CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The central role played by a quality environment in the life of humans and even animals cannot be over emphasized. Its health implication and the uncoordinated policy thrusts governing it at different levels of government leaves much to be desired. It is taken that qualitative environmental practices engender good health. These put to question, policy initiatives towards ensuring sustainable waste management. Weaving the challenge of waste management around globally acclaimed principle or variable of sustainability cannot be more poignant in a country like Nigeria.

However, waste management system has continued to pose problem in many societies while population growth makes waste management even more challenging because the more the presence of people in a specific geographic location the higher the level of waste generation recorded with more waste to contend with within that area. Nevertheless, that poorly managed wastes are perceived as environmental hazards of high significance, the inabilities of societies to manage waste generation effectively play no small role in increasing extant environmental pressures and degradation (Alam, Chowdhury, Hassan, Karanjit, and Shrestha, 2007). Thus, the challenge that derives from the proper management of generated waste is not only just coping with the volume, but also its composition and having the ability to design and accomplish its management efficiently because waste needs to be disposed of safely to ensure environmental safety and lessen public health hazards.

In the United Kingdom, landfill is the most common method of disposal. Out of all of the waste that was from the household, commercial and industrial waste, approximately 57% of the waste was disposed of at landfill sites. In addition, some waste from sewage sludge, mining waste, and quarrying waste is moved to landfill sites. The landfill has been the most efficient way of disposal in the UK. Equally, fly tipping is another form of waste in the United Kingdom. This is the illegal dumping of waste, most commonly found among roadways or abandon areas, which has been increasing and becoming a problem within parts of the UK. Household items are the most commonly found items incidents. The United Kingdom Environmental Act became law in 2021 as the new framework of environmental protection. The law covered rules on nature protection, water quality, clean air, and other environmental protections. It allows the UK to enshrine better environmental protection into law and provide the Government with powers to set new binding targets.

In Nigeria, the waste generation rate is estimated at 0.65 to 0.95kg per day which gives an average of 42million tonnes of waste generated on annual basis with little or no capacity to manage them (Ike et al, 2018). Urban centres or cities need an environment that is free of health hazards, an environment where water, land, river and forest, public health, sewage and proper garbage disposal in factories are of great importance to sustainable environmental security but the reverse is mostly the case in Nigeria, thus leading to environmental degradation, health hazard and communicable diseases in many instances. Invariably, the weakness of public policies on waste disposal in Nigeria partly exposes citizens to environmental hazard, including flooding and environmental pollution. The administrative framework for waste management in Nigeria is

anchored by the three tiers of government, consisting of national, State and local government agencies. The Federal Ministry of Environment is the body charged with overseeing the protection of the environment towards achieving environmental security. As such, it promulgates of national environmental laws, and enforcement and monitoring sanitation activities. To ensure the protection of the environment is better managed, all states in Nigeria (and their local governments) have the legal capacity to create their own environmental protection agencies (Ogwueleka, 2009).

Kwara State is largely bedeviled by waste mismanagement as many areas are characterized by improper disposal of refuse in highly inappropriate places like the middle of roads and unauthorized disposal sites. In Ilorin, which is the capital of Kwara State, the problem of waste mismanagement in the State capital is very disturbing because the more these wastes are evacuated the newer ones are generated daily. Thus, huge refuse is found dumped in unauthorized places, while gutters and roads are filled up with solid and liquid wastes which at times obstruct the free flow of water, thereby causing floods during raining season. While the only approve dump site for the Kwara State capital is Sokoto Ayekale along Eye-Nkorin, illegal dump sites are springing up frequently in other areas in the metropolis. This prompts the establishment of Kwara State Environmental and Protection Agency. Against this background, this study will examine environmental protection policy thrust and waste management in Kwara State Environmental Protection Agency (KWEPA).

1.2 Statement of the Problem

The public policy on environmental protection, including the policy on waste management, is contained in the Kwara State Environmental Law 1992. The law is being implemented by the Ministry of Environment and Forestry and the Kwara State Environmental Protection Agency (KWEPA). Despite the efforts of these two regulatory bodies to ensure proper waste management in Kwara State, the State is largely bedeviled by waste mismanagement as many areas are characterized by improper disposal of refuse in highly inappropriate places like the middle of roads and unauthorized disposal sites. This negative common practice is prevalent in many parts of Kwara State including Ilorin in Oja-Oba, Oja-Tuntun, Mandate Market, Dada, Sango, Pakata, Aluko, Gambari and Taiwo areas in the Kwara Central geo-political zone. The illegal sites in Kwara South geo-political zone include Ajase, Kara Market, Owode-Offa, Oke Ode market and Share market. Places like Gbugbu, Bode-Saadu and Tsaragi are also notorious for improper waste management in Kwara North geo-political zone. In Ilorin, which is the capital of Kwara State, the problem of waste mismanagement in the State capital is very disturbing because the more these wastes are evacuated, the newer ones are generated daily.

