

Appraisal of the Contemporary Household Waste Management Policies, Institutional and Implementation Strategies in Oyo State

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Summary

Management of household waste in Nigeria, particularly in Oyo State is very crucial in order to ensure environmental protection and public health. To achieve this, more efforts are required by the government, environmental agencies and the general public. The study therefore aimed to appraise the contemporary waste management policies and intervention strategies put in place in Oyo State. An in-depth interview was conducted on twenty-one (21) waste management opinion leaders who were: 12 private waste contractors in Ibadan, four Environmental and Health Officers, four Baales/Community leaders, and one representative from Oyo State Solid Waste Management Authority (OYOWMA) with the aid of interview guide. Findings shows that Oyo State has several agencies that were saddled with the responsibility of organizing and controlling waste management activities and also creating awareness to the public on the importance of waste handling. It was also found that the waste management policies were considered ineffective because of poor policy implementation, poor structure of waste management institutional framework and inadequate compliance of the public to waste management policies and regulations.

Introduction

The generation of waste by human being is inevitable and in the recent time, there is drastic increase due to rapid industrialisation and urbanization. Therefore, its management is very demanding (Emmanuel, et al, 2021). The average waste generation rate in Africa was 0.78kg per capital per day as related to 1.22kg per capital in developed countries (Beukering et al, 1999; Ojok et al, 2013). The projected estimate of waste generation in Nigeria by 2025 is 0.85kg/capita/day

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(UN, 2015). Daily waste generated was heavy in Ibadan, the capital city of Oyo State, going by Odewumi *et al* (2016), which was 1,648.85 tons per day. In response to the whopping waste generation in Africa, particularly in Oyo State, and mismanagement of household waste which has posed a serious problem to the health of people and economic development of various African nations, the study aimed to appraise waste management policies, institutional and strategic frameworks in Oyo State. Several studies have been done on household solid waste and management (Omolawal and Shittu, 2016), however, research on the evaluation of the existing domestic waste management policies, institutional and implementation strategies in Oyo State are negligible. On this premise, Oyo State government came up with some institutions and agencies encumbered with roles related to waste management activities, some of which are reviewed below as:

4.2: Institutional Frameworks for Waste Management in Oyo State

The institutional framework is the system of formal laws, regulations, and procedures, and informal conventions, customs, norms, and roles of stakeholders, that shapes the behavior relating to waste management. The institutional and legal framework of waste management is a broad concept that involves the functions of private enterprises, government, and political interference (IGI Global, 2021). Waste management is one of the major problems in Nigerian cities, and it has been a problem over a long period. Also, due to the continuous rise in population, urbanization, commercialization, industrialization, and globalization, the waste management challenges in the city of Ibadan, the second-largest city in Africa have drastically and consequently increased. A major factor responsible for this problem is the inadequate regulatory framework which is reflected in inadequate investment in service delivery of private sector, uncoordinated institutional functions, low capacity to discharge responsibility, insufficient data information for planning, and wrong attitude of waste generators (Odewumi *et al.*, 2016). Moreover, the diverse nature of waste-related activities undertaken in the city of Ibadan gave rise to various types of waste generated, collected, and disposed of. Hence, the need to critically examine not only the existing policies and implementation strategies, but also the waste management institutional frameworks in the State.

In no city are the problems of waste management better illustrated than in Ibadan, Africa's largest indigenous settlement. The spectacular failure of many programs and machinery for waste

disposal in this city has led to a continuous shift in responsibilities between agencies and the various tiers of government, as well as prompting some degree of privatization. For instance, between 1988 and 1989, responsibility for solid-waste management was with the Environmental Sanitation Board. However, following an institutional directive in 1989, responsibility was again transferred to local governments. In this new dispensation, collection facilities and other equipment were shared among the five local governments that occupied the city's core areas, namely, the Ibadan North, Northeast, Northwest, Southeast, and Southwest local governments.

Since 1991, however, these five local governments have entrusted responsibility for solid waste collection and disposal to the Ibadan Urban Sanitation Committee (IUSC). The IUSC is governed by the Ibadan Urban Sanitation Board (IUSB). In Nigeria, we have the Sanitation Committee at the local level, the EPC at the state level, and the FEPA at the federal level. The members of the IUSB are the five health officers of the five local governments, representatives of the Ministry of Health and the Environmental Pollution Control (EPC), and the project manager of the IUSC. There are two subcommittees, namely, Operations and Technical. Apart from solid-waste collection, transportation, and disposal, the committee also maintains the vehicles. The operations of the IUSC are subsidized by the five local governments, which contribute equal amounts, irrespective of their populations or the amounts of waste they generate.

