

# Attitude Of Urban Dwellers To Waste Management And Control In Ogun State, Nigeria: A Developmental Challenge And Concern

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**Abstract:** Waste generation has been identified as a major challenge in many developing societies. In Ogun State, South West Nigeria, just like other states, the challenge has continued in spite of some very obvious steps taken by the government to curtail it and the problem it poses to the citizens. Although, a few studies have been carried out on waste situation in the state but such efforts ignored the: waste constituents in Ogun and Lagos States, behavioural patterns in waste disposal at the household level, categories of waste and disposal methods, waste sorting attitudes and practices and monthly environmental sanitation exercise: A government response to waste. The study used questionnaire (self-administered type), In-depth interview (IDI) and personal observation to obtain information from respondents. Among other things, the paper found that the highest waste constituents from households were nylons and papers at 50.5%, indicated categories of waste as Solid, liquid and sewage and shown that wastes were predominantly disposed through waste collectors, and toilets at 77.6%. Based on these findings, the study suggested some recommendations to improve the situation of waste management in the state.

**Index Terms:** Attitude, Urban dwellers, waste, management

## 1 INTRODUCTION: THE WASTE SITUATION IN OGUN-STATE

Fishbein (1967) cited in Omonijo, Uwajeh, et al (2019) [19] views attitude as a learnt behaviour that shows people's reactions to objects, either in a positive or negative way. The attitude of Nigerians to waste generation and disposition, most especially in Ogun State, has continued to pose a serious challenge in spite of some very obvious steps taken by the government to curtail it. One of these challenges is that 'the solid waste generation is faster than the rate of collection and evacuation, leading to solid waste accumulation across the nooks and corners of the state' Oloyede, et al, (2014) [10], which has health implications on citizens. Aside from the claims of Oloyede et al., (2014) [11] concerning waste generation and lack of proper management in Ota, Ojo (2014) [9] discussed other problems facing Obantoko area of Abeokuta in the state. These include inadequate water supply, bad road network and poor waste management. Out of these problems, Ojo (2014) [9] contends that lack of proper waste management is the most prominent among them that needs urgent attention'. The situation described by Oloyede et al., (2014) [10] and Ojo (2014) [9] is common place across the State particularly the major towns and cities.

The embarrassment this situation has caused the successive governments must have informed the Monthly Environmental Sanitation Exercise put in place by the State Government (Military and Civil) in the last two decades or more. The exercise seems to have failed to address the problem as expected, as the state will qualify as a dirty state going by its inability to manage her waste generated by individuals, households, groups and industries. Corroborating this position, Oloyede et.al (2014) [10] observed that 'Despite various efforts at enforcing environmental sanitation in Nigeria at both national, state and local government council levels and the benefits of these efforts in terms of providing employment, alleviating poverty, improving public health and sanitation as well as a reduction in environmental pollution, there is still the issue of continuous increase in uncollected residential solid waste'. Failure of the efforts may be connected with the present attitude of seeing 'waste as waste' and not 'waste as wealth'. More worrisome about the attitude of urban dwellers on waste issues is the tendency to cohabit with waste in their neighborhoods and across the city in spite of the danger it poses to human existence. Further to that, the obvious incapacity to know the hidden potentials of waste to generate wealth in order to alleviate the squalor and poverty prevalent in the state are gradually becoming an issue of concern in academia and needs to be explored. Besides, several studies have addressed problems associated with housing and waste management in Ogun and Lagos States, South-West Nigeria, (Ayedun, et al., 2018; Durotoye, et al., 2018; Atayero, et al., 2019)[11-13], but such efforts failed to capture the: waste constituents, behavioural patterns in waste disposal at the household level and categories of waste as well as its disposal methods. Also, neglected in these studies that need to be addressed are issues relating to urban dwellers waste sorting attitudes and practices. Moreover, the valuable information concerning the monthly environmental sanitation exercise: A government response to waste management in these states were ignored. It is on this note this paper was conceived. The study intends to address these flaws in knowledge. The paper is divided into three sections: Introduction, material and methods and findings.

