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A Study of Waste Management Policy Implementation and Akwa Ibom Environmental Protection and Waste Management Agency (AKSEPWMA)

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Abstract

This study examined Waste Management Policy Implementation in Nigeria: A Study of the Akwa Ibom Environmental Protection and Waste Management Agency (AKSEPWMA). The study was due to the persistent criticisms for lack of implementation of waste management policy in Uyo Municipality by AKSEPWMA which has resulted to waste management challenges. The main objective of the study was to examine the implementation of waste management policy in Nigeria with focus on AKSEPWMA. A descriptive survey design was adopted for the study, while questionnaires was the main instrument used for collecting data from the 384 respondents that constituted the sample population for the study, using simple random sampling technique. Three hypotheses were formulated for the study which: ineffectiveness in waste evacuation and incidence of flooding, ineffectiveness in desilting and blocked drainages as well as ineffective waste management awareness programmes and poor waste management attitude. The hypotheses were tested using the chi-square. The study adopted policy implementation theory and the inter-organizational interaction approach. The theory states that, collaboration among community of organizations lead to a more comprehensive coordinated approach to a complex issue than can be achieve by one organization. Findings revealed that the three hypotheses were significant. Implying that ineffectiveness in waste evacuation, ineffectiveness in desilting and ineffective waste management awareness programmes have significant relationship with waste management policy implementation in preventing flood, blocking drainages and promoting good waste management attitude in Uyo Municipality. The study recommended

firstly, regular waste evacuation, to avoid waste spilling into water channels, that will subsequently lead to flooding. Another is, effective desilting, using modern technology-based equipment due to the peculiar nature of our geographical disposition. And thirdly, stakeholders-centred waste management awareness programme to provide an all-inclusive platform for all stakeholders to acquire knowledge of modern waste management practices. This will curb poor waste management attitude among the residents. If these recommendations are considered and implemented, it will go a long way in solving the problem of implementing waste management policy in Uyo Municipality.

Key Words: Waste, Policy, Implementation, Environment, Municipality, Evacution, Desilting and Awareness.

Introduction

Managing waste has remained a daunting task globally, this is because waste generation is ever increasing and is expected to rise with economic development and population growth, and lower-income countries are likely to experience the greatest growth in waste production. The fastest growing regions are sub-Saharan Africa and South Asia, where total generation is expected to triple than double by 2050, respectively, making up 35% of the world's waste. The Middle-East and North African region is also expected to double waste generation by the same 2050 (Waste Statistics 2012).

In order to mitigate the negative impact of waste on the environment, efforts have been intensified in different countries of the world through policy framework to provide for waste management. It has been noted that, Nigeria like many other developing countries have continued to fare less in this regard, as a result of several barriers militating against sustainable municipal waste management (Ezeah, Roberts, Watkin, Philips, and Odunfa,2009). Consequently, waste management in most developing countries is fast becoming a major and environmental challenge (Agunwamba, 2003; Ezeah, 2010).

Waste management ensures reduction in the volume of waste in the environment. According to Okey and Umana (2013), waste management generally involves several activities: the collection, transfer, treatment, recycling, resources recovery and disposal of waste in any location. As the volume of waste continue to rise due to increased socio-economic programmes and urbanisation, the need to manage waste generated becomes very imperative. With the advent of industrial revolution, waste management becomes a critical issue. Nigeria, like most developing countries is facing the challenges of managing waste. It could be said that the Nigerian government did not accord waste management the needed attention until the Koko Port waste dump scandal in 1988, when an Italian ship brought in toxic chemical waste, made up of poly chlorobiphenyls and dumped it in Nigeria, and following several media reactions, the then military government created the Federal Environmental Protection Agency (FEPA). The major mandate of the Agency was to establish natural environmental guidelines, standard and criteria, most especially in the area of waste quality, effluent discharge, and air and atmospheric quality (FEMA, 1998).