The institutional roles and responsibilities related to waste management and sanitation are shared at various levels of government. According to World Bank and PPIAF, (2017) added that Policy Guidelines on Solid Waste Management (2005) was developed by the Federal Ministry of Environment and the roles and responsibilities of Government at various levels were stated. Below are the following four solid waste management options:

- Local Government/Municipal Agencies.
- Private Companies on contract with the LGA: the involvement of the private sector in waste management suggests a delegation in the key role of government at various levels from the provision of service to regulation (Peter, 1996).
- Private Companies on contract with Home-Owners: there should be proper delivery of service and low cost of service delivery. Solid waste management authorities should also establish a good rapport with residential population and user groups (Peter, 1996) and

- Public-private partnership (PPP): for proper participation and community-based waste management, public and private are in affiliation for suitable waste implication awareness and enhancement of organizational capacities. Peter (1996) asserted that the NGOs' support will be possibly valuable in strengthening the capability of households to be directly involved in local solid waste management.

Despite all these institutional arrangements, waste management was still a major challenge in the city of Ibadan. In the recent reforms by the State Government, the administrative roles of solid waste management in Oyo State lie with three institutions; with roles and responsibilities differing from one institution to another. The institutions are Oyo State Ministry of Environment and Habitat, formerly known as the Ministry of Environment and Water Resources, Local Governments, and the Oyo State Solid Waste Management Authority (OYOWMA). The Ministry of Environment and Water Resources was initiated by the government of Oyo State which started functioning on 1st January 2001. The Ministry which was later known as Oyo State Ministry of Environment and Habitat has general responsibility for the environmental protection, maintenance, and development in the State, including solid waste management. The Ministry had among others the roles of formulating and enforcement of policies, constitutional rules, and regulations concerning to waste collection and disposal, general environmental control, regulation, and safeguard of the ecological system and other associated actions.

The Oyo State Solid Waste Management Authority (OYOWMA) has direct and operational responsibilities for solid waste management in the whole of Oyo State, including the Ibadan metropolitan area. Other strategic objectives of OYOWMA are as follows: it enforces all laws and regulations concerning solid waste management and any sanitation laws that may be in use in the State. One of the objectives is to further maintain sanitary landfill sites all over the State and charges economic rates from contractors and finally, prepares, collect, collates, and analyze solid waste data and manage information concerning solid waste. Summarily, the regulation is designed to improve the productivity and the quality of the services at a fixed price and to improve the relationship between the public and private sectors.

The Authority also oversees the waste collection, clearing of the illegal refuse depot, street cleaning, transport. OYOWMA is authorized to charge fees for the registration and subsequent

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renewal of private refuse collection licenses and economic rates and the issuing of operating permits to private waste contractors. OYOWMA also monitors the activities of these private waste contractors. The Authority has the power to charge dumping fees per truck for access to the dumpsites. She assigns jurisdiction of operation to the private participants in the collection of waste in the city. This is to define the boundary of operation for each contractor in order not to encroach into other contractor's assigned jurisdiction. OYOWMA likewise implements a variable rate system for charges on service users of waste collection agencies.

The Authority further can withdraw licenses and charge fines on waste collectors for different misconducts, such as waste collection outside of the contractor's designated jurisdiction or using waste disposal sites that are unapproved. (World Bank and PPIAF, 2017). The enforcement aspect of the Authority engages in surveillance activities daily at strategic areas in Ibadan to discourage inhabitants from illegal dumping of waste. The enforcement activities are jointly carried out by Authorized Officers, such as a team of Environmental Health Officers, and complemented by Environmental Taskforce in Oyo State, who are Non-governmental agencies (NGOs), Community support Brigade and Man "O" War and Lay magistrate that prosecute sanitation offender with specific fines. The enlightenment arm is responsible for educating, informing, and creating public awareness on proper waste management and basic hazards in poor hygiene. Visits are paid to various places including markets, and communities to discourage indiscriminate dumping of waste in waterways, road medians, and other illegal areas by residents. The communities are informed and encouraged to patronize registered Private Refuse Contractors.

One of the functions of Local Governments according to World Bank and PPIAF (2017) was to ensure that the implementation of adequate practices in solid waste management and sanitation is maintained, such as house inspection, enforcement, arrest, and prosecution of anyone who violates Environmental and Sanitation laws and regulations. LGs are to make available annual budgetary provisions for solid waste management. Before the establishment of OYOWMA, LGs were saddled with the responsibility to supervise waste management within their localities. Later, OYOWMA took over the responsibility from the Local Governments and LGs did not have proper access to effectively carry out waste management in their vicinities. OYOWMA performed the responsibility to collate waste at main roads, core areas of the city, markets, and areas uncovered

by private waste contractors. As a result of the policy modification, from October 2015, Local Governments reclaimed their responsibility for waste collection within their locality.