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## 2 MATERIAL AND METHODS

This study was a cross-sectional survey in which self-administered questionnaire, In-depth interview (IDI) and personal observation was deployed. The consideration for combining both qualitative and quantitative methods of enquiry was to fully capture the phenomenon under study. The study was conducted in four urban Local Government Areas in Ogun State – Ijebu-Ode, Ado-Odo/Ota, Ifo and Shagamu, with the total population of about 1,744,863 people or individuals who live and work in the urban centre as well as those that are knowledgeable about the subject matter and are willing to share their knowledge with the researchers. The four urban Local Government Areas The sample size for the study was determined by using the Cochran (1977) as framework for sampling a definite population [14]. Therefore, out of a total population 1,744,863, as reported by the National Population Commission (2006), a sample size of 1,144 respondents was drawn [15].

**Table 1: Proportional Allocation to Strata in each Local Government Areas**

Local Government Areas	Population	Selected Major Streets	Samples
Ado-Odo/Ota	621,826	i. Ota	155
		ii. Sango	252
		Total	407
Ifo	635,893	i. Ifo	190
		ii. Isheri	227
		Total	417
Ijebu-Ode	185,355	i. Folagbade	60
		ii. Bonojo	62
		Total	122
Shagamu	301,789	i. Sabo	
		ii. Surulere	
		Total	197
Total	1,744,863		1,144

Source: Adapted from Federal Republic of Nigeria, (2012) [16] with Researcher emphasis, (2019)

Further to these, the sampling technique is multistage. First, the four selected urban Local Government areas were purposively selected being the strategic locations of high volume of waste in Ogun state State, and that benefited from the National Integrated Municipal Solid Waste Management Intervention. Second, by cluster sampling locations within selected LGAs were selected. This comprised market places, residences, motor-parks, industries, office, organizations and designated areas with high volume of waste generation during the monthly State organized Environmental Sanitation Exercise. Thereafter, the respondents were purposively selected for in-depth interview. In each site, a minimum of 1 respondent was identified for the interview. This was also based on their willingness to participate in the study. Respondents for the IDI were also purposively selected after conducting the quantitative study. This method assisted the researchers to identify reliable sources of data in the study population. Field observations were noted and notes taken down in field. The notes were based on meeting the objectives of the study.

## 3. FINDINGS AND DISCUSSION

### 3.1 Soio-Demographic Features of Respondents

The socio-demographic characteristics of the respondents reflect that more females (54.6%) than males (45.6%) participated in the study. A majority (66.7%) of the respondents were Christians, and most respondents were also married (60.2%). The residence pattern of the respondents showed that more people (53%) lived in shared houses and/or occupied not more than 2 rooms in a house. About 97.4% of the respondents had not less than primary school education and 89.8% lived in nuclear family settings. The mean age of respondents was  $\pm 32.94$  while the maximum age of respondents was 83 years old. Also, mean income was 29,855.88 naira per month as the mean number of children in a household is 2.69 children, and the mean household size was less than 5 persons at a time (4.40 people). Being a study conducted in Southwest Nigeria, most (78.9%) respondents were of Yoruba descent.

**Table 2: Frequency and percentage of socio-demographic characteristics of the respondents**

Socio-Demographic Characteristics		F	%
Sex:	Male	439	45.4
	Female	529	54.6
	Tot	968	100.0
Religion:	Christianity	605	66.7
	Islam	304	31.4
	Traditional	14	1.4
	Others	4	0.4
	Total	967	100.0
Marital Status:	Single	320	35.2
	Married	548	60.2
	Divorced	17	1.9
	Separated	16	1.8
	Widow(er)	9	1.0
	Total	910	100.0
Residence Pattern:	Single room	230	24.5
	Two rooms	268	28.5
	Mini-flat	166	17.7
	2-bedroom flat	120	12.8
	3.bedroom flat	156	16.6
	Tot	940	100.0
Highest Educational Qualification:	No education	24	2.5
	Primary School certificate	97	10.1
	SSCE, WASC, NECO, or equivalent	390	40.7

	NCE/ND/OND	300	31.3
	University Degree	142	14.8
	Others	5	0.5
	Total	958	100.0
Current Household Type:	Nuclear	851	89.8
	Polygyny	59	6.2
	Extended	38	4.0
	Total	948	100.0
Ethnicity:	Yoruba	768	78.9
	Igbo	62	6.4
	Hausa	12	1.2
	Others	132	13.6
	Total	974	100.0

Source: Field Work, (2017)