Thus, huge refuse is found dumped in unauthorized places, while gutters and roads are filled up with solid and liquid wastes which at times obstruct the free flow of water, thereby causing floods during raining season. While the only approve dump site for the Kwara State capital is Sokoto Ayekale along Eye-Nkorin, illegal dump sites are springing up frequently in other areas in the metropolis, including Gaa Saka, Wara, Tanke Iledu, Oke Oyi, Asa Dam, Amayo, and Ifokanbale area along the Navy College of Health Science Offa, among others. The results of improper waste disposal have led to pollution of

different types in Kwara State including flooding. Such waste management is assumed to be a reflection of the failure of public policy on waste management in Kwara State. This study examines the waste management policy implementation and impacts on environmental security in Kwara State, Nigeria Many scholars have worked on waste management and environmental security such as Ahmed (2008), Eze (2008), Momodu, Dimuna, and Dimuna (2011), Oladepo (2012), Zacho and Mosgaard (2016), and Luke and Henry (2018) but none has written environmental protection policy thrust and waste management in Kwara State Environmental Protection Agency (KWEPA). This study intends to fill this academic gap.

1.3 Research Objectives

i. To examine environmental protection policy thrust and waste management in Kwara State Environmental Protection Agency (KWEPA).

ii. To examine the challenges of environmental protection policy on waste management in Kwara State.

1.4 Research Questions

i. What are the effects of public policy on waste management on environmental security in Kwara State?

ii. What are the challenges of environmental protection policy on waste management in Kwara State?

1.5 Significance of the Study

The study will contribute to academic knowledge by revealing the extent to which Kwara State has been able to manage waste and its implications for environment. The study will serve as a guide to policymakers and other researchers on what can be done to improve public policy on proper waste management for environmental protection in Kwara State while also contributing to the body of existing knowledge on public policy and waste management as well as environmental protection. The study locations include Amilengbe, Gaa Saka, Okolowo, Wara, Harmony Estate, Oke Oyi, Asa Dam, Tanke, Amayo, and Ifokanbale area along with the Navy College of Health Science Offa among others.

1.6 Scope and Limitations of the Study

The geographical scope of this study is Kwara State, Nigeria while the subject scope focuses on public policy, waste management and environmental protection. The timeline for this study will cover 1999 to 2024. The reason for choosing the timeline is to cover the fourth republic. The reason for choosing Kwara as a case study is that Kwara State is among the states that are facing a serious challenge of waste disposal and environmental protection, especially in the state capital (Ilorin). The state is littered with refuse and people pay less attention to sanitizing their environments.

1.7 Expected Contribution to Knowledge

The essence of research is to find more knowledge and add to the existing body of knowledge. This research will contribute to the knowledge in the area of Public Policy, Public

Administration, Health Administration, Public Sector Personnel Management; Organization Behaviour, and Community Health.

1.8 Definition of Terms

a. **Policy:** This refers to a course of action proposed by the government or individual or organization
b. **Public:** This refers to the members or people as a whole.
c. **Security:** This means a state of being free from disease, danger or threat.
d. **Environment:** This is referred to the conditions in which a person operates.
e. **Waste:** This refers to an act of using something carelessly or for one purpose.
f. **Management:** This refers to the process of dealing with and controlling both humans and materials**.**
g. **Implementation:** This means putting a decision or plan into execution.
h. **Challenge:** This refers to obstacles encountered in the process of duty discharge.

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CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter reviews scholars' opinions gathered from secondary sources; articles, journals, books, etc. on waste management and environmental protection. The chapter consists of three sections, the conceptual clarification, the review of the empirical literature, and the theoretical review.

