ENVIRONMENTAL SANITATION POLICY AND THE MANAGEMENT OF WASTE IN OREDO LOCAL GOVERNMENT, EDO STATE, NIGERIA.

BY

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A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF PUBLIC ADMINISTRATION AT THE DEPARTMENT OF PUBLIC ADMINISTRATION, FACULTY OF SOCIAL SCIENCES UNIVERSITY OF BENIN CITY, NIGERIA.

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DECLARATION

I, Precious Isioma Atanmoh, hereby declare that the project work entitled Environmental Sanitation Policy and The Management of Waste In Oredo Local Government, Edo State, Nigeria, is a record of an original work done by me, as a result of my research effort carried out in the Faculty of social sciences, University of Benin, Edo State, Nigeria under the supervision of Dr. A.I Mustapha.

_____ Students Signature & Date

CERTIFICATION

This is to certify that this study was carried **Atanmoh Isioma Precious** with **Matric Number SSC1909661** in the Department of Public Administration, Faculty of Social Sciences, University of Benin, Edo state, Nigeria, carried out this research work titled Environmental Sanitation Policy and The Management Of Waste In Oredo Local Government, Edo State, Nigeria**.**

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Date ----------

DEDICATION

I dedicate this project to God Almighty, the one who has been my source of strength, who has made me come this far by his mercy and love, who alone removed obstacles from my way academically, financially, mentally and spiritually. I am able to accomplish this with him by my side. I dedicate this work also to my late Aunt MRS UGO ATANMOH, for her believe in me, words and work of encouragement. Also to my mum, Mrs Juliet Ebofua thank you so much ma, for all your hard work, support, encouragement, love, sacrifice to my education. I dedicate this work to my Family, my dad and mum, Mr and Mrs Emmanuel and Rosaline Ofomor, for all the support, love and encouragement. God bless you, I love and appreciate you all.

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ABSTRACT

This study examined The Environmental Sanitation Policy And The Management Of Waste In Oredo Local Government, Edo State, Nigeria. The population of the study was over 5000 people spread across the wards of Oredo local government. A sample of 385 representing 20% of the population was taken. The study adopted a descriptive survey design while the instrument for data collection was structured questionnaire. The Likert four-point, scale rating was adopted whereas the data collected were analyzed using mean. The result of the data analyzed showed that there is a medium positive relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA, there is a low positive relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A, there is a low positive relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government. The researcher recommend that policy implementation should be enhanced, investment should be done in education and awareness, waste management infrastructure should be upgraded, encouraged community participation and engagement, enhance monitoring and enforcement amongst other things.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Environmental sanitation is an essential aspect maintaining health and cleanliness. It involves methods like proper waste management and promoting a clean environment. Nigeria is endowed with immense physical and human resources diversified over various ecosystems which are defined on the basis of vegetational zones as well as drainage, soil and land resource systems. In recent decades however, most of these ecological niches have experienced pressures from uncontrolled socioeconomic activities, putting land, air, water, forest and animal species to widespread deterioration and greater risk of abuse. Apart from environmental degradation arising from the modification of the structure of the ecosystems through frequent bush burning, overgrazing, wildlife poaching, mining, industrialization, rural development and settlement schemes, the production of waste and the generally low level of environmental sanitation are the most noticeable and which affect the greater number of people and their environment (David and Michael , 2012).In recent years, the level of public concern and response of the government about environmental waste pollution has increased. Environmental sanitation and waste management has its roots in the need to address the growing concerns about pollution and its impact on public health and the environment. Over time, as societies became more aware of the

negative effects of improper waste disposal and environmental degradation, the field of environmental sanitation emerged (Aliyu baba Nabegu, 2018) . Researchers and experts began studying ways to effectively manage waste, develop sanitation systems, and implement policies to protect the environment. Today, this field continues to evolve as we strive to find sustainable solutions for waste management and create a cleaner and healthier world for future generations.

It has been established that several cities in Nigeria suffer greatly from poor environmental sanitation part of which is solid waste management (Shittu, 2016) . Solid wastes are all the wastes that arise from both human and animal activities that are normally solid and are discarded as useless or unwanted (Shittu, 2016) . In this light, solid waste management includes the collection, storage, transportation, treatment and disposal of waste such that they are rendered harmless to human and animal life, ecology and the environment generally. It has been affirmed that the different categories of wastes in many states in Nigeria, like Edo state are most times disposed in an unsustainable manner in open dumps, streets, ravines and these states suffer greatly from poor drainages which flows into streams and causes floods, erosion, building collapse, road accidents, pollution, and general dissatisfaction (Shittu, 2016). The general level of sanitation in an urban area like Oredo local government of Edo State is sub-par and it is important to prioritize intensive and ongoing efforts in waste management which are crucial for maintaining a clean and sustainable environment.

As the level of governance closest to the people in Nigeria, local authorities have been the medium through which community decision-making and actions particularly relating to the regulatory and protective aspects are undertaken. Despite this, the despoliation of the environment in various forms is often explained from the view point that local community has less concern for environmental sanitation than their urban counterparts (Adedayo, 2000) . It has also been assumed that the concern with environmental quality is a recent phenomenon and that existing environmental policies at the local level have been accidental being formulated and implemented mainly from urban considerations.

In Nigeria, waste management often emerges as a problem that endangers human health and the environment. To make matters worse, waste management usually has a low priority on the political agenda, as they are struggling with other important issues such as hunger, health problems, water shortages and unemployment (Ayotamuno and Gobo, 2014) . In such situations, it is easy to understand why waste problems have a tendency to grow steadily. Fast-growing population, poverty of large numbers of urban households, and persistent deterioration of living conditions are some of the challenges facing cities in Nigeria (Ayres, 2000) . Several researches in the past have focused on investigating the cost-benefits of providing safe and convenient living conditions to households in the developing world, especially on housing conditions, notably on the relationship between water, sanitation and disease.(Barbalace, 2003)

1.2 STATEMENT OF PROBLEM

In certain circles, there exists a belief that the performance of Nigeria's local government is inadequate in relation to the funding they receive from the federal government. The Nigerian federal government is working to improve the efficiency of local government administration through reform. Of course, in order to propose solutions that would guide the reform's conclusion, the reform's goal could not be fully achieved without some understanding of the local government policy framework. Based on the aforementioned issue the following questions became necessary: how effective are the current environmental sanitation policy in managing waste and how it affects the lives of people in Oredo LGA of Edo state? To what extent does monitoring on waste management affect the sociological atmosphere of Oredo LGA of Edo state? What are challenges affecting the environmental sanitation policy on the management of waste in Oredo LGA?

1.3 RESEARCH OBJECTIVES

The main objective of this study is to:

1. Determine the effect of Environmental Sanitation Policy and the Management of Waste in Oredo L.G.A of Edo State, Nigeria.

2. To ascertain the effect of monitoring on waste management in Oredo L.G.A

3. To investigate the challenges affecting environmental sanitation policy on the management of waste in Oredo L.G.A Edo State, Nigeria.

1.4 RESEARCH HYPOTHESES

A hypothesis is a tentative statement about the relationship between two or more variables in other for it to be tested and shown whether to be rejected or accepted. This research work is guided by the following hypothesis:

1. Ho: There is no significant relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA.

HR: There is a significant relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA.

2. Ho: There is a negative relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A

HR: there is a positive relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A

3. Ho: There is no relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government

HR: There is a relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government

1.5 SIGNIFICANCE OF STUDY

Man is exposed to danger by virtue of maltreatment of the environment. Therefore, a study of this kind is necessary as it helps us to atleast emphasize on key environmental sanitation policy, a tool which the government has used in keeping the environment clean. The study of the environmental sanitation policy and management of waste in Oredo LGA seeks to improve on the cleanliness of the LGA and the state in general, with a view to make recommendations to further enhance the quality of the Environmental Sanitation Policy on Waste Management.

The result of the finding of this study would be useful not only to the government but also to individuals, the public and the community. To the government, it would help in reviewing their former strategies and achieving results with no significant cost. To the community, the study could serve as a source of motivation to promote the initiative of the people. The result of this study could also initiate further research in the other sectors, i.e the health sector. During the course of this research, we would proffer solutions to unhealthy sanitary habits which impair living conditions, proper waste management, waste disposal and how improper waste management affects Oredo LGA and the society in general.

1.6 SCOPE OF THE STUDY

This study will focus on the impact and performance of Environmental Sanitation Policy and the Management of Waste on people of Oredo LGA. In its scope geographically,it would cover Oredo LGA territory of Benin City Edo state, Nigeria, from 2012-2022. The population size will consist of as much cooperative individuals living in the said territory. Despite this focus area, it will not be possible to meet with all the individuals in Oredo LGA, or be with them at all times when sanitary policies are being effected, due to the researcher's academic schedule. Lack of reliable research data, financial limitations, and access to literature might serve as limitations to this study.

1.7 CONCEPTUAL DEFINITION OF TERMS

Environment: Environment refers to the natural world around us, including the air, water, land, and living organisms. It' everything that surrounds and affects us. They make up our planet, it is all interconnected and plays a crucial role in sustaining life.

Environmental Sanitation: Environmental sanitation refers to the practices and measures taken to maintain cleanliness and hygiene in the environment. It involves activities such as waste management, proper disposal of waste, maintaining clean water sources e.t.c. the goal of environmental sanitation is to prevent the spread of diseases, creating a clean and safe living environment.

POLICY: Policy refers to a set of rules, guidelines, or principles that are established by the governing body or an organization to guide decision making and actions. Policies can cover a wide range of topics, from environmental protection to education, healthcare, or even social issues. They help create a structure and direction for things should be done in a particular setting.

WASTE MANAGEMENT: waste management refers to the systematic handling, disposal and treatment of waste materials. It involves the collection, transportation, processing and proper disposal of waste to minimize its impact on the environment and public health. It is all about finding sustainable way to deal with waste to protect our environment and create a cleaner and healthier future for everyone.

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CHAPTER TWO

REVIEW OF LITERATURE

2.1 INTRODUCTION

This project examines Oredo's waste management policies as well as the topic of sustainable development. It was found that the collection and disposal of all kinds of waste generated in Edo State is primarily the responsibility of the local government, private sector, highway management and the Edo State Waste Management Authority. Edo State has just six dumpsites (including new and existing ones) that are mistakenly called Landfill. All of the closed dumpsites are still being utilized illegally, in addition to the other numerous illegal dumpsites that destroy the landscape.

2.2.1 MEANING OF WASTE MANAGEMENT AND ENVIRONMENTAL SANITATION POLICY

There have been several definitions of waste proposed in recent years. One common thread among these definitions is the concept that waste is a material that is unwanted by its producer. The unwanted materials may be by-products of a production process – fly ash from a furnace, for example. Alternatively, they might be products, the inherent value of which has been consumed from the perspective of the current holder – for example, a newspaper that has been read, a package that has been opened and emptied of its contents or an apple eaten to the core are all similar as far as they have

lost their original inherent value from the consumers perspective. If these materials lose this inherent value to such a degree that permanent disposal is the most viable option or perhaps the only available option, then a waste services provider acts as an agent that relieves the generator of the waste of the burden of disposal. However, the material may have value from the perspective of someone else – the newspaper can be used as an input at a pulp and paper plant or the apple can be used by a composting facility – thus converting it to a useful material.

