

ASSESSMENT OF OPERATIONS AND CHALLENGES OF WASTE MANAGEMENT OPERATORS IN ILORIN METROPOLIS

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Abstract

This paper examined the operations and challenges of wastes management consultants in Ilorin metropolis of Kwara State, Nigeria. Waste management has become a source of livelihood to thousands of Nigeria and the sector continue to be lucrative due to ubiquitous nature of wastes. It is a fact that managing solid waste effectively and efficiently is no easy undertaking. Companies dealing in solid waste management face several challenges. This study addressed issues relating to operational capabilities of wastes management consultants and challenges facing them. A cross-sectional study was conducted among the registered wastes consultants working in Ilorin metropolis, Kwara State. The sampling technique employed was total sampling using the record of all registered wastes consultants with Kwara State Environmental Protection Agency (KWEPA). The study utilized quantitative research method, using structured questionnaires to gather data from 30 respondents among the waste management consultants operating in the area. The data was analysed using statistical package for social science for descriptive (t-test) at 5% level of significance. Examined were their operational capabilities through the number of functioning trucks, experience, coverage and impediments to effective service deliveries. The research shows that wastes contractors are not well equipped with modern wastes transportation facilities. Also, it was discovered that commercial wastes contractors face problems of multiple charges being paid to government purse. Poor sensitization and awareness among the general public were found to be among major challenges of wastes contractors. Inadequate enforcement of proper wastes disposal through the wastes contractors is another challenge of the waste contractors.

Keywords: Wastes contractor, transportation, disposal, KWEPA, metropolis.

Introduction

Waste management are the activities required to take care of waste from its inception to its final disposal. These include but not limited to collection, transportation, treatment and disposal of waste together with monitoring and regulation [1,2]. Waste collection and transportation are basic components of wastes management techniques. Furthermore, as the wastes generations continue to increase due to increase in population, change in economic situation and way of life, effective collection, transportation and safe disposal of wastes are imperative [3,4]. One of the main challenges is the increasing amount of waste production due to population growth, consumerism, and industrialization [1]. Traditionally, the task of management of municipal solid wastes rest on the municipal or local government authorities, but inadequacies of proper wastes management plan, paucity of funds and corruption have made the various state government in the country to take up the municipal waste management especially at various state capitals. Accurate wastes generation record is not available for Kwara State, but it is estimated that over one hundred and thirty thousand tons of refuse are generated annually in Ilorin metropolis [2,9,10,].

Among the major causes of poor solid waste collection, transportation and treatment/disposal programme is a weak cost recovery system. This means there is no effective mechanism for collecting payments to cover the costs of the waste collection system. If the users of a service (the householders and businesses) do not pay for the waste

collection and disposal service – either directly or through the local authority – then there will be no funds available to pay wages, maintain the equipment or invest in new equipment and facilities [4,5]. Private sector organisations can be better equipped than governmental organisations to collect payments and manage the finances. If they become involved in providing the waste management services, this spiral of declining services can be reversed [4,10,11]. There have been very little studies on assessment of private sector wastes management companies' operations and their challenges especially in Kwara State and North-Central regions of Nigeria. Private companies may also have more experience of waste collection and access to better equipment than local government, resulting in better service provision. This arrangement, where the public and private sectors work together, is called a **public-private partnership** or **private sector participation** as applicable in Lagos State. For example, a private sector company may be paid to collect wastes and to collect payments from individual businesses and residents. If several companies are competing for the same PPP contract this should result in lower costs [5,12].

PSP in Lagos are as results of privatization of solid waste collection which has given rise to the spring up of quite large number of operators in the state. Among the contractors, 67% were from the low income area in Alimosho LGA, 20% from the medium income area in Ikeja LGA, and 13% from the high income area in Eti-Osa LGA. All are operating in different size or capacity in terms of manpower and available equipment. The strength and quality of staff with available facilities are often an indication of firm's waste collection capacity. All the firms have offices in their locations; hence it becomes easier for their customers and monitoring agencies to locate them in case of difficulties in service provisions [19]. In Addis Ababa, private sector operators became eligible to obtain permits to take part in waste collection, transport and treatment when the Solid Waste Management Proclamation was published in 2007 [5,6]. By April 2011, 524 firms in Addis Ababa had been permitted to collect solid wastes, employing 5800 people [6,18]. Over the four years, the proportion of the city's waste collected had risen from 60% to 80%, providing waste collection services to an additional 600,000 people. Many of these private sector operators are 'micro-enterprises'. Under these PPP schemes, the planning and administration is the responsibility of the kebele authorities, who remain owners of the service [20,22].

