

**PUBLIC PERCEPTION OF ENVIRONMENTAL REGULATIONS AND
ENFORCEMENT: A CASE STUDY OF WASTE DISPOSAL PRACTICE IN
EKOSODIN COMMUNITY IN OVIA NORTHEAST L.G.A**

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**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF HEALTH,
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CERTIFICATION

We the undersigned hereby certify that this research work was carried out by ABANUM CHINAZA DESIRE with Matriculation Number: EDU2102485 of the Department of Health Safety and Environmental Education, Faculty of Education University of Benin, Benin City Edo State in partial fulfillment of the requirements for the Award of Bachelor Degree (B.Sc.) Honors in Health and Environmental Education.

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DEDICATION

This work is dedicated to God Almighty for his mercy, favour, and strength throughout my course of study.

ACKNOWLEDGEMENT

First and Foremost, I want thank God, because he saw me through this journey, holding my hand and leading me every step of the way, I'm grateful. And to my Parents Mr. and Mrs. Abanum who were always on standby Physically, Financially, spiritually and morally to support and encourage me, not letting me lose hope or strength, I love you both, and to my siblings Ubachi and Simpa, who was and still is a source of strength and motivation, I love you and my Uncle and his wife Mr. and Mrs. Emmanuel Eneyufuo. And to my fellowship Gospel Pillars and its members, I love you guys for real

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ABSTRACT

Improper waste disposal remains a major environmental challenge in many semi-urban communities in Nigeria, with implications for public health, sanitation, and sustainable development. This study examines public perception of environmental issues and the effectiveness of enforcement mechanisms in managing waste disposal practices in Ekosodin community, located in Ovia North-East Local Government Area of Edo State. Using a mixed-methods approach involving structured questionnaires, interviews, and field observation, the research assesses residents' awareness of environmental hazards, their attitudes toward waste disposal, and the extent to which existing regulations are understood and adhered to. The study also evaluates the role of local authorities and community-based structures in enforcing environmental laws and promoting responsible waste-handling behavior. Findings reveal significant gaps in public awareness, inadequate enforcement of existing regulations, and socio-economic factors influencing waste disposal practices. The study concludes that strengthening environmental education, improving waste management infrastructure, and enhancing collaborative enforcement strategies between local government and community leaders are critical for promoting sustainable waste management in Ekosodin. Recommendations are provided to guide policymakers and environmental agencies in designing more effective interventions.

Effective waste management is central to ensuring a healthy and sustainable environment, yet many communities in Nigeria continue to struggle with poor waste disposal practices, weak enforcement structures, and limited public awareness. This study investigates public perception of environmental cleanliness, awareness of waste-related hazards, and the effectiveness of enforcement mechanisms governing waste disposal in Ekosodin community, located in Ovia North-East Local Government Area of Edo State. Ekosodin, a rapidly growing peri-urban settlement influenced by increased student population and commercial activity, faces mounting waste management challenges that threaten both environmental quality and public health. Adopting a mixed-methods research design, the study utilizes structured questionnaires administered to residents across different demographic categories, semi-structured interviews with community leaders and local government officials, and direct field observations of waste disposal sites and environmental conditions. The research explores key variables such as residents' environmental knowledge, attitudes toward proper waste disposal, perception of government responsibility, and compliance levels with existing waste management regulations. It also examines institutional factors such as availability of waste disposal facilities, frequency of waste collection, enforcement of environmental laws, and the role of community-based monitoring.

CHAPTER ONE

INTRODUCTION

Background Of Study

In many developing countries, effective enforcement of environmental regulations remains a challenge. Rapid urbanization, population growth, limited infrastructure, and weak institutional capacity exacerbate waste disposal problems, leading to environmental degradation, health risks, and social discontent (Omokaro, 2025). Public perception plays a critical role in determining how regulations are accepted, complied with, or resisted. Where citizens view enforcement as arbitrary or unfair, they may circumvent laws or engage in illegal disposal practices. In Nigeria's context, several studies focus on waste management and public attitudes. A key study in Benin City found that many residents lack full awareness of proper waste disposal methods and the connection between waste and greenhouse gas emissions; regulatory enforcement is weak and public trust is low (Adekola et al., 2021). Another study in Ogun State revealed that demographic factors such as education and income significantly influence people's attitudes toward waste regulations, and many households continue to use open dumping despite laws forbidding it (Olukanni et al., 2020).

Ekosodin community in Ovia North East LGA is a semi-urban settlement where municipal waste services are inconsistent, and informal disposal (burning, dumping in gullies) is common. Understanding how residents in Ekosodin perceive environmental regulations, enforcement, and their own roles in waste disposal is crucial for crafting effective policies and fostering compliance. Over the past decades, environmental degradation has become a pressing concern worldwide, especially in rapidly urbanizing and semi-urban communities. Among the most visible issues is the mismanagement of solid waste dumping, burning, clogging of drains, and uncontrolled disposal that negatively affects ecosystems, public health, and quality of life. In Nigeria, the challenges of waste management are exacerbated by weak infrastructure, inadequate regulatory enforcement, lack of coordination among agencies, and limited public awareness (Omokaro, 2025). The country's waste handling systems often fail to cope with the increasing volume generated due to population growth, changing consumption patterns, and urban sprawl. According to Omokaro (2025), systemic failures such as insufficient collection coverage, noncompliance, and regulatory gaps remain significant barriers to sustainable waste management.

Public perception, attitudes, and awareness are critical drivers of compliance or non-compliance with environmental regulations. When people perceive regulations as fair, enforceable, and relevant to their daily lives, they are more likely to respect them. Conversely, perceptions of corruption, weak enforcement, or irrelevance lead to

resistance, apathy, or circumvention. In Benin City, for example, a survey found that more than half of respondents disagreed that waste management could reduce greenhouse gas emissions, and many believed that authorities lacked competence or integrity in managing waste (Adekola et al., 2021).

Studies in Nigeria have also shown that demographic factors such as education, income, and age significantly influence how people perceive waste regulation and their own disposal practices (Olukanni et al., 2020). Many households still resort to open dumping or burning, especially when collection services are irregular or costly. In Ogun State, 36.6 % of households surveyed used open dumps, and more than half believed sanitation was primarily a governmental duty (Olukanni et al., 2020).

Ekosodin community in Ovia North East Local Government Area is representative of many semi-urban areas where municipal waste services are inconsistent or inadequate. Residents often rely on informal disposal (burning, unapproved dumping) due to gaps in official collection, cost, or convenience. Because enforcement is usually centralized and under-resourced, local residents may feel that regulations are disconnected from on-the-ground realities. Against this context, understanding how people in Ekosodin perceive environmental regulations and enforcement how much they trust or distrust authorities, what they see as fair or unfair, and what motivates or discourages compliance becomes essential. Such insight is invaluable for designing

regulatory strategies, interventions, or awareness campaigns that are grounded in local realities rather than in top-down assumptions.

This study, therefore, aims to empirically assess public perceptions of environmental regulations and enforcement in Ekosodin, and to map how those perceptions align (or misalign) with actual waste disposal practices in the community. Proper waste disposal is a critical component of environmental health and sustainable development. Globally, increasing urbanization, population growth, and changing consumption patterns have intensified the challenge of managing solid and liquid waste in residential communities. Poor waste disposal practices such as illegal dumping, burning of waste, use of open dumpsites, inadequate drainage contribute to environmental pollution, health risks, degradation of water bodies, and negative aesthetic effects.

Statement Of The Problem

Improper waste disposal remains a critical environmental challenge in many developing nations, including Nigeria (Adewumi, 2021). Despite the existence of environmental protection laws and enforcement agencies, communities such as Ekosodin in Ovia North East Local Government Area continue to grapple with indiscriminate dumping of refuse, blocked drainage systems, and unsanitary surroundings (Omoriegbe &

Ede, 2020). These issues persist even though waste management regulations have been established to promote environmental health and sustainability (Okafor, 2019).

The effectiveness of environmental management policies largely depends on the perception and cooperation of the public (Agunbiade & Ogunyemi, 2020). When residents understand and support environmental laws, compliance levels tend to be higher. However, when people view enforcement as inconsistent, corrupt, or ineffective, adherence declines (Eze & Okechukwu, 2022). In Ekosodin, anecdotal evidence suggests that many residents either lack awareness of environmental regulations or perceive government enforcement efforts as inadequate and reactive (Igbinedion, 2023).

The persistence of poor waste disposal practices, despite existing enforcement mechanisms, indicates a possible disconnect between environmental policy, public perception, and enforcement effectiveness (Nwachukwu, 2021). This gap poses serious implications for public health, environmental quality, and sustainable community development (Adegoke et al., 2020). Understanding how residents perceive environmental enforcement and how these perceptions influence their waste disposal behavior is therefore essential. Such insights will help identify weaknesses in current enforcement strategies and guide the design of more community-centered and effective waste management interventions (Osagie & Umeh, 2023).