Value is reintroduced to the material through a process that treats the material in such a way as to enable it to be reintroduced back into the market place as a valuable good. For example, the newspaper may be collected and taken to a Material Recycling Facility (MRF) where it is sorted from other items, bundled and compacted – thus preparing it in such a fashion that it is marketable (valuable) to a buyer such as a pulp and paper mill. (Adewole, 2009).

The federal environmental protection act (1988) does not define “waste”, however Waste as the term implies is any solid, liquid or gaseous substances or materials which being a scrap or being super flows, refuse or reject, is disposed or required to be disposed as unwanted, this is Environmental law, the term assumes it’s ordinary literal meaning unlike in the real property Law, when “waste” is used as a term of art, having meaning completely different from its ordinary meaning. One of the few statues in

Nigeria, which attempts to define waste is the Lagos State Environmental Edicts 1985, there in Section 32, waste is define as follows:

Waste includes:(i.) Waste of all description. ii. Any substance, which constitutes scrap materials or an effluent or other unwanted surplus substances arising from the application of any process. The United Kingdom's Environmental Protection Act 1990, re-enacting an earlier U.K statue, took this statutory definition a step further in section 75(2), it defines waste in these terms: Waste includes: i.) Any substance which' constitutes a scrap material or an effluent or other unwanted surplus substance arising from the application of any process and ii.) Any substance or article, which requires to be disposed of as being broken, worn out, contaminated or otherwise spoiled. One thing to notice is that none of the above definitions of waste give "value" to the elements considered. There is no suggestion that the items, which constitute a waste, do not have value or is intrinsically useless. The word "unwanted" which appears in the definition although it introduces its own problem, does not necessarily, import a value element for a substance or material (Adewole, 2009).

Municipal solid wastes generally can be classified in terms of three major sources of generators: residential, commercial, and industrial. Sometimes, institutional sources are separated from commercial sources and, thus a fourth source is referred to as institutional. In the traditional scheme of classification, residential (domestic) solid waste consists of household garbage and rubbish, or refuse. The garbage fraction is

mostly in the form of wastes derived from the preparation and consumption of food (e.g., meat and vegetable scraps). An alternate term commonly used to describe the garbage faction is “putrescibles.” In the traditional scheme, all wastes not classified as “garbage” are classified as “rubbish.” The major constituents of rubbish include glass, metal and plastic wastes, yard and garden debris, wastepaper and paper waste (Adewole, 2009).

Waste management is the process of handling, transporting, processing, recycling, and disposing of waste materials in an environmentally responsible manner. It involves a series of activities aimed at minimizing the adverse effects of waste on human health, the environment, and society as a whole (Akindele and Olaopa , 1977) . Here's a detailed explanation of each component of waste management:

1. Waste Generation: Waste is generated from various sources, including households, businesses, industries, agriculture, healthcare facilities, and construction sites. This can include solid waste, liquid waste, and hazardous waste.

2. Collection: Waste collection involves the gathering of waste from its point of generation and transporting it to a central location for further processing or disposal. Collection methods vary depending on the type of waste, location, and infrastructure available. Collection may be done through curbside pickup, drop-off points, or specialized containers for specific types of waste.

3. Transportation: Once waste is collected, it needs to be transported to appropriate facilities for further treatment or disposal. This may involve trucks, trains, barges, or specialized vehicles equipped to handle different types of waste safely.

4. Processing and Treatment: Waste processing and treatment methods depend on the type of waste and its characteristics. This step may include sorting, shredding, composting, incineration, or chemical treatment to reduce the volume of waste, extract useful materials, or neutralize hazardous components.

5. Recycling: Recycling involves the conversion of waste materials into new products or raw materials to be used in manufacturing. Common recyclable materials include paper, plastic, glass, metal, and certain types of organic waste. Recycling helps conserve natural resources, reduce energy consumption, and minimize landfill space.

6. Composting: Composting is a natural process that breaks down organic waste, such as food scraps and yard waste, into nutrient-rich compost. Composting can be done on a small scale in households or on a larger scale in commercial composting facilities. The resulting compost can be used as fertilizer or soil amendment in agriculture and landscaping.

7. Energy Recovery: Some waste materials, such as certain types of plastics and organic waste, can be converted into energy through processes like incineration or

anaerobic digestion. This allows for the generation of electricity, heat, or biofuels from waste, reducing the reliance on fossil fuels and mitigating greenhouse gas emissions.

8. Landfilling: is the final disposal option for waste that cannot be recycled, composted, or processed for energy recovery. Landfills are engineered facilities designed to safely contain and manage waste while minimizing environmental impacts such as groundwater contamination, air pollution, and habitat disruption. Modern landfills incorporate liners, leachate collection systems, and methane capture to mitigate environmental risks.

9. Hazardous Waste Management: Hazardous waste, which poses a threat to human health or the environment due to its toxic, flammable, corrosive, or reactive properties, requires special handling and disposal procedures. Hazardous waste management involves identifying, segregating, storing, transporting, treating, and disposing of hazardous materials in accordance with regulatory requirements to prevent accidents and contamination. (Akindele and Olaopa , 1977)

Overall, effective waste management requires a comprehensive approach that integrates waste reduction, recycling, resource recovery, and proper disposal practices to minimize environmental pollution, conserve resources, and promote sustainability. It also involves collaboration between governments, businesses, communities, and individuals to implement policies, infrastructure, and behavioral changes that support responsible waste management practices.

Sanitation refers to all aspects of excreta disposal (human and animal, faeces and urine). It includes sanitary structures (e.g. latrines); material needed for the proper operation and use of the structures (e.g. water, soap); and the human behavior and attitudes relating to excreta and its disposal (Omolawal and Shittu, 2016)

Environmental sanitation means drainage (how unwanted water is disposed of); solid waste management (how refuse is dealt with); and vector control (measures taken to reduce the risks of disease posed by vectors)

The World Health Organisation (WHO) defines 'Environmental Sanitation' as "the control of all those factors inman's physical environment which exerciseor may exercise a deleterious effect on his physical development, health and survival. Environmental/hygiene includes all the activities aimed at improving or maintaining the standard of basic environmental conditions affecting the well-being of people (WHO, 1996). These conditions include:

•Clean and safe water supply

• Clean and safe ambient air

• Efficient and safe animal, human, and industrial waste disposal

• Protection of food from biological and chemical contaminants

- Adequate housing in clean and safe surroundings

2.2.2 EMERGENCE OF WASTE MANAGEMENT AND ENVIRONMENTAL SANITATION POLICY

In all Nigeria's urban centers solid waste consisting of millions of tons of bottles, cans, food scrap, plastics, abandoned broken down vehicles, dead animals etc. are generated every year. When dumped into water drains, they contribute to flooding. The annual flood on the banks of Jakara and Gogau stream in Kano city (old city) and Fagge areas have been associated with refuse dumped improperly along and in the river channels (UNDP,1978). In Oredo LGA, the closure of moats for illegal new housing citations, road, has impeded water flow which has led to the flooding of street, disruption of roads (landscape). In the long run, runoffs which carries waste from households pollutes the environment leading to poor environmental sanitation. For example, the station at Costain is an illegal waste dump-site located in Oredo Local Government Area of Edo State this dump-site which was formerly a monument to the Bini's (a moat), has been illegally patronized by waste managers, private companies and individuals for over 20years in dumping of various kinds of wastes. Domestic, market, agricultural, industrial, hospital wastes including sewage and sludge are the types of solid waste found in this dump-site. According to Filani and Abumere (1983) flood disasters experienced in Ibadan were caused largely by solid waste which choked up the channels of Ogunpa river. When dumped in improper landfills, they can contaminate, water, soil and air with disease spreading bacteria. A more serious risk is the release of toxic substances which arise from natural decomposition process and

incomplete combustion of the incinerated waste (Callan and Thomas, 1996). Thus, the environmental damage associated with solid waste mismanagement cuts across all media - land, water, soil, and air, which makes it widespread, difficult to control and costly to the society. According to the WHO (2000), more than two thirds of humanity has improper or no facilities for solid waste disposal, a situation which leads to a vicious cycle of disease and poverty that is detrimental to social welfare and economic development. Since the mid nineteen seventies the problem of solid waste has become an important environmental issue in Nigeria.

The oil boom of the 1970s and the concomitant explosion of industrial, commercial and population growth in most of the cities has resulted in an alarming growth in waste generation that successive governments have failed to efficiently solve. As the city size increases the situation is likely to worsen since the amount of solid waste generated by the city residents and industries in developing countries is projected to double between 1985 and 2025 from 0.6 billion metric tons to 1.2 billion metric tons due to population increase alone. This projection will be exceeded if in addition their economies develop at about 3% annually as they did between 1960 and 1985 (Filani and Abumere, 2012) The 1976 HABITAT conference and the 1977 united nation's water and sanitation conference set global targets for providing waste disposal to the whole world's population by the end of the millennium. In Nigeria a series of Decrees were promulgated on environmental protection and sustainable environment since the 1980s.These include, petroleum Decree 1969, 3 Territorial Water Decree 1967,

explosive Act 1964, Federal Environmental Protection Agency Decree 58 of 1989, Harmful Waste (Special Criminal provision) Decree No. 42 of 1988, Natural environmental protection (pollution abatement in industries and facilities generating wastes regulation, 1991, Environmental impact Assessment Decree No. 86 of 1992 and other regulations provided by the authorities at various levels to enforce compliance with the requirement of sustainable standard of Environmental sanitation encompassing solid waste and the instrument of enforcement.

In Edo state the ministry of environment and public utilities (MEPU) is the regulatory body with the responsibility of managing the environment on behalf of the State. Under the direct supervision of MEPU is the Edo state waste management board (ESWMB) saddled with the responsibility of supervising collection, transport, processing, recycling or disposal, and monitoring of waste materials (Erediauwa, 2012) . These include solid, liquid, gaseous and radioactive substances. In managing the environment, the Ministry tackles all environmental problems ranging from Waste Management, Flood and Erosion Control, forest depletion and degradation and general environmental and atmospheric pollution.

Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes as well as the treatment and proper disposal of sewage waste water. World Health Organization (WHO) defines sanitation as group of methods to collect human excreta and urine as well as community waste waters in a

hygienic way, where human and community health is not altered. Sanitation methods aim to decrease spreading of diseases by adequate waste water, excreta and other waste treatment, proper handling of water and food and by restricting the occurrence of causes of diseases (iHuuhtanen and Laukkanen, 2006) Sanitation is a system to increase and maintain healthy life and environment. Its purpose is also to assure people enough clean water for washing and drinking purposes. Typically health and hygiene education is connected to sanitation in order to make people recognize where health problems originate and how to better sanitation by their own actions. Essential part of sanitation is building and maintenance education on sewerage systems, wash up and toilet facilities.