**Table 3: Descriptive information of socio-demographic characteristics of the respondents**

Variables	N	Minimum Values	Maximum values	Range	Mean	Standard Deviation
Age	770	18	83	65	32.94	10.14
Average Income	551	3,000	300,000	297,000	29,855.88	34,996.47
No. of Children	596	1	9	8	2.69	1.32
No. of Household Members	889	1	24	23	4.40	2.56

Source: Field Work, (2017)

### 3.2 Waste Constituents in Ogun State

Based on a ranking of 1<sup>st</sup> to 10<sup>th</sup>, the data reflects that highest waste constituents from households in the survey were nylons and papers (50.5%); when plastics, green materials – grass and vegetables accounts for a total of (16.7%) of wastes that are deposited in the communities, as tin/metals, batteries and unwanted clothes constituted 19.4% of the wastes that are to be found in the environment. This data is a reflection of the prevailing situation of waste management in Nigeria, as it also highlights the probable outcomes that entrepreneurial dimensions could take in Nigeria, considering the fact that wastes are continuously generated and available in the environment, the data shows the wastes that are most readily available can inform the direction of private and government investments. This finding contrasts with the reports from the Inter-governmental Panel on Climate Change (2006) [4] and Ogwueleka (2013) [18] which agree that organic wastes rank highest in terms of household waste composition. In the study area, the fact that organic materials rank 4<sup>th</sup> is a reflection that organic elements are either better managed or are not in surplus supply, this could be a function of the economic recession and or increased awareness on the need to manage/reduce organic waste. Economic recession has been found to reduce expenditure on food and by implication consumption, which contributes significantly to the production of organic waste. In Japan (Larke and Micheal 2005) [5], Sweden (Sverige, 2009) [1], and UK (Burkhalter, 2016) [2],

economic recession is a factor that accounts for fall in real income and it leads to a decline in household spending as well as a fall in consumer goods production (Mukhtar et. al, 2016) [3]. In other terms, awareness about how foods can be preserved – ensuring longer shelf life, managing food quantities and multidimensional use and re-use of certain foods/vegetables can also impact positively on the amount of waste generated in the household (Burkhalter, 2016) [2]. Also, factors that may be responsible for the skew in waste composition ranking, being contrary to the literature, extend to demographic changes (increase in young population, changes in lifestyle and consumption patterns). These dimensions can be responsible for the reversal of order relating to waste generation as captured in the study. Thus, as social and environmental dynamics occur, they have propensity to determine the kinds of waste that can be found, especially within the context of households. Therefore, it is imperative to note that developing business and entrepreneurial ideas based on waste generation and management in any scenario is a function of the availability of the wastes required, where the required waste (plastic, nylons, glass, organic elements etc) can be found; and how regularly such can be found. Business development experts will argue that location of industry is first a function of nearness to raw materials. Transforming wastes to wealth has huge social and economic benefits. Hence, considering the fact that location is vital for the transformation of waste to wealth, Hassan (2015) [7] describes five major considerations for the siting of business concerns that are interested in transforming waste to wealth. These are – distance to landfills and transfer stations; distance to main road; distance to electrical grid; distance to sensitive land use (serving school, residences, medical structures); and existence of vacant land, are major factors to consider.

**Table 4: Multiple response analysis showing the waste constituents in the selected areas**

Identified Wastes Constituents	Responses		% of cases	% Rank
	F	%		
Liquid Wastes	110	3.6	11.8	10 <sup>th</sup>
Nylons	776	25.3	83.3	1 <sup>st</sup>
Papers	772	25.2	82.8	2 <sup>nd</sup>
Plastics	266	8.7	28.5	3 <sup>rd</sup>
Grass/Vegetables materials	245	8.0	26.3	4 <sup>th</sup>
Unwanted clothes	209	6.8	22.4	5 <sup>th</sup>
Tin/Metals	200	6.5	21.5	6 <sup>th</sup>
Batteries	187	6.1	20.1	7 <sup>th</sup>
Foods remnants	169	5.5	18.1	8 <sup>th</sup>
Ceramic	129	4.2	13.8	9 <sup>th</sup>
Total	3063	100	328.6	

Source: Field Work, (2017)