Methodology

Study Area

The city of Ilorin lies on latitude North 8°30' and longitude East 4° 35' near the southern fringe of the savannah and forest zone. Ilorin is the capital city of Kwara State located in the North-central region of Nigeria, although dominated by Yorubas, it is classified as North-central state due to its emirate system of traditional rule. As of the 2006 census, it had a population of 777,667, making it the 7th largest city by population in Nigeria [3]. A large part of the province is located on grass plains with undulating landscapes which are well watered and highly agricultural. By the southern Nigeria provincial borders, at an elevation of 1,500 feet, there is a watershed with a river generally running from west to east and flowing into the River Niger [13,14]. The ecology of the region plays an important role in people's decisions to settle in a particular area. It has a mean annual rainfall of 1,318 mm (51.9 inches), which allows inhabitants to practice arable farming. The mild climate has also attracted northern pastoralists to the region. Ilorin city is the commercial and administrative center of Kwara State. It is made up of four local government areas (Ilorin South, Ilorin West, Ilorin East and Asa) [14].

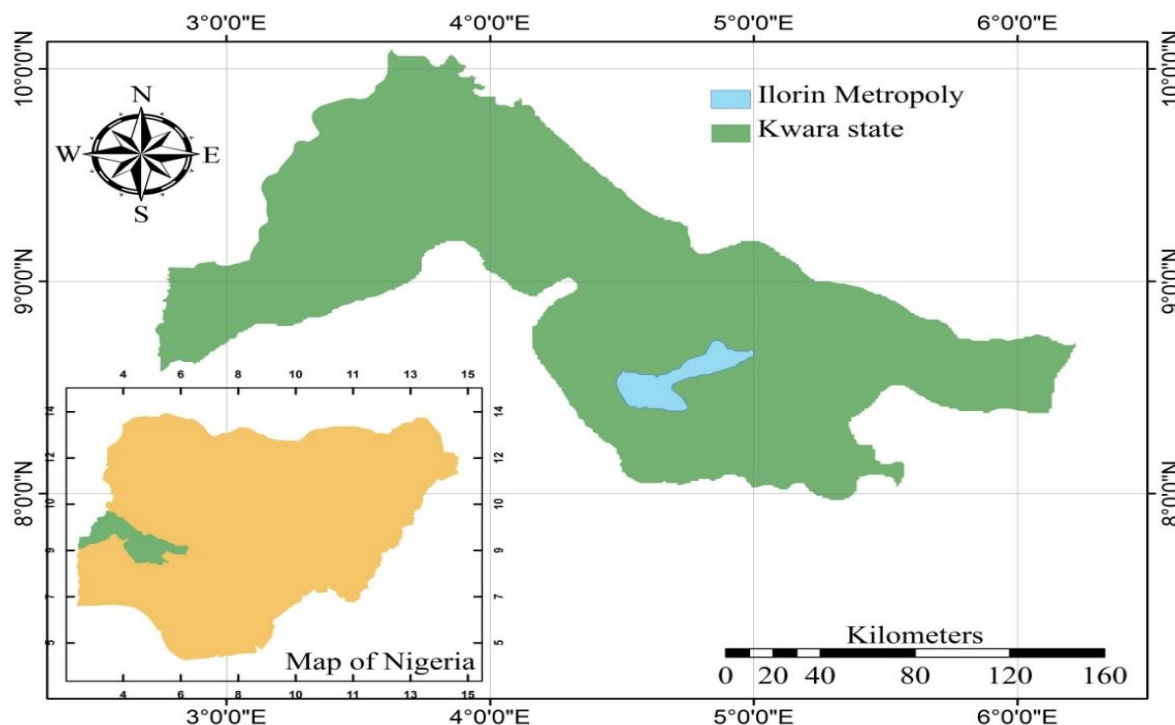


Figure 1: Map of Kwara State showing the study area. Adapted from Sawyerr *et al.*, [5].

Sampling Techniques

The technique employed in the study was total sampling methods, relying on record of registered wastes contractors with the ministry of environment and forestry but thirty of them were available to administer with questionnaires. Majorly there two categories of waste contractors working with the Kwara State Government, the social wastes contractors and commercial wastes contractor both are captured in the research. Thirty (30) respondents covering both social and commercial wastes contractors were administered with questionnaires out of the total number of thirty-eight (38) registered contractors as at the time of data collection.