2.2.3 Reasons for environmental sanitation policy and management of waste in oredo local government area of Edo state

Environmental sanitation policy and waste management are crucial for several reasons in any local government (Otoghile & Omorede, 2021):

1. Public Health: Proper waste management reduces the risk of diseases spread by pests and pathogens found in waste. It also prevents contamination of water sources, soil, and air, thereby safeguarding public health.

2. Environmental Protection: Effective waste management helps in preserving the natural environment by preventing pollution of land, water bodies, and air. It also minimizes habitat destruction and protects biodiversity.

3. Resource Conservation: Waste management involves recycling and reusing materials, which reduces the demand for raw materials and energy consumption. This contributes to resource conservation and promotes sustainability.

4. Aesthetic and Social Reasons: Clean and well-managed environments improve the quality of life for residents by creating pleasant surroundings and reducing social stigma associated with poor sanitation.

5. Economic Benefits: Proper waste management can create employment opportunities through waste collection, sorting, recycling, and disposal activities. It also reduces healthcare costs associated with diseases caused by poor sanitation.

6. Compliance with Regulations: Many local governments, including Oredo local government area is required by law to implement environmental sanitation policies and waste management practices to comply with national or international regulations aimed at protecting public health and the environment.

7. Disaster Risk Reduction: Effective waste management can mitigate the impact of natural disasters such as floods or landslides by reducing blockages in drainage systems and preventing the spread of contaminants during emergencies.

Overall, environmental sanitation policy and waste management play a critical role in ensuring the health, safety, and sustainability of communities within any local government jurisdiction.

2.2.4 Environmental sanitation policies in place in Oredo local government

On account of the importance of the environment to mankind and the need to ensure a cleaner environment, the Edo State Government has gone ahead to enact laws and regulations. Thus, the policy objective of Edo State government on the environment is to achieve sustainable development and clean environment national policy on the environment. This policy of the Federal Government was issued in 1989. In Edo State, the structure, for the protection of the environment is primarily predicated on the environmental sanitation edict of 1994. This edict charges Edo State environmental sanitation task force with implementation of the objectives of the edict. Generally, the Edo State environmental sanitation task force performs among others, the function of; Ensuring proper disposal of waste refuse and sewage and Ensuring that surroundings together with adjourning and connecting drains, gutters are kept clean.

The need to keep Edo State environment clean, has made it compelling on the inhabitants of the state and every one as expected by law to keep their environment or surrounding clean. By this, movement of persons is restricted within the hours of 7:00am-10:00am ever last Saturday of every month, in the state, so as to enable all and sundry to actively participate in keeping the environment clean. Therefore this work

shall examine the Edo State environmental sanitation in Edo State to determine whether the government has done enough to protect the environment as well as ensuring a cleaner Edo State environment since it (environment) is the core of man's existence on earth and anything that affects it must affect the quality of his life. Thus, in recognition of this link between the environment and the quality of a peoples life conference on the environment in 2008 noted the following; that in developing countries, most of the environment at problem are caused by underdevelopment million continue to live for below the minimum level required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation.

2.2.5 How environmental sanitation policy is implemented in Oredo local government area of Edo state

Oredo local council government being the metropolitan local council has keyed into the environmental sanitation drive of state Edo the government. Environmental sanitation officials of the council have continued to serve abatement notices on landlords/ landladies who violate sanitary regulations in the locality. Landlords who compromised environmental sanitation ethics and regulation are normally charged to court.

The environmental sanitation policy of council is a daily directive aimed at making the locality cleaner and healthier. In an interview with the Head of Environment of

council, Mr. Friday Ebohon, was emphatic that the last Saturday of every month which the state government set aside for environmental sanitation is fully complied with by residents of the area (Erediauwa, 2012)

He went further to state that council sanitation officials are on routine inspection of residential houses, business premises, market places etc. with a view to instilling in the inhabitants, the culture of cleanliness. Landlords/landladies of dirty premises are usually charged to court to serve as deterrent to others.

Sanitation is an integral component of environmental protection and an essential ingredient of sustainable development. Indeed, sanitary, environment and economic wellbeing of the community are closely linked. One cannot be solved without solving the other. Sanitation has many dimensions, the most important being safe water supply, personal cleanliness and safe hygienic system of human waste disposal. Sanitation ensures a productive life, the lack of which creates poverty which is the greatest polluter to the environment. Putting it simply, sanitation is not only keeping clean but protecting those sources of environment which support quality life, community health sustainable development (Erediauwa, 2012).

Oredo local government council in collaboration with Edo state Ministry of Environment clears refuse heaps form market places and residential houses. A token of N600 (six hundred naira) monthly is paid to sanitation officials by landlords/landladies as cost for the evacuation of refuse form their homes.

2.2.6 Impacts of environmental sanitation policy and the management of waste in Oredo local government

The impact of environmental sanitation policy and waste management in Oredo local government, Edo state from 2012-2022 in Nigeria, include (Erediauwa, 2012):

1. Improved public health: effective waste management and sanitation policies can reduce the spread of diseases such as cholera, typhoid, and malaria, leading to better public health outcomes.

2. Environmental sustainability: proper waste management practices can mitigate environmental pollution, preserving natural resources, and biodiversity.

3. Enhanced quality of life: cleaner surroundings contribute to a better quality of life for residents, fostering a sense of well-being and community pride.

4. Economic benefits: efficient waste management systems can create employment opportunities, stimulate economic growth through recycling initiatives, and attract investment to the area.

5. Social cohesion: community involvement in waste management activities promotes social cohesion and collective responsibility for environmental stewardship.

6. Tourism and recreation: a clean environment can attract tourists and visitors, boosting the local economy through tourism-related activities and promoting outdoor recreation.

7. Regulatory compliance: adherence to environmental sanitation policies ensures compliance with national and international regulations, avoiding penalties and sanctions.

8. Climate change mitigation: proper waste management practices, such as recycling and waste-to-energy initiatives, can contribute to reducing greenhouse gas emissions and combating climate change.

Overall, the effective implementation of environmental sanitation policies and waste management strategies in Oredo local government can lead to significant socio-economic and environmental benefits for the community.

2.2.7 Strategies of environmental sanitation policy on the management of waste in Oredo local government area of Edo state

Environmental sanitation policies in Oredo local governments typically involve a range of strategies aimed at improving public health, promoting environmental sustainability, and enhancing the overall quality of life (Otoghile & Omorede, 2021). Here are some detailed strategies commonly employed:

1. Waste Collection and Disposal:

- Implementing organized waste collection services covering residential, commercial, and industrial areas.

- Establishing designated collection points or bins for proper waste disposal.

- Ensuring regular and timely collection of waste to prevent accumulation and spread of diseases.

2. Public Awareness and Education:

- Conducting comprehensive public awareness campaigns through various channels including media, community outreach programs, and educational institutions.

- Educating residents on the importance of proper waste management practices, recycling, and sanitation hygiene.

- Organizing workshops, seminars, and training sessions to build capacity and empower communities to actively participate in environmental sanitation efforts.

3. Enforcement of Regulations:

- Enforcing existing environmental sanitation laws and regulations to ensure compliance with waste management standards.

- Implementing penalties and fines for littering, illegal dumping, and other sanitation offenses to deter improper waste disposal practices.

- Collaborating with law enforcement agencies to monitor and enforce compliance with environmental regulations.

4. Infrastructure Development:

- Investing in infrastructure development such as waste treatment plants, recycling facilities, and sanitary landfills to improve waste management infrastructure.

- Upgrading existing facilities to enhance efficiency, capacity, and environmental sustainability.

- Implementing innovative technologies for waste management, such as waste-to-energy initiatives and decentralized waste treatment systems.

5. Partnerships and Collaborations:

- Forming partnerships with relevant stakeholders including government agencies, non-governmental organizations (NGOs), community-based organizations (CBOs), and private sector entities.

- Collaborating with international organizations and development partners to access funding, technical expertise, and best practices in environmental sanitation.

- Engaging community leaders, traditional rulers, and religious institutions to mobilize community support and participation in sanitation initiatives.

6. Monitoring and Evaluation:

- Establishing monitoring and evaluation mechanisms to assess the effectiveness of environmental sanitation policies and programs.

- Conducting regular inspections and audits to monitor compliance with sanitation standards and identify areas for improvement.

- Collecting data and conducting surveys to measure progress, identify challenges, and inform evidence-based decision-making in sanitation planning and implementation.

By implementing these comprehensive strategies, Oredo local government can effectively address environmental sanitation challenges, improve public health outcomes, and promote sustainable development in their communities (Otoghile & Omorede, 2021).

2.2.8 Problems of Policy Implementation and Administration in Environmental Sanitation policies in Oredo local government.

There are many problems which are common to policy implementation in local government administration in Nigeria. Some of these problems already identified by authors such as Egonmwan are discussed below (Egonmwan, 1984):

Inadequate Definition of Goals: In less developed countries policy goals are found to be defined in broad or vague terms. This could be as a result of people disagreeing in objectives of a given programme. In order to seem to be carrying everyone along the goals are not declared clearly. In some other circumstances, policy makers assume that they know the needs of the target groups whose social situation they attempting to ameliorate and therefore see no need for clarity of goals. All these affect the opportunities for successful implementation of policies.

Over-Ambitious Policies: The leader behaves like that because they are in a position to promise much to their citizen: more so when there is high human and physical needs in poor countries, the desire to establish the legitimacy of the political regime by providing tangible evidence of imp roving conditions and the feeling that deprivations of colonial or military past must be wiped off.

Cultural Consideration: The culture of the area where the target group of the policy is located can hamper the implementation. Take for example, family planning

programme. The people can resist the project if they believe that children are God's gift which should not be rejected through any guise. In fact, people do reject family planning devices developing countries even in the face of poverty, overcrowding, maternal mortality which are results of such rejection.

Lack of well-defined Programme for achievement of Goals: Achievement of Goals: In most less developed countries such as Nigeria, specific actions taken to achieve the goals of a policy take the form of "trial and error" The actions are not well articulated and made explicit for the implementers hence policy run into hitches during implementation. In some cases, because a chosen programme for the achievement of goals is not well defined, it becomes politically unattractive and unacceptable. This suggests that policy planners should consider specification of strategies and actions for achievement of policy goals as well as social acceptability and political attractiveness of such strategy and actions.

Choice of inappropriate Organizational Structure in Implementation of Policy: in third world countries the choice of proper organizational structure in the implementation of policy is problematic. According to Egonmwan "the problems arise from the type of procedures adopted, the assignment of priorities to departments and conflict over jurisdiction" (Egonmwan, 1984)

In most cases policy makers provides a wrong structure to implement a programme where there is need to use a new structure, an existing one would be preferred where

the un-dynamic pattern of doing things would still hamper the achievement sometimes, too, a new policy would require an old implementation structure as most appropriate but policy makers would employ a new one which may not be able to gather enough experience technique and knowledge to implement the policy. An example is the use of non health workers to do immunization in the National Immunization programme.