2.2 Conceptual Discourse

2.2.1 Public Policy

Public policy can be said to be an active part of government (Clarke, 2009). Lassance (2020) defines public policy as an institutionalized proposal to solve a central problem, guided by a conception". Dye (1975) defines public policy as whatever government chooses to do or not to do. This means that public policy is the action part of the government in addressing the needs of the people. Public policy could also be referred to as the action deliberately taken by the government to achieve the desired result. This study adopts Dye's (1975) definition. *"Public policy as whatever government chooses to do or not to do".*

2.2.2 Environmental Policy

Ambali, (2015) sees environmental policy as a type of policy action deliberately taken to manage human activities with a view to prevent, reduce or mitigate harmful effects on nature and natural resources and ensuring that man-made changes to the environment do not have harmful effects on humans. Environmental policy is the commitment of an organization or government

to the laws, regulations, and other policy mechanisms concerning environmental issues. These issues generally include air and water pollution, waste management, ecosystem management, maintenance of biodiversity, the management of natural resources, wildlife, and endangered species. Environmental policies can increase environmental security when implemented (Eccleston, 2010).

2.2.3 Waste

Audu (2007), defines waste as the leftover, or already used items waiting for reuse or disposal Waste is a by-product of human activity that is unavoidable (UN-ESCAP, 2018). The United Nations Statistics Division (UNSD) defines waste as "materials that are not prime products (that is products produced for the market) for which the generator has no further use in terms of his/her purposes of production, transformation or consumption, and of which he/she wants to dispose of" (UNEP-GRID, 2018). Waste refers to disposable, discarded, or unused portions of materials (Coker, Achi, Sridhar and Donnett, 2016). Coker et al. (2016) stated that waste mix differs from one user to the next due to culture, social standing, and financial status. The European Communities (EC) (1999) defined waste management by its activities, including preventing wastes, collecting, transporting, treating, controlling, and monitoring. Oyedele (2009) defines solid waste as leftovers arising from human, animal or plant activities that are discarded as useless and not having any consumer value. Festus and Omoboye (2015) state that wastes are materials or substances that are either spoiled, rejected or no longer required for their original purpose. This study adopts the definitions of Coker, Achi, Sridhar and Donnett, (2016) "*Waste*

refers to disposable, discarded, or unused portions of materials". And Festus and Omoboye's (2015) *"Wastes are materials or substances that are either spoiled, rejected or no longer required for their original purpose".*

2.2.3.1 Types of Waste

There are different types of waste as discussed below.

i. Municipal Waste

Municipal waste is heterogeneous. Municipal waste comprises only around 10- 15% of total waste generated. However, the political prominence of municipal waste is high because of its complexity due to its composition, its distribution among many waste generators and its link to consumption patterns. This waste is solid and semi-solid substances of organic and inorganic origin generated by human activities in households, services, trade, public and technical facilities, and administration in cities and communities. (Tölgyessy. 2001). It consists of residual waste (like food, vegetables, cooking oils), bulky waste, and secondary materials from the separate collection (like paper and glass), household hazardous waste, street sweepings and litter collections, paper, cardboard, metals, textiles, organics (food and garden waste) and wood. It comprises waste from hotels, motels, camping sites, recreational and spa resorts, cultural places, parks, graveyards, sports institutes, market places, solid dirt accumulating in wastewater traps, ice and snow. Bulky waste that is not intended for reuse or their life span has finished like home appliances, carpets, furniture, carpets, mattresses, lighting appliances, and heating radiators is also municipal solid waste.

Municipal Waste comprises both organic and inorganic material. That is the reason why there is a specific technical elucidation for its amassing, transportation, elimination or utilization. If we count for utilization it is necessary to sort the waste into relevant categories and they are stored separately. This waste has been landfilled for generations but since mid 90's incineration has been another management system used for municipal waste along with landfill (Tölgyessy. 2001). There are several potential influences associated with the landfilling of waste including the production of leachate and landfill gas, odours, flies, vermin and the use of land.

ii. Industrial Waste

The difference between municipal waste and industrial waste is not only in quantity but also in composition. It is specific for each factory and sometimes even each batch. Industrial waste varies from harmless to very toxic. Most of the industrial waste arises from heavy, chemical and consumer industries. The industrial waste can be subdivided according to the procedure during the whole mechanism of production. Production waste is residues of raw materials and this waste originated in different phases of production mechanisms. (Tolgyessy. 2001.). Process waste is produced during the processing of raw materials and fuel consumption. Consumption residues are materials that have lost their value during reactions or processes and do not meet the quality and composition of the desired products.

iii. Hazardous Waste

Hazardous waste is generated from different sources including households, commercial activities and industry. Waste that is considered toxic to living beings and surroundings is

hazardous. Mostly this waste arises from chemical plants like medicine, pesticides, insecticides, dyes, bio-chemical industries and paint factories. The waste generated contributes only 1% of all waste but it is the most dangerous and this waste is properly handled. This waste is categorized by its flammability, reactivity, toxicity and corrosively. Depending on these characteristics hazardous waste can be further subdivided into its level of harmful effect i.e. low risk to high-risk hazardous waste. (Johnson, 1986).