Data Instrument

The instrument used for this study was structured questionnaire. The questionnaires were interviewer-administered to the wastes contractors and where necessary the questions were translated to Yoruba language. Both open-ended and closed-ended questions were included in the questionnaire. The questionnaires were administered to the commercial wastes contractors at the point of their monthly meeting while the those of two (2) social wastes contractors were administered at their respective offices. All the participants were informed of the aims of the research before the study started, this was done to facilitate the data collection processes and to obtain their consents.

Data Analysis

Data was analysed using SPSS 23, using descriptive statistic such as mean, frequencies, charts and graphs.

Results

Socio-Demographic Characteristics of respondents

Presented below are the results of the respondents based on their age, marital status, educational level and tribal status respectively.

Table 1: Demographic Characteristics of the Wastes Contractors

Variables	Frequency	Percentages
Sex		
Male	26	86.6
Female	4	13.4
Age		
21-30 years	2	6.7
31-40 years	21	70.0
41years-above	7	23.3
Marital status		
Single	6	20.0
Married	23	76.7
Divorced	1	3.3
Tribes		
Yoruba	30	100.0
Igbo	-	
Hausa	-	
Educational Background		
Primary	4	13.3
Secondary	6	20.0
Tertiary	19	63.3
Islamiyyah	1	3.3

In table 1 above, the socio-demographic characteristics of wastes contractors in Ilorin metropolis showed that majority of respondents are men between the ages of 31 – 40years with 70.0% with the least being ages 21-30years constitute 6.7%. Also, distribution of respondents according to gender showed that wastes contractors in Ilorin are majorly male with population of 26 which constitute 86.6% of the total respondents. Tribal or ethnic distribution of respondents showed that all of the registered waste contractors belong to Yoruba tribe. The marital status of respondents showed majority to be married with 76.7%, unmarried constitute 20% of the population, while 3.3% are divorced.

Operations of wastes management contractors in Ilorin metropolis.

The wastes management policy in Kwara State is a dual policy of combination of Social and commercial wastes management policy. Information from the state ministry of Environment revealed that the Kwara State Environmental Protection Agency is in charge of overseeing the day to day operation of the contractors.

The social wastes management is restricted to the major roads in the capital city which comprises of three local governments (Ilorin west, part of Ilorin East and part of Ilorin South). The work of social wastes management is contracted out to two private contractors, while the commercial wastes management is being handled by thirty-six (36) contractors registered with Ministry of Environment and Kwara Environmental Protection Agency.

The responsibilities of social wastes contractors are to clear wastes in public places from streets in the metropolis and the evacuation of central wastes storage on various streets in the metropolis. The payment of social wastes contractors is the responsibility of the state Government while their activities is monitored by government agencies.

The commercial wastes contractors are people that take wastes evacuation as a vocation, they are registered by the state ministry of Environment and forestry but under supervision of Kwara State Environmental Protection Agency.

Table 2: Operational Information of Licensed Wastes Contractors

Types of was licenced to evacuate	Frequency	Percentage
Household wastes	27	90
Medical and special wastes	3	10
Total	30	100
	Frequency	Percentage
Number of trucks		
1 Truck	20	66.7
2 Trucks	8	26.7
Above 2 trucks	2	6.6
Total	30	100.0
	Frequency	Percentage
Types of wastes trucks		
Open truck	5	16.7
Tipping truck	19	63.3
Compactor	6	20.0
Total	30	100.0
	Frequency	Percentage
Your trucks covered always		
Yes	27	90.0
No	3	10.0
Total	30	100.0

Source: Author's field report 2023

The table above showed that majority of wastes contractors 27 which is 90% of the total registered wastes consultants are licensed to manage household wastes while only 3 which is 10% of wastes contractors are licensed to manage bio-medical and hospital wastes. Furthermore, in terms of operational truck most of the contractors has only one operational vehicle. The total number of 20 out of 30 wastes contractors which is 66.7% of their population relied on the service of a single truck. Wastes contractors with two working trucks are next with population of 8 which is 26.7% of the total population. The type of trucks commonly used for wastes evacuations are majorly tipping trucks, this is alluded to by the number of wastes contractors 19 which used them that constitute 63.3 % out of total number of 30 wastes contractors. Also the next most used types of vehicle after tipping trucks is the compacting with 6 different consultants which 20% of companies having one or more compactors. The remaining 5

contractors which are 16.7% of the total number of the consultants use open trucks for daily evacuation of wastes in the state.