One of the greatest problems is the overlapping and duplication of functions in the proliferation of Government implementation agencies. It leads to waste of resources. For example, in Edo state, the constitution of roads, bridges, drainages, and houses is presently carried out by the government agencies. Ministry of Works and the rapid response Agency. Hitherto construction was the sole responsibilities of the ministry of works. Today we find it difficult to state the difference between the functions of the ministry of works and the aforementioned agency.

2.2.9 Solutions to problems facing implementation of environmental sanitation and the management of waste

Improving environmental sanitation policy and waste management in Oredo local governments requires a multifaceted approach. Here are detailed ways to enhance these aspects:

1. Legislative Reforms: Review and update existing environmental sanitation laws and regulations to address current challenges and align with international best practices.

Introduce new legislation to address emerging issues such as electronic waste management, plastic pollution, and hazardous waste disposal.

2. Capacity Building: Provide training and capacity-building programs for local government officials, waste management personnel, and community leaders on effective waste management techniques, sanitation best practices, and environmental regulations. Foster partnerships with academic institutions and research organizations to develop training materials and conduct workshops on waste management and environmental sustainability.

3. Community Engagement: Implement community-driven initiatives that encourage active participation and ownership of environmental sanitation efforts. Establish community-based organizations or sanitation committees to mobilize residents organize clean-up campaigns, and monitor waste disposal activities. Use traditional and social media platforms to raise awareness, educate the public, and promote behavior change towards sustainable waste management practices.

4. Investment in Infrastructure: Allocate resources for the construction and rehabilitation of waste management infrastructure including waste treatment plants, recycling facilities, composting sites, and sanitary landfills. Explore public-private partnerships (PPPs) and concession arrangements to attract private sector investment in waste management infrastructure development and operation.

5. Promotion of Recycling and Waste Reduction: Introduce incentives and initiatives to promote recycling, such as waste segregation at source, buy-back schemes for recyclable materials, and subsidies for eco-friendly products. Implement extended producer responsibility (EPR) programs to hold manufacturers accountable for the end-of-life disposal of their products and incentivize eco-design and sustainable packaging practices.

6. Technology Adoption: Embrace innovative technologies for waste management, such as waste-to-energy conversion, biogas production from organic waste, and mobile applications for waste collection scheduling and tracking. Invest in research and development to explore locally adaptable and cost-effective technologies for waste treatment and recycling.

7. Monitoring and Evaluation: Establish robust monitoring and evaluation mechanisms to track progress, measure performance, and assess the impact of environmental sanitation policies and waste management interventions. Conduct regular audits and assessments of waste management practices, infrastructure functionality, and compliance with environmental regulations. Use data-driven insights to identify areas for improvement, prioritize interventions, and inform evidence-based decision-making in waste management policy formulation and implementation.

By implementing these detailed strategies, Oredo local governments can strengthen their environmental sanitation policies and improve waste management practices, leading to cleaner and healthier communities.

2.2.10 Responsibilities and duties of environmental sanitation and management of waste in Oredo local government

Environmental sanitation and waste management officers in Oredo local government have a range of responsibilities and duties aimed at ensuring the cleanliness of their communities and the proper management of waste. Here are some of their key responsibilities:

1. Policy Implementation: Implement environmental sanitation policies, regulations, and guidelines set forth by the local government and relevant national agencies. Ensure compliance with environmental laws and regulations related to waste management, pollution control, and sanitation standards.

2. Waste Collection and Disposal: Coordinate and supervise waste collection activities within the local government area, including scheduling routes, allocating resources, and overseeing waste collection crews. Ensure timely and efficient collection of solid waste from residential, commercial, and industrial areas, and proper disposal in designated landfill sites or treatment facilities.

3. Public Awareness and Education: Conduct public awareness campaigns to educate residents about the importance of proper waste disposal, recycling, and sanitation hygiene practices. Organize community outreach programs, workshops, and seminars to promote environmental awareness and foster behavior change towards sustainable waste management practices.

4. Enforcement and Compliance: Enforce environmental sanitation laws and regulations, including penalties for littering, illegal dumping, and other sanitation offenses. Conduct inspections and monitoring activities to ensure compliance with waste management standards, sanitary practices, and environmental regulations.

5. Infrastructure Maintenance: Maintain and oversee the operation of waste management infrastructure such as waste collection vehicles, equipment, recycling facilities, and landfill sites. Ensure the proper maintenance, repair, and servicing of equipment to optimize efficiency and prolong the lifespan of infrastructure assets.

6. Data Collection and Reporting: Collect data on waste generation, collection, and disposal activities to inform planning, decision-making, and policy formulation. Prepare reports, analyze data, and provide recommendations for improving waste management practices, resource allocation, and operational efficiency.

7. Community Engagement: Engage with community stakeholders, residents, and local organizations to solicit feedback, address concerns, and foster community

participation in environmental sanitation initiatives. Collaborate with community leaders, traditional rulers, and religious institutions to mobilize support and resources for environmental sanitation projects and programs.

8. Emergency Response: Coordinate emergency response efforts during environmental disasters, such as floods, disease outbreaks, or hazardous waste incidents, to mitigate risks to public health and the environment.

Overall, environmental sanitation and waste management officers play a crucial role in safeguarding public health, promoting environmental sustainability, and maintaining the cleanliness of Oredo local communities through effective policy implementation, community engagement, and operational oversight.

2.2.11 A review of works done on environmental sanitation and waste management

Under this subhead, the researcher would look for works already done on Environmental Sanitation Policy and Waste Management. Several researchers for example which includes Nnaji (2015), who said that more than 50 percent of residents of Maiduguri in Northern Nigeria and Ughelli in Southern Nigeria dispose of their waste in open dumps. Although open dumpsites disposal method is a commonly adopted method of disposal in Nigeria and other developing countries, which involves people disposing of their waste on open grounds most often indiscriminately, they are

generally unsanitary, unsightly and smelly, attracting rats, insects, snakes and flies (Nwosu and Chukwueloka , 2020) . Onwughara et al. (2010) reported other obvious implications of open dumpsites such as landfill gases which contribute to global warming and urban ozone problem thereby harming both humans and the natural environment. Similarly, reported characteristics of leachates found at dumpsites at Ibadan, Nigeria and the serious problems they possess on contaminating the land and water around them. Dumpsites in the southern part of Nigeria are largely unsuitable owing to the highly waterlogged characteristics of the region (Nwosu and Chukwueloka , 2020) This calls for geological assessment of areas before designing dumpsites. Therefore, these groups of scholars recommend Landfills of open dump sites as a strategy in controlling waste management. Although, there are many other forms and methods of waste disposal outside land filling, such as composting , waste reuse, source reduction and recycling the option chosen should be beneficial to the environment and should require less energy, less resource use and limited pollution rate. As observed by Kofoworola (2007), the treatment of waste does not exist, as such, collected waste that are transported to dumpsites are burnt most often to reduce the volume of waste which results in air pollution and the release of harmful gases to the atmosphere. To this effect, Lunge et al. (2009) advise the adoption of waste reduction, recycling and reuse as an alternative (Nwosu and Chukwueloka , 2020)

Although land filling is considered the cheapest and most convenient form of waste disposal, it has by far, more disadvantages to human health and the environment than

waste recovery and recycling. The concept of waste recovery, recycling and waste to energy is relatively new in the practice of waste management in Nigeria, due to challenges such as lack of the necessary facilities and equipment required for recycling, lack of technical know-how, lack of funding, and support from the government. The advantages however, surpass the set-backs and should be considered. These methods have the potential of attaining the Millennium Development Goals relating to job creation, poverty alleviation, and sustainable environment, save energy, reduction in waste, cost and pollution as well it could serve as a lasting solution to the electricity challenges of the country (Nwosu and Chukwueloka , 2020).

Another group of scholars recommend strategies of waste management such as Technological Strategy (TcS). Of all the modern management practices assessed, Waste Recovery, Recycling, Radio Frequency Identification (RFID) and Communications Technologies, Global Positioning System (GPS), Geographical Information System (GIS) and Remote Sensing Technologies are the relatively modern technologies adopted by studies to solve problems associated with waste management globally. Global Positioning System (GPS), Geographical Information System (GIS), and Remote Sensing, used most times together, are multi-functional technologies that have been applied in various fields to solve problems in record time at a lesser cost. Globally, studies have shown they can be applied at each step of the TSWMS process; at estimation of waste generation, waste storage, waste collection and route optimization using multi-agent-based modeling and simulation, and

dumpsite selection/waste disposal (Nwosu and Chukwueloka , 2020) . In Nigeria, Thompson et al. (2013) developed a system for waste management authorities at Ondo state Nigeria to help plan and solve problems associated with waste management. Using GIS technology, they developed a system that solved waste bin allocation and relocation, communication between the public and authority in charge as well as separation of recyclable waste. In route optimization, GIS is perceived as the most appropriate for locating least-cost travel routes for waste transport and disposal (Achi et al., 2012). Using preset criteria such as the distance of the site from a street at 30 m, surface water at 160 m, major roads at 200 m and absence of important economic or ecological features as to determine the best site and route for waste disposal and transportation, Achi et al. (2012), proposed Sam-Ewang and Ita-Ika disposal sites at Abeokuta, as best site after they met all stated criteria. Based on suitable criteria, many dumpsites have been assessed and proposed as best for waste disposal using GIS and Remote Sensing technologies. At the Federal University of Technology, Minna, Gidan Kwano Campus, certain criteria were used which included slope, built-up-area, road networks, geological maps to determine and select using GIS, suitable sites for waste disposal (Onuigbo & Bello, 2014). Similarly, using Multi-Criteria Analysis (MCA) and data from topographical map, remotely sensed imagery and soil map, Zumo and Vokna (2014), identified a suitable site for solid waste disposal at Yola, Nigeria. Various studies at other parts of Nigeria, applied the Multi-Criteria Analysis (MCA) or Multi Criteria Decision-Making methodology in the selection of suitable waste

disposal sites for sustainable waste management. Some of the criteria analyzed include; distance to river, railroad, existing dumpsite, airport, major road, advance road, slope, soil type, population, future urban expansion, geology, drainage, underground water table, geomorphology and lastly land-use types. Although the challenges of disposal of solid waste has been a huge problem in Nigeria, the application of GIS and Remote Sensing Technologies has remediated this problem by spatially locating suitable sites for waste disposal, as a suitable decision making tool for management and an analysis tool that facilitates planning processes (Babalola & Busu, 2011; Onuigbo & Bello, 2014), reduction of operating cost and time taken for operations and a cheap source of data collection (Abiodun, 2000). Babalola and Busu (2011) also revealed the efficacy of GIS and Remote sensing for dumpsite identification and selection process that can be easily manipulated and replicated in other areas and countries for siting purposes.