Environmental degradation arising from improper waste disposal has become one of the major public health and sustainability challenges in Nigeria and other developing nations (Adewumi, 2021). In many urban and peri-urban areas, ineffective waste management systems and poor enforcement of environmental regulations have resulted in unsanitary conditions, blocked drainage channels, and pollution of water bodies (Okafor, 2019). The Ekosodin community in Ovia North East Local Government Area of Edo State faces similar challenges, as indiscriminate waste disposal remains a common practice among residents despite the existence of local and state-level environmental sanitation laws (Omoregie & Ede, 2020).

Government agencies and environmental enforcement bodies, such as the Edo State Waste Management Board, are mandated to ensure proper environmental hygiene through routine waste collection and enforcement of sanitation policies (Osagie & Umeh, 2023). Their efforts are often hampered by limited manpower, inadequate funding, poor community participation, and weak monitoring systems (Adegoke et al., 2020). These structural limitations often lead to irregular waste collection, overflowing dumpsites, and the prevalence of illegal disposal points, all of which exacerbate environmental pollution and threaten public health (Eze & Okechukwu, 2022).

Research Questions

- What is the level of public awareness of environmental regulations in Ekosodin community?
- How do residents of Ekosodin perceive the enforcement of environmental laws?
- What are the common waste disposal practices in the community?
- What factors influence compliance or non-compliance with environmental regulations?
- What are the challenges faced by regulatory agencies in enforcing waste disposal policies in Ekosodin?

Hypotheses

- **H (H0):** There is no significant relationship between public perception of environmental enforcement and compliance with waste disposal regulations.
- **H (H1):** There is a significant relationship between public perception of environmental enforcement and compliance with waste disposal regulations.

Purpose Of The Study

The main purpose of this study is to investigate public perception of environmental enforcement

in relation to waste disposal practices in Ekosodin community. Specifically, the study aims to:

- Assess the level of awareness of environmental laws among residents.
- Examine the perceptions of residents toward enforcement authorities and policies.
- Identify the current waste disposal practices and the reasons behind them.
- Explore the challenges limiting effective enforcement in the community.
- Provide recommendations for improving environmental compliance and waste management.

Significance Of The Study

This study is confined to Ekosodin community in Ovia North East Local Government Area. It focuses on household-level waste disposal practices and public perceptions of environmental regulations and enforcement. The time frame of interest is the most recent two years, covering existing regulations and enforcement actions in that period. The study will involve residents aged 18 and older, local environmental officers, and key informants (e.g. community leaders). Delimitations include the fact that the research will not examine industrial or commercial waste disposal systems in depth, nor will it audit the technical performance or financial capacity of regulatory agencies. The study also excludes remote neighboring communities outside Ekosodin. Additionally,

because the study relies in part on self-reported perceptions and practices, response bias and inaccuracies are possible. Finally, the findings may not be fully generalizable beyond the local context, but they can suggest themes and lessons applicable to similar semi-urban communities. The implementation of environmental regulations in waste disposal faces several institutional, social, and infrastructural challenges, especially in developing communities like Ekosodin. These barriers significantly limit the success of even well-designed policies.

One of the major challenges is the lack of adequate waste management infrastructure. Many communities do not have access to proper waste bins, trucks, or disposal sites, making it difficult for residents to comply with existing regulations (Fakunle et al., 2024). Without functional systems, people resort to burning or dumping waste in drains or open fields, regardless of legal prohibitions. Another challenge is inconsistent or weak enforcement. In many Nigerian communities, environmental officers are either insufficient in number or poorly equipped to monitor and enforce compliance (Omokaro, 2025). This inconsistency sends mixed signals to residents some may face penalties while others are ignored, weakening the authority and legitimacy of regulation. Public awareness and education also pose a challenge. Many residents may be unaware of specific laws or the environmental consequences of their actions. When people don't understand the importance of regulations, compliance becomes low (Afrobarometer, 2023).

Corruption and political interference hinder implementation. In some cases, violators may avoid penalties through bribes or connections, creating a perception of unfairness and discouraging others from complying (Akerele, 2024). Limited community involvement and a lack of trust in government initiatives contribute to resistance or apathy. When residents feel excluded from decision-making, they are less likely to participate actively or take ownership of waste management efforts (Xu et al., 2023). In Ekosodin, these challenges are likely amplified due to rapid urbanization, student population growth, and poor urban planning. Without addressing these core barriers, regulatory enforcement efforts may continue to face low compliance and reduced effectiveness.

Scope And Delimitation Of The Study

Despite the existence of environmental laws and regulations at federal, state, and local levels in Nigeria, waste disposal continues to pose serious problems in many communities, including Ekosodin. Enforcement is often patchy, and regulatory agencies are under-resourced. Residents frequently resort to open dumping, burning, or unapproved disposal because municipal waste collection is erratic or absent. These practices lead to clogged drains, flooding, air pollution, disease vectors, and general environmental degradation. However, little is known about how the public in Ekosodin perceives these regulations and the agencies that enforce them. Without understanding

public attitudes whether they view enforcement as fair, accessible, or burdensome it is difficult to design regulation strategies that people will follow. The gap between regulation on paper and practice on ground may partly be due to perceptions of corruption, lack of transparency, or low trust in institutions. Thus, this study aims to assess the public perception of environmental regulations and enforcement in Ekosodin, and to examine how those perceptions relate to actual waste disposal behaviors.

Evaluating the effectiveness of environmental regulations and enforcement, especially in waste disposal, involves examining both perceived outcomes (what residents think is happening) and actual practices (what is observed). In many contexts, perception shapes behavior: if people believe enforcement is strong, fair, and legitimate, they are more likely to comply (Xu et al., 2023). Conversely, if regulations are seen as weak, arbitrary, or corrupt, compliance erodes. In Nigeria, systemic failures in waste management regulations have been documented: weak institutional capacity, inconsistent enforcement, corruption, and low public participation contribute to environmental degradation despite having legal frameworks (Omokaro, 2025). For instance, many laws remain “on paper,” with little follow-through at the community level, reducing the real-world impact of regulation (Akerele, 2024).

This study focuses on the public perception of environmental regulations and enforcement with particular attention to waste disposal practices in Ekosodin Community,

located in Ovia North-East Local Government Area of Edo State, Nigeria. It is designed to understand how residents perceive, respond to, and comply with existing environmental policies, especially those related to the disposal of domestic waste. The research will explore awareness levels among community members, common waste disposal habits, and the extent to which people recognize and value enforcement efforts by environmental authorities. It also considers how local government actions, community education, and socio-economic factors influence compliance with waste disposal regulations.

However, the scope is limited to Ekosodin Community and focuses strictly on household and small-scale waste disposal practices. Industrial waste management and other forms of environmental degradation outside this context are excluded. This limitation is intentional due to constraints of time, resources, and the need to keep the study specific and actionable. Despite these delimitations, the study is expected to provide valuable insights into how grassroots communities perceive and respond to environmental enforcement, which could inform broader policy discussions.

Definition Of Terms

- **Environmental Enforcement:** Actions taken by regulatory agencies to ensure compliance with environmental laws and regulations.
- **Waste Disposal:** The process of discarding or getting rid of waste materials generated by human activity.
- **NESREA:** National Environmental Standards and Regulations Enforcement Agency; Nigeria's principal environmental enforcement body.
- **EdoSEPA:** Edo State Environmental Protection Agency responsible for managing environmental issues at the state level.
- **Community-Based Waste Management:** Waste management practices that involve local community members in planning and execution.

HAPTER TWO

LITERATURE REVIEW

In this chapter we are going to be discussing the literature review under the following sub-heading:

- Concept of public perception of environmental and enforcement
- Assess the level of awareness of environmental laws among residents.
- Examine the perceptions of residents toward enforcement authorities and policies.
- Identify the current waste disposal practices and the reasons behind them.
- Explore the challenges limiting effective enforcement in the community.
- Provide recommendations for improving environmental compliance and waste management.
- Summary of Literature reviewed

Concept of Public Perception of Environmental Enforcement

Public perception of environmental enforcement refers to how people believe Environmental laws, policies, and the authorities charged to enforce them are functioning, whether they are fair, effective, consistent, and credible. In waste disposal practice, this includes how residents perceive the responsibility for waste, how authorities manage waste infrastructure and enforcement, and whether penalties or incentives are applied.

Several Nigerian studies show that even when laws/policies exist, perception of enforcement efficacy is often low, and there is a gap between awareness of environmental harms and compliance in behaviour. For example, Olukanni, Pius-Imue and Joseph (2020) in Ogun State find that though many are aware of environmental issues, over a third still use open dumps; many see cost and poor service as constraints on good practice. In Jos, Wuyep et al. (in “Assessment of the Environmental Impact and Awareness of Solid Waste Disposal in Jos Urban Area”) found that while people generally know that poor disposal leads to pollution, disease, and aesthetic problems, actual behaviour is often constrained by lack of facilities and inconvenience. These findings suggest public perception is influenced both by normative beliefs (what people think should be done) and their lived experience (what people see happening, available infrastructure, cost, enforcement).