Private Sector Participation (PSP) in waste management dates as far back as 1994. As regards the scheme, the participants can apply for any of the three categories of permits based on the category of waste producer – each class requires a varied application fee:

- Residential waste collection or Domestic– N2,500
- Institutional and Commercial waste collection– N5,000
- Industrial waste collection – N10,000

A licensed waste contractor undertakes waste collection at the designated jurisdiction and at the appointed time of service delivery, following the guidelines of waste collection, transportation, and disposal. Economic rates are being charged on the Private Waste collectors by OYOWMA for the maintenance of dumpsites. The role of the contractors is majorly to collect waste for household, commercial, industrial, as the case may be, and dispose to any of the government-approved dumpsites. According to the review, some are licensed or accredited representatives under the agency named Oyo State Environmental Protection Agency (OSEPA) to carry out some special activities related to hazardous waste management such as pesticides, chemicals, radioactive substances.

The Ministry of Environment and Habitat supervises the activities of the OYOWMA and also has a role to oversee the weekly Exercises on Environmental Sanitation, set up every Thursday between the period of 7 am and 9 am. The Ministry also observes the waste level in the Local Government Areas of the state. The State Governor has the final decision-making capacity on private sector participation and most importantly on solid waste management generally (World Bank and PPIAF, 2017).

Summarily, different waste management institutions and agencies at different levels in the State are saddled with the roles to ensure that the wastes are responsibly managed by citizens, stakeholders, and government authorized officers. The essence of institutions is to establish waste management laws, enforce the law and ensure the compliance of the laws by the citizens with various existing strategies. However, in Oyo State, insufficient long-term planning, inadequate

government priority, shortage of manpower, lack of political support for action, and financial constraints among others seriously impeded the efficiency of the institution. For institutional responsibilities related to waste collection to be properly carried out by waste contractors, authorized officers, and environmental task force, there is a need for adequate policies. Therefore, the existing waste management policies guiding individual stakeholders were appraised in the following section.

4.4 Waste Management Policies in Oyo State

The existing waste management policies in Oyo State are very crucial for consideration in this study. The relevance of the policy to waste management practice, expected standards of the policy, the policy practice in reality, and the evaluation of the policy would be examined. The OSEPA Law, which revoked the Oyo State Environmental Protection Agency Law 1999, initiated the Oyo State Environmental Protection Agency (OSEPA). The OSEPA Law provides for the constitution, duties, functions, and powers of OSEPA, which also includes household's responsibilities towards waste handling.

4.4.1. Oyo State Solid Waste Management Authority (OYOWMA), Subsidiary legislation of OYOWMA (also known as Fines/Sanctions Regulations) 1997.

Oyo State Solid Waste Management Authority (OYOWMA), formerly known as Ibadan Solid Waste Management Authority was established under the regime of governor Akala with Edict No. 10 of 16th May 1997. It thereafter changed to OYOWMA after the enactment of the "Oyo State Solid Waste Management Authority Law, 2004" by the Oyo State House of Assembly in the year 2008. The strategic objective of OYOWMA is to manage the generated waste within the State.

According to the regulation, OYOWMA charges every private sector participant for dumping waste at the government-approved dumpsite. OYOWMA also charges annual licensing fees. The fees vary depending on the categories of operations or areas. The regulation permits service providers to develop approaches that build the service providers' management and capacity. Moreover, it is designed to encourage investment commitment in the contract, ensure the

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budget allocation to guarantee payment of waste collection providers. The regulation also arranged a prolonged contract that could last for 2 to 3 years as a transit and the contract duration should be 7 to 8 years preferably.

As a result of indiscriminate dumping in Ibadan, the government came up with subsidiary legislation of OYOWMA, which compels all households in Ibadan to pay fees for the collection of their waste, it encourages the community-led collection of waste at public places within the community. It also reinforces community association to enforcing landlords or tenants on the placement of waste bins for waste storage and subscription for the service of waste collection. It also informs the waste generators about the benefit of subscribing to the service of waste collectors. The regulation permits the monitoring of the private companies who are willing to invest in activities related to waste recovery. It also ensures the effective management of landfills to minimize the area of waste coverage and thereby space for waste recovery activities.

In Oyo State, the private sector participation scheme is ineffective because of unavailability of capital to purchase equipment, such as trucks and tippers is most time beyond the capacity of the waste contractors. Another challenge in Private Sector Participation is that the number of waste contractors appears to be insufficient in the city. This is being complemented by the effort of the environmental task force in Ibadan. In addition, non-compliance of the residents to the compulsory subscribing to waste collection services in Ibadan seems rampant. Also, waste collectors after rendering their waste collection service to those that subscribed had issues in getting paid by the service users in some areas. This could be due to nonchalant attitude, in-availability of the service users, and unaffordability.

4.4.2. Environmental (Sanitation and Waste Control) Regulations, 2013.

The State government introduced the Sanitation and Waste management policies currently adopted in the state in 2013. The law came into being on the 18th of March, 2013 by section 25 of the Ministry of Environment and Habitat Law, 2012. The purpose of the regulation was to minimize pollution. The Organisation that carries out the implementation of such obligation is Oyo State Environmental Protection Agency.

