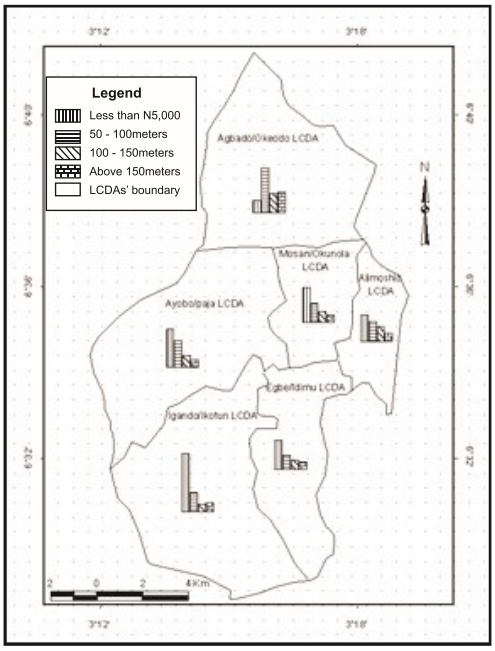

Fig. 5: Distance to domestic Water sources

Distance to Drinkable Water sources

The measurement of the accessibility level of water facilities in this study was leveraged on distance travelled and fig 5 shows the average distance travelled by the studied population in each LCDA. In general, about 95 (51.6%) and 61 (33.2%) of the total 184 respondents sampled travelled less than 50meter, and between 50 & 100meters respectively to access their water source(s)portable water. About 18 (9.8%) and 10 (5.4%) claimed to travel between 100 - 150meters, and over 150meters before accessing their domestic water sources (Fig. 5).

Sanitation Indicators

Households' Toilet Facilities

Sanitation and cleanliness starts from within the household, also poverty can be measured from the facilities used in the building of a house. One of these facilities is the type of toilet being used in a household. Fig 6 shows four (4) types of toilet facilities obtainable in the study area. The most prominent toilet facility in all LCDAS is the Flush/Sewer (52.7%), followed by direct flush to septic tank toilet type (31%) as indicated by respondents. About 26 (10.3%) and 4 (2.2%) of the respondents respectively indicated covered pit latrine and uncovered pit latrine accounted as their toilet facilities for 3.8%, and respectively.

Households' Waste Type

Sanitation is an integral part of urban poverty; it is expected that a well-balanced affluence community should have a well sanitized environment. In addressing sanitation issues, efforts should be expended on the type of waste being generated by such community. Fig. 7 shows the four (4) classes of waste types generated in the area. Food waste accounted for the most generated waste type in all LCDAs as claimed by 81 (44%) respondents. This is followed by plastic and industrial wastes as claimed by 52 (28.3%) and 43 (23.4%) respondents.

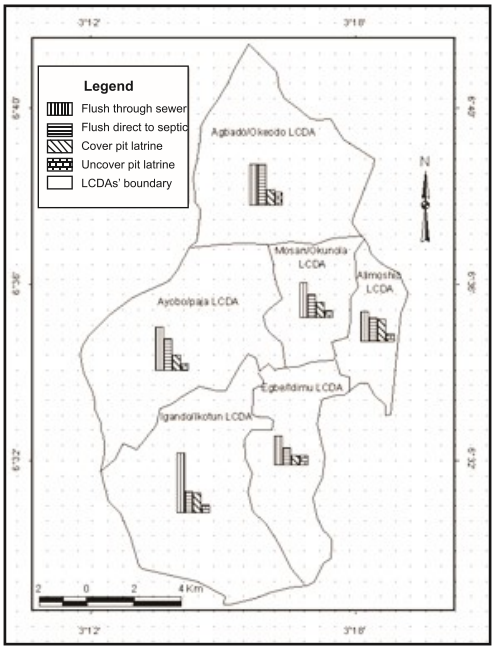

Fig. 6: Households' Toilet Facilities

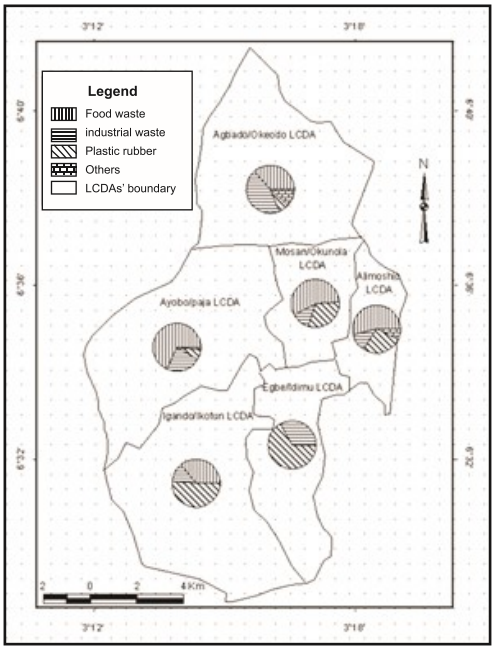

Fig 7**:** Households' Waste types

Households' Waste Collection and Management

Fig. shows where households keep their wastes before it is being evacuated. Collection of wastes is very important to keep a health environment and a good aesthetic nature of such environment. The frequency/ rate of the collection and management before final evacuation are much important. The large proportion of respondents 51 (32.1%) and 51 (27.7%) claimed that majority of the population respectively collect and manage within their houses and in the backyard/front of their respective buildings before evacuation to designated dumpsites. Respondents also claimed that communal and street waste points are being used as observed by 45 (24.5%) and 29 (15.8%) of the population respectively (Fig. 8).