However, there is a dearth in literature on the challenges of applying this technology in waste management. GIS and Remote Sensing Technologies do not provide for proper identification of all sources of waste generated as well as the actual volume generated daily which has affected data gathering and processing (Oyinloye & Tokunbo, 2013), there also exist; limited manpower, funding and inadequate hardware and software facilities for data manipulation and processing (Abiodun, 2000) and most importantly lack of education and indigenous research in Nigeria of GIS and Remote Sensing Technologies. Also, despite the advancement of GIS and Remote sensing technologies in solving waste management problems globally, there are specifically

reluctances in applying remote sensing and GIS in solid waste management and integrated management strategies in Nigeria (Nwosu and Chukwueloka , 2020).

In some other cases of some materials and books which would be stated below, there are some authors who have also discussed the topic of waste management and I have done a summary on the criticisms of their works. In a book: " (Pichtel, 2014) , he focuses on integrating the technical and regulatory complexities of waste management, this book covers the historical and regulatory development of waste management and the management of municipal solid wastes. It also addresses hazardous wastes and their management, from the perspectives of identification, transportation, and requirements for generators as well as the treatment, storage, and disposal facilities. This comprehensive book covers various aspects of waste management, including collection, disposal, recycling, and regulatory frameworks. It provides insights into both municipal and industrial waste management practices. a major criticism of this his work as it relates to waste management and environmental sanitation is that the book lacks coverage of emerging technologies and innovative approaches to waste management (Pichtel, 2014).There is a tendency to focus more on conventional waste management methods rather than exploring sustainable alternatives. But with the aid of indebt research done in this project work, we shall put into considerations this area of critic as we discuss waste management and environmental sanitation especially in Oredo local government.

In a Research Paper: "Life cycle assessment of municipal solid waste management alternatives: A review" by Fernando Martinho et al. (2018) (Martinho, 2018) , this paper reviews life cycle assessment (LCA) studies conducted on different municipal solid waste management strategies, such as landfilling, incineration, composting, and recycling. It evaluates the environmental impacts of each option throughout their life cycles.This paper presents a study related to the application of the reliability-based life cycle assessment (LCA) to assess different alternatives for solid waste management. The current system includes waste collection, transport, sorting, recycling, and mechanical and biological treatment (MBT) by means of aerobic treatment and landfill. In addition, some future expansion plans are discussed. Materials and methods. The proposed 18 alternatives were examined with respect to six impact categories based on a customized life cycle inventory (LCI). All the alternatives are designed to comply with the targets prescribed in the Packaging and Packaging Waste Directive and the Landfill Directive. These 18 alternatives were eventually assessed by using the reliability-based LCA methodology with respect to some uncertain parameters and scenarios. Results and discussion The results show that solutions based on anaerobic digestion at the MBT followed by energy recovery are the most advantageous options. Overall, recycling may help to avoid most environmental impacts. Alternatives which treat massively biodegradable municipal waste are also competitive. In addition to the recycling options, electricity production is also an influential determinant which affects the results. The uncertainty analysis focused on testing different energy-from-

waste options (like landfill and MBT biogas electricity production) and different recycling substitution ratios. Such a quantitative analysis is proved effective to confirm the reliability of the LCI in the study (Martinho, 2018). In order to improve the sustainability of the solid waste management (SWM) system, final suggestions may concentrate on the closure of aerobic MBT, the enhancement of anaerobic digestion MBT treatment, and the maximization of energy recovery from high calorific fractions of the waste streams. Two major criticisms of this work as it relates to waste management and environmental sanitation is in the scope of reviewed studies, such as regional variability and data quality issues. And some argue that focusing solely on environmental impacts may overlook social and economic aspects of waste management.

Global waste management outlook by United Nations Environment Programme (UNEP). The report provides a global assessment of waste management practices, challenges, and policy recommendations. It highlights the need for integrated approaches to waste management to achieve sustainable development goals. The Outlook is primarily focused on the 'governance' issues which need to be addressed to establish a sustainable solution – including the regulatory and other policy instruments, the partnerships and the financing models. Broad in scope and global in coverage, the Outlook includes a series of Topic Sheets and case studies addressing specific issues and illustrating featured initiatives (UNEP, 2015). This document provides an inspiring possible way forward on waste management, drawing conclusions and

making recommendations to assist policy makers and practitioners to develop local solutions for waste management. To complement the Sustainable Development Goals of the Post-2015 Development Agenda, the Outlook sets forth Global Waste Management Goals and a Global Call to Action to achieve those goals. Although in its quest to proffer solutions to the increasing problem of waste pollution and lack of proper sanitation programs, critics may argue that the report lacks specificity in addressing context-specific challenges faced by different regions and countries (UNEP, 2015) .Some others, may find the recommendations too broad or lacking actionable strategies for implementation at the local level.

In an Article Review: "Challenges and opportunities in waste management: A review" by Olalekan S. Fatoba and Olatunde S. Afolabi (2018), this review article discusses various challenges facing waste management systems worldwide, including inadequate infrastructure, lack of public awareness, and policy gaps. It also explores opportunities for improvement through technological innovation and policy reforms (Olalekan S. F and Olatunde S.F, 2018). Critics may argue that the review could delve deeper into the socio-economic factors influencing waste management practices. others might find the suggested solutions overly optimistic or impractical in certain contexts.

This research work however, as already stated would conduct a critical review of environmental sanitation policy and waste management, and would bear in mind the

various limitations as it has studied in other works done in this topic and related ones (Olalekan S. F and Olatunde S.F, 2018). This would be done however, with a focus on Edo state, Oredo local government to be precise.

2.3 Theoretical Framework

Institutional Theory

This theory postulates that political behavior is impeded by an institutional structure of rules, norms and traditions that limit the free play of individual will and calculations (Akindele and Olaopa , 1977) work. Meyer and Rowan (1977) described institutionalization as the process by which "social processes, obligations, or actualities come to take on a rule-like status in social thought and action". From their perspective, this process is driven as much by external forces as functional requirements or internal organizational rationality. Their core contribution was communicative; that is, organizations absorb policies and structures to signal to their environments that they are an important resource for organizations, particularly in highly regulated environments. They recognized that the structure of organizations is derived not only from the functional requirements of production but also from the external symbolic pressures perceived as legitimate, that is, "the extent to which the array of established cultural accounts provide explanations for [an organization's] existence, function, and jurisdiction, and lack or deny alternatives" (Meyer & Scott, 1983). Moreover, Meyer and Rowan (1977) suggested that an organization uses

rational myths (untestable means ends statements such as “This organization engages in affirmative-action hiring policies.”) to signal its legitimacy. These activities involve the efforts of managers and leaders to persuade workers about the adoption of practices congruent with externally established norms (Deephouse & Carter, 2005). Several studies in organizational communication illustrate this thread, including O’Connor and Shumate (2010) and Barbour and Lammers (2007). Lammers (2003) argued that the high salaries paid to CEOs reflected established standards of legitimacy that operated in the absence of any evidence for a high correlation between firm performance and CEO salaries. In other words, symbolic, not functional, requirements explained these remuneration practices. Similarly, Zorn, Flanagin, and Shoham (2011) studied the roles of efficiency (functional) and legitimacy (symbolic) goals in the adoption of information technology among nonprofit organizations. They suggested that “efficient use of ICTs [information and communication technologies] may be spurred by institutional isomorphic pressures if organizations have the autonomy (i.e., leadership) and resources (i.e., knowledge and size) to find workable structures to make use of ICTs” (p. 24). These findings explain the ways that certain practices come to be institutionalized and show how these practices are embedded in or influenced by widespread social norms.

Thus in the area of legitimacy, organizational scholars should consider the influence of institutional pressures, legitimate; legitimacy, in turn, serves as a symbolic resource for organizations. Tolbert and Zucker (1996) hypothesized a series of processes by

which organizational practices may become institutionalized or develop habitualized actions (Berger & Luckmann, 1967). The processes, which can occur simultaneously and independently in different settings, include innovation, habitualization, objectification, and sedimentation. Tolbert and Zucker did not theorize about innovation, instead noting that it is a "largely independent activity" (1996, p. 181).3 Indeed, innovation might be best understood in contrast to institutionalization, as it may occur as individual organizations seek to solve problems outside established conduct. In contrast, an important aspect of the second process, habitualization, is that routine actions take on lives independent of actors and can be classified and typified (Tolbert & Zucker, 1996). This observation leads to the third process of institutionalization, objectification. Organizational structures that are habitualized and objectified may be said to be "semi-institutionalized" (p. 183), while full institutionalization requires historical continuity or sedimentation (p. 184). It is worth noting that innovation, habitualization, objectification, and sedimentation are essentially communicative processes. Deetz (1992) used sedimentation with reference to institutionalization in essentially the same sense. Kuhn (2005) applied this model to the adoption of interpretive scholarship within the field of organizational communication. Tolbert and Zucker's (1996) framework offers communication scholars an opportunity to unpack the communicative features that underlie the processes of innovation, habitualization, objectification, and sedimentation. In addition to understanding the processes by which practices come to be

institutionalized, scholars are concerned with why these practices become institutionalized.

The theory has a way of bringing the state back into political analysis by insisting on a more autonomous role for political institutions. Institutional/theory dictates the pace for individuals, Oredo local government area as a political institution compels inhabitant of the locality to clean up their environment rather than letting them clean up their surrounding at will. Institutional theory refers to a theory about the ways in which organizational structures, norms, practices, and patterns of social relationships are connected to the broader social and cultural environment. Institutional theory is a theory on the deeper and more resilient aspects of social structure. It considers the processes by which structures, including schemes; rules, norms, and routines, become established as authoritative guidelines for social behavior. Different components of institutional theory explain how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

The study employed the survey research design. The survey research design is associated with quantification of data. This design, enables the study to effectively gather relevant data from targeted respondents.

3.2. POPULATION OF THE STUDY

The population of study comprises the whole sample of the universal. In this case, the population of the study is both male & female adults in Oredo LGA which is projected at 553,300 according to the National Population Commission (2023).

3.3 SAMPLE SIZE

The researcher adopted the Taro Yamane formula as sampling technique. Out of the rough estimate of more than 553,300 inhabitants, using the 3.3 sample size (400 respondents were selected. Below is the calculation on how the sample size was gotten via the Taro Yamane formula;

n = N/(1+N(e))2

Where; n = the sample size

N = the population under study

e = margin error

The sample size is calculated as follows;

n = 553300/1+553300 (0.05)2

n = 553300/1+553300 (0.0025)

n = 553300/1+1383.25

n = 553300/1384.25

n = 400

3.4. SAMPLING TECHNIQUE

The study adopted the simple random sampling technique which is probalistic in nature. Based on the study sample size (400), six (6) wards will be used from the twelve (12) wards in Oredo Local Government Area as the study sample unit area. Hence, 400 respondents will be randomly selected from these six (6) wards which include: Ogbe, GRA/Etete, Urubi, Oredo, New Benin I, New Benin II.