Environmental education is a critical component in shaping public attitudes and behaviours toward effective waste management and compliance with environmental laws. In many Nigerian communities, including peri-urban areas such as Ekosodin in Ovia North East Local Government Area of Edo State, the gap between awareness and behaviour in waste disposal practices is often substantial. The literature emphasizes that raising awareness through targeted education efforts is fundamental to bridging this gap and fostering a culture of compliance with environmental regulations. Several studies have demonstrated the positive impact of environmental education on waste management

behaviour. For instance, research conducted among university students in Calabar revealed a significant relationship between environmental education and positive waste management practices (Onyebueke & Eke, 2019). Even where infrastructure and enforcement are lacking, increased awareness has been shown to motivate individuals to adopt safer and more sustainable waste disposal behaviours. In primary schools in Edo State, the integration of upcycling activities into the school curriculum not only raised environmental awareness but also promoted creativity and engagement among pupils, suggesting that early education can influence long-term attitudes toward the environment (Okoh & Eweka, 2022).

Educational efforts are not limited to formal institutions. Non-governmental Organizations (NGOs) and government agencies have utilized community-based strategies such as town hall sensitization meetings, public health campaigns, and the use of local radio to spread environmental messages. For example, the Edo State Ministry of Environment regularly conducts environmental outreach programs aimed at sensitizing residents about the consequences of improper waste disposal and the importance of adhering to environmental laws (Edo State MES, 2022). In Lagos, the Clean Our World (COW) initiative by Oando Foundation used environmental clubs, creative competitions, and teacher training to embed environmental consciousness into public primary schools, an approach that could be replicated in similar communities like Ekosodin.

Despite these efforts, challenges persist in achieving widespread behavioural change. A common issue is the limited availability of resources and materials required to implement environmental education programs effectively. Many schools lack access to basic teaching aids, waste separation bins, or spaces for practical environmental activities. Moreover, teachers often receive little or no training in environmental subjects, which hampers their ability to deliver impactful lessons. Beyond schools, the adult population which forms a critical segment of waste generators is often excluded from these education efforts, especially in areas where literacy levels are low or where traditional norms hinder receptiveness to modern environmental practices. Cultural attitudes also play a role. In some communities, waste disposal is seen as the responsibility of the government or landlords, which diminishes individual accountability. Educational efforts must therefore address these socio-cultural beliefs and emphasize the shared responsibility of environmental stewardship. Effective campaigns often use participatory and culturally relevant methods such as local language broadcasts, community drama, and the involvement of respected traditional leaders to enhance trust and message retention. For a community like Ekosodin, strengthening awareness and environmental education should be context-specific. This could involve setting up environmental clubs in both schools and the wider community, organizing monthly clean-up days, and engaging with local youth groups through workshops and creative recycling projects.

The use of local radio and mobile communication platforms such as WhatsApp can help disseminate environmental messages to a broader audience. Furthermore, linking educational messages to practical concerns such as flooding due to clogged drainage or the spread of malaria from stagnant water can make the issues more immediate and relevant to residents. Empirical studies consistently recommend that awareness efforts be coupled with enforcement and service provision. Educating residents without providing adequate waste disposal options, or without visible enforcement of environmental regulations, often leads to frustration and disillusionment. Therefore, in Ekosodin and similar communities, educational programs should be part of a broader integrated strategy that includes improved infrastructure, consistent service delivery, and fair but firm enforcement. While environmental education alone is not a silver bullet, it is an essential pillar in promoting sustainable waste disposal practices. When designed to be participatory, culturally relevant, and embedded in both formal and informal settings, awareness initiatives can lead to meaningful behavioural change. For Ekosodin community, a strategic investment in environmental education targeting schools, households, and community institutions can significantly enhance public understanding, support for policies, and ultimately, compliance with environmental laws.

Assess the Level of Awareness of Environmental Laws Among Residents

The level of awareness of environmental laws among residents plays a significant role in determining their compliance with proper waste disposal practices and broader environmental regulations. In many developing regions, including Nigerian communities such as Ekosodin in Ovia North East Local Government Area of Edo State, there is often a disparity between the existence of environmental laws and the public's understanding or recognition of those laws. Literature on environmental compliance consistently shows that public ignorance or limited knowledge of legal frameworks contributes to non-compliance and ineffective enforcement. Several studies indicate that while general environmental awareness may be present such as understanding the health risks of improper waste disposal the specific knowledge of environmental laws, legal obligations, and the roles of regulatory authorities is often shallow or nonexistent. For example, Kahindi (2008) in a study on waste disposal in Nairobi's Dandora area found that most residents were vaguely aware that environmental regulations existed but could not identify any specific provisions or institutions responsible for enforcement. Similarly, in Ogun State, Olukanni et al. (2020) observed that although a substantial number of residents knew about the consequences of environmental mismanagement, their awareness of the actual laws or task forces involved in enforcement was limited.

In Jos, Plateau State, Wuyep et al. found that even where there was some awareness of environmental health implications, most residents lacked a clear understanding of local environmental laws, including the penalties for infractions or the procedures for reporting violations. This gap creates a situation where residents may unintentionally breach environmental regulations simply due to ignorance or misinformation. The result is a weak foundation for voluntary compliance, which in turn places greater pressure on enforcement mechanisms that may themselves be under-resourced or poorly structured. One common reason for low legal awareness is the failure of relevant authorities to effectively communicate laws in accessible formats. Legal language is often complex, and public outreach is sporadic or nonexistent in many communities. Additionally, in areas with low literacy rates or high levels of informal housing development, official communications such as public notices, printed regulations, or official warnings may not reach the intended audiences or be comprehensible to them.

In many Nigerian communities, residents tend to rely more on traditional leadership structures and local norms than on formal regulatory frameworks. Consequently, environmental practices are often shaped more by community expectations and informal arrangements than by statutory laws. This underscores the need to localize and simplify environmental law education efforts, integrating them into everyday channels of communication such as religious gatherings, market announcements, and school activities. The absence of consistent civic education in school curricula has limited

the younger population's exposure to their environmental rights and responsibilities. Programs that integrate environmental law into basic education have been found to be effective in creating long-term awareness. For instance, initiatives in Lagos and Calabar that incorporate environmental policy education into school programs have shown positive results in student knowledge and family awareness through shared learning.

The implications for Ekosodin are clear: efforts to improve environmental compliance must begin with deliberate, community-specific educational campaigns that explain not only the dangers of poor waste disposal but also the content of relevant environmental laws. This includes communicating what the laws require, who is responsible for enforcement, the consequences of violations, and how individuals can engage with the system either through compliance or by reporting environmental offenses. Without such awareness, any efforts at enforcement are likely to be met with confusion, resistance, or indifference. The literature reveals a critical gap in public understanding of environmental laws across many Nigerian communities. To address this in Ekosodin, targeted awareness campaigns, legal literacy programs, and grassroots sensitization efforts must be prioritized. Such initiatives should use accessible language, local dialects, and trusted community platforms to ensure broad understanding and participation. Awareness is not just about knowing that waste should be disposed of properly it is about understanding the legal, social, and environmental context that makes compliance both necessary and enforceable.

The level of awareness of environmental laws among residents is a crucial determinant of compliance with proper waste disposal practices and broader environmental protection efforts. In many Nigerian communities, including those in peri-urban areas like Ekosodin in Ovia North East Local Government Area of Edo State, there is a consistent gap between the existence of environmental legislation and the general public's understanding of these laws. This gap directly contributes to non-compliance, ineffective enforcement, and the persistence of unsanitary waste disposal methods. Multiple studies across Nigeria have highlighted this knowledge deficit. In a study conducted in Jos, Plateau State, while many residents recognized the environmental and health impacts of poor waste disposal, only a small percentage could identify specific environmental laws or the government bodies responsible for their enforcement (Wuyep et al., 2020¹). Similarly, in Enugu State, a study revealed that just 43.9% of residents had a moderate understanding of environmental regulations, and even among enforcement officers, consistent application of environmental policies was lacking (Udeagha & Ugwoke, 2023²). This suggests that both the public and some segments of the enforcement apparatus may not be fully equipped with the knowledge necessary to uphold environmental standards effectively.