Household Waste Disposal Methods

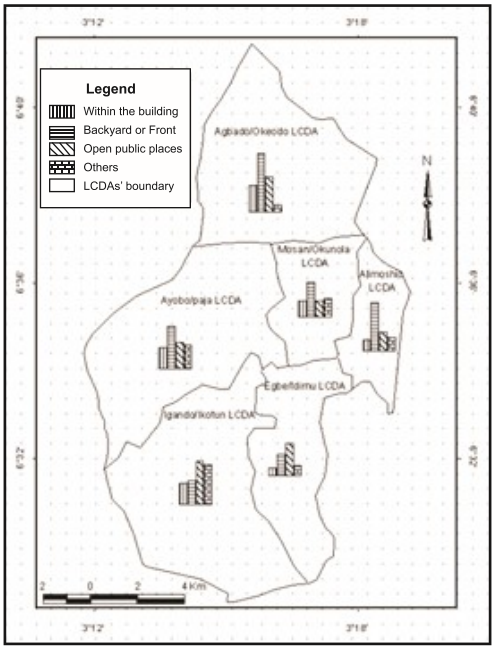

Fig. 8: Households Waste collection and management

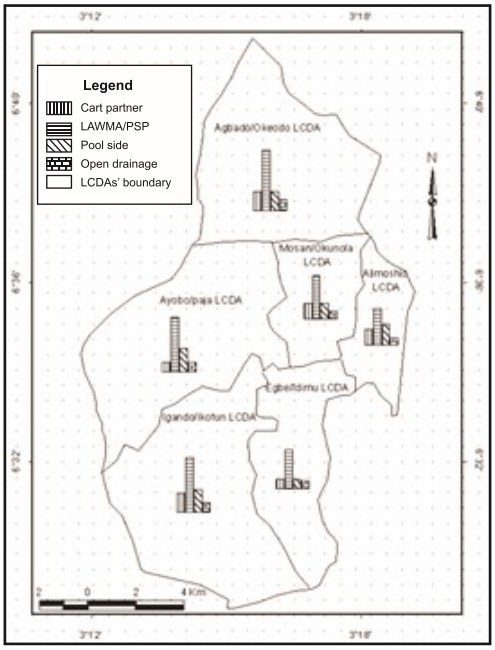

Fig. 9: Waste Dispose methods

Waste Evacuation Rate

The frequency of waste evacuation from household/community level to final designated waste collection is very important and it can be used as yardstick for the determination poverty severity within urban centers. The more frequent wastes are evacuated, the less the communities are prone to waste induced diseases and infections, also the more the aesthetic value of the environment. Fig. 10 shows that there are several intervals in the evacuation of wastes in the study area; this can be attributed to factors like 'flexibility in transportation medium, financial ability of the population etc. All the LCDA's within the study area share various evacuation rates in different proportion. Majority of respondents - 61 (32.2%) and 48 (26.1%) claimed that LAWMA/PSP evacuates waste weekly and twice a week respectively which characterized varying periods and intervals as scheduled by operators and management. On the other hand, 34 (18.5%), 22 (12%), and 19 (10.3%) waste are being evacuated twice a month, daily, and monthly respectively.

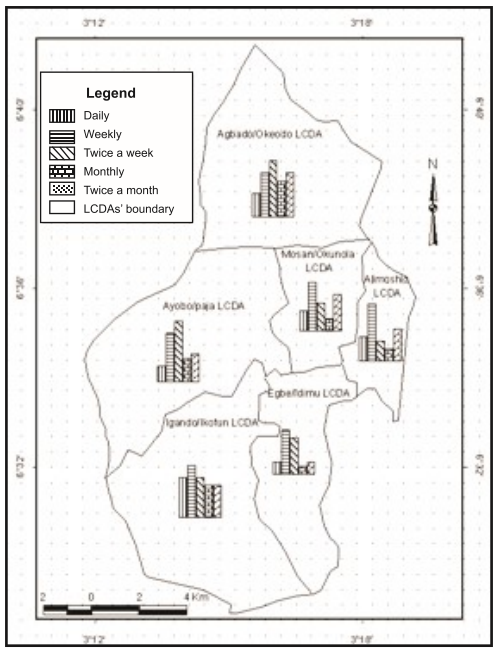

Fig. 10: Alimosho LGA Household Waste Evacuation Rate

CONCLUSION

Poverty disparities and trends can be measured in different facet of satisfaction. It is the deprivation of the satisfaction in focus that amounts to poverty. In this context, poverty was conceptualized under two (2) units, i.e. in terms of sanitation and accessibility to water facilities.

It is observed in Agbado-Okeodo LCDA that most settlements use the frontage/backyard of the building as dumpsite location while in Igando-Ikotun LCDA, most settlements embraces public places as dumpsite location. This clearly shows how sanitized both LCDA's can be. Mosan Okunola LCDA and Alimosho LCDA, have similar view on dumpsite location. In Egbe-Idimu LCDA, there are divergence in believe of residents in the two settlements selected therein. These diverse orientations in the site selection of dumpsite can be related to the poverty severity in each settlement and across LCDA's.

Accessibility to water facilities was also used in measuring poverty/in-equality in urban areas viz-a-viz Alimosho LGA. It was observed that there is gross poor water quality in part of Agbado-Okeodo LCDA and part of Igando-Ikotun LCDA. The later LCDA poor water quality can be attributed to the vandalisation of oil pipe in Ijegun some few years ago. The fossil fuel product mixed with the underground water to pollute the water.

In conclusion, any policy designed to ameliorate the plight of poverty must among other things recognize housing, provision of potable water, improved health care facilities for the wards of the urban poor and employment opportunities. No societies can surely flourishing and be happy, of which by far the greater part of the numbers are poor and miserable. Therefore, the need to alleviate poverty in Nigeria as a whole should be the highest priority of the government and the citizenry.

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