iv. Construction and Demolition Waste

Human beings are living in a society where the number of houses grows more than trees. This society contributes heavily to construction and demolition waste. This waste that is obtained from the production and destruction of commercial enterprises is said to be construction and demolition waste. This waste includes nails, rubber and plastic pipes, electrical wiring, insulation, brick, glass, steel, and wood. Most of this waste can be reduced, reused and recycled. This type of waste does not create any chemical or biochemical pollution. Since this type of waste is heavy, bulky and has high density, there should be proper management for the collection, transportation, utilization and disposal of the construction and demolition waste. (Tölgyessy, 2001).

v. Mining Waste

Mining and processing of mineral resources such as coal and ores generate large amounts of solid waste. This type of waste includes mine heaps, sediments from ore dressing, waste rock and topsoil. However, waste rock cannot be considered waste that simply has to be disposed of in mine dumps. In order to use the industrial composition, they have to be separated from the

mineral rock by either mechanical or physic-chemical way. The separated waste rock is accrued in dumps and as it is an almost non-utilizable substrate it may pose a severe ecological problem. Mining consists of a variety of industrial waste such as lead, carbonates, sulfides and metal oxides. This type of waste creates pollution in the environment. (Tölgyessy, 2001).

Waste is also classified by (Gourlay, 1992 cited by Puopiel, 2014), Puopiel and Owusu-Ansah, 2014). The volume and composition of waste are dependent on many factors which include the consumption patterns, the economic structure of the place, and the rate of development (UNEP-GRID, 2018). Wastes are generally classified into liquid and solid waste (Puopiel and Owusu-Ansah, 2014). Regardless of its form or class of matter, waste is a resource. However, the focus of this study would be on solid waste. Solid wastes generally refer to unused, unwanted, or discarded material available in the solid form generated from residential, commercial, industrial, institutional sources or municipal services which can be in the form of rubbish from households, wastes from manufacturing activities, packaging items or jars, abandoned cars, disposed electronic devices and waste from garden etc.; semi-solid food wastes and sewage sludge may also be categorized as municipal solid waste (Uyen and Hans, 2009) (Gaurav K., Kunal, & Shashank, 2014). Eze, (2008) in a report on environment sanitation trend analysis in the African region, classified solid waste management as one of the three major factors affecting health.

2.3 Waste Management

Waste management is defined as "the discipline associated with controlling the generation, storage, collection, transfer and transport, processing, and disposal of waste in a manner that is by the best principles of health, economics, engineering, conservation, aesthetics, and other environmental considerations, and that is also responsive to public attitudes" (Tchobanoglous, 1993).

2.3.1 Waste Management activities in Nigeria

In Nigeria, recycling activities are not popular and non-existent. However, the recovery of materials from waste (scavenging) is practiced on a large scale. This type of recovery takes place at both legal and illegal dump sites where scavengers search for valuable metals, plastics, and bottles to be reused or for sale to buyers of different types of scraps on daily basis. In general, the treatment of solid wastes is not only carried out in Nigeria but also other strategies employed in disposing of waste in the country which include:

i. **Composting**:

Composting is a biological process that uses microorganisms to degrade organic matter using atmospheric oxygen. The stabilized end product occupies a reduced volume compared with the starting materials. The principal emissions are C02 and water vapour, bio-aerosols and odour. It is estimated that nearly a quarter of all household waste is organic and can be composted. In Nigeria, compositing is undertaken in the open and its end product is used on farms (Ahmed, 2013).

ii. Collection and Transfer:

Waste transfer stations are often located along the streets, while the dump sites are usually away from the city centres. Waste transfer points are used by waste management companies as a means of increasing the efficiency of their waste collection service through the bulking up of waste into larger consignments before transfer to dump and disposal sites. Along the process, waste is loaded directly into large bulk container vehicles and transferred by road to the dump site. The environmental impacts commonly cited are odour, dust, bioaerosols, the attraction of birds, noise and surface water pollution and surface water runoff management. (Ahmed, 2013).

iii. Combustion:

Combustion of waste results in emissions of carbon dioxide (C02) because nearly all of the carbon in MSW is converted to C02 under optimal conditions and nitrous oxide (N20). C02 from burning biomass sources (such as paper products and yard trimmings) is not counted as a GHG because it is biogenic (Ahmed, 2013).