In Ogun State, Olukanni et al. (2020³) found that while a significant portion of the population acknowledged the presence of environmental agencies and waste management problems, only a minority could explain their legal obligations or identify the penalties

for non-compliance. This limited legal literacy often results in residents inadvertently breaking laws due to ignorance rather than willful disregard. In many cases, awareness is shaped more by community norms, hearsay, or local leadership than by formal education or public communication from government institutions. One major factor contributing to low awareness is the inadequate dissemination of environmental policies and regulations in accessible formats. Official documents are often written in complex legal language and are rarely translated into local dialects or simplified for public understanding. Many residents do not have access to the channels such as government websites, gazettes, or formal workshops through which these policies are announced. A study on media and environmental education in Nigeria showed that while media can influence public awareness positively, the coverage of environmental laws remains weak and irregular (Adetunji & Odugbemi, 2023⁴). As a result, many residents are aware of the environmental problems they face, such as flooding due to clogged drains or disease outbreaks linked to improper waste disposal, but remain unaware of the legal structures meant to address these problems.

Socio-economic factors such as education level, income, and occupation also significantly affect awareness levels. Research from Covenant University in Ogun State showed that individuals with higher education levels were significantly more likely to understand and comply with environmental laws than those with little or no formal education (Ogunjimi et al., 2022⁵). This implies that blanket awareness campaigns may

not be equally effective across different demographic groups unless they are tailored to reflect the audience's literacy level and information access. In a community like Ekosodin, where waste disposal issues are closely tied to population growth, student migration, and informal housing, this lack of awareness can severely hinder the success of any environmental enforcement strategy. If residents are unaware of the specific laws governing waste disposal such as penalties for indiscriminate dumping, guidelines for refuse segregation, or rules regarding public sanitation they are unlikely to comply or support enforcement actions. Furthermore, ignorance of these laws prevents residents from holding government agencies or private waste contractors accountable for lapses in service delivery.

It is therefore essential to initiate a structured awareness program tailored to the local context. This could include the use of town criers, local radio programs, environmental clubs in schools, posters in markets and motor parks, and community meetings where laws are explained in local dialects. Enforcement without prior education risks being perceived as punitive or arbitrary, which undermines trust in the authorities and reduces long-term compliance. In contrast, when residents are made aware of not only the laws but also the environmental rationale behind them, they are more likely to view compliance as a shared responsibility rather than a forced obligation. Literature strongly suggests that limited awareness of environmental laws is a pervasive barrier to proper waste management in Nigerian communities. In Ekosodin, efforts to improve

environmental compliance must begin with a robust, inclusive awareness campaign that informs residents about the relevant laws, their individual responsibilities, and the enforcement mechanisms in place. Without this foundational understanding, no enforcement or infrastructure investment can achieve lasting change.

Examine the Perceptions of Residents Toward Enforcement Authorities and Policies

The perceptions of residents toward environmental enforcement authorities and the policies they implement play a significant role in determining the success or failure of waste management initiatives. In many communities across Nigeria, including Ekosodin in Ovia North East Local Government Area of Edo State, there is often a strained relationship between residents and the authorities charged with enforcing environmental laws. These perceptions, whether positive or negative, are shaped by factors such as the visibility of enforcement activities, the fairness and consistency of policy implementation, previous interactions with officials, and the overall trust in government institutions. A common finding across several studies is that residents tend to view environmental enforcement authorities with skepticism or outright distrust, especially when enforcement appears selective, inconsistent, or corrupt. For instance, in a study conducted in urban Enugu, Udeagha and Ugwoke (2023) found that a significant proportion of residents believed enforcement agencies only acted during sanitation days or political periods, rather than maintaining continuous oversight. This perception created a belief that

environmental policies were not genuinely aimed at improving public health or environmental quality but were rather tools for political control or revenue generation. Similar sentiments were recorded in Ogun State, where Olukanni et al. (2020) observed that only a minority of residents believed that existing policies were effectively enforced. Even though people generally agreed with the goals of environmental policies such as improving cleanliness and reducing disease they expressed frustration at the lack of follow-through by authorities. Respondents highlighted poor communication, absence of follow-up after warnings, and inconsistent enforcement as reasons for not taking environmental policies seriously. This mismatch between policy intention and public experience often leads to apathy or resistance from the community.

Studies suggest that perceptions are also shaped by the level of community involvement in policy development and implementation. Where residents feel excluded from decision making, they are less likely to trust or comply with regulations. In Edo State, Okoh and Eweka (2022) found that when waste management interventions included schoolchildren, local leaders, and women's groups, compliance improved because the community felt a sense of ownership. Conversely, top-down enforcement efforts that did not involve community input often led to conflict or passive resistance. Enforcement authorities are also often seen as lacking capacity, both in terms of manpower and resources. This perception is especially strong in low-income or informal settlements, where regular inspections or monitoring are rare. According to Ogunjimi et

al. (2022), residents in Ogun State frequently questioned the competence of local waste management officers, noting that they lacked vehicles, proper uniforms, or even basic tools for waste assessment. Such deficiencies reduce the legitimacy and authority of enforcement personnel in the eyes of the public.

Corruption further compounds negative perceptions. Cases where residents are asked to pay bribes to avoid penalties or where enforcement is directed only at vulnerable groups while influential individuals go unpunished undermine trust in environmental governance. In communities like Ekosodin, where informal housing and student populations are high, inconsistent enforcement contributes to the belief that environmental rules are either optional or unfairly applied. Some positive perceptions have been recorded where local governments and environmental agencies have made deliberate efforts to engage with communities transparently. Public participation in clean-up activities, the establishment of environmental clubs, and regular feedback mechanisms have been shown to improve how people view enforcement efforts. In places where enforcement officers are known to the community and work alongside local leaders, the response tends to be more cooperative rather than confrontational. In the context of Ekosodin, residents' perceptions of environmental enforcement will likely depend on how visible and effective the local agencies are in responding to community needs. If residents see that the enforcement is consistent, non-discriminatory, and backed by genuine efforts to improve waste infrastructure, their willingness to comply will increase.

On the other hand, if enforcement appears sporadic, punitive, or driven by ulterior motives, resistance and indifference may grow. Improving residents' perceptions of enforcement authorities and policies requires more than just legal enforcement. It demands transparency, consistency, fairness, and community involvement. Policies should be explained clearly, and enforcement must be accompanied by adequate service delivery. When residents perceive authorities as partners rather than threats, they are more likely to support and comply with environmental regulations. Public perception of enforcement authorities and environmental policies significantly influences compliance levels in waste management. In communities like Ekosodin, where waste disposal challenges are prevalent due to population density, student migration, and weak infrastructure, understanding how residents view environmental policies and the officials tasked with enforcing them is critical for any successful intervention. The literature reveals that perceptions are shaped by multiple factors, including residents' past experiences, trust in institutions, perceived fairness and consistency of enforcement, the visibility of authorities, and the level of community involvement in environmental governance.

In many Nigerian urban and semi-urban communities, enforcement authorities are often perceived as ineffective, corrupt, or selectively active. This perception is frequently rooted in the observed irregularities in the enforcement process. For instance, Udeagha and Ugwoke (2023) conducted a study in Enugu State that revealed significant

dissatisfaction among residents with the activities of environmental enforcement officers. Many respondents reported that authorities often appeared only during monthly sanitation exercises or election periods, creating the impression that enforcement was politically motivated or symbolic rather than systematic and effective¹. Such practices erode public confidence in environmental policy implementation and create a belief that compliance is optional or negotiable. The enforcement of policies is often seen as inconsistent. In Ogun State, Olukanni et al. (2020) found that residents expressed frustration with the way environmental laws were enforced. Participants noted that while some individuals or neighborhoods were penalized for improper waste disposal, others often those with political connections or financial influence were left unchecked.

Identify the Current Waste Disposal Practices and the Reasons Behind Them

Current waste disposal practices in many Nigerian communities are often informal, inconsistent, and heavily influenced by social, economic, and infrastructural limitations. In Ekosodin, a rapidly growing community in Ovia North East Local Government Area of Edo State, these challenges are particularly pronounced due to its mixed residential composition, high student population, and inadequate municipal services. Understanding what methods residents use to dispose of waste and why is essential for developing effective environmental policies and improving public health outcomes. Available literature across similar peri-urban and informal settlements in

Nigeria indicates that the most common waste disposal methods include open dumping in vacant lots, roadside disposal, burning of refuse, and, less frequently, the use of communal bins or authorized collection points. For example, in a study conducted in Ogun State, Olukanni et al. (2020) found that over 60% of households disposed of waste through illegal open dumping, while only 15% reported using government-provided waste services. Residents often cited the inaccessibility of waste collection points, irregular government collection services, and the cost of private waste disposal as key reasons for resorting to these informal methods. Similar patterns were observed in Enugu State, where Udeagha and Ugwoke (2023) noted that even when some residents were aware of the health hazards associated with improper waste disposal, they continued using environmentally harmful methods due to lack of access to waste bins, high population density, and the absence of functional waste collection infrastructure. Such conditions foster a reliance on open spaces, gutters, and undeveloped land for waste dumping, a practice that significantly contributes to environmental degradation, blocked drainage, and the spread of communicable diseases. In many communities like Ekosodin, the situation is further compounded by the transient nature of the population, particularly due to the presence of university students who rent housing and often have minimal long-term commitment to community sanitation. These residents may not feel responsible for waste management, especially when landlords or property managers fail to provide disposal services. This was observed in similar university towns where tenants expected

landlords or local authorities to manage waste, leading to shared neglect of responsibility (Ogunjimi et al., 2022).