Challenges facing Wastes Management Contractor in Ilorin Metropolis

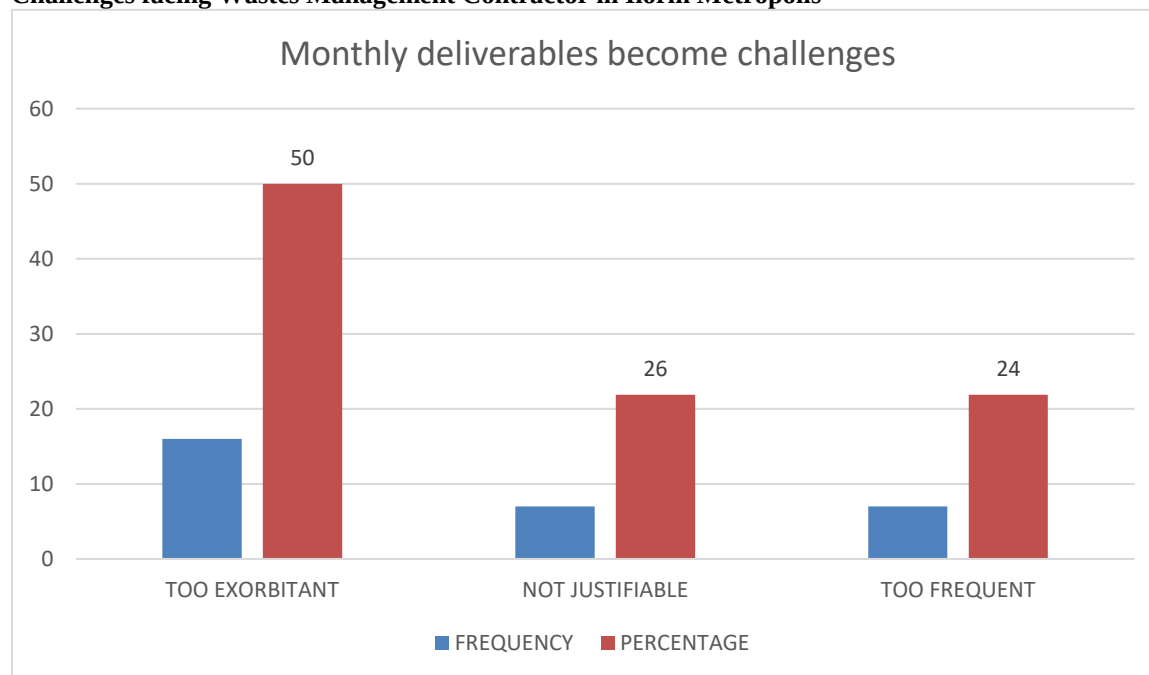


Figure 1: Monthly deliverable paid by the contractors

Monthly deliverables are amount paid into the purse of the state government through the Kwara State Internal Revenue Service (KWIRS). The money is evaluated by the Kwara Environmental Protection Agency and recommended to the KWIRS based on areas of coverage allocated to each contractor. The above chart explained the perception of the wastes contractor to the monthly fees (deliverable) payable to the purse of the state government. Majority of the wastes contractors 15 which is 50% of respondents felt that the monthly deliverables are too expensive. Also, 26% of contractors that is 8 believed that the amount allocated to their company is not justifiable in terms of area of coverage and patronage. The remaining 24% believed that the payment of deliverable every month is too frequent and not helping their businesses.

Poor Wastes Management Sensitization.

Low level of environmental and health education poses a serious challenge to wastes management. Among the issues identified as factor militating against effective wastes management and patronage of waste contractors is poor sensitization. The chart below seeks to ascertain if lack wastes sensitization constitutes a problem for waste contractors in the metropolis. Majority of the wastes contractors 67% believed that poor sensitization on wastes is a problem which usually lead to indiscriminate wastes disposal and eventually make their tasks difficult.