A major challenge in waste management in Ibadan just as in any other city in Nigeria is waste disposal. In an attempt to create a clean environment, the regulation stated that any person whose activities generate waste should ensure the refuse is handled by someone who is licensed to transport and dispose of the waste at the designated waste dumpsites. Furthermore, any occupant in care or control of any business premises should ensure that sidewalks and drainages area surrounding the building is kept clean at all times; and ensure no sweeping out, or throwing of any refuse into any drain, vacant plots, private lands, public places, streets, lanes, walkways, beaches within the 5 meters of the premises.

A common feature in Ibadan is the preponderance of food vendors in almost all the streets of the city. Such operators litter the area with droppings from their shops and in a way pollute the environment. To curb this practice, the regulation states that a food vendor shall comply with the Environmental Policy Guidelines on Food Sanitation by ensuring that litter and other refuse do not pollute the environment, and operators should collect and dispose of all generated waste emanating from the business to a designated collection point. Finally, such regulations were enacted to always maintain cleanliness or hygiene of the location of business.

Ibadan is a commercial city with notable markets in the city. Not only that the bulk of waste is often generated through trading and commercial activities and such wastes are often dropped at river canals, along the roads, and in undesigned places. As such, the regulation provided that traders in the markets or in the business management or operation where wastes are produced in the environment shall ensure that recyclable objects and litters are deposited in a suitable containers or waste bins with cover and ensure cleanliness is generally maintained. Shop owners are expected to provide welfare facilities such as portable water, conveniences, cloakrooms, and canteen, provide educational and pictorial symbols to guide persons where to drop refuse, provide a suitable containers for recyclable materials in proper and accessible locations; regularly service, maintain and empty the container and above all, keep the premises drain clean, and all private and public areas street, walkways, beaches within 5 meters of the boundary of the property litter-free at all times.

The bulk and various types of waste are generated in the household. In other to ensure that households contribute to a clean environment, the regulation also provided that every occupant of

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the premises shall ensure the cleanliness of the kitchen, toilets, drains, bathrooms, cloakrooms, animal pens, and other rooms within the premises and the control of vectors in the premises. It states that any person who generates waste shall segregate such waste by:

- separating hazardous from non-hazardous waste,
- separating all recyclables before being taken out for collection,
- keeping refuse bin within the premises, and dispose of them in facilities provided by the relevant authority and
- putting them into securely tied plastic bags or leak-proof refuse bins with tightly fitting lids.

Moreover, the regulation expects every owner of house premises to make provision for an adequate number of toilets for the house occupants and ensure the proper maintenance of the structure from time to time. The regulation also made provisions for licensed waste contractors. It stipulated that a licensed waste contractor shall engage in the waste collection at the allocated jurisdictions and at the scheduled time or period following the waste collection and transportation guidelines in Schedule VII to the regulation. According to the provisions of the regulation, anyone granted a license to transport waste shall ensure that waste is collected from the designated area of licensed operations and delivered to the licensed transporter transfer station, disposal site, or plant. Finally, the collection and transportation of such waste are conducted in a way that will not lead to scattering or flowing out of waste from the vehicle or release of the horrible odour, fumes, or smoke.

The regulation also provided that the Ministry, Agency, and other important Authorities shall ensure the proper implementation of the provision of the National Environmental Sanitation Policy and Guidelines at all levels of government, enforce compliance with the provision of these regulations, issue permit and building a strategic association with other Federal Ministries, Agencies and Department, other States, Local Government Areas, and other related Stakeholders. Furthermore, the Ministry ensures that the waste management complies with the Environmental Impact Statement and embark on intensive environmental training and awareness, campaign on proper environmental sanitation and waste management. It also publicizes standards for

environmental sanitation and waste management, develops and occasionally review the regulations, standards, and guidelines on environmental sanitation and waste management, and initiate and institutionalize extended product program with an emphasis on “buy back” initiative, among others.

Since Oyo State is an industrial area, with various manufacturing companies all over the city of Ibadan in particular, and the type of waste generated may be disastrous to the health of people, animals and soil and thereby leading to low productivity of labour. Hence, the Ministry of Environment and Habitat, enacted a law that any industrial facility using hazardous chemicals and products should ensure safe and appropriate disposal of hazardous chemicals and containers. For proper handling and disposal with the special precaution of hazardous waste, the regulation defined and identified various types of hazardous wastes. These are wastes that display corrosive, ignitable, toxic, or reactive features and produce extensive harm either to humans or animals now or in the future.

Infections can easily be spread, with pollution occurring in an area that health care waste is not properly handled. There are quite many health facilities in Oyo State: government, private and orthodox types. Public and private hospitals are not less than 20 in number in the city of Ibadan (Federal Ministry of Health, 2019). If therefore there is mismanagement of such sensitive and delicate waste, the lives of people are at stake. Thus, the Ministry of Environment and Habitat came up with some regulations to safeguard human health, soil, and elements. It shall therefore be an offense for any person to own or operate any facility that treats Health Care Wastes without a valid license issued by the Agency. Health Care Wastes need to be carefully segregated at the point of generation and all stages thereafter as contained in Schedule XVI to the regulations. Furthermore, Health Care Wastes should be securely packaged in colour-coded bags or containers as contained in Schedule XVII to these regulations.