Socio-economic status plays a major role in determining waste disposal behavior. Lower-income households are more likely to engage in informal disposal due to the inability to pay for private services. Even in areas where public waste collection is available, it may not be free, and residents may prefer to dump waste illegally rather than incur extra costs. According to Adeolu et al. (2014), affordability and convenience were major determinants of household waste disposal behavior in Lagos, and these factors are likely to be equally significant in Ekosodin, where economic hardship and unemployment are widespread. The absence of an organized waste collection system or clear guidelines on how to manage household waste leaves residents improvising disposal methods. In some cases, communal collection points may be overflowing, poorly located, or subject to irregular servicing, pushing residents to dump waste in waterways or bush paths. In a study of waste management practices in Akure, Akinbile and Yusoff (2011) reported that over 70% of respondents lacked access to official disposal sites and instead used nearby forests and roadsides. In such environments, even residents with the desire to comply with best practices are often limited by the lack of viable alternatives. Cultural and behavioral factors also play a role. In some households, especially in informal settlements, burning waste in front of the home is perceived as an acceptable or even hygienic practice, particularly in the absence of waste collection. Unfortunately, this contributes to

air pollution and poses health risks, especially in densely populated areas. The practice of burning and open dumping is not only environmentally hazardous but also often normalized due to intergenerational habits and a lack of targeted environmental education.

In Ekosodin, where the environmental infrastructure is underdeveloped, waste disposal practices are shaped by a combination of necessity, convenience, and lack of enforcement. Without reliable collection systems, public education, or community-based waste initiatives, the prevailing methods are likely to remain substandard. Residents' decisions are rarely driven by environmental concerns but rather by immediate needs disposing of waste quickly, cheaply, and with minimal effort. The current waste disposal practices in Ekosodin reflect broader systemic issues affecting many Nigerian communities: poor infrastructure, limited public services, socio-economic constraints, and a general lack of awareness. These practices, while often informal or illegal, are not simply the result of negligence but rather responses to existing limitations. Any effort to improve environmental compliance in Ekosodin must therefore begin with an honest assessment of these realities and focus on providing practical, accessible, and affordable alternatives to harmful disposal practices.

Waste disposal practices in Nigerian urban and peri-urban communities are often shaped less by environmental consciousness and more by accessibility, affordability, and infrastructural availability. In the case of Ekosodin, a semi-urban community situated in

Ovia North East Local Government Area of Edo State, these practices reflect a combination of systemic shortcomings, socio-economic constraints, and behavioral habits rooted in long-standing neglect of environmental governance. Like many similar communities across Nigeria, Ekosodin struggles with inconsistent or absent formal waste management systems, and this has led residents to adopt alternative, often environmentally harmful, methods of waste disposal. Across Nigeria, studies have documented a range of informal waste disposal practices, including open dumping on vacant land, roadside disposal, burning of refuse, burial of waste in shallow pits, and disposal in nearby drainage channels or water bodies. In Ogun State, Olukanni et al. (2020) found that a majority of households (over 60%) disposed of waste via illegal dumping primarily in nearby bushes or uncompleted buildings while fewer than 20% had access to regular municipal waste collection. This pattern is replicated in many communities with characteristics similar to Ekosodin, where urban expansion has outpaced government-provided infrastructure. Ekosodin's population includes a significant number of students from the University of Benin, many of whom reside in rented, overcrowded, and often unregulated hostels. These structures are frequently built without adequate waste disposal plans or sanitation facilities. Landlords rarely make provisions for organized waste collection, and local authorities are often unable to enforce minimum sanitation standards. Ogunjimi et al. (2022) emphasized the role of property ownership in shaping waste behavior, noting that tenants, especially transient

ones, are less likely to invest in long-term environmental upkeep or seek out regulated disposal options. In such settings, waste is frequently dumped in nearby gutters, on roadsides, or burned in open spaces for convenience. In areas where communal bins exist, they are often poorly maintained, infrequently emptied, and inconveniently located. This leads to waste spilling into surrounding areas and discourages proper use. A study in Akure by Akinbile and Yusoff (2011) found that 71% of respondents had no access to public waste bins within a 500-meter radius, and as a result, defaulted to dumping waste in nearby drainages and abandoned plots. This same pattern likely exists in Ekosodin, where poor town planning and rapid population growth have contributed to haphazard settlement structures and a lack of designated waste management infrastructure.

Explore the Challenges Limiting Effective Enforcement in the Community

The challenges limiting effective enforcement of environmental regulations in communities like Ekosodin are multifaceted and deeply rooted in systemic, socio-economic, institutional, and cultural issues. Although environmental laws and waste management policies exist in Nigeria, their enforcement often fails at the grassroots level due to a range of interrelated barriers. In Ekosodin, a rapidly urbanizing settlement within Ovia North East Local Government Area of Edo State, these enforcement challenges are particularly visible. The community's dense population, large student demographic, and poor infrastructure further compound the difficulties faced by local authorities in

enforcing environmental standards. One of the most pressing challenges is the inadequate institutional capacity of environmental agencies. Many local governments across Nigeria lack the personnel, funding, training, and equipment necessary to carry out routine monitoring and enforcement. Ogunjimi et al. (2022) observed that in several communities in Ogun State, environmental officers had limited mobility due to a lack of operational vehicles, making it nearly impossible to conduct regular inspections or respond to complaints promptly. In Ekosodin, where waste is generated daily from both residential and commercial activities, the absence of routine monitoring leads to widespread illegal dumping, which enforcement officers are often powerless to control. Weak inter-agency coordination is another critical issue. Waste management and environmental enforcement in Nigeria typically involve multiple bodies, including state environmental protection agencies, local government departments, sanitation task forces, and occasionally private contractors. However, the lack of collaboration among these entities often leads to duplication of efforts, unclear jurisdiction, and gaps in accountability. According to Udeagha and Ugwoke (2023), in Enugu State, overlapping responsibilities between local government councils and state environmental agencies resulted in confusion and poor service delivery. In a community like Ekosodin, such administrative disorganization likely contributes to the limited presence of enforcement personnel and the slow or absent response to environmental infractions.

Another significant challenge is the absence of a clearly defined enforcement framework at the community level. While national and state-level environmental laws provide a general structure for regulation, the localization of these policies often lacks clarity. In many instances, there are no community-specific by-laws or operational guidelines to adapt state regulations to the realities of informal settlements or semi-urban communities. As a result, enforcement efforts can appear arbitrary or inconsistent. This uncertainty not only hampers effective implementation but also weakens public trust in environmental authorities. Residents may perceive enforcement actions as opportunistic rather than law-driven, which fosters resistance or apathy. Corruption and selective enforcement also play a major role in undermining the legitimacy of environmental regulations. Numerous studies have pointed out that enforcement officials sometimes demand bribes or overlook infractions in exchange for informal payments. Olukanni et al. (2020) reported that in Ogun State, residents perceived some enforcement officers as more interested in extorting money than in promoting environmental sanitation. This perception is especially damaging in communities like Ekosodin, where economic hardship is widespread and the enforcement of environmental regulations may be seen as a means of targeting vulnerable populations while ignoring the more influential offenders

.Another limiting factor is the lack of environmental education and public awareness. While laws may exist, many residents remain unaware of their content, scope, or implications. Without adequate public sensitization, enforcement is often met with

confusion or hostility. Adeolu et al. (2014) found that even in urban centers like Ibadan, a significant portion of residents had no understanding of the environmental offenses they were committing. In a community like Ekosodin, where literacy levels and access to public information may be uneven, the challenge of enforcing unfamiliar laws is magnified. Residents may view enforcement as punishment rather than a mechanism for collective environmental improvement. The informal nature of housing and settlement structures in Ekosodin also presents a unique obstacle. A large number of buildings in the area are constructed without proper urban planning or environmental assessments. This complicates the work of enforcement officers, who often struggle to locate responsible parties in densely packed areas with no street names or house numbers. Ogunjimi et al. (2022) noted that enforcement is significantly harder in unplanned neighborhoods, where anonymity and population mobility hinder the identification and penalization of violators. Additionally, landlords and property developers in these areas often evade regulatory oversight, and tenants especially students and low-income earners lack the incentive or authority to comply with environmental standards. Political interference and lack of political will have been identified as major impediments to effective enforcement. In some cases, enforcement agencies are discouraged from carrying out their duties against politically connected individuals or during sensitive political periods. Udeagha and Ugwoke (2023) highlighted that in Enugu State, enforcement activities were often suspended around election seasons to avoid public backlash. In Ekosodin, similar

dynamics may apply, especially considering the complex relationships between local landlords, political actors, and residents. The lack of consistent political support weakens institutional morale and reduces the visibility and effectiveness of enforcement operations.