### 3.3 Categories of Waste and Disposal Methods in Ogun State

Waste disposal has been described as one of the many problems that waste generation had created in the past and in present situation. Solid (61.4%) and liquid (61.1%) wastes are predominantly disposed through waste collectors, and toilets (77.6%) are largely engaged in the disposal of sewage. As a way of describing the pathways adopted in waste disposal, the

use of fire – burning were next in line for solid (23.4%) and sewage (14.3%) wastes. This practice is however found among few respondents, hence, it is rational to relate with the fact that although waste disposal is a common practice in the population is subject to the idea that the disposal is properly managed. Individuals are likely to dispose of waste based on the available means. Hence, literature that discuss waste disposal and management process in Ogun State have identified the fact that in parts of Abeokuta, open dumps are the most common options for solid waste disposal (Ojo, 2014) [8]. These are however reported as being poorly managed. Also, in the Sango-Ota area of Ogun State, solid wastes have been described as littering the major roads of the community. Hence recycling as a suggested strategy of waste management in the State was evaluated as requiring various interventions that can encourage households and businesses' engagement with recycling (Oloyede, et. al 2014) [9].

**Table 5: Multiple response analysis showing the categories of waste and disposal methods in the selected areas**  
Source: Field Work, (2017)

Items	Yes		No		Total	
	F	%	F	%	F	%
Do Adolescents help with Waste Disposal?	364	38.4	584	61.6	948	100
Do you know what happened to your garbage after disposal?	205	21.6	746	78.4	955	100
Do you think careless wastes disposal can be a risk to your health?	898	94.5	52	5.5	950	100
Do you recycle wastes yourself?	271	28.1	693	71.9	964	100
Do you have any idea about composting?	249	25.8	715	74.2	964	100
Are you involved in doing gardening?	205	21.3	759	78.7	964	100
Are you currently paying for your garbage?	330	35.3	606	64.7	936	100
Are you willing to pay for wastes collecting services?	769	80.9	181	19.1	950	100

**Table 6a: Frequency and percentage of current orientation of household in the study area about waste disposal**

Categories of Wastes	Disposal Methods	Responses		% of cases	% Rank
		F	%		
Solid	Waste Collector	779	61.4	85.1	1 <sup>st</sup>
	Burning	296	23.4	32.5	2 <sup>nd</sup>
	Burying	111	8.8	12.2	3 <sup>rd</sup>
	Animal Feeding	81	6.4	8.9	4 <sup>th</sup>
	Total	1264	100	138.6	
Liquid	Waste Collector	724	61.1	78.4	1 <sup>st</sup>
	Water carriage	290	24.5	31.4	2 <sup>nd</sup>
	Street drainage	114	9.6	12.3	3 <sup>rd</sup>
	Outside the house	56	4.7	6.1	4 <sup>th</sup>
	Total	1184	100	128.1	
Sewage	Toilets	795	77.6	89.3	1 <sup>st</sup>
	Burning	131	12.8	14.3	2 <sup>nd</sup>
	Drainage	99	9.7	11.1	3 <sup>rd</sup>
	Total	1025	100	115.2	

Source: Field Work, 2017

### 3.4 Behavioural patterns in waste disposal at the household level

The study identifies the behavioural patterns that are associated with waste disposal at the household level. Thus, in a majority (61.6%) of the studied households, adolescents are not assigned the task of waste disposal, as a significant population (78.4%) does not know what happens to the wastes after they have been deposited. Paradoxically, most (94.5%) respondents believe that careless waste disposal constitutes a public health risk. Household demonstrate weak attitudes in terms of waste management practice(s), hence, practices like recycling (28.1%), composting (25.8%), and gardening (21.3%). Although majority of households (64.7%) do not currently pay for waste collection, significant willingness was demonstrated regarding payment for waste collection services. In this regard, although waste management behavior at the household level can be regarded as poor and weak, the willingness reflected in terms of paying for waste disposal, is a sign that more efforts through public sensitization and awareness can yield better results relating to household management of wastes. In this vein, Sridhar and Hammed (2014) [6] pointed out that although many actors are involved in waste management, governments at the centre (State and Federal) wield significant influence. Albeit, the current challenges that confront waste management in Nigeria are outcomes of politicization and weak inclusiveness.