All the states in Nigeria are having serious challenges over the waste situations in their respective cities and efforts has been made through various policies and strategies to curb the 'waste challenge.' In Akwa Ibom State, the government enacted the Akwa Ibom State Environmental Protection and Waste Management Law Cap. 47, 2000 that provided for the establishment of Akwa Ibom State Environmental Protection and Waste Management Agency (AKSEPWMA) in 2000 (AKSEPWMA Law 2000). Part II section 6 of the law provide for the functions of the Agency to include among others: ensuring regular evacuation of refuse from public places and dustbins and clearing ant other domestic waste found residential premises, ensure opening and clearing of public drains and effective drainage of liquid waste and free flow of water and create awareness on the need for environmental education. The study examined the implementation of waste management policy in Uyo Municipality, Akwa Ibom State. Specifically, it examined how lack of effective waste evacuation is contributing to the incidence of flooding, determine how ineffective desilting is responsible for blocked drainage and also evaluate how ineffectiveness in waste management awareness programmes is promoting poor waste management attitude among residents in Uyo Municipality.

Statement of the Problem

Despite several attempts, Nigeria has not been able to implement waste management policy to achieve the envisaged goals because of numerous challenges impeding waste management policy implementation. According to Adama (2007), and Imam, Mohammed, Wilson, and Cheeseman, (2008), the most significant factor affecting municipal waste management in the city is most apparent inadequacies in the area of institutional and legal framework for waste management.

In Akwa Ibom state, Akwa Ibom State Environmental protection and Waste Management Agency (AKSEPWMA), is the statutory agency responsible for implementing waste management policy in the state has been embarking on some routine activities like waste collection, transportation and disposal at the dump site, organize clean up exercises, as well as making effort to desilt blocked drainages etc. It is observed that all these efforts have not yielded any meaningful impact as heaps of unevacuated refuse continue to adorn major locations in the state capital, flooding incidence has not abated, blocked drainages due to lack of desilting, indiscriminate dumping of waste by residents and so on. This situation has continued to attract endless criticisms from the public, who are disappointed and dissatisfied with the Agency over their ineffectiveness in implementing the waste management policy in the state.

Objectives of the Study

The main aim of the study is to examine waste management policy implementation Nigeria, with focus on the role of Akwa Ibom State Environmental Protection and Waste Management Agency (AKSEPWMA).

Specifically, the study is:

1. To examine how ineffective waste evacuation has contributed to the incidence of flooding in Uyo municipality, Akwa Ibom State, Nigeria.
2. To determine how ineffective desilting has accounted for blockage of drainage systemin Uyo municipality, Akwa Ibom State, Nigeria.
3. To evaluate how ineffectiveness in waste management awareness programmes has resulted in poor waste management attitude of residents in Uyo municipality, Akwa Ibom State, Nigeria.

Research Questions

The study sought to answer the following questions:

1. Has ineffectiveness in waste evacuation contributed to the incidence of flooding in Uyo Municipality?
2. Has ineffective desilting account for the blockage of the drainage system in Uyo municipality?
3. Has ineffectiveness in waste management awareness programmes resulted in poor waste management attitude of residents in Uyo municipality?

Literature Review

Concept of Waste

According to Amasuomo and Baird (2016) waste refer to necessary outcome of human activities. Solid waste may be defined as materials that is useless, unused, undesirable, or unwanted materials available in solid form (Sigh et al. 2014). Oyideran (1997) refer waste to substance or objects discarded as worthless or unwanted, defective or of no further value from manufacturing or production process. Sigh et al (2014), solid waste is defined as useless, unused, unwanted, or discarded materials available in solid form.

Waste Management Policy

It is government outlined programmes and strategies for waste management. In Nigeria, Section 20 of Chapter 11 of the 1999 constitution (As Amended) has prescribe the Fundamental Objectives and Directive Principles of State policy thus: the state shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria. This provision demonstrates the important that Nigeria's government attach to environmental sustainability. Part 11 of the fourth schedule of the constitution specifically deal on waste and how it should be managed. It places waste management in the concurrent legislative list so that all tiers of government can take part in the management of waste.