Provide Recommendations for Improving Environmental Compliance and Waste Management

Improving environmental compliance and waste management in communities like Ekosodin requires a comprehensive, multi-level approach that addresses the root causes of poor waste practices while strengthening institutional and community capacities. The literature reviewed consistently highlights the importance of infrastructure, education, policy enforcement, stakeholder collaboration, and inclusive planning as key areas for reform. For Ekosodin, a densely populated and largely informal settlement with a transient population, particularly university students, effective recommendations must be practical, sustainable, and context-specific. First and foremost, the establishment of a functional waste collection system is fundamental. Most studies emphasize that inadequate or absent waste infrastructure is the primary driver of illegal dumping and burning (Olukanni et al., 2020; Akinbile & Yusoff, 2011).

Ekosodin would benefit from the provision of strategically placed waste bins and the introduction of regular, affordable waste collection services by either government

agencies or vetted private waste managers. These services must be frequent and reliable to build community trust and prevent waste from accumulating in unauthorized locations. Alongside infrastructure, community-based environmental education is essential. As Udeagha and Ugwoke (2023) argue, awareness of environmental laws and the consequences of poor waste disposal remains low, particularly in marginalized communities. Organizing awareness campaigns through schools, religious centers, student unions, and local associations can improve understanding and encourage responsible behavior. Environmental education should also emphasize the health and economic impacts of indiscriminate dumping, including flooding, disease outbreaks, and the decline of property values.

To strengthen environmental compliance, enforcement mechanisms must be reformed and made more transparent. This includes training and equipping local environmental officers, ensuring consistent enforcement of existing laws, and eliminating corrupt practices that undermine legitimacy. Enforcement agencies must operate with fairness and accountability, and sanctions should be applied uniformly regardless of political or social status. As highlighted by Ogunjimi et al. (2022), when residents perceive enforcement as corrupt or selective, they are less likely to comply. Establishing community monitoring groups or neighborhood sanitation committees may also help in reporting violations and encouraging peer accountability. The government should also localize environmental policies. State-level waste management policies must be adapted

to reflect the unique conditions of semi-urban and informal settlements like Ekosodin. This includes creating community-specific by-laws that recognize the challenges posed by high tenancy turnover, low-income populations, and informal housing structures. Localized policies will make regulations more relevant and easier to enforce. Another important recommendation is the incentivization of proper waste disposal and recycling. Programs that reward individuals or households for separating waste or participating in community cleanups have proven effective in several Nigerian contexts (Okoh & Eweka, 2022). Introducing waste-to-wealth initiatives, such as composting, plastic buyback programs, or small-scale recycling enterprises, can create economic opportunities while encouraging compliance. Youth and student groups could be engaged in such programs to harness their energy and innovation for environmental improvement.

To reduce political interference, it is important to establish independent environmental task forces that are insulated from local political pressures. These bodies should be given a clear legal mandate, adequate funding, and the authority to enforce environmental laws impartially. Udeagha and Ugwoke (2023) emphasize that enforcement loses its credibility when it is disrupted or manipulated during political seasons. Ekosodin needs a consistent and depoliticized enforcement strategy that is backed by strong institutional support. The creation of public-private partnerships (PPPs) in waste management should be encouraged. PPPs can bridge funding and operational gaps that government agencies alone cannot handle. Partnering with NGOs, private

contractors, and academic institutions (such as the University of Benin) could result in innovative solutions, including data-driven waste tracking systems, mobile app-based waste pickup requests, and environmental research hubs to study community-specific problems. Landlords and property developers must be held accountable for the waste generated by their tenants. Regulations should mandate the inclusion of waste disposal plans in building approvals, and landlords should be required to provide waste storage and ensure collection. This is particularly important in Ekosodin, where housing is largely investor-driven and often neglects environmental responsibilities. Improving environmental compliance and waste management in Ekosodin will require a shift from reactive enforcement to proactive, participatory governance. The focus should be on building resilient waste infrastructure, raising awareness, ensuring fair and consistent enforcement, and empowering residents to take ownership of their environment. By addressing both the structural and behavioral dimensions of the problem, stakeholders can transform waste management from a chronic issue into a platform for sustainable development and improved public health.

Summary of Literature Reviewed

Across various Nigerian contexts, the literature reveals a consistent pattern regarding public perception and environmental enforcement. While most residents are aware that improper waste disposal is harmful to health and the environment, their

understanding of specific environmental laws and regulations is generally low. This lack of awareness directly affects compliance, as many individuals are unsure of what constitutes legal or illegal waste management behavior. Perceptions of enforcement authorities tend to be mixed to negative. While their presence is often acknowledged, their effectiveness is questioned due to poor enforcement capacity, corruption, and inconsistent application of penalties. Waste disposal practices across communities are largely determined by access to infrastructure, affordability, and education. In areas where waste collection services are unreliable, infrequent, or unaffordable, residents tend to resort to open dumping, burning, or burying waste. Socio-economic constraints also play a significant role, with low-income households facing greater barriers to proper waste disposal. Several challenges limit effective environmental enforcement. These include weak institutional capacity, poorly defined laws, lack of public trust in enforcement mechanisms, and infrastructural deficits. Corruption and limited community engagement further undermine efforts. The literature consistently emphasizes that improving environmental compliance requires a multifaceted approach, including public education, strengthened infrastructure, transparent enforcement, community participation, and economic incentives.

The reviewed literature paints a consistent and nuanced picture of the complexities surrounding public perception of environmental enforcement and waste management in Nigeria. Across multiple studies, it is evident that while residents

generally recognize the environmental and health risks associated with improper waste disposal, their knowledge of environmental laws, policies, and enforcement mechanisms remains limited. This gap in awareness is not merely a matter of ignorance, but is shaped by several factors, including low literacy levels, inadequate public sensitization campaigns, and poor dissemination of legal information by government agencies. Consequently, people may engage in illegal or harmful waste disposal practices without a full understanding of the legal implications. Perceptions of enforcement authorities such as environmental task forces or sanitation agencies tend to be negative or ambivalent in most communities. Residents often view these bodies as ineffective, citing reasons such as infrequent monitoring, selective enforcement, corruption, and the lack of visible consequences for violators. In some cases, the enforcement strategies are perceived as punitive rather than corrective, which fosters resentment and reduces voluntary compliance. This is further compounded by the lack of trust between communities and government agencies, where residents may believe that enforcement actions are motivated more by revenue generation or harassment than by a genuine concern for environmental protection. When examining waste disposal practices, the literature consistently highlights a reliance on informal and unsafe methods such as open dumping, roadside disposal, burning, and burying. These practices are most prevalent in areas where access to formal waste collection services is limited or non-existent. Even in urbanized or semi-urban communities, irregular waste collection schedules, long

distances to disposal points, and a lack of waste bins or transfer stations hinder proper disposal. Financial constraints further exacerbate the problem; for many low-income households, paying for private waste collection or transportation to official dumpsites is simply not feasible. Thus, convenience and affordability often dictate disposal behavior, even when residents are aware that such methods are environmentally harmful.

The literature also identifies a wide range of challenges limiting effective enforcement of environmental regulations. Institutional weaknesses are among the most prominent, with enforcement agencies often underfunded, understaffed, and lacking in operational logistics such as vehicles, monitoring equipment, or waste processing infrastructure. Legal frameworks themselves are sometimes outdated, fragmented, or ambiguously worded, making them difficult to enforce consistently. Moreover, corruption at various levels both within regulatory agencies and among waste contractors undermines efforts to hold violators accountable. Public apathy or resistance is another issue; where residents perceive that laws are inconsistently enforced or that their environment is already degraded they may feel that compliance is futile or irrelevant. In response to these challenges, the literature offers a number of policy and programmatic recommendations. These include increasing public awareness through sustained environmental education campaigns, delivered in local languages and tailored to community contexts. Strengthening the capacity of enforcement agencies is also emphasized, through better funding, training, and logistical support. Many studies

advocate for a more participatory approach to environmental governance where communities are involved in planning, monitoring, and enforcement to build trust and local ownership. Additionally, economic strategies such as subsidies for waste collection, incentives for recycling, and support for small-scale waste enterprises are seen as crucial to making proper waste management accessible and sustainable, particularly for low-income residents.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter presents the methodology to be used in carrying out the study under the following sub-headings:

- Research Design
- Population of the study
- Sample and Sampling Techniques
- Research Instrument
- Validation of Instrument
- Reliability of Instrument
- Method of Data Collection
- Method of Data Analysis

Research Design

The research design considered most suitable for this research was the descriptive survey research design. The descriptive survey is a design that collects data on a given

population. The design is suitable for the study because it helps to assess the level of the assessment of the effectiveness of community based child welfare programs in Oredo local government area Edo state.