For proper monitoring, the existing operators of health care wastes management facility within 6 months of the commencement of this facility, must submit Environmental Audit Reports and thereafter submit such reports, every 3 years and Wastes Management Facilities dealing with health care waste should submit waste management report quarterly to the relevant Authority. Any

person who violates any of the regulations will be guilty of an offense and shall on conviction be liable to a particular amount of fine or imprisonment for a particular number of years or to both such fine and imprisonment depending on the type or the weight of offense. Despite the effort of the Ministry of Environment and Habitat, OYOWMA, and LGs among others to enforce the laws meant for the protection of all stakeholders. The waste management rules and regulations in Ibadan, however, are not sufficiently enforced (World Bank, and PPIAF, 2017).

4.2.3 Corporate Institutions and Government Reservation Areas Frontage Beautification Regulations, 2013.

Ministry of Environment and Habitat, Law 2012 established Corporate Institutions and Government Reservation Areas Frontage Beautification Regulations, 2013; on the 18th day of March, 2013. The regulations deal generally on the environmental beautification and sustainability. Moreover, the Industrial/Health Care waste-related regulations was specifically considered.

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4.5. Waste Management Implementation Strategies in Oyo State.

This is the process by which an establishment or an institution executes its waste management strategies and plans through actions and activities which will guide in achieving the set-out goals of the waste management strategy. In Oyo State, there are implementation strategies related to waste management, set out by the government in to achieve a hygienic environment, some of which are: enlightenment, enforcement, and prosecution of the defaulter of waste management policy(ies).

4.5.1 Enlightenment: This is to keep people abreast of the vital information concerning waste and waste management, the implications of improper waste management. An impactful strategy for enlightenment is that of the Clean and Green Initiative, which cuts across different spheres and mediums of disseminating crucial information relating to waste management.

4.5.1.1 Clean and Green Initiative- Overview of the Integrated Waste Management Program, 2020.

Oyo State government recently launched the Clean and Green Initiative. It was organized by the Ministry of Environment and Natural Resources Oyo State Government of Nigeria in

partnership with the Oyo State Waste Management Authority. It was launched by the present regime on the 2nd of June 2020. The program is a waste-to-wealth initiative. The core objective of the program is to reduce carbon footprint, creating wealth and employment in Oyo State through Municipal Solid Waste Management Initiatives. The target of the initiative was to carry out a baseline study to determine the quality and quantity of solid waste management at designated areas within the State and erect a standard solid waste management processing plant at a selected location within the State (preferably on a dumpsite that is currently in use or within its nearness). It was expected that the results obtained from the baseline study will determine the size of the investment.

The project is divided into three phases, which are Media/Awareness Campaign, PSP Reforms, and establishment of standard Integrated Waste Management Framework (IWMF) program. Since waste management is generally poor in Oyo State, including Ibadan, a campaign strategy was adopted as an implementation strategy by the State government to effectively change the attitude and perception of Ibadan people (at all levels and cadres) concerning waste. The following key media/vehicles are desirable, such as:

- Electronic means by engaging in radio stations, local or national television broadcast and internet on a program that appeal to the people of Oyo State and foreigners on waste management.
- Printing community magazines, both local newspapers and national newspapers, which helps to communicate the Advertorials/Supplements, available waste management Policies, waste management Activities, Features/Stories, and Advertisements to the public.
- Outdoor through Posters, Banners, Flyers, Billboards, Mementoes/Souvenirs, and Stickers is identified as an implementation strategy for the clean and green initiative in Oyo State to keep the public abreast of the importance of waste management and implication attached to improper waste handling in the state.
- Schools Advocacy: because of the importance of the awareness of waste management to the public, the government of Oyo State identifies school advocacy as a reliable implementation strategy. This can be achieved through a mobile campaigns, the establishment of information centers at all the local government councils/development

areas, Debate/Quiz competitions in Schools on waste management, and customized Wristbands, T-shirts, face caps, and others.

- Stakeholders' Fora: since waste is generated majorly within the community, therefore, one of the effective implementation strategies in Oyo State is stakeholders' Fora agenda, which is primarily community-oriented inputs. These comprise the association of Traditional Institutions, Opinion molders, Estate Associations- (Landlord and tenant), Cart pushers, PSP operators, Market woman, Law enforcement Agencies, NURTW/RTEAN, Professional Associations/groups, and informal Sector.

The project involves a Memorandum of Understanding between the Oyo State Government of Nigeria, Macpresse West Africa Limited coupled with other stakeholders in the scheme. The joint venture between Macpresse W. A Ltd and Souder, Miller & Associate- Colorado, USA targeted at delivering a world-class service with the aid of foreign and local expertise in the aspect of solid waste management initiative.