2.3.2 Waste Management activities in Kwara State

In Kwara State, during the late Governor Muhammad Lawal led administration (1999-2003), the most common practice of waste management activities was open dumping and burning of waste within residential areas. The waste management was anchored by the Kwara State Ministry of Environment and Forestry. There were a lot of issues of environmental mismanagement. Because the Ministry did not have enough material to operate and waste were

dumped illegally. Poor waste disposal resulted in the littering of the surroundings, creating an eyesore and odour nuisance; all efforts by the Kwara State Ministry of Environment and Forestry monthly programs tagged: Kick Against Indiscipline (KAI) to promote environmental sanitation and security towards hygienic existence disposal management have become a serious challenge in Kwara state.

However, former Governor Dr. Bukola Saraki led administration introduced the Clean and Green policy in 2004 in which some vehicles, and trucks were imported to evacuate waste across the State. The administration established Kwara Waste and Environmental Protection Agency (KWEPA) under the Kwara State Ministry of Environment to complement the activities of the Ministry. Unfortunately, the policy suffers mismanagement of materials and poor maintenance by the contractors.

From 2011-2019, former Governor Abdulfatah Ahmed administration's inherited the Clean and Green policy. He introduced and sponsored Kwara Waste Waste Management Company. The company was charged with the responsibility to remove and dispose of the waste from the cities within the state. In addendum, Governor Abdulfatah Ahmed led administration bought Roro Bins, Dano trucks, and Compactor trucks to evacuate municipal waste but the materials were not properly maintained.

The present administration of Mallam Abdulrahman Abdulrasaq introduced Social Waste Collectors and Commercial Waste Collectors to keep Kwara clean. Social Waste Collectors evacuate waste free of charge at public areas daily across the state while Commercial Waste Collectors move from house to house, office to office to collect with meager charges either

weekly(₦500) or monthly (₦2000). The Commercial Waste Collectors pay revenue to State Government monthly. The Mallam Abdulrahman Abdulrasaq-led administration also introduced Waste Management Intervention that cut across over 50 zones in the State. Like previous administrations, bought new materials (Roro Bins, Dano trucks, and Compactor trucks) and repair some damaged ones.

The previous administrations (Governor Dr. Bukola Saraki and Governor Abdulfatah Ahmed) adopted 3Ms (Money, Man and Material) while the current administration adopts 4Ms (Money, Man, Material, and Method) to carry out the operation.

2.3.3 Challenges of Waste Management in Nigeria

There are many challenges confronting waste management in Nigeria as discussed below.

i. Inadequate Funding

Funds is a major component for the efficient proper management of waste. Its adequacy and timeliness more often than not determine the success of solid waste management. Raising substantial and timely funds to implement critical development programs and execute projects is required. There is a high cost of securing and accessing funds in the State.

ii. Socio-Economic Factors

Less Willingness to Pay (WTP) for a waste service and considered as the social responsibility of State/Local Government as well as payment for service delivery by the supposed collection beneficiary. The poor attitude to modern waste management strategies (reduce, reuse

and recover) and informal waste picking (scavenging) serves as challenge to proper waste management in Nigeria. (Agunwamba, 2003).

iii. Low Technology

The available technologies are not sufficient. The existing ones (methods and equipment) are too low for the handling of the volume, rate and complexity of the current waste generation while the appropriate ones are more sophisticated or rather expensive for local adaptation, use and maintenance. Especially, to implement and sustain modern waste management strategies such as waste reuse, recovery, recycling and renewable energy (Agunwamba, 2003).

iv. Weak and Inadequate Human Capital

The required technical and research support service for implementing acceptable waste management projects is still deficient in both quantity and quality. This is also posing a challenge to the paucity of professionals in modern reliable waste management data and information gathering methods and this inhibits genuine effective capacity building for best practice (Agunwamba, 2003).

2.4 Empirical Review

Onuminya and Nze (2017) work on an appraisal of waste management in Lagos metropolis: a case study of Lagos state waste management authority (LAWMA) Finding from the study showed that waste accumulation occurs when waste isn't readily disposed and this leads to filth, diseased conditions and poor aesthetic appeal. Wilson et al. (2010) observe that it had

taken over 30 years to focus more seriously on waste prevention, but now its importance is fully recognized and even considered a priority. Waste prevention is recognized as the priority of the waste hierarchy and it offers the best chance for reversing the current trends in waste generation in Nigeria. Ajibade (2017) believes that the approach which could reduce waste to the barest minimum is the most desirable for Nigeria, while Afun (2009) advises that the waste hierarchy should be a fundamental element of the national policy thrust for waste management. He recommended that waste prevention for Nigeria, no study has specifically looked at waste prevention in detail as a strategy.