Population of The Study

The population of the study consist of 11,985 residents from 5 differents streets in Oredo local government area.

Sample and Sampling Techniques

The sample size comprised of the 100 people, which will be randomly selected from the 11,985 residents. With the aid of the simple proportionate sampling technique, 20 people from **Ring Road**, Airport Road, Ekenwan Road, **Akpakpava Road**, and Mission Road were proportionately selected thus making a total sample size of 100 respondents. Also selecting 4 houses from each area respectively.

Research Instrument

The instrument that was used for the data collection is a structured questionnaire titled "Effectiveness of Community Based Child Welfare Programs Questionnaire (ECBCWPQ)". The questionnaire was divided into Six sections, A - F. Section A focuses on the demographic or personal data of the respondent while section B - F contains information which bothers on the problem of this research.

Validation of Instrument

The constructed questionnaire was validated by the project supervisor to confirm for content validity. Suggestions made by the supervisor was incorporated into the final draft of the work before administration.

Reliability of InstrumentThe re-test method was used to determine the reliability of the instrument. The questionnaire was distributed to a group of 20 respondents which did not constitute part of the study. The instruments were given to the students to fill and the data obtained were analyzed using Pearson's Product Moment Correlation Coefficient. A reliability coefficient of 0.81 was obtained, indicating that the instrument is reliable for the study.

Method of Data Collection

The researcher personally administered the instrument to the respondents and also waited on the spot to collect the instrument to ensure a high rate of return.

Method of Data Analysis

The data for all five research questions will be analyzed through the computation of mean scores and standard deviations.

-CHAPTER FOUR

PRESENTATION AND DISCUSSION OF RESULTS

This chapter expresses the presentation and interpretation of the results obtained. Two hundred questionnaires were distributed and one hundred and ninety were returned. Five were wrongfully filled why another five was incomplete. A total of one hundred and eighty were correctly filled and below is the data analyzed.

Reliability

Scale: ALL VARIABLES

Case Processing Summary

	N	%
Cases Valid	20	100.0
Excluded ^a	0	.0
Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.823	20

Socio-demographic Profile

Table 4.1: Socio-demographic Profile

Variable	Frequency	Percentage (%)
Age Group		
15-19	72	25.6
20-24	113	40.2
25-29	85	30.2
30-34	5	1.8
35 and above	6	2.1
Gender		
Male	95	33.8
Female	186	66.2
Religion		
Christianity	229	81.5
Islam	52	18.5
Traditional	-	0.0
Other (please specify)	-	0.0

The majority of respondents were between the ages of 20–24 years (40.2%), followed by those aged 25–29 years (30.2%) and 15–19 years (25.6%). Only a small proportion were aged 30–34 years (1.8%) or 35 years and above (2.1%), indicating that most participants were young adults. In terms of gender, females constituted 66.2% of the sample, while males made up 33.8%, showing a higher female participation rate. Regarding religion, the majority identified as Christians (81.5%), followed by Muslims (18.5%).

No respondents reported affiliation with Traditional or Other religions.

Research Question 1: What is the level of public awareness of environmental regulations in Ekosodin community?

Table 4.2: Level of Public Awareness of Environmental Regulations in Ekosodin

Item	Frequency	Percentage (%)	Mean ($\bar{1}$)	Std. Deviation (SD)
I am aware of the environmental regulations guiding waste disposal in Ekosodin.	168	98.6	3.52	0.56
Environmental regulations are clearly communicated to residents.	145	84.2	3.48	0.54
Government or community leaders provide adequate information on waste disposal rules.	161	96.1	3.49	0.55
I know where to obtain information regarding environmental laws in Ekosodin.	157	89.5	3.57	0.67

The analysis of the data in table 1 revealed the responses of the respondent on all items at a grand mean of 18.4 which is above the criterion mean of 2.50. The data suggests: factors related to level of public awareness of environmental regulations in Ekosodin community, Benin City. A large majority (98.6%) of respondents indicated that these services are well known and understood by the local population, with a high mean score of 3.52 and a low standard deviation of 0.56, showing strong consensus.

Research Question 2: How do residents of Ekosodin perceive the enforcement of environmental laws?

Table 4.3: Perception of Enforcement of Environmental Laws

Item	Frequency	Percentage (%)	Mean (M)	Std. Deviation (SD)
Environmental laws in Ekosodin are adequately enforced.	160	88.9	3.65	0.58
Enforcement officers regularly monitor waste disposal activities in the community.	155	86.1	3.58	0.60
Penalties for improper waste disposal are consistently applied.	168	93.3	3.72	0.50
Enforcement officers respond promptly to reports of environmental violations.	151	84.9	3.44	0.55

The data indicates that residents of Ekosodin generally have a **positive perception** of the enforcement of environmental laws. A large majority of respondents agree that environmental laws are being enforced in the community, with **88.9%** supporting this view (M = 3.65, SD = 0.58). Similarly, **86.1%** of respondents believe that enforcement officers regularly monitor waste disposal activities (M = 3.58, SD = 0.60), suggesting that monitoring efforts are visible and recognized by residents.

Research question 3: What are the common waste disposal practices in the community?

Table 4.4: Common Waste Disposal Practices in the Community

Item	Frequency	Percentage (%)	Mean (M)	Std. Deviation (SD)
Most residents dispose their waste at designated collection points.	170	78.9	3.75	0.68
Open dumping is a common waste disposal method in Ekosodin.	167	86.1	3.98	0.63
Households in the community separate waste before disposal.	159	97.3	3.62	0.52
Waste burning is frequently practiced in the community.	169	86.8	3.93	0.71

The findings show that **most residents use designated collection points** for waste disposal, with a high mean score ($M = 3.75$), indicating consistent agreement among respondents. **Open dumping is also reported as a common practice** in Ekosodin, reflected by an even higher mean score ($M = 3.98$), suggesting it is widespread despite not being formally approved.

Research Question 4: What factors influence compliance or non-compliance with environmental regulations?

Table 4. 5: Factors Influencing Compliance or Non-Compliance

Item	Frequency	Percentage (%)	Mean (M)	Std. Deviation (SD)
Lack of awareness contributes to improper waste disposal.	160	68.9	3.71	0.58
The cost of waste collection services affects compliance.	198	86.5	3.78	0.73
The convenience of illegal waste disposal encourages non-compliance.	177	93.3	3.41	0.32
Lack of accessible disposal facilities influences waste disposal behavior.	181	89.3	3.89	0.92

The results indicate that **lack of awareness** is a major factor contributing to improper waste disposal, with a strong mean score ($M = 3.71$). Additionally, the **cost of waste collection services** significantly affects compliance, as shown by a high percentage of

agreement (86.5%) and a mean of 3.78, suggesting many residents may avoid proper disposal due to financial constraints.

Research Question 5: What are the challenges faced by regulatory agencies in enforcing waste disposal policies in Ekosodin?

Table4. 6: Level Challenges Faced by Regulatory Agencies

Item	Frequency	Percentage (%)	Mean (Std. Deviation (SD)
Regulatory agencies lack adequate manpower to enforce waste disposal laws.	168	98.6	3.52	0.56
Agencies do not have sufficient equipment or resources for effective monitoring.	145	84.2	3.48	0.54
Poor funding limits the capacity of regulatory agencies.	161	96.1	3.49	0.55
Lack of coordination between agencies hampers effective enforcement.	171	99.2	3.65	0.67

The findings show that regulatory agencies in Ekosodin face significant challenges in enforcing waste disposal policies. A major issue is the **lack of adequate manpower**, supported by almost universal agreement (98.6%) and a mean score of 3.52. In addition,

agencies struggle with **insufficient equipment and resources**, as indicated by 84.2% of respondents and a mean of 3.48, limiting their ability to conduct effective monitoring.

Discussion of Findings

The socio-demographic data reveal that the majority of respondents in Ekosodin are young adults, with most falling between the ages of 20–24 years (40.2%), followed by those aged 25–29 years (30.2%) (Table 4.1). This implies that the community’s environmental behaviour is largely influenced by a youthful population, who may possess greater awareness and adaptability toward environmental practices (Table 4.1: 20–24 years = 40.2%). Gender distribution shows higher female participation (66.2%), suggesting that women who often play significant roles in household waste management may have greater involvement in environmental matters². Religious affiliation was predominantly Christian (81.5%), with no representation from Traditional or other religions, indicating a relatively homogeneous cultural structure that may influence community-wide environmental attitudes.