3.5. RESEARCH INSTRUMENT FOR DATA COLLECTION

A structured questionnaire which is designed by the researchers using the Likert type scale rating will be used as the instrument for data collection. A questionnaire is a research instrument that consists of a set of questions or other types of prompts that aims to collect information from a respondent. A research questionnaire is typically a mix of close-ended questions and open-ended questions. The Likert scale question is a psychometric scale where questions based on this scale are used in a survey. It is one of the most widely used question types in a survey. In a Likert scale survey, respondents don't choose between 'yes/no,' there are specific choices based on 'agreeing' or 'disagreeing' on a particular survey question.

It's a question that uses a 5 or 7-point scale, sometimes referred to as a satisfaction scale that ranges from one extreme attitude to another. Typically, the Likert survey question includes a moderate or neutral option in its scale. The face validity by non experts and the content validity by scholars and lecturers would be taken into consideration before the distribution of the questionnaire.

3.6. VALIDITY AND RELIABILITY OF THE INSTRUMENT

From a research perspective, the scale appears to be trustworthy since it consistently measures whatever it is supposed to. Another question is whether such consistent results hold true. But if an instrument lacks reliability, it cannot be considered valid.

There are three major categories of reliability for most instruments: test-retest, equivalent form, and internal consistency. Each measures consistency a bit differently and a given instrument need not meet the requirements of each, during the course of this study, we shall use the internal consistency method. The subjects complete one instrument one time. When the items on an instrument are not scored right versus wrong, Cronbach's alpha is often used to measure the internal consistency. This is often the case with attitude instruments that use the Likert scale.

3.7. DATA COLLECTION PROCEDURE

I would be collecting data using the questionnaire. Copies of the questionnaires would be distributed to the respondent individually by the researcher. All respondents are expected to give Maximum Corporation, as the information that would be contained in their questionnaire would be related to their study. Hence enough time would be taken to explain how to tick or indicate their opinions on the items stated in the research questionnaire. The instrument would be given to the respondents and collected on the spot to avoid the loss cases. The data generated from the instrument was analyzed using mean.

The questionnaire was divided into two sections (A and B). Section A was for collection of information on personal data of respondents while. Section B consisted of questions that elicited responses about the dependent variable and the independent variables from the respondents with response options: Strongly Agree (SA), Agree (A),

Undecided (U), Disagree (D), and Strongly Disagree (SD). Anonymity was ensured in this process to ensure confidentiality for all participants. Students were also reminded not to write their names and that their response was completely voluntary

3.8 METHOD OF DATA ANALYSIS

The descriptive and chi square analytical data method will be utilized in this study. The descriptive (simple percentaging) will be used to analyze respondents view and opinions while the chi square will be used to test for relationship between the study variables.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1INTRODUCTION

This chapter presents the empirical analysis of the data retrieved from respondents in the field survey. Specifically, the questionnaire was distributed and shared to the populations of the six(6) wards of Oredo Local Government Area, Benin City, Edo state. A total response of 400 questionnaires was administered, out of which 385 were retrieved. The data from the responses were retrieved, cleared and used for this analysis indicating a response rate of 96.25%.

4.2 DATA PRESENTATION

Table 1: Administration of Questionnaire

VARIABLES	FREQUENCY	PERCENTAGE (%)
Valid questionnaire filled and returned	385	96.25
Questionnaire not returned	15	3.75
Total	400	100.0

SOURCE: Field Survey, 2024.

Table 1 above shows that out of 400 copies of questionnaire structured and distributed to the selected respondents in the six(6) ward of Oredo Local Government Area, 385(96.25%) were retrieved, while 15 (3.75%) copies of questionnaires were unable to be retrieved.

SECTION A: (DEMOGRAPHIC DATA)

TABLE 2: Respondent by Gender Profile

	FREQUENCY	PERCENTAGE (%)
Male	185	48.05
Female	200	51.95
Total	385	100.0

SOURCE: Author's Computation 2024

In the distribution by gender of the respondents, the above table shows that majority of the respondents were female. This category of respondents accounted for 200 (51.95%) female of the total respondents while 185 (48.05%) were male.

TABLE 3: Age Distribution of Respondents

AGE RANGE	FREQUENCY	PERCENTAGE (%)
<30	79	20.52
31-35	91	23.64
36-40	113	29.35
41>	102	26.49
Total	385	100.0

SOURCE: Author's Computation 2024

On the age range distribution of the respondents, table 3 indicates that most of the respondents were aged 36-40 years. This category of respondents accounted for 113 (29.35%) of the total respondents, while 102 (26.49%) were aged 41 and above,91 (23.64%) were aged 31-35 years, while 79 (20.52%) were 30 years and below.

TABLE 4 Marital Status of Respondents

Marital Status	Frequency	Percentage %
Single	90	23.38%
Married	151	39.22%
Divorced	71	18.44%
Widows/Widowers	73	18.96%
Total	385	100

SOURCE: Author's computation 2024.

As regards the marital of respondents, 151 (39.22%) of the respondents were Married, 90 (23.38%) of the respondents were in Single, 73 (18.96%) of the respondents were Widows/Widowers, while 71 (18.44%) were in Divorced.

TABLE 5: Educational Qualification

Educational Qualification	Frequency	Percentage (%)
WAEC/GCE	85	22.08
OND/NCE	93	24.15
HND/B.Sc	111	28.83
Postgraduate	51	13.25
PhD	45	11.69
Total	385	100.0

SOURCE: Author's computation 2024

TABLE 6: Occupational Status

Occupational Status	Frequency	Percentage (%)
Civil-Servants	68	17.66
Self Employed	111	28.83
Business	112	29.09
Farmer	50	12.99
Others	44	11.43
TOTAL	385	100

SOURCE: Author's computation

4.3 ANALYSIS OF RESEARCH QUESTIONS

SECTION B

In this section, data were analyzed and discussed based on the research question used for the study. The responses were analyzed with the use of frequency count and simple percentage.

RESEARCH QUESTION ONE (1): WHAT IS THE EFFECT OF ENVIRONMENTAL SANITATION POLICY IN THE MANAGEMENT OF WASTE IN OREDO L.G.A OF EDO STATE, NIGERIA?

TABLE 5: The effect of environmental sanitation policy in the management of waste in oredo L.G.A of Edo state, Nigeria

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	TOTAL (%)
1	The Environmental Sanitation Policy implemented in Oredo L.G.A effectively addresses the waste management issues in the area.	137 (35.58)	131 (34.03)	76 (19.74)	41 (10.65)	385 (100)
2	The inhabitants are	49 (12.73)	102 (26.49)	81 (21.04)	46 (11.95)	385 (100)

	satisfied with the current waste management practices in Oredo L.G.A					
3	The Environmental Sanitation Policy has improved public health in Oredo L.G.A	79 (20.52)	225 (58.44)	40 (10.39)	41 (10.65)	385 (100)
4	Proper management of waste have a crucial impact on the overall quality of life in Oredo L.G.A	73 (18.96)	200 (51.95)	71 (18.44)	41 (10.65)	385 (100)
TOTAL						

Source: Field work, 2024.

As shown in table five (5) above, 35.58 %(137 respondent) of the six (6) wards Strongly agree that the Environmental Sanitation Policy implemented in Oredo L.G.A effectively addresses the waste management issues in the area. While about 34.03% (131 respondents) agreed, about 19.74% (76 respondents) disagreed to this and about 10.65% (41) strongly disagreed. About 12.73% (49 respondents) strongly agreed that the inhabitants are satisfied with the current waste management practices in Oredo L.G.A**,** while 26.49%(102 respondent) agreed to the claim, about 21.04% (81 respondent) disagreed and some 11.95% (46 respondents) strongly disagreed. About

20.52% (79 respondents) strongly agreed that the Environmental Sanitation Policy has improved public health in Oredo L.G.A. About 51.19% (225 respondents) agreed to the claim. Some 10.39% (40 respondents) disagreed to the claim; about 10.65% (41 respondents) strongly disagreed to it. Some 18.96% (73 respondents) strongly agreed to the fact that Proper management of waste has a crucial impact on the overall quality of life in Oredo L.G.A. Some 51.95% (200 respondents) agreed to the claim, while some 18.44 %(71 respondents) disagreed to it. About 10.65% (41 respondents) strongly disagreed to the claim.

RESEARCH QUESTION TWO (2): What is the Effect of Monitoring on Waste Management in Oredo L.G.A?

TABLE 6: The Effect Of Monitoring On Waste Management In Oredo L.G.**A**

S/N	ITEMS	SA (%)	A(%)	D (%)	SD (%)	TOTAL (%)
5	Regular monitoring of waste management activities in Oredo L.G.A improves the overall cleanliness of the environment	83 (21.55)	204 (52.98)	61 (15.84)	37 (9.6)	385 (100)
6	The current monitoring mechanisms helps in ensuring compliance with waste management regulations in Oredo L.G.A	59 (15.32)	190 (49.35)	93 (24.15)	43 (11.16)	385 (100)
7	Increased monitoring contributes to reducing illegal dumping and littering in Oredo L.G.A	60 (15.58)	202 (52.46)	77 (20)	46 (11.95)	385 (100)

8	The Inhabitants are satisfied with the frequency of waste management inspections conducted by local authorities in Oredo L.G.A	73 (18.96)	185 (48.05)	83 (21.56)	44 (11.43)	385 (100)
TOTAL	385					

Source: field work, 2024

As shown in the table five (6) above, about 21.56% (83 respondents) Strongly agree that Regular monitoring of waste management activities in Oredo L.G.A improves the overall cleanliness of the environment. About 52.99% (204 respondents) agree with the claim. About 15.84% (61respondents) disagree and about 9.61% (37 respondents) strongly disagree with the claim. About 15.32% (59 respondent) strongly agree the current monitoring mechanisms helps in ensuring compliance with waste management regulations in Oredo L.G.A, while some 49.35% (190 participants) agree with the above claim. About 24.16% (93 respondents) disagree and the other 11.17% (43

respondents) completely disagree. About 15.58% (60 respondents) strongly agree that increased monitoring contributes to reducing illegal dumping and littering in Oredo L.G.A. Some 52.47% (202 respondents) agree with the above claim. About 20% (77 respondents) disagree and some 11.95% (46 respondents) strongly disagree. Some 18.96% (73 respondents) strongly agree that the Inhabitants are satisfied with the frequency of waste management inspections conducted by local authorities in Oredo L.G.A. About 48.05% (185 respondents) just agree to the claim. Some 21.56% (83 respondents) disagree are and some 11.43% (44 respondents) strongly disagree.

RESEARCH QUESTION THREE (3): what are the challenges affecting environmental sanitation policy on the management of waste in Oredo L.G.A Edo State, Nigeria?