Ola Adisa et al. (2015) studied knowledge, attitudes/beliefs, and practice associated with medical waste management; Binbol et al. (2013) evaluated the waste management activities of PEPSA; Egbere et al. (2001) researched the health impacts associated with waste handling; Jatau (2013) and Ola-Adisa et al. (2015) researched attitudes and practices to waste; Peter et al. (2014) and Musa et al. (2008) looked at planning aspects of waste management in Jos. Their work is relevant to this study but did not address waste management and environmental security in Kwara State. Afun (2009) and Ajibade (2007) have recommended that waste prevention be used as a strategy for reducing waste generation in Nigeria. Ajibade (2007) believes that the approach which could reduce waste to the barest minimum is the most desirable for Nigeria, while Afun (2009) advised that the waste hierarchy should be a fundamental element of the national policy thrust for waste management.

Ahmed (2008) writes on waste management in Ilorin metropolis. The study revealed that a metropolis (Ilorin) is often polluted with heaps of refuse that occasionally caused traffic hold-

ups in some strategic areas of the urban centre. A lot of health incidences resulting from water, air and pest-borne diseases are not uncommon within areas where the prevalence of effluents prevailed. Management of waste in Ilorin and Kwara State, in general, has been the sole responsibility of the Kwara State Environmental Protection Agency (KWEPA) and other health management sectors in the recent past. The performance of these sectors had been rebuked as a result of their poor performance by the general public. The outcome results show that both the Government's financial support to KWEPA and other Health Agencies in the past in terms of funding, manpower and equipment had been grossly inadequate, and misused. Improvement measures are suggested in the new tasks ahead of Kwara State Waste Management Company (KWMC) under the new dispensation of Ola Kleen.

2.5 Theoretical Framework

This study adopts the Green theory leading by John Dryzek, Robyn Eckersley, Val Plumwood and Andrew Dobson (1980s-1990s). The approaches of the theory on environmental issues are mainly based on the idea that the environment needs to be "secured", and not "securitized". The main object of reference shifts from the state toward the environment in which environment is understood concerning the activities of the individuals that live in it. Individual emancipation ultimately depends on people feeling secure in the environment where they live. People's welfare is interlinked with the preservation of surrounding ecosystems and therefore the main goal of environmental protection should be their preservation (Elliot 2004, 201-222). This approach makes important theoretical advances, especially by shifting the perception of the

environment. Here, the environment is understood as the ultimate goal of security. To guarantee the survival of individuals and society (and, ultimately, even the survival of the state) one must, first of all, assure the security of the planet, and the elimination of elements that threaten the preservation of the environment.

The criticism of green theory in International relations did not reveal much in terms of current global scenarios. The critical view remains limited to the extent that its research agenda focuses much more on the normative dimension of the problem, without offering practical solutions to how to assess environmental issues (Peoples and Vaughan-Williams, 2010). The critical approach argues for the demilitarization of security thinking to focus instead on the mitigation of the causes that lead to environmental degradation. The literature consulted on Green theory has only pointed out so far that green theory is ineffective in the process of making environmental governance policies. The green theory posited that the environment needs to be secured, and not securitized. The environment must be sanitized and individual emancipation ultimately depends on people feeling secure in the environment where they live. People's welfare is interlinked with the preservation of surrounding ecosystems, and therefore the main goal of environmental security should be their preservation.

The theory is relevant to the study because the Kwara Ministry of Environment and Forestry embarks on mandatory monthly sanitation which is usually held on the last Saturday of the month. The Administration of Governor Abdulfatah Ahmed re-introduced the sanitation exercise after it has been cancelled by Federal Government nationwide. The present

administration under the leadership of Governor AbdulrahmanAbdulrazaq inherits a monthly sanitation programme. The Kwara State government established a mobile court to judge sanitation/environmental law falters with immediate effect. Yet, many do not comply with the key into the exerciser owing to the poor commitment of the Kwara State Government to enforce environmental laws on the members of the public across the state. Few areas like Maraba, Muritala, Challenge, Garage Offa, Fate, Taiwo, Sango and all prominent markets are seen as the places where sanitation takes place and environmental law is effective. Whereas, there is no sign of monthly sanitation in areas like Omoda, Ode-Alausa, Oloje, Ogidi, Okolowo, Pakalata, Akerebiata, Oke-Oyi, Bode-Saadu etc.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the methodology to be used in this research work successfully. It explains the research design. It also gives details about the population and sample used for the research.