### 3.5 Waste Sorting attitudes and practices

From the findings in the Table 6b, waste sorting, as a first step

in waste management was engaged so as to account for the attitudes and practices relating to waste sorting. Hence, it was clear that household members sort their wastes because it is perceived that such can be useful (94%). In other scenarios, household sort their waste so as to reduce the environmental problems that wastes generate (66.2%). In another condition, waste sorting is practiced because it a socially-learned behavior (63.6%). It was found that waste sorting primarily (96.8%) is done when household members perceive that they have the time for such activity. A lesser proportion (32.1%) however sorts their waste due to the economic benefits that accrue from waste sorting. This is a reflection of the low economic value that individuals attach to waste sorting. In dredging into the waste to wealth potential, Sridhar and Hammed (2014) [6] and Burcea (2015) [17] among other scholars have however identified financial/economic benefits that accrue to waste sorting, and picking at the individual level. It is an enormous industry that metal and plastic recycling brings to major cities in Nigeria – a single town in Oyo State (Kishi Town) currently has not less than 3000 metal recyclers in business. As highlighted in Burcea (2015) [17] the informal activities relating to waste management – throughout the value chain provides vast economic benefits across Africa, Asia and South America. Hence, it is imperative to emphasize the need to engage productively in waste management and how wastes can become bigger industries as this has already begun. In the interviews, Nigerians demonstrate the high economic potentials that waste to wealth endeavours can generate. This is also extended to the capacity to produce fuel, and energy from the vast deposits of waste siting around the country. Although, the benefits accruing to waste sorting are enormous, the study identified gray areas that slow down the commitment and activities relating to waste sorting and recycling in the study areas. Waste collectors inconsistency (84.8%) in terms of coming to pick up sorted waste was identified as a setback. Also, in about 66.8% of the cases, respondents reported that they had little time to spare so as to accommodate the sorting activity. In other cases, reference to time emerged as a corollary to the challenges of waste sorting, second to the availability of materials and personnel to complete the sorting process. In this regard, in about 190.1% of the cases, respondents opined that they will engage in sorting if sorting bags are made available. This is a pointer to a policy and research gap, relating to the needs of the population and as a process for facilitating waste sorting – which may actually not be a primary source of income but as a means of residual income. Hammed (2014) [8] and Burcea (2015) [17] have established the fact that waste sorting, collection and recycling can double as both a primary income as well as a residual income. The direct implication of this for the country's Gross Domestic Product (GDP) is huge (Nzeadibe and Chukwuedozie, 2011) [8].

**Table 6b:** Multiple response analysis showing the distributions of waste sorting tendencies of the respondents in the selected areas

Sorting Tendencies	Characteristics	Responses		% of cases	% Rank
		F	%		
Reasons For Sorting	It is because I see others doing it	618	18.6	63.6	3 <sup>rd</sup>

	I know that it could be useful	914	27.6	94.0	1 <sup>st</sup>	
	I know that it would reduce environmental problems	643	19.4	66.2	2 <sup>nd</sup>	
	I have seen it in the news	285	8.6	29.3	5 <sup>th</sup>	
	I see neighbors doing it	296	8.9	30.5	4 <sup>th</sup>	
	I use some of the materials myself	272	8.2	28.0	6 <sup>th</sup>	
	I don't see any use for sorting wastes	136	4.1	14.0	8 <sup>th</sup>	
	Other reasons	150	4.5	15.4	7 <sup>th</sup>	
	<b>Total</b>	<b>331</b>	<b>100</b>	<b>340.9</b>		
	When do you sort?	When I have a party	427	19.2	46.7	3 <sup>rd</sup>
		When I have the time	885	39.8	96.8	1 <sup>st</sup>
When I feel like		619	27.8	67.7	2 <sup>nd</sup>	
When I think I will be paid for certain components of my garbage		293	13.2	32.1	4 <sup>th</sup>	
<b>Total</b>		<b>222</b>	<b>100</b>	<b>243.3</b>		
Problems Encountered During Sorting	No containers	413	18.7	42.5	3 <sup>rd</sup>	
	Collectors inconsistency	824	37.3	84.8	1 <sup>st</sup>	
	Little time for me to do so	649	29.4	66.8	2 <sup>nd</sup>	
	Others	323	14.6	33.2	4 <sup>th</sup>	
	<b>Total</b>	<b>220</b>	<b>100</b>	<b>227.3</b>		
Reasons Why People Don't Sort	I don't know about it	819	24.8	86.1	3 <sup>rd</sup>	
	I know about it but there is no garbage container nearby	100	30.4	105.6	2 <sup>nd</sup>	
	I don't have time to sort	107	32.7	113.4	1 <sup>st</sup>	
	I don't think it makes a difference to sort	345	10.5	36.3	4 <sup>th</sup>	
	Other reasons	52	1.6	5.5	5 <sup>th</sup>	
<b>Total</b>	<b>329</b>	<b>100</b>	<b>346.8</b>			
Reasons why those who do not sort will sort	If I know about the health and environmental benefits of good waste management	806	16.5	89.0	4 <sup>th</sup>	
	I will start if garbage containers are available to me	172	35.3	190.1	1 <sup>st</sup>	
	I don't think I have time to sort wastes even if containers are available	1170	24.0	129.1	2 <sup>nd</sup>	
	I will start sorting my wastes if others will also do it	105	21.6	116.6	3 <sup>rd</sup>	
	Other reasons	127	2.6	14.0	5 <sup>th</sup>	
<b>Total</b>	<b>488</b>	<b>100</b>	<b>538.7</b>			