TABLE 7: Challenges affecting environmental sanitation policy on the management of waste in Oredo L.G.A Edo State, Nigeria

S/N	ITEMS	S (%)	A (%)	D (%)	SD (%)	TOTAL (%)
9	Inadequate infrastructure hinders the effective implementation of Environmental Sanitation Policy in Oredo L.G.A	117 (30.38)	168 (43.64)	57 (14.81)	43 (11.16)	385 (100)
10	Dearth of public awareness and education regarding waste management practices in Oredo L.G.A	72 (18.70)	198 (51.43)	64 (16.62)	51 (13.25)	385 (100)
11	The major challenge is insufficient funding in addressing waste management challenges in Oredo L.G.A:	66 (17.14)	186 (48.31)	87 (22.60)	49 (12.73)	385 (100)

12	inadequate enforcement of environmental regulations contributes to the ineffective management of waste in Oredo L.G.A	60 (15.58)	202 (52.47)	83 (21.56)	39 (10.13)	385 (100)
13	Improper waste disposal practices by residents impact the success of Environmental Sanitation Policy in Oredo L.G.A	73 (18.96)	181 (47.01)	88 (22.86)	43 (11.17)	385 (100)
TOTAL	385					

Source: field work, 2024.

As shown in table 7 above, some 30.39% (117 respondents) strongly agree that Inadequate infrastructure hinders the effective implementation of Environmental Sanitation Policy in Oredo L.G.A. Some 43.63% (168 respondents) agreed to the claim. About 14.81% (57 respondents) disagree and the other 11.17% (43 respondents) strongly do not agree. Some 18.70% (72 respondents) strongly agrees that there is a Dearth of public awareness and education regarding waste management practices in Oredo L.G.A, which may indirectly affect students' academic experiences, and some 51.43% (198 respondents) agree with the claim. About 16.62% (64 respondents) disagree and the other 13.25% (51 respondents) strongly do not agree. About 17.14%

(66 respondents) strongly agrees that the major challenge is insufficient funding in addressing waste management challenges in Oredo L.G.A. some citizens, about 48.31% (186 respondents) agree to the above claim but some 22.60% (87 respondents) disagree. Some 12.73% (49 respondents) strongly does not agree. About 15.58% (60 respondents) strongly agreed that inadequate enforcement of environmental regulations contributes to the ineffective management of waste in Oredo L.G.A Some 52.47% (202 respondents) agreed with the above claim and about 21.56% (83 respondents) disagreed and some 10.13% (39 respondents) strongly disagree. About 18.96% (73 respondents) strongly agree with the claim that improper waste disposal practices by residents impact the success of Environmental Sanitation Policy in Oredo L.G.A. Some 47.01% (181 respondents) agree with the above claim, while some 22.86% (88 respondents) disagree. About 11.17% (43 respondents) strongly disagree with the claim.

4.4 TEST OF HYPOTHESES

TEST OF HYPOTHESIS ONE (1):

H0: There is no significant relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA.

Hr: There is a significant relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA.

Question 4: Proper management of waste have a crucial impact on the overall quality of life in Oredo L.G.A

Table 8

RESPONSES	MALE	FEMALE	TOTAL
STRONGLY AGREE	40	33	73
AGREE	75	125	200
DISAGREE	34	37	71
STRONGLY DISAGREE	36	5	41
TOTAL	185	200	385

Source: Field Work 2024

Using Chi Square (x^2)

Chi-squared Test/Formula

$\chi^2 = \Sigma(O_i - E_i)^2/E_i$

x^2 = Chi square

Oi Observed value

E_i Expected value

Table 9

CONTINGENCY TABLE

Cells	O_i	E_i	$O_i - E_i$	$(O_i - E_i)^2$	$(O_i - E_i)^2$/Ei
A	40	35.08	4.92	24.21	0.69
B	33	37.92	-4.92	24.21	0.63
C	75	96.10	-24.10	580.81	6.04
D	125	103.90	24.10	580.81	5.59
E	34	34.12	-0.12	0.01	0.0003
F	37	36.88	0.12	0.01	0.0003
G	36	19.70	16.3	265.69	13.49
H	5	21.30	-16.3	265.69	12.47
TOTAL					38.91

$X^2 = 38.91$

Degree of freedom (R-1)(C-1)

(4-1)(2-1) = 3

Significance level 0.05

Research Result:

Calculated X^2= 38.91

Critical X^2 =7.82

α= 0.05

Research Decision: data are statistically significant due to the calculated X^2 of 38.91 being greater than the critical X^2 of 7.82 at α, 0.05. hence the study rejects the Null hypothesis (Ho) and accepts the alternate hypothesis (Hr).

To examine the extent of the relationship, the Pearson's correlation coefficient(C) is employed.

$$C = \sqrt{\frac{X^2}{N+X^2}}$$

$$C = \sqrt{\frac{38.91}{385+38.91}}$$

$$C = \sqrt{\frac{38.91}{423.91}}$$

$$C = \sqrt{0.092}$$

C= 0.30

Interpretation: There is a medium positive relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA.

TEST OF HYPOTHESIS 2

H0: There is a negative relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A

Hr: There is a positive relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A

QUESTION 7: Increased monitoring contributes to reducing illegal dumping and littering in Oredo L.G.A

Table 10

Responses	Male	Female	Total
Strongly Agree	28	32	60
Agree	92	110	202
Disagree	49	28	77
Strongly Disagree	16	30	46
Total	185	200	385

Source Field work 2024

Using Chi Square (x^2)
Chi-squared Test/Formula
$\chi^2 = \Sigma(O_i - E_i)^2/E_i$
x^2 = Chi square
Oi Observed value
E_i Expected value

Table 11

CONTINGENCY TABLE

Cell	O_i	E_i	O_i - E_i	$(O_i - E_i)^2$	$(O_i{}^1 - E_i)^2$/Ei
A	28	28.83	-0.83	0.69	0.02
B	32	31.17	0.83	0.69	0.02
C	92	97.66	-5.66	32.04	0.33
D	110	104.94	5.66	32.04	0.31
E	49	37	12	144	3.89
F	28	40	-12	144	3.6
G	16	22.10	-6.1	37.21	1.68
H	30	23.90	6.1	37.21	1.56
TOTAL					11.41

$X^2 = 13.74$

Degree of freedom (R-1)(C-1)

(4-1)(2-1) =3

Research Result:

Calculated X^2= 11.41

Critical X^2 =7.82

α= 0.05

Research Decision: data are statistically significant due to the calculated X^2 of 11.41 being greater than the critical X^2 of 7.82 at α, 0.05. hence the study rejects the Null hypothesis (Ho) and accepts the alternate hypothesis (Hr).

To examine the extent of the relationship, the Pearson's correlation coefficient(C) is employed.

$$C = \sqrt{\frac{X^2}{N+X^2}}$$

$$C = \sqrt{\frac{11.41}{385+11.41}}$$

$$C = \sqrt{\frac{11.41}{396.41}}$$

$$C = \sqrt{0.029}$$

C= 0.17

Interpretation: There is a low positive relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A

TEST OF HYPOTHESIS THREE

H0: There is no relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government.

Hr: There is a relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government.

QUESTION 9: Inadequate infrastructure hinders the effective implementation of Environmental Sanitation Policy in Oredo L.G.A

Staff Table 12

Responses	Male	Female	Total
Strongly Agree	48	69	117
Agree	79	89	168
Disagree	30	27	57
Strongly Disagree	28	15	43
Total	185	200	385

Source Field work 2024

Using Chi Square (x^2)

Chi-squared Test/Formula

$\chi^2 = \Sigma(O_i - E_i)^2/E_i$

x^2 = Chi square

Oi Observed value

E_i Expected value

Table 11

CONTINGENCY TABLE

Cell	O_i	E_i	O_i - E_i	$(O_i$ - $E_i)^2$	$(O_i$ ¹- $E_i)^2$/Ei
A	48	56.22	-8.22	67.57	1.20
B	69	60.78	8.22	67.57	1.11
C	79	80.72	-1.72	2.97	0.04
D	87	87.27	-0.27	0.07	0.0008
E	30	27.40	2.60	6.76	0.25
F	27	29.61	-2.61	6.81	0.23
G	28	20.66	7.34	53.88	2.61
H	15	22.32	-7.32	53.58	2.40
TOTAL				7.84	

$X^2 = 7.84$

Degree of freedom (R-1)(C-1)

(4-1)(2-1) =3

Research Result:

Calculated $X^2 = 7.84$

Critical $X^2 = 7.82$

$\alpha = 0.05$

Research Decision: data are statistically significant due to the calculated X^2 of 7.84 being greater than the critical X^2 of 7.82 at α, 0.05. hence the study rejects the Null hypothesis (Ho) and accepts the alternate hypothesis (Hr).

To examine the extent of the relationship, the Pearson's correlation coefficient(C) is employed.

$$C = \sqrt{\frac{X^2}{N+X^2}}$$

$$C = \sqrt{\frac{7.84}{385+7.84}}$$

$$C = \sqrt{\frac{7.84}{392.84}}$$

$$C = \sqrt{0.02}$$

$$C = 0.14$$

Interpretation: There is a low positive relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government.

4.5 DISCUSSION OF FINDINGS:

Results in table 2-4 shows that majority of the respondents were females, from table 2, in table 3 the age range with the most respondents is that between the ages of 36-40. The six(6) wards recorded most of its respondents to this research work as married, with about 151 respondents, with the lowest being divorced with 71 persons as shown in table 3. In table 4, we saw that most were educated and hold the HND/BSc degree(111 respondents), with only 45 respondents having a PhD Degree. Despite the educational qualifications, most responded to being business inclined and self employed (112 and 111 respectively).

In the course of addressing the first research question of the study, it was discovered that There is no significant relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA A notable reason being that policies no matter how well planned and well meaning, needs proper execution and machineries to ensure that it functions as requires

Noble intentions of the government are, and they have not been followed through with proper implementation and its mechanisms. Implementation is one crucial aspect of any planning exercise. When plans do no result to tangible change, it represents a waste of planning resources. Within the sanitation policy context, where resources of

all types are generally scarce, successful implementation is the most critical of all issues in the process of planning growth and development.

Table 10 considered the relationship between Increased monitoring and how it contributes to reducing illegal dumping and littering in Oredo L.G.A. it found out that there is a negative relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A. this means that despite the government best efforts to curb illegal waste disposal, this doesn't affect the sociological impact of waste. For those living close to the land fill site or dump grounds the stench of waste is an issue to contend with. They suffer difficulty breathing due to the fumes and dust and smell from this dump sites. They also negatively impact the environment. Landfills produce leachate and gas emissions, which enter the environment around the land fill poisoning the ground water and air. The bottom line is that waste doesn't disappear in the long run it still comes back to affect negatively the human environment and heir health. No amount of engineering and waste disposal technique has been able to completely get rid of the sociological impacts of waste.