There was a consistent increase in unemployment and under-employment rate in Oyo State, which rose from 9.08% in the third quarter of 2017 to 14.3% in the third quarter of 2018 respective (Business Day, 2nd May 2019). To handle the challenge, the clean and green initiative was brought about by the incumbent governor of Oyo State, Gov. Seyi Makinde, to create a source of living for the hopeless family. This has birthed 12,000 direct jobs for skilled, semi-skilled, and unskilled labour in the State, through the current rehabilitation at Awotan dumpsite, being re-modelled to international standard. Moreover, the project has created 500 registered private refuse collectors and finally, the scheme called the “clean and green initiative”, has produced 6,000 direct employment opportunities. Assuming each of the engaged 500 PSP operators having six personnel managing the 1,000 trucks with drivers, motor boys and 4 refuse parkers engaged permanently” (Clean and Green Initiative, 2020).

4.5.2 Waste Management Policy Enforcement: The institutions that are specifically responsible to enforce policy action related to waste management on the public are called waste management task forces, such as Sanitation officers, OYOWMA, and other Organizations or bodies. According to World Bank and PPIAF (2017), Oyo State was unable to effectively enforce regulations and develop appropriate activities in waste management. Thus, indiscriminate

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dumping of refuse and the level of compliance of the public to rules governing waste management, most especially among the households were found to be low.

4..5.3 Apprehension and Prosecution: Are responsible for apprehension and prosecution of people who disrespect waste management regulations in the State. Moreover, with the existence of waste management laws/policies in Oyo State, there is a law court to prosecute the offenders or the violators of any of such laws. Therefore, there is Oyo State waste management Law Court established in 2012; while Sanitation Law Court was newly established in 2020.

4.6 Evaluation of Waste management Institutional framework, Policies and Implementation Strategies in Oyo State

The major criteria for evaluating waste management policies are based on 3 important aspects, which are policy structure, connection between policy structure and policy objectives and goals, and achievement of policy objectives and goals through implementation strategies and other factors. The various documents reviewed in this chapter indicate the existence of waste management institutions, policies, and strategies to ensure that a hygienic environment is secured via law enforcement, awareness, and supervisory roles on waste management issues. The waste management policies and regulations were properly and sufficiently formulated by the government, the policy objectives aligned with the policy structures; but it could not effectively achieve the stated objectives (which is primarily to ensure effective waste management practices) in the State as there was still indiscriminate dumping of waste at the residential and public areas. The effectiveness of the existing policies was impeded by both waste management strategic and institutional frameworks.

There has been a change of structure in waste management over the years. The change occurred because of the work requirement and new strategies involved in waste management. However, it has a negative implication of adaptation in the drive of a new authority. As at the time of the interview, the waste management affair was under the supervision of local governments within their jurisdictions but OYOWMA controlled all the waste management activities of the Local Governments in the State. Insight from an in-depth interview truly showed that the Local

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Government was formerly in charge of waste management in Ibadan, and later on, in the year 1999, the responsibility was totally taken over from the local government level and transferred to OYOWMA. As a result of a change in policy, the government at the local level once again was assigned roles to complement the waste management efforts in the state in October 2015, while OYOWMA oversees the affairs within the State.

Another finding from the in-depth interview indicates that private sector involvement in waste management dates as far back as 1994. During the regime of Governor Ajimobi, which ended in the year 2019, there was a single organization identified as private sector involvement in waste management in the state called West Africa Energy. The organization was granted the license to single-handedly collect waste in the whole of Ibadan. The scheme was thereafter terminated during the resumption of the preceding governor- Governor Makinde in the following year, giving access to the interested public to venture into the business.

Since part of the institutional role of OYOWMA is to register and issue a license to private sector participants and monitor the activities of the interested contractors in waste collection and disposal activities within the state. In reference to the boundary of operation by contractors, the regulation stipulated in the review that the demarcation of boundaries to the contractors should be carried out by the authority in charge-OYOWMA. However, findings from the field showed that there was not a well-defined boundary of operation or jurisdiction among the contractors, thereby leading to competition and conflict.

In Oyo State, there are three categories of permits following the nature of waste production, which are available to waste contractors- commercial/institutional waste, residential waste, and industrial waste. The document reviews that waste contractors applied for any of these permits based on their choice. Insights from the in-depth interview, contrary to the review stated that the contractors were assigned for all types of waste, whether commercial waste collection, domestic waste collection or industrial waste collection depending on the type of activities performed and waste generated in the allocated jurisdiction in the state. By implication, an individual waste contractor, in practice, could not exercise his/her preference over other waste categories. In addition, an individual contractor was involved in collecting more than one category

of waste with only one permit. By implication, industrial and medical wastes, which are more hazardous were simultaneously handled with household waste.