Waste Management Policy Implementation

Public policy implementation is important in achieving the policy objectives because it is the mechanisms, resources, and relationships that link policies to programme action. More specifically, it means carrying out, accomplishing, fulfilling, producing, or completing a given task. Seraw and Lu (2005) confirmed that the success or failure of a policy depends upon its

effective implementation. Also, Ezeah (2010) stressed that: "there are various problem facing developing nations in terms of implementing policies, he also identified those challenges to include corruption, lack of continuity in government policies and inadequate human and material resources, all of which often led to implementation gap-that is a widening distance between the stated policy goals and the realization of such goals. Consequently, the Akwa Ibom State government under His Excellency, Obong (Arc.) Victor Attah provided the expected legal frame work for the management of waste in the state by signing into law the Akwa Ibom State Environmental Protection and Waste Management Agency (AKSEPWMA) Law Cap 47, 2000.

Waste Evacuation and Flooding

Waste evacuation refers to the removal of waste from a location such as buildings, community, pathway or drainage to disposal site or treatment facility. Waste generation is a recurrent problem globally and particularly in urban cities. It is considered one of the most serious issue confronting developing nations suffering from severe environmental pollution due to high waste generation profile. This increase waste generation has negative impact on the cities, especially in the aspect of blocking drainages and impeding free flow of water and other debris thereby resulting in flooding and other negative consequences. The challenges of waste evacuation are mainly attributable to lack of specialized personnel and equipment that can equaled the volume of waste generated in the cities. Also, lack of information concerning waste collection schedule, improper and inadequate number of receptacles deployed, inadequate vehicles, poor roads network impedes effective waste evacuation (Abdel-Shafy and Mansour, 2018). Waste evacuation has remained a serious challenge to waste management in Nigeria because of the ever-increasing waste generation occasioned by the increasing socioeconomic activities, industrialization and urbanization.

When wastes are not evacuated routinely to avoid accumulation, there is the possibility of the waste to spill into gutters thereby blocking the drains and when the drains are not free to allow for the flow of running water there is the tendency to cause flood. Flood is a destructive natural occurrence which affects both urban and rural areas (Dihn et. al., 2012). It is among the world most devastating natural disaster, claiming lives and causing damage to properties than any other natural phenomenon; with wide spread negative scenario (Kundu, 2011). Flooding is common in every urban city in Nigeria. To curb this menace, the city authority provides for policy that when implemented will help in promoting proper waste management by ensuring the provision of all the necessary equipment that is required to implement effective waste management programmes especially in ensuring the timely evacuation of waste from the different collection sites.

Desilting and Blocked Drainages

Desilting of waste refers to the removal of silt, dirt and debris that has accumulated and blocked the gutters, reducing or blocking running waters. Desilting is a very important aspect of waste management because it ensures that gutters that have been left overtime, which has become clogged with sediment and debris that are capable of blocking the drainages are removed. Desilting has continued to remain a daunting task to waste managers due to the unavailability of the technical equipment and infrastructure that is required to carry out these

operations effectively. What is usually obtained in most Nigerian cities, is to moblised some adhoc workers called 'desilters' armed with shovels, diggers, machetes, some without personal protection, to the sites of the blocked drainages. The desilters will then dig out the debris and heap them on the roadsides, pending when the will be removed by those hired to do so. This debris sometimes is not evacuated for days and may also wash back into the gutters by raining waters thereby making the operations cyclic. The inability of the responsible agencies to effectively desilt the gutters and other channels has been responsible for the blocked drainages. It is therefore evident that if desilting is not effectively carried out, it has the potency to cause environmental related hazards.

Waste Management Awareness Programmes and Waste Management Attitude

One of the critical aspects of effective waste management is creating awareness about waste management practices among the people. It is practically impossible to operate effective waste management activities or implement any waste management policy without creating the necessary awareness to enable the people become part of the efforts. A comprehensive waste management programme will cover various aspects of waste management orientations such as: proper waste disposal method, Reduce, Reuse, Recycle practice, expose the negative impact of poor waste management, community participation and enlightenment, segregation and categorization of waste, government initiatives and policies and so on.

Theorectical Framework

Policy implementation theory, the inter-organisational interaction approach was adopted for this study. The theory propounded by Litwak and Rothman and Levine and White began in the 1960s, when researchers started to have a growing interest in how the environment affects the organisation behavior Hooyman (1976). Specifically, they were interested in how organisation could decrease uncertainty in the environment through collaboration (Marku, 2016). The basic assumption of the theory is that collaborations among community of organisations lead to a more comprehensive coordinated approach to a complex issue than can be achieve by one organisation. Hooyman (1976) suggest that for the inter-organisational interaction to be effective certain condition have to be in place, these are: the existence of relationship between the agencies involved, the awareness of partial interdependence among the agencies, resource asymmetry between units to be coordinated and the type of task to be coordinated.

Methodology

Uyo became the capital city of Akwa Ibom State in 1987. It has a landmass of 362Km^2 and a population of 554,906 (NPC, 2006). Uyo Municipality lies between latitudes 4^{o}58^{1}N and 5^{o}4^{1}N and longitudes 7^{o}51^{1}E and 8^{o1}E. The city covers an area of about 214.31 square kilometers. The city can be accessed via Abak road, Nwaniba Road, Uyo-Itu/Calabar Road, Aka Nung Udoe Road and Ikot Ekpene Road (Mbina and Edem , 2015). The major language spoken in Uyo is Ibibio, majority of the people engages in farming and trading. Their main agricultural products are cassava, yam, cocoa and vegetable and Akpan Andem as the major market. Uyo Municipality was chosen as the area of study because of its strategic location as the political and

economic centre of the state and has continue to witness influx of people from the rural areas and other cities, couple with the increasing industrialization and urbanization, the volume of waste generation is heightening, with its attendant implications on public health and the environment.

3.3 Population of Study

The total population of the study is 554,906 (NPC, 2006).This population is people living in the Uyo municipality who are directly affected by the lack of implementation of waste management policy by AKSEPWMA.

3.4 Sample and Sampling Technique

The simple random sampling technique will be use to pick sample population from the eleven (11) wards that make up the sample population which is 554, 906and the sample size will be determined using Krejcie and Morgan statistical table Krejcie and Morgan statistical formula was adopted to determine the sample size for the study. Based on the Krejcie and Morgan statistical table, the sample size from the population of 554, 906 is 384. Therefore, 384 was the sample population for the study.

Data Collection Technique

The data collection technique that was used for this study was structured questionnaires. The questionnaires were personally administered by the researcher working with four research assistants.

Instrumentation

The instrument that was used for the study was a structured questionnaire titled "Waste Management Policy Implementation in Uyo Municipality, Akwa Ibom State, Nigeria" (WMPIUMAKSNQ). The questionnaire was divided into two sections, 'Section A' for collection of information on respondent's socio-demographic data: sex, age and educational level while 'Section B' will be sub-divided into three subscales. The first was on ineffectiveness in waste evacuation and it impact on the incidence of flooding in the city. The second was on the lack of ineffectiveness in desilting and the relationship with the blocking of drainage system. The third was on how lack of waste management awareness programmes result in poor waste manage attitude of residents, all in Uyo Municipality. It was a four-point Likert rating scale of:

Strongly Agreed (SA) ……. 4
Agreed (A)…….. 3
Disagreed (D) ……. 2
Strongly Disagreed (SD)……. 1

Method of Analysis

Chi-square was used for the analysis of the data collected from the field. The Chi-square as denoted as:

Where: O = Observed frequency
e = expected frequency

The critical value was compared with the calculated value and as required, if the calculated value is greater than the critical value, the null hypothesis (H_o) will be rejected while the alternative hypothesis (H_1) will be accepted.

In this study therefore, the researcher adopted a 95% confidence interval (0.05 level of significance). The degree of freedom therefore was derived thus:

D/F: $(C-1)\,x\,(R-1)$
$(4-1)\,x\,(2-1)$
$(3)\,x\,(1) = 3$ @ 0.05 level of significance = 7.815

Data Presentation and Analysis

Table 4.1: Demographic characteristics of respondents

Characteristics of Subjects	Number of Respondents	Percentage of Respondents
SEX:		
Males	213	55.5
Females	171	44.5
TOTAL	384	100
AGE:		
Below 28	99	25.8
29-39	121	31.5
40-50	102	26.6
51 & above	62	16.2
TOTAL	384	100
MARITAL STATUS:		
Single	87	22.7
Married	297	77.3
TOTAL	384	100
QUALIFICATIONS:		
FSLC	71	18.5
SSCE & OND	128	33.3
BSc, HND & above	139	36.2
Others	46	12.0
TOTAL	**384**	**100**

Source: Fieldwork, 2024.(By researcher)

The above data presentation shows the demographic characteristics of respondents for the study. Analysis of the above data shows that in respect to the sex of the respondents, 213 representing 55.5 percent were male while 171 representing 44.5 percent were female. In respect to age analysis, the number of respondents between the age of 0 to 28 years 99, that is 25.8 percent of the sample population. Those within 29 and 39 years were 121 that is 31.5 percent, 40 to 50 years were 102, that is 26.6 percent and those from 51 years and above were 62, that is 16.2 percent. On marital status of the respondents, data from the table shows that 87 respondents, that is 22.7 percent were singles while 297, that is 77.3 percent of the respondents were married. In terms of educational qualifications, the analysis indicates that respondent's First School Leaving Certificate (FSLC) were 71, that is 18.5 percent. Those with Secondary School Certificate (SSC) and Ordinary National Diploma (OND) were 128, that is 33.3 percent. Those with BSc, HND and above were 139, that is 36.2 percent while those with other forms of qualifications were 46 representing 12.0 percent of the sample population.

Table 1: Analysis of responses on the relationship between ineffectiveness in waste evacuation and incidence of flooding in Uyo Municipality.

S/N	Statements	SA	A	SD	D	Total
1.	Poor evacuation of waste can lead to flooding in Uyo Municipality?	289 (75%)	68 (18%)	14 (3%)	13 (4%)	384 (100%)
2.	Ineffective evacuation of waste in Uyo Municipality is as a result of lack of adequate equipment?	268 (70%)	97 (25%)	8 (2%)	11 (3%)	384 (100%)
3.	Poor road network has contributed to the problems of waste evacuation in Uyo Municipality?	183 (48%)	172 (45%)	14 (3%)	15 (4%)	384 (100%)
4.	Inadequate waste receptacles promote poor waste evacuation practices in Uyo Municipality?	247 (64%)	103 (27%)	22 (6%)	12 (3%)	384 (100%)
5.	Poor waste disposal can lead to difficulties in waste evacuation in Uyo Municipality?	208 (54%)	157 (41%)	8 (2%)	11 (3%)	384 (100%)

From the table above, it showed responses to question 1, on if poor waste evacuation can lead to incidence of flooding in Uyo Municipality, 289 (75%) strongly agreed that there is a relationship between poor waste evacuation and incidence of flooding in Uyo Municipality, 68 (18%) agreed, 13 (3%) strongly disagreed while 14 (4%) disagreed with the position that there is a relationship between poor waste evacuation and incidence of flooding in Uyo Municipality. Question 2, on if ineffective waste evacuation in Uyo Municipality is as a result of inadequate equipment, the respondents, responds as follows; 268 (70%) strongly agreed, 97 (25%) agreed while 8 (2%) strongly disagreed and 11 (3%) disagreed that ineffective in waste evacuation in Uyo Municipality is as a result of inadequate equipment. Question 3, the respondents were asked if poor road network has contributed to the problems of waste evacuation in Uyo

Municipality. A total of 183 representing 48% strongly agreed, 172 (45%) agreed that poor road network has contributed to the problems of waste evacuation in Uyo Municipality while 14 (3%) strongly disagreed and 15 (4%) disagreed that poor road network has contributed to the problems of waste evacuation in Uyo Municipality. Question 4, the responses from the respondents on if inadequate waste receptacles promote poor waste evacuation practices in Uyo Municipality shows that 247 (64%) strongly agreed and 103 (27%) agreed while 22 (6%) strongly disagreed and 12 (3%) disagreed that inadequate waste receptacles promote poor waste evacuation practices in Uyo Municipality. Question 5, this was to find out if poor waste disposal can lead to difficulties in waste evacuation in Uyo Municipality. From the analysis of the responses, a total of 208 (54%) strongly agreed, 157 (41%) agreed to that position while 8 (2%) strongly disagreed and 11 (3%) disagreed that poor waste disposal can lead to difficulties in waste evacuation in Uyo Municipality. From the table, the data collected and analyzed shows that there is a relationship between ineffectiveness in waste evacuation and incidence of flooding in Uyo Municipality.

Table 2: Analysis of the responses on the relationship between ineffectiveness in desilting and blockage of the drainage system in Uyo Municipality.

S/N	Statements	SA	A	SD	D	Total
6.	Ineffective desilting is responsible for blocked drainages in Uyo Municipality?	152 (40%)	209 (54%)	10 (2%)	13 (4%)	384 (100%)
7.	Lack of infrastructure is contributing to the poor desilting of water channels in Uyo Municipality?	224 (58%)	96 (25%)	25 (7%)	39 (10%)	384 (100%)
8.	Inadequate trained personnel have made desilting difficult in Uyo Municipality?	238 (62%)	88 (23%)	32 (8%)	26 (7%)	384 (100%)
9.	There is a relationship between availability of modern equipment and effective desilting in Uyo Municipality?	197 (51%)	162 (42%)	13 (3%)	12 (3%)	384 (100%)
10.	Indiscriminate dumping of waste is responsible for poor desilting of water channels in Uyo Municipality?	183 (48%)	174 (45%)	18 (5%)	9 (2%)	384 (100%)

The analysis on table 2, question 6, the question was to find out if ineffective desilting is responsible for blocked drainages in Uyo Municipality. From the analysis of the responses, 152 (40%) strongly agreed, 209 (54%) agreed that ineffectiveness in desilting is responsible for the blocked drainages in Uyo Municipality while 10 (2%) strongly disagreed and 13 (4%) disagreed. Question 7, the question was on lack of infrastructure contributing to the poor desilting of water channels in Uyo Municipality. The respondents responded as follows; 224 (58%) strongly agreed, 96 (25%) agreed that lack of infrastructure contribute to poor desilting of water channels in Uyo Municipality while 25 (7%) strongly disagreed and 39 (10%) disagreed

that lack of infrastructure contribute to poor desilting of water channels in Uyo Municipality. Question 8, the question was to find out how lack of trained personnel has made desilting difficult in Uyo Municipality.

The analysis from respondents shows that 238 (62%) strongly agreed and 88 (23%) agreed to that position while 32 (8%) strongly disagreed, 26 (7%) disagreed that inadequate trained personnel has made desilting difficult in Uyo Municipality. Question 9, the question bothers on the relationship between availability of modern equipment and effective desilting in Uyo Municipality. The responses from the analysis shows that 197 (51%) strongly agreed, 162 (42%) agreed that there is a relationship while 13 (3%) strongly disagreed and 12 (3%) disagreed that there is a relationship between availability of modern equipment and effective desilting in Uyo Municipality. Question 10, the question was to find out if indiscriminate dumping of waste is responsible for poor desilting of water channels in Uyo Municipality. The responses from the respondents to this question shows that 183 (48%) strongly agreed, 174 (45%) agreed that indiscriminate dumping of waste is responsible for poor desilting of water channels in Uyo Municipality while 18 (5%) strongly disagreed and 9 (2%) disagreed. From the analysis of the all the responses from the table, it shows that there is a relationship between ineffectiveness in desilting and blockage of drainage system in Uyo Municipality.

Table 3: Analysis of responses on the relationship between ineffectiveness in waste management awareness programmes and poor waste management attitude in Uyo Municipality

S/N	Statements	SA	A	SD	D	Total
11.	Ineffective waste management awareness programmes is responsible for the poor waste management attitude among residents of Uyo Municipality?	198 (52%)	128 (33%)	31 (8%)	27 (7%)	384 (100%)
12.	The level of funding affects the effectiveness of implementing waste management awareness programmes in Uyo municipality?	203 (53%)	162 (42%)	9 (2%)	10 (3%)	384 (100%)
13.	Lack of involvement of the people in designing waste management awareness programmes is responsible for the ineffective implementation Uyo Municipality?	172 (45%)	153 (40%)	32 (8%)	27 (7%)	384 (100%)
14.	Inappropriate implementation strategies are responsible for the ineffective waste management awareness programmes in Uyo Municipality?	211 (55%)	104 (27%)	29 (8%)	40 (10%)	384 (100%)
15.	Organizational inefficiency is responsible for the ineffective implementation of waste management awareness programmes in Uyo Municipality?	207 (54%)	121 (32%)	42 (11%)	14 (4%)	384 (100%)

Table 3 is on analysis of responses from question 11, this question was designed to find out if poor waste management awareness programme is responsible for the poor waste management attitude among residents of Uyo Municipality. From the analysis of data from the table, it shows that 198 (52%) strongly agreed and 128 (33%) agreed that poor waste management awareness programme is responsible for poor waste management attitude among residents of Uyo Municipality while 31 (8%) strong disagreed and 27 (7%) disagreed that poor waste management awareness programme is responsible for poor waste management attitude among residents of Uyo Municipality. Question 12, the question is to find out if the level of funding affects the effectiveness of implementing waste management awareness programme in Uyo Municipality. the responses from the respondents to this question shows that 203 (53%) strongly agreed, 162 (42%) agreed to this while 9 (2%) strongly disagreed and 10 (3%) disagreed that the level of funding affects the effectiveness of implementing waste management awareness programme in Uyo Municipality. Question 13, the question was to find out from the respondents if lack of involvement of the people in designing waste management awareness programme is responsible for the ineffective implementation in Uyo Municipality. The analysis shows that the respondents responded as follows; 172 (45%) strongly agreed, 153 (40%) agreed that effectiveness of implementing waste management awareness programme depend on involving the people in designing the programme while 32 (8%) strongly disagreed, 27 (7%) disagreed that lack of involvement of the people in designing waste management awareness programme is responsible for the ineffective implementation in Uyo Municipality.

Question 14, this question was to find out if inappropriate implementation strategies are responsible for the ineffective management awareness programme in Uyo Municipality. In respond to this question, 211 (55%) strongly agreed, 104 (27%) agreed that effectiveness of waste management awareness programmes depends on the strategies while 29 (8%) strongly disagreed and 40 (10%) disagreed that inappropriate implementation strategies are responsible for the ineffective management awareness programme in Uyo Municipality. Question 15, this question bothers on organizational efficiency and effectiveness in implementing waste management awareness programme. From table, the data shows that the responses were as follows; 207 (54%) strongly agreed, 121 (32) agreed while 42 (11%) strongly disagreed and 14 (4%) disagreed that organizational efficiency is responsible for the ineffective implementation of waste management awareness programme in Uyo Municipality. From the table 3, the data analyzed from all the respondents to the questions shows that there is a relationship between lack of waste management awareness programme and poor waste management attitude among residents in Uyo Municipality.