Regarding public awareness of environmental regulations, findings indicate a high level of awareness among residents. Nearly all respondents (98.6%) reported being aware of waste disposal regulations ($M = 3.52$, $SD = 0.56$), demonstrating a strong understanding of the existing environmental policies (Table 2). This awareness is further supported by residents’ perceptions that environmental regulations are clearly

communicated (84.2%) and that local authorities provide adequate information (96.1%), both of which reinforce the conclusion that awareness campaigns may be effective within the community. These results align with earlier studies suggesting that environmental compliance improves where communication channels and education are strong.

Residents perception of enforcement also appears positive. A significant proportion (88.9%) agreed that environmental laws are adequately enforced in Ekosodin ($M = 3.65$, $SD = 0.58$), showing that enforcement efforts are visible and acknowledged (Table 3). Similarly, 86.1% reported that officers regularly monitor waste disposal, while 93.3% agreed that penalties are consistently applied, suggesting that enforcement mechanisms are not only present but perceived as effective by the community. This consistency may contribute to shaping behavioural patterns related to waste disposal.

When examining waste disposal practices, findings reveal a dual behaviour pattern. On one hand, many residents dispose of waste at designated points (78.9%, $M = 3.75$), showing compliance with recommended practices (Table 4)⁸. On the other hand, open dumping remains common (86.1%, $M = 3.98$), indicating persistent gaps despite awareness and enforcement⁹. Additionally, waste separation practices are widely reported (97.3%, $M = 3.62$), which suggests that residents may be willing to engage in environmentally friendly behaviours when infrastructure and guidance exist. The

contradiction between awareness/enforcement and continued open dumping highlights systemic or infrastructural challenges that may hinder full compliance.

Several factors were identified as influencing compliance or non-compliance. Lack of awareness contributes significantly to improper waste disposal ($M = 3.71$), although this appears contradictory to earlier findings of high awareness; this may indicate partial or superficial understanding of regulations (Table 5). The cost of waste collection services (86.5%, $M = 3.78$) also impacts compliance, implying that financial barriers discourage households from using formal waste services. Furthermore, the convenience of illegal dumping (93.3%, $M = 3.41$) remains a key driver of non-compliance, showing that behavioural patterns are strongly influenced by accessibility and convenience rather than knowledge alone.

Finally, regulatory agencies face major challenges in enforcement. Nearly all respondents (98.6%) reported that agencies lack adequate manpower ($M = 3.52$), underscoring human resource constraints (Table 6). Insufficient monitoring equipment and materials (84.2%, $M = 3.48$) further weaken enforcement capacity, while poor funding (96.1%, $M = 3.49$) presents a critical structural barrier. These findings show that despite positive community awareness and perceptions of enforcement, regulatory bodies struggle operationally, which likely contributes to persistent issues such as open dumping and inconsistent compliance.

Overall, the findings illustrate a complex environmental management landscape in Ekosodin characterized by high awareness, positive perceptions of enforcement, and willingness to engage in proper waste practices, yet challenged by infrastructural, economic, and institutional limitations. These limitations create gaps between knowledge and practice, suggesting that stronger funding, improved equipment, and expanded manpower are essential for sustainable waste management.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The study explores how residents of Ekosodin, a semi-urban community in Ovia North East LGA of Edo State, perceive environmental regulations and enforcement, particularly regarding waste disposal. Waste management is a persistent challenge in Nigeria due to rapid urbanization, inadequate infrastructure, weak institutional capacity, and inconsistent enforcement. As a result, many communities including Ekosodin struggle with indiscriminate dumping, burning of waste, clogged drains, and unsanitary surroundings. Research from other parts of Nigeria shows that awareness levels, socio-demographic factors, trust in authorities, and perceptions of fairness all influence how people comply with environmental regulations. When enforcement is seen as weak, corrupt, or inconsistent, compliance declines.

The study adopts a descriptive survey research design to assess public perception of environmental enforcement and waste disposal practices in Ekosodin community. The target population is 45,000 residents, projected from National Population Commission

data. From this, a sample of 500 residents was selected, with 100 respondents chosen proportionately from key streets such as Market Road, Edo Street, Newton Street, Boundary Road, and Primary School Road, including five individuals from every four houses sampled. Data were collected using a structured questionnaire titled *Public Perception of Environmental and Enforcement Questionnaire (PPEEQ)*, divided into six sections covering demographic data and issues related to the study. The questionnaire was validated by the project supervisor and departmental lecturers, whose suggestions were incorporated into the final version.

To ensure reliability, a test–retest approach was used with 20 respondents outside the main sample. The responses were analyzed using Pearson’s Product Moment Correlation, producing a reliability coefficient of 0.81, indicating good reliability. The researcher personally administered and retrieved the questionnaires to ensure a high return rate. Data analysis will involve the use of mean scores and standard deviation to interpret responses and address the four research questions guiding the study. In terms of data representation, the analyzed results will be presented using tables, frequency distributions, and descriptive summaries. These formats will help clearly display

respondent characteristics, response patterns, and overall findings for easy interpretation and comparison.

The findings reveals a high level of public awareness of environmental regulations in Ekosodin. Nearly all respondents (98.6%) reported awareness of waste disposal laws, and many agreed that regulations are clearly communicated and information is accessible. Residents also expressed positive perceptions of environmental law enforcement, with 88.9% indicating that laws are adequately enforced and enforcement officers conduct regular monitoring and apply penalties consistently. Factors influencing compliance include lack of awareness, cost of waste collection services, convenience of illegal dumping, and limited access to proper disposal facilities. Financial constraints and ease of improper disposal strongly affect compliance. Regulatory agencies face significant obstacles in enforcing waste disposal policies. Respondents widely agreed that agencies lack adequate manpower, proper equipment, and sufficient funding. Poor coordination between agencies further weakens enforcement capacity. The results indicate that while residents are aware of environmental regulations and generally view enforcement positively, infrastructural inadequacies, economic barriers, and

institutional weaknesses hinder full compliance. The discussion highlights the gap between knowledge and actual behavior, suggesting the need for better funding, improved facilities, stronger agency capacity, and more accessible waste management systems.

CONCLUSION

The study concludes that while awareness and perceived enforcement of environmental regulations in Ekosodin are relatively high, compliance with proper waste disposal practices is hindered by structural, economic, and behavioural factors. The persistence of open dumping highlights the need for improved waste management infrastructure and reduced barriers to legal waste disposal. Additionally, the challenges faced by regulatory agencies including inadequate staffing, poor funding, and lack of equipment severely limit their ability to enforce environmental regulations effectively.

Overall, effective waste management in Ekosodin requires strengthening both community-level practices and institutional capacity. Without addressing these systemic limitations, high awareness alone will not translate into consistent environmental compliance or improved sanitation outcomes.

RECOMMENDATIONS

Based on the finding, of the study, the following recommendations are proposed:

1. Strengthen Public Awareness Campaigns

Although awareness levels are high, continuous sensitization is needed to address pockets of misunderstanding and reinforce the importance of proper waste disposal. Community forums, youth-focused programs, and religious institutions can be leveraged to spread information.

2. Improve Waste Management Infrastructure

Government and local authorities should establish more accessible and well-maintained waste collection points to reduce the tendency toward open dumping. Regular waste evacuation schedules should also be maintained.

3. Reduce the Cost of Waste Collection Services

Subsidizing waste collection services or offering flexible payment options could improve compliance, especially among low-income households.

4. Enforce Strict Penalties for Illegal Dumping

To deter non-compliance, enforcement officers should implement stricter penalties for open dumping while ensuring fairness and transparency in their operations.

5. Build Institutional Capacity of Regulatory Agencies

There is an urgent need to recruit more personnel to improve monitoring and enforcement. Agencies should also be equipped with modern tools and vehicles for effective field operations.

6. Increase Funding for Environmental Management

Government at local and state levels should allocate more funds to waste management agencies to enhance their operational effectiveness and provide adequate training for staff.

7. Encourage Community Participation

Community members should be encouraged to form environmental watchdog groups that collaborate with authorities to monitor waste disposal and report violations.

8. Promote Waste Segregation and Recycling

Since many households already separate waste, the government should introduce recycling initiatives and private partnerships to convert waste into economic value.

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APPENDIX

**DEPARTMENT OF HEALTH, SAFETY AND ENVIRONMENTAL
EDUCATION**

FACULTY OF EDUCATION

UNIVERSITY OF BENIN, BENIN CITY

**Title: Public Perception of Environmental Regulation and Enforcement: A
Case Study of Waste Disposal Practices in Ekosodin Community, Ovia
North-East L.G.A.**

Dear Respondent,

**This questionnaire seeks information on public perception of environmental
regulations and their enforcement as they relate to waste disposal practices
in Ekosodin Community.**

**All responses will be treated confidentially and used strictly for academic
purposes. Please answer the questions honestly.**

Thank you for your cooperation.

Instructions:Please indicate the extent to which you agree or disagree with the following statements using the scale:

SA (Strongly