Concerning the level of efficiency of waste contractors, the contractors were guided by regulations about the timing of waste collection, quality of service delivery- that is how sanitarily the operation is carried out. The findings from the in-depth interviews pointed out that some of the agencies under Private Sector Partnership are not effectively performing their duties as the service users sometimes complain that the refuse collectors allocated to their jurisdiction do not often show up to collect waste. Challenges are being encountered by some private waste contractors in discharging their responsibility, such as roads linking their jurisdiction with the dumpsites are bad and inavailability of other infrastructural facilities, which impedes their performance.

As it has become mandatory for all households to subscribe to the service of private sector participants; however, the number of waste management contractors appears inadequate to engage in the waste management activities in the State. This is because insight from the in-depth interview showed that there are only 150 private waste participants providing service in the whole of Oyo State. During the fieldwork, information from OYOWMA indicates that the taskforce committee of the government and the local government officers complement the operation of refuse collection in public places. The task force committees are majorly the Non-Governmental Organisations (NGOs), Peace Corps, Man “O” War, White Brigade, and other stakeholders like Market Associations, Landlord Associations, National Union of Road Transport Workers (NURTW), YES-O among others.

In addition, the regulation emphasizes the roles of waste generators in subscribing to the service of waste collectors in the State. In the practical sense, however, some residents who are the waste generators failed to comply with the rules. Despite that the waste collectors showed up, they still engage in self-disposal. Generally, the level of compliance of the majority of the public to rules governing waste management, most especially among the households, was found to be low. Though, as at the time of the interview, it was conspicuous from the personal experience at the public areas of Ibadan that there has been improvement in the city of Ibadan in recent time. This was compared with the visit to the city before the period of the interview, which indicates an obvious change in the area of waste management and sanitation.

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A larger percentage of households still carrying out self-disposal of waste in the city of Ibadan. From the respondents' interview, it was discovered that the largest percentage of those that carry out self-disposal burnt their waste, and this shows that majority violates the OYOWMA's regulation on proper waste disposal strategy. Factors responsible for self-disposal strategy were the non-availability of waste collection services and the unaffordability of waste management charges. Some still carry out indiscriminate dumping, not minding the health and economic implication of such actions. It was found from the qualitative interview conducted on a community leader claiming that they engage in self-disposal.

“We do self-disposal in Sawia community. We have central refuse depot and we burn it from time to time. Each household goes there to drop waste, but it is our duty as community leaders to burn the waste when full. We carry out this method of disposal because there is no effort from the government as related to waste and no private contractors assigned to our community at all. All our effort to subscribe for waste management service is to no avail“.

(Male/ Ibadan Ona- Ara Community Leader/ Sept, 2020).

Also, waste collectors after rendering their waste collection service have issues in getting paid by the service users in some areas. The possible reasons for this were given from the findings of an in-depth interview. Firstly, the majority of the service users would have gone to their various offices, or shops by the time of collection of services charges. Another reason was that some of the service users deliberately evaded the payment for service rendered to them.

It was found from the in-depth interview that the charging structure for waste collection services in Oyo State was done per waste drum. The amount of ₦750 was charged per visit on a waste drum. Since, collection of waste is expected to be carried out twice a month, by implication, ₦1,500 is charged on waste collection per household for each drum in a month.

Findings from the in-depth interview support the observation that some people were not previously cooperating with the government concerning the issue of sanitation and waste management, especially by not engaging the service of contractors in waste disposal because the charges seem to be too high for many. Now, with the present policy implementation on waste management and sanitation by the present regime in the year 2021, people are complying and there

has been a drastic improvement in sanitation and waste management in Ibadan. It was also shown from the qualitative interview carried out on another officer that intense awareness has been carried out through radio jingles, government holding meetings with markets' leaders, communities' leaders, religious leaders, National Union of Road Transport and Workers (NURTW), Road Transport Employee Association of Nigeria (RTEAN) that they should engage the service of a waste contractor for zero tolerance for waste dumping on roads and the roadsides.

There are different penalties attached to different offenses connected to waste management. For instance, paying fines, or imprisonment are common penalties for waste-related offenses. Insight from an environmental and Sanitation officer indicates that prosecutors are arraigned before Oyo State waste management Law court, known as magistrate court 18, which was established in 2012. The court meets 2 times a week and prosecutors are charged ₦10,000. Environmental sanitation and health departments of the local governments in Ibadan also bring cases under their jurisdiction to magistrate court 18.

In a nutshell, the total generated waste daily in Oyo State is estimated to be 3000 tonnes (OYSIPA, 2020). The implication of the large volume of waste generated in the State could have served as a benefit to the economy if properly handled such as recycling, re-use, and converting waste to wealth, for instance, to generate energy in terms of gasification, electrification, manure, fabric among others. In reality in Oyo State, waste was most often not properly managed, whether in the hand of waste generators, waste contractors, or the government agents. For instance, waste was not suitably sorted, collected, and disposed of especially by households. Thus, it created some problems around waste management in the State, such as health disasters and environmental effects.