3.2 The Purpose of the Study

This study is to explore the main thrusts of environmental protection policy on waste management in Kwara State. It aims to investigate the issues associated with waste disposal in Kwara State. The study examines the relationship between waste management and environmental protection. The study equally aims at examining the effects of public policy on waste management in Kwara State. It investigates the challenges of proper implementation of waste management in Kwara State.

3.3 Research Design

This research is anchored on a descriptive study as its designed.

Table: 3.3 Workflow.

S/N	**Research Objectives**	**Research Questions**	**Methods/Research Instrument**
i	Appraise the effects of environmental protection policy on waste management in Kwara State.	What are the effects environmental protection policy on waste management in Kwara State?	Survey Questionnaire
2	Examine the challenges of environmental protection policy on waste management in Kwara State.	What are the challenges of environmental protection policy on waste management in Kwara State?	Survey Questionnaire

Source: Researcher's Field Survey, 2025

3.4 Sources of Data Collection

To carry out this study, the data was collected from two major sources. These sources will include primary and secondary sources.

3.4.1. Primary Sources of Data

The primary sources of data for the analysis of this study was collected from the respondents through the design questionnaire and interview. The questionnaires administered by

the researcher. The researcher conducts an individual oral interview with people of the region. This was done to elicit further information from them concerning the issue under study.

3.4.2 Secondary Sources of Data

The secondary data for this study was collected from textbooks both published and unpublished that are found to be relevant for this study. These already written works include; textbooks, journals, magazines, newspapers, and some relevant documents that are relevant to this research work.

3.5 Population and Sample of the Study

The term "population" has been defined by Odo (1992) as "the entire number of people, objects events and things that all have one or more characteristics of interest to a study". The population of this study shall be drawn from the staff of the Kwara State Environmental and Protection Agency. The population is 32 while the sample size is also 32.

3.6 Method of Data Collection

Primary data is collected with the aid of a structured questionnaire administered to various levels of staff of the local government. The researcher will administer a questionnaire directly to the respondents based on the sample size. The questionnaire is divided into two sections. The first section will capture bio-data information of the respondents while the second section focuses on information based on the concept of this research, using a 5-point Likert scale with "1=

Strongly Disagree, 2= Disagree, 3 = Undecided, 4 = Agree and 5=Strongly Agree". More so, the researcher will also interview in addition to the questionnaire.

3.7 Method of Data Analysis

The data gathered is analyzed using the Statistical Package for Social Sciences (SPSS) for easy analysis. This primary data is analyzed through a pilot study, regression, correlation analysis.

3.8 Validity of the Instrument

The content approach to estimating validity is used to establish the validity of the research instrument. The questionnaire is drafted and submitted to the supervisor who scrutinize and evaluate the strength of the instrument. The correction, evaluation and suggestions made by the project supervisor enrich the research work.

3.9 Ethical Consideration

The issue of ethics in conducting research is highly adhered to. And also, ensure that high moral and ethical values are highly maintained; thus ensuring the protection of the right of individuals and organizations. In the case of the participants, enrolments are done voluntarily. This ensures that the persons engaging in the study give information at ease and do not intrude into their privacy in any way. The aspect of confidentiality also given optimum attention to ensure that, the identities of the participants are not disclosed.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents findings based on the administered questionnaire. The analysis comprises the results of the demographic characteristics of the respondents from each sampled and the regression estimates of the variables. The totals of thirty-two questionnaires were distributed and returned correctly. The survey cut across department of environment in Kwara State Environmental and Protection Agency. Statistics Package for Social Sciences (SPSS) Statistical software was used for analysis to determine the answer to the objective; the study was tested by pilot, correlation and regression.

4.2 The Study Area

Kwara State is a derivative of the local name for the River Niger. It was created on May 27, 1967, when the Federal Republic of Nigeria was split into twelve states by General Yakubu Gowon. Its original name "West Central State" has subsequently changed to Kwara. Before its creation, the area currently known as Kwara was part of the former Northern Region of Nigeria. The structure of the state has undergone several alterations. First, in 1976, a segment of the eastern part of the state was merged with the current Benue state. Second, in 1991, part of the

areas of the state was merged with the current Niger state and Kogi state. The capital city, Ilorin, is a historically ornate centre, with one of the most distinguished Emirates in the country.