Source: Field Work, 2017

The Table 6c reflects the state of awareness and orientation about the practice of waste sorting, as a first step in the waste to wealth drive. Based on the ranks allocated to each of the issues, most respondents (52.7%) do not have a solution to the challenges of indiscriminate dumping of waste, as 24% mentioned that attaching economic value to wastes will be a motivating factor in terms of awareness and/or orientation. The concept of attaching rewards/payment to waste sorting further

emerged as the basis for which individuals will opt for waste sorting in the study areas. Also, majority (Self) are responsible for disposing wastes in the household, however, the state of waste dumping, sorting and disposal was described as not encouraging (55.6%). Also, the respondents opined that the challenge of waste disposal is associated with non-availability of containers/waste disposal facilities (57.5%) as well as the need for sensitization (53%). Thus, the government still has significant role to play in terms of ensuring that wastes are properly disposed – by making disposal channels available and accessible, as well as making information about the potential benefits of waste management, starting from the household. This is the role of sensitization and awareness.

**Table 6c:** Frequency and percentage distributions table showing the awareness and orientation of respondents on wastes sorting

Items	Responses		Rank
	F	%	
Solutions to Indiscriminate Dumping	Availability of economic values of the wastes	234 24.0	2 <sup>nd</sup>
	Provisions of containers	143 14.7	3 <sup>rd</sup>
	Nothing	84 8.6	4 <sup>th</sup>
	No response	513 52.7	1 <sup>st</sup>
	Total	974 100	
What do you think will make you sort your wastes?	Awareness that attract payment	404 41.5	1 <sup>st</sup>
	Availability of containers	120 12.3	4 <sup>th</sup>
	Nothing	137 14.1	3 <sup>rd</sup>
	No response	313 32.1	2 <sup>nd</sup>
	Total	974 100	
Who is responsible for wastes disposal or sorting in your household?	Self	454 46.6	2 <sup>nd</sup>
	Wife	134 13.8	4 <sup>th</sup>
	Children	259 26.6	3 <sup>rd</sup>
	Nobody	76 7.8	5 <sup>th</sup>
	No response	51 94.8	1 <sup>st</sup>
Total	923 100		
Respondents views on the current situation of wastes disposal, dumping, sorting etc.	It is okay	293 38.1	2 <sup>nd</sup>
	It is not encouraging	542 55.6	1 <sup>st</sup>
	No response	139 14.3	3 <sup>rd</sup>
	Total	974 100	
Suggested solutions to current situation of wastes disposal, dumping, sorting etc.	Provisions of containers	560 57.5	1 <sup>st</sup>
	Cleaners should be provided	124 13.8	3 <sup>rd</sup>
	Availability of good road network	12 1.2	5 <sup>th</sup>
	No idea	47 4.8	4 <sup>th</sup>
	No response	221 22.7	2 <sup>nd</sup>
Total	974 100		
Suggested roles of Local Government Authorities to alleviate	Enforcement of laws to sanction offenders	144 14.8	2 <sup>nd</sup>

current situation of wastes disposal, dumping, sorting etc.	Provision of containers	84	8.6	5 <sup>th</sup>
	Good road networks	89	9.1	4 <sup>th</sup>
	Sensitization of citizens	516	53.0	1 <sup>st</sup>
	No response	141	14.5	3 <sup>rd</sup>
Total		974	100	