To address the problem of waste, Oyo State has several agencies that are saddled with the responsibility of organising and controlling waste management activities and creating awareness to the public on the importance of waste handling. These agencies enforce compliance on households with the waste management rules and guidelines in the State; one of which is to subscribe to the service of waste contractors. They prosecute the defaulters of waste management policies by paying fines, among other functions. Additionally, there are a couple of waste management policies formulated to guide the operation and activities in Oyo State. In practice, the

State has relevant, and adequate waste management policies which largely determine its quality but that is not sufficient for its effectiveness. Also, the effectiveness of waste management policies is largely determined by various factors such as the efficiency of the institutional framework, the type, and quality of the implementation strategies put in place, and political will. In the case of Oyo State, there was an inadequate waste management structure to effectively carry out the waste management activities.

Furthermore, Oyo State has several agencies that are saddled with the responsibility of creating awareness to the public on the importance of waste handling there was a low level of performance by the institutional framework as a result of inadequate staff, bureaucracy and paucity of fund hindering smooth running among others contributed to the poor implementation of such policies. Going by the operation, the waste management policies are considered ineffective because of poor policy implementation resulting from insufficient long-term planning, inadequate government priority, and lack of political support for action. Also are cultural background, bad attitude and literacy level of people from the part of the community. Though there is improvements by the recent administration in the area of waste management activities through awareness and enforcement, there are still some areas in Oyo State, particularly in Ibadan city that are still very dirty, such as “Gege“ area in Ibadan South-West LGA, and “Orita merin ti oya area“ in Ibadan North LGA among others.

References

I. B., Addo, D. Adei and E.O. Acheampong (2015). Solid Waste Management and Its Health Implications on the Dwellers of Kumasi Metropolis, Ghana. *Current Research Journal of Social Sciences* 7(3): 81-93, 2015

United Nation (2015). *World Population Prospects: The 2015 Revision*.

T. O. Odewumi, Okeniyi, A. G., & Agbede, O. A, (2016). Assessment of Solid Waste Management Practices in Ibadan Metropolis. *Journal of Scientific and Engineering Research*, 2016, 3(4):375-382.

P. V. Beukering, Sehker, M., Gelagh, R. and Kumar, V., (1999). Analysing Urban Solid Waste in Developing Countries: a perspective on Bangalore, India. Working Paper No. 24.

J., Ojok, Koech M. K., Tole M. and Okot-Okumu J. (2013). Rate and Quantities of Household Solid waste Generated in Kampala City, Uganda. Science Journal of Environmental Engineering Research, vol. 2013, Article ID sjeer-237.

E., Ubuoh, Ogbonna, Wilson U. E., and Emeka-Chris C. (2021). Characterization of Municipal Solid Wastes for Resources Recovery in Owerri, South-East, Nigeria.

World Bank and PPIAF, (2017)

Peter, S. (1996). In collaboration with Karl Wehrle & Jürg Christen, SKAT “Conceptual Framework for Municipal Solid Waste Management in Low-Income Countries.

IGI Global, (2021). What is Institutional Framework.

S. A., Omolawal, & Shittu, O. S. (2016). Challenges of Solid Waste Management and Environmental Sanitation in Ibadan North Local Government, Oyo State, Nigeria. *Research gate*, vol. 19, No 1, 2016.

Federal Ministry of Health, (2019). Hospitals and Clinics in partner with USAID, Measure Evaluation, The global Fund and Nigeria government

Oyo State Solid Waste Management (OYOWMA) Hand-Over Notes on 29th May, 2015.

Oyo State Solid Waste Management Authority Law, 2004

OYSIPA 2020 (Oyo State Investment and Public Private Partnership Agency). Energy and Waste to Wealth.

Clean and Green Initiative, Oyo State Government. Macpresse West Africa Limited and Macpresse Europa

Ministry of Environment and Habitat Law, (2012). Environmental (Sanitation and Wastes Control) Regulations, 2013. Supplement to the Oyo State of Nigeria Extraordinary Gazette No 6, Vol38 of 20th March, 2013- Part B.

Appendix

Criteria for Evaluating Waste Management Policies in Oyo State.

1. Policy Formulation:

This involve principally the contents and structure of the policy, in which to be sufficient, it must include various items such as:

- a. handling of household waste to align with the scope of the study
- b. spell out the responsibility of the households in proper handling of waste from storage to disposal
- c. it must spell out the penalty (ies) given to households for improper waste management
- d. it must make provisions for enabling environment to effectively manage waste by households. Such as provision of sufficient PSPs, creating awareness among others.

2. The Relationship with waste management policy's structure and policy objectives

This is to verify if there is any connectivity between policy structure and policy objectives.

3. Achievement of Stated Objective(s)

The waste management policy objective is primarily to ensure proper hygiene and environmental sustainability in residential areas by reducing the stream of waste and encouraging recycling.

If such policy realizes the objective either by improving or maintaining hygiene at the residential area or has to a large extent combated waste issue through information obtained from the interview, through personal observation of the researcher, then it is efficient. If otherwise, it is inefficient.