The Kwara State Environmental Protection Agency Law was enacted in 1992. The Act created the Kwara State Environmental Protection Agency (KWEPA) to promote a safe and healthy environment for the people of Kwara State. The Agency is saddled with the powers to carry out all environmental protection activities, carry out research and development activities for environmental protection and educate the general public on proper waste disposal methods acceptable by the State Government for domestic and industrial wastes (Adebayo, 2022). The Kwara State Environmental law provided that any person who contravenes any of the offenses mentioned above commits nuisance and would be tried by either a Magistrate Special Environmental Court or Area Court within the jurisdiction and upon conviction shall be liable to a maximum fine of ₦ 5000.00 (five thousand naira) or imprisonment for six months.

4.3 Data Presentation and Analysis

Table 4.3.1: Pilot Test

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on	N of Items

	Standardized Items	
.734	.619	4

The above table shows that the reliability of coefficients for all scales used in the study. The table contains four items. It has Cronbach's Alpa of .734 and Cronbach's Alpha on standardized items is .619. Therefore, the variable is acceptable because it is above 0.69.

Table 4.3.2: Challenges of Waste Management in Kwara State

Items	Opinion	Percent	Mean	Standard deviation	Remark
Financial handicap Strongly disagree Disagree Undecided Agree Strongly agree Total	 - 3 1 12 16 32	 - 9.4 3.1 37.5 50 100	 4.2813 	 .92403 	 Strongly agreed
Insecurity Strongly disagree Disagree Undecided Agree Strongly agree Total	 - - 1 16 15 32	 - - 3.1 50.0 46.9 100	 4.4839 	 .50800 	 Agreed

Inadequate of operational vehicles. Strongly disagree Disagree Undecided Agree Strongly agree Total	 1 3 3 21 4 32	 3.1 9.4 9.4 65.6 12.6 100	3.7500	.91581	Agreed
No enough technical Environmental Strongly disagree Disagree Undecided Agree Strongly agree Total	 - 4 1 8 19 32	 - 12.5 3.1 25.0 59.4 100	4.3125	1.02980	Strongly agreed

Source: Researcher's Field Survey 2025

4.4 Discussion of Findings

The study shows that majority of the respondents strongly agreed that financial handicap is one of the challenges of proper implementation of waste management in Kwara State. This is in line with (Hakeem, 2013) that the Agency is faced with many problems, such as lack of funds; lack of trained/professional waste managers; lack of effective monitoring and control; the peculiarity of the Nigerians' attitude; the "government-does-everything"; lack of modern technology/lethargy in implementing efficient waste management methods and corruption. The finding revealed that majority of the respondents strongly agreed that insecurity is a contemporary challenge to waste management in the State. In addition, the majority of the respondents agreed that inadequate of operational vehicles affect evacuation and disposal of waste in Kwara State. The study is in line with Onuminya and Nze (2017) that major drawback in service delivery is the breakdown of waste evacuation trucks while the majority of respondents

strongly agreed that no enough technical environmental staff or workers hinder the effective operation of waste management in the State. This is similar to Onuminya and Nze (2017) that inadequate manpower and maintenance capacity as well as lack of cooperation from residents in ensuring proper waste management. It is also similar to previous study by (Agunwamba, 2003) that the required technical and research support service for implementing acceptable waste management projects is still grossly deficient (quantity and quality). Also posing a challenge is the paucity of expertise in modern reliable waste management data and information gathering methods and this inhibits genuine effective capacity building for best practice.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The study reveals that majority agreed that financial handicap is one of the challenges of proper implementation of waste management in Kwara State. The finding revealed that majority of the respondents strongly agreed that insecurity is a contemporary challenge to waste management in the State. The respondents agreed that inadequate of operational vehicles affect evacuation and disposal of waste in Kwara State while the majority of respondents strongly agreed that no enough technical environmental staff or workers hinder the effective operation of waste management in the State.

5.2 Conclusion

The paper examined the environmental protection policy thrust and waste management in Kwara State Environmental Protection Agency (KWEPA) and its challenges. The study concluded that financial handicap, inadequate personnel and insecurity are the challenges of proper implementation of waste management policy in Kwara State.

5.3 Recommendations

The Kwara State Ministry of Environment and Forestry should deploy more environmental personnel to Kwara State Environmental and Protection Agency. More authorize dumpsites should be created. As a matter of urgency, security should be provided to environmentalists so as to enable them discharge their duties diligently. The State Government should budget more capital to the Ministry of Environment and Forestry. The environmental laws should be enforced throughout the State. Kwara State government should ensure the regular maintenance of the trucks used by KWEPA. There is need for orientation and awareness programs on proper waste handling through house to house campaign, print and electronic media.

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