Table 13 the last item on the research question sought to find out if inadequate infrastructure hinders the effective implementation of Environmental Sanitation Policy in Oredo L.G.A. Infrastructures such as policies, institutions, agencies who would make sure that the overall goal of management is effectively met. The study looked at the adequacy of such structures to see how best they function in Oredo local government. When certain institutions are improved upon by, there is the strong

believe that exists that these measures or sanitation policies, when they are put in place, illegal waste disposal will be curbed to an extent.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

There are many ways environmental sanitation and management of waste affects proper waste management in Oredo local government. In this study, the most common ways in the order of their popularity include: the improvement of public health in Oredo L.G.A. in order to accomplish this regular monitoring teams were set up to check the overall cleanliness of the environment, thus ensuring compliance. Structures were put in place to implement the sanitation policies, to raise awareness, enforce environmental health among all other things.

This study was carried out to investigate the Environmental Sanitation Policy and the Management of Waste in Oredo Local Government in Edo State, Nigeria. To achieve this objective, three research questions and two research hypotheses for each question, were formulated to guide the researcher. A structured questionnaire was used as the major instrument to obtain data from 400 selected respondents in the six (6) selected wards. Out of this number, 385 (96.25%) copies of questionnaire were appropriately completed and returned to the researcher while 15 (3.89%) copies of the questionnaire not were completed and returned to the researcher. The data collected from the respondents were analyzed using simple percentage while Chi-square statistical tool

was employed to analyze the research hypotheses. The findings revealed amongst others that, there is a medium positive relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo LGA, there is a low positive relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A, and there is a low positive relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government

5.2 Conclusion

This research indicates there is a medium significant relationship between the effectiveness of environmental sanitation policy on the management of waste in Oredo local government area. That is the more effective the sanitation policy the, effective the management strategy and result of the management process would be. The research also found out that there is a low positive relationship between the monitoring of waste management and the sociological impact of waste on Oredo L.G.A. That means that waste management monitoring does not necessarily change or affect the sociological condition or status of the society. The research also found out that there is a low positive relationship between the challenges affecting environmental sanitation policy and the management of waste in Oredo government. Challenges to the management policies are not, in all most cases, affect the poor sanitation status of Oredo Local Government Area.

5.3 Recommendations

The researcher, Based on the findings of the study, made the following recommendations:

Based on the research findings regarding environmental sanitation policy and waste management in Oredo LGA, here are some recommendations:

1. Enhance Policy Implementation: Strengthen the implementation of environmental sanitation policies to improve waste management effectiveness in Oredo LGA.

2. Invest in Education and Awareness: Increase public awareness and education programs to promote responsible waste disposal practices among residents.

3. Upgrade Waste Management Infrastructure: Invest in modern waste management infrastructure such as recycling facilities and waste treatment plants to handle waste efficiently.

4. Community Engagement and Participation: Encourage community involvement in waste management initiatives through community clean-up events, volunteer programs, and neighborhood recycling schemes.

5. Promote Sustainable Practices: Encourage the adoption of sustainable practices such as composting, waste segregation, and reduction of single-use plastics.

6. Enhance Monitoring and Enforcement: Strengthen monitoring mechanisms to ensure compliance with waste management regulations and enforce penalties for non-compliance.

7. Invest in Technology Solutions: Explore the use of technology such as waste tracking systems and mobile applications to improve waste collection, sorting, and disposal processes.

8. Capacity Building: Provide training and capacity building programs for waste management personnel to enhance their skills and knowledge in effective waste management practices.

9. Public-Private Partnerships: Foster partnerships between the government, private sector, and civil society organizations to leverage resources and expertise for waste management initiatives.

10. Incentivize Recycling: Introduce incentives for recycling initiatives such as cash rewards or tax breaks for businesses and individuals who actively participate in recycling programs.

11. Strengthen Research and Data Collection: Conduct further research to better understand the sociological impact of waste and use data-driven insights to inform waste management strategies.

12. Improve Waste Collection Systems: Optimize waste collection schedules, routes, and methods to ensure timely and efficient removal of waste from residential and commercial areas.

13. Public Health Awareness: Highlight the public health implications of poor waste management practices to emphasize the importance of proper waste disposal for community well-being.

14. Encourage Green Innovation: Support the development and adoption of green technologies and innovations for waste management, such as biodegradable packaging and energy recovery from waste.

15. Policy Review and Adaptation: Continuously review and adapt environmental sanitation policies based on feedback, research findings, and evolving waste management challenges to ensure their relevance and effectiveness over time.

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APPENDIX I

APPENDIX ONE (1)

Department of Public Administration,
Faculty of Social Sciences,
University of Benin,
Benin City.

Dear Respondent,

QUESTIONNAIRE

I am a final year student of the above named institution currently undertaking research on **'THE ENVIRONMENTAL SANITATION POLICY AND THE MANAGEMENT OF WASTE IN OREDO LOCAL GOVERNMENT, EDO STATE, NIGERIA'.** Please kindly respond sincerely to the questions by ticking [√] where applicable. Your responses which are needed for research purposes only will be treated with high level of confidentiality and used purely for academic purposes. I appeal that you fill/tick this questionnaire to the best of your knowledge as the information given by you, will be strictly used for the purpose of this study.

Thank you for your anticipated cooperation.

Yours faithfully,

_____

Atanmoh Isioma Precious

(RESEARCHER)

SECTION A: DEMOGRAPHICS

Please kindly tick appropriately in the box/ column below

1. Gender: Male [ ] Female [ ]

2. Age: under 30yrs [ ] 31 – 35yrs [ ] 36-40yrs [ ] 41 yrs and above [ ]

3. Marital Status: single [ ] Married [ ] Divorced [ ] Widow/Widower [ ]

4. Educational qualification: WAEC/GCE [ ] OND/NCE[ ] HND/B.Sc [ ] postgraduate [ ] PhD [ ]

5. Occupational Status: Civil servant [ ] Self- employee [ ] Business [ ] Farmer [ ] others specify: _____

SECTION B:

INSTRUCTION: please tick your option amongst the options provided in each question

Note: Strongly Agree (SA); Agree (A); Undecided (U); Disagree (D); Strongly Disagree(SD)

	THE EFFECT OF ENVIRONMENTAL SANITATION POLICY AND THE MANAGEMENT OF WASTE IN OREDO L.G.A OF EDO STATE, NIGERIA.	**SA**	**A**	**U**	**D**	**SD**

6	The Environmental Sanitation Policy implemented in Oredo L.G.A effectively addresses the waste management issues in the area."					
7	The inhabitants are satisfied with the current waste management practices in Oredo L.G.A					
8	The Environmental Sanitation Policy has improved public health in Oredo L.G.A					
9	Proper management of waste have a crucial impact on the overall quality of life in Oredo L.G.A					
	Survey On The Effect Of Monitoring On Waste Management In Oredo L.G.A					

10	Regular monitoring of waste management activities in Oredo L.G.A improves the overall cleanliness of the environment.					
11	The current monitoring mechanisms helps in ensuring compliance with waste management regulations in Oredo L.G.A					
12	Increased monitoring contributes to reducing illegal dumping and littering in Oredo L.G.A					
13	The Inhabitants are satisfied with the frequency of waste management inspections conducted by local authorities in Oredo L.G.A					

	Survey on the challenges affecting environmental sanitation policy on the management of waste in Oredo L.G.A Edo State, Nigeria.					
14	Inadequate infrastructure hinders the effective implementation of Environmental Sanitation Policy in Oredo L.G.A					
15	Dearth of public awareness and education regarding waste management practices in Oredo L.G.A					
16	The major challenge is insufficient funding in addressing waste management challenges in Oredo L.G.A:					
17	inadequate enforcement of environmental regulations contributes to the ineffective management of waste in Oredo L.G.A					
18	Improper waste disposal practices by residents impact the success of Environmental Sanitation Policy in Oredo L.G.A					

APPENDIX TWO (2)

Hypothesis 1

Cell A = (A+B)(A+C+E+G)/n

= (40+33)(40+75+34+36)/385

= 73*185/385 =35.08

Cell B = (B+A)(B+D+F+H)/n

= (33+40)(33+125+37+5)/385

= 73*230/385 = 37.92

Cell C =(C+D)(C+A+E+G)/n

= (75+125)(75+40+34+36)/385

= 200*185/385 =96.10

Cell D = (D+C)(D+B+F+H)/n

= (125+75)(125+33+37+5)/385

= 200*200/385 =103.90

Cell E = (E+F)(E+A+C+G)/n

= (34+37)(34+75+40+36)/385

= 71*185/385

= 34.12

Cell F= (F+E)(F+B+D+H)/n

= (37+34)(37+125+33+5)/385

=71*200/385 = 36.88

Cell G= (G+H)(G+A+C+E)/n

= (36+5)(36+40+75+34)/385

=41*185/385 =19.70

Cell H= (H+G)(H+B+D+F)/n

= (5+36)(5+33+125+37)/385

= 41*200/385 =21.30

Hypothesis 2

Cell A = A+B)(A+C+E+G)/n

= (28+32)(28+92+49+16)/385

= 60*185/385 =28.83

Cell B= (B+A)(A+C+E+H)/n

= (32+28)(32+110+28+30)/385

60*200/385= 31.17

Cell C= (C+D)(D+B+F+H)/n

= (92+110)(92+28+49+16)/385

= 202*185/385 =97.66

Cell D= (D+C)(D+B+F+H)/n

=(110+92) (110+32+28+30)/385

= 202*200/385 =104.94

Cell E =(E+F)(E+A+C+G)/n

=(49+28)(49+28+92+16)/385

= 77*185/385=37

Cell F= (F+E)(F+B+D+H)/n

= (28+49)(28+32+110+30)/385

= 77*200/385= 40

Cell G= (G+H)(G+A+C+E)/n

= (16+30)(16+28+92+49)/385

=46*185/385 =22.10

Cell H = (H+G)(H+F+D+B)

= (30+16)(30+32+110+28)/385

= 46*200/385 = 23.90

Hypothesis 3

Cell A = (A+B)(A+C+E+G)/n

= (48+69)(48+79+30+28)/385

= 117*185/385 =56.22

Cell B= (B+A)(B+D+F+H)/n

=(69+48)(69+89+27+15)/385

= 117*200/385 =60.78

Cell C= (C+D)(C+A+E+G)/n

= (79+89)(79+48+30+28)/385

= 168*185/385 =80.72

Cell D= (D+C)(D+B+F+H)/n

= (89+79)(89+69+27+15)/385

= 168*200/385 =87.27

Cell E= (E+F)(E+A+C+G)/n

= (30+27)(30+48+79+28)/385

= 57*185/385 = 27.40

Cell F= (F+G)(F+B+D+H)/n

= (27+30)(27+69+89+15)/385

= 57*200/385 =29.61

Cell G = (G+H)(G+A+C+G)/n

= (28+15)(28+48+79+30)/385

43*185/385 =20.66

Cell H = (H+G)(H+B+D+F)/ n

= (15+28)(15+69+89+27)/385

= 43*200/385 =22.34