Source: Field Work, (2017)

#### 4 monthly environmental sanitation exercise: a government response to waste management and a situation report

The monthly environmental exercise is a government response to the environmental and sanitary needs of the State. It has its origin in the Military Government of yesteryears in Nigeria. It takes place every last Saturdays of every month between the hours of 8a.m and 10 a.m. Since it has assisted in waste evacuation process, the Civil Governments that came into governance since 1999 continued with it. The exercise was monitored in our study locations in Ogun State to capture the state of waste situation now from a direct observational method. 27<sup>th</sup> May 2017 was a Saturday that the regular monthly exercise was meant to take place. It equally coincided with the Children's Day Celebration. The State Government actually declared the day in favour of the children and cancelled the monthly environmental exercise. Surprisingly, the cancellation by the government did not have effect on the populace as a majority of them were seen observing the cleaning exercise from one neighbourhood to another and all major streets across the state. This probably showed the willingness of the people to have their environment clean with or without legislation. There were noticeable heaps of solid wastes as usual in almost every corner of the streets in Ijebu-Ode. The heaps of solid waste were placed indiscriminately at any available space especially adjoining street to a major road. For example, there were heaps at

1. Median on the high way of major roads including the newly constructed and popular Folagbade street and its extension to both Lagos and Ibadan roads.

2. Public Utilities such as General Post Office, Churches, Mosques and the State General Hospital.

3. The Median in the Popular Oke Aje Market was not spared of the solid waste of heaps amidst market activities.

The solid wastes were neatly parked in some areas into sacks and many were packed carelessly by the people. The disposal method from our observation showed the attitude to the material being disposed as 'truly waste' as they threw the items with disdain and without caution about the implication on the solid waste carriers, people and environment. Interestingly however, it was observed that the waste carriers were on hand to evacuate the waste disposed on the day almost immediately. In fact, some residents disposed their waste directly into the cabin carriers provided by the efforts of the State Government and private assistance. The cabin carriers, we were told, is actually supplied by State Government but it is operated by private business individuals. However, while this seems to be an effort, from a Public/Private Participation (PPP) in the right direction, it must be noted that the efforts are concentrated on the major roads of the city and the hinterlands were completely neglected. The heaps, we were told, could actually be left for some days to and sometime weeks on the spot without evacuation until complaints are made to the authorities. It was observed that generation of the heaps of wastes were done by all age categories, as both children and

adults could be spotted dumping all manner of solid waste materials at different locations they so desire in their neighbourhood with minimal or no caution at all. Aside the different categories of people seen disposing solid waste materials on the monthly environmental sanitation day under study, it was also noticed that the Urban Metal Miners were equally busy in their mining activities on all the available heaps and dump sites across the city. They scavenge for metal and electronics materials. The monthly sanitation exercise is therefore a monthly source of raw materials for them as Urban Metal Miners. The two categories of people on the heaps sites across the city as observed were motivated by different principles or philosophy. While the people that throw away their 'unusable materials' place no value whatsoever on them and as such defined as 'waste', those that pick some of the same materials thrown away, especially the metal materials in this case, placed economic value on them and as such see the materials as income generating item that should be harnessed for their economic potentials. The implication of this is that any other items that can be identified as having economic potentials may also offer opportunity for the urban miners and this may be actualised at the end of this study.

#### 4. CONCLUSION

Based on the above findings and discussion, the paper found nylons and papers as the highest waste constituents from households at 50.5%. It also concludes that categories of waste are solid, liquid and sewage and that wastes were predominantly disposed through waste collectors, and toilets at 77.6%. The study equally concludes that household members sort their wastes because it is perceived that such can be useful at 94%.

#### 5. RECOMMENDATIONS

In continuation of the discussions by Sridhar and Hammed, first, waste management must be properly understood as a process that has strong local underpinnings and should therefore be properly addressed. Second, there is a need for higher dimensions of inclusiveness, especially in building up policies for waste management. The involvement of civil society, citizens, and private business concerns should be made imperative, so that local and people-centred solutions can emerge in view of better waste management. Thus, segregation of waste begins first at the local level which builds up into bigger scales. This is to say, that, if wastes are properly separated at the household level, the management of waste at the state and federal levels will be well channelled to achieve better results for national development.

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