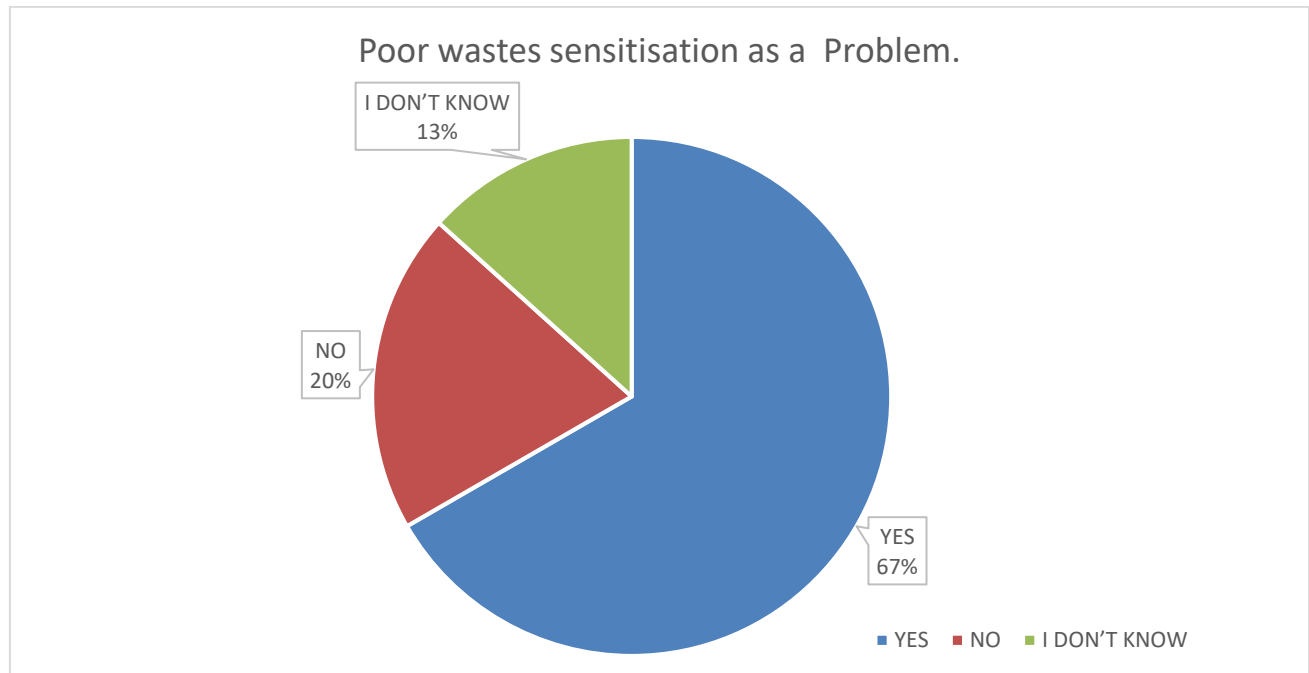


Figure 2: Wastes management sensitisation

20% of the respondents don't agree that poor wastes sensitization constitutes impediments to execution of their jobs. The remaining 13% are indifferent as they don't know either if poor wastes sensitization is affecting their wastes management activities or not.

Poor enforcement of waste disposal with wastes contractors

The institutional framework and laws that gave the state ministry of environment and agency some supervisory roles, among those agencies are given in the chart below and the wastes contractors' awareness of the environment health enforcer. Among those presented below are the Kwara State Internal Revenue Service (KWIRS), the agency that is responsible for enforcing payment of monthly deliverables and payment of the yearly renewal fees for each contractors. The next is the Kwara Environmental Protection Agency (KWEPA) they are responsible for implementation of all wastes management strategies among other duties. They also oversee the operation of all wastes consultants. The last is Ministry of Environment and Forestry (MOE), they are the policy maker in all activities that has to do with the environment.