Discussion of Findings

Table one shows that there is a significant relationship between ineffectiveness in waste evacuation and incidence of flooding in Uyo Municipality. Waste evacuation is a very significant aspect of waste management. Without waste evacuation waste will remain in a location constituting a serious danger to the free flow in running waters due to impediments. This position is supported by Abdel-Shafy and Mansour (2018) who posit that improper and inadequate number of receptacles deployed, inadequate vehicle, poor roads network impedes effective waste evacuation. This situation is what is responsible for food frequency incidence of

flooding in Uyo Municipality. Because when wastes are not evacuated on time, they spill into nearby gutters and block water channel leading to flooding.

The result of table two shows that there is a significant relationship between ineffectiveness in desilting and blockage of drainage system in Uyo Municipality.

Blocked drainages have been responsible for the incidence of flooding in Uyo Municipality over the years. These blocked drainages are as a result of various kinds of waste that has been thrown into the gutter due to indiscriminate waste disposal habit by the residents. The negative impact of this situation is that, when it rains or there is channeling of water from any facility, the water will not have where to flow to due to block drainages, therefore the water will flow in any direction without control leading to flooding in the area.

The result of table three shows that there is a significant relationship between ineffectiveness in waste management awareness programmes and poor waste management attitude among residents of Uyo Municipality. It is through waste management awareness programmes that the resident come to imbibe modern waste management attitude, but if it is lacking or poorly executed, it will not achieve the expected result. Like Ayodeji (2012) observed, though there is appreciable awareness and knowledge about waste disposal among the people of Nigeria, only that there are crude and traditional methods. This shows that the widening knowledge gap in respect to traditional and modern waste management methods is responsible for the negative waste management attitude exhibited by the people. This is in line with the position of Adeyemo and Aboyesola (2013), who notes that attitude towards waste management, reflects the level of the people knowledge and awareness.

The negative impact of this ineffectiveness in waste management awareness programmes has been largely responsible for the poor waste management attitude among the residents of Uyo Municipality. Because only people who are more aware about modern waste management practices, are likely to engage in best waste management methods than those who are not aware (Rahman, 2016).

Conclusion

The study considered the implementation of waste management policy in Uyo Municipality, Akwa Ibom State, Nigeria. Based on various variables and their relationship collated and analysed, it was concluded that the three variables: ineffectiveness in waste evacuation, ineffectiveness in desilting and ineffectiveness in waste management awareness programmes all have significant relationship with waste management in Uyo Municipality, Akwa Ibom State Nigeria. It was discovered that AKSEPWMA is still finding it difficult to implement waste management policy in Uyo Municipality due to various challenges that has continued to confront the agency. The study concludes that the agency must introduce effective waste management policy implementation approaches to ensure greater result in managing the waste situation in Uyo Municipality.

Recommendations

The study thus, has recommends some strategic measures to achieve waste management policy implementation in Uyo Municipality. These are:

Regular Evacuation of Waste

1. AKSEPWMA should ensure timely and regular evacuation of waste.
2. Waste dumps should be decentralized across the municipality.
3. More receptacles should be provided.
4. AKSEPWMA should ensure those companies contracted to handle waste evacuation has the required capacity.
5. Regular inspection of waste dump should be carried out to ascertain regularity and effectiveness of waste evacuation operations.

Effective Desilting of Water Channels

1. Effective enforcement of waste laws.
2. ASKEPWMA should work with or interface with other organizations/ministries to ensure that water channels are constructed in such a way it allows for easy desilting in case of blockage.
3. The agency should acquire modern desilting equipment.
4. More staff should be employed and trained them on modern desilting techniques and how to operate relevant equipment.
5. The agency should seek private sector collaborations in it operations.

Improved Waste Management Awareness Programme

1. The agency's department for public education should be reorganized and repositioned.
2. The agency should come up with stakeholders-centred waste management awareness programmes.
3. Waste management awareness programmes should be well funded.
4. Experts in strategic communication and information management should be engaged.
5. Waste management awareness should be incorporated into the school curriculum.

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