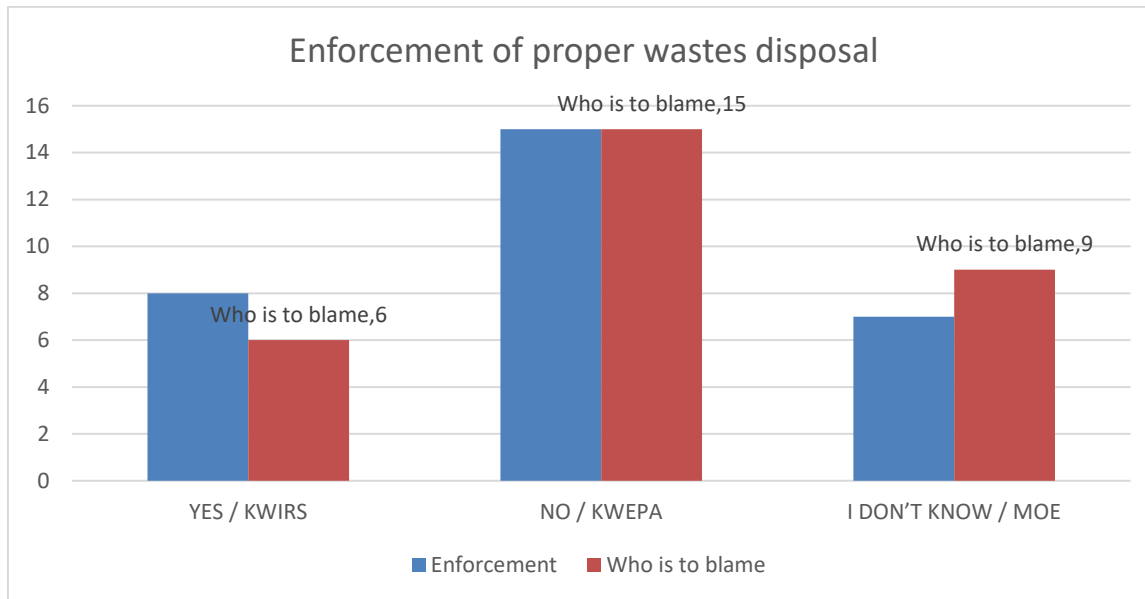


Figure 3: Poor enforcement of Waste disposal

Majority of respondents of the respondents as can be seen above opined that the Kwara State Environmental Protection Agency is to be blamed for poor enforcement of proper wastes management and poor patronage by the residents. Total number of 15 respondents which constitute 50% of the total population of the study fall into this group. This is closely followed by ministry of environment and KWIRS is the least blamed for poor enforcement of proper wastes disposal.

Discussion

Operational Capabilities

Operational capabilities of wastes contractors are determined by the equipment and manpower availability. The research shows that wastes contractors are not well equipped with modern wastes transportation facilities. It was discovered that majority of them 66.7% (20) relied on a single truck most of which are old rickety trucks. Also, most of them 63.3% operate with open tipping trucks which expose their workers and the public to hazards of wastes. These are in agreement with Adebola [21] and Yusuf *et al* [16] who concluded that vehicle challenges and the use of inappropriate wastes trucks are major problem with solid waste management in their study. There are many challenges facing waste contractors, key among the challenges of commercial wastes contractors are multiple charges being paid to government purse. Most of waste contractors frowned at the monthly deliverable paid to government cover through the KWIRS. 50% of the contractors believed the monthly payment is too much, while 26% thought the payment is unjustifiable. This is in agreement with the submission of Mba and Nandi [12] and Adebola *et al*. [21]. Poor sensitization and awareness among the general public were indicated as major challenges. The general lack of awareness regarding waste issues lead to poor patronage of the wastes contractors and foster indiscriminate wastes disposal around the town. This is in agreement with the findings of Shittu *et al*. [15], Yusuf *et al*. [16] and supported by Kaoje *et al*. [17].

Enforcement of proper wastes disposal through the wastes contractors is another challenge and majority of the contractors 50% put the blame on the government agency overseeing the wastes management sector i.e. Kwara State Environmental Protection Agency for poor awareness and enforcement of residents to comply with using commercial wastes contractors. This is similar to the result of findings of Rauf *et al.* [8] and Shittu *et al.* [15]

Conclusion

The research has been able to unveil some operational inadequacies with government registered waste contractors and this is largely due to the fact that majority are driven to begin wastes management as means of economic empowerment with little or no training in wastes handling and the technical requirement for wastes management. The regulatory organisation are also not living up to the expectation in the enforcement of our environmental laws. The government policy of making wastes management as means of revenue generation is another impediment that is worth mentioning and this has contributed to the failure of enforcement of the environmental law as government as the agency of the government are working hard to improve the government revenue rather than protection of the environment and health of the people. In all of these challenges facing the wastes management contractors in Kwara State, few of the recommendation below will assist in improving the operational efficiency of the contractors and ensure a health and clean environment for all.

Recommendations

1. The usage of inappropriate vehicles for waste transportation must be prohibited.
2. Registered wastes contractors can be supported with vehicle loans from the government to enhance their productivity.
3. Government agencies in charge of enforcement and compliant should improve on their monitoring activities to detect illegal contractors and check excesses of some registered wastes contractors.
4. The government evacuation trucks can serve as backup for any private contractor with vehicular issues and such contractor must be made to pay for such service.
5. Waste management contractors should be appointed based on their capacity, expertise and the process must be devoid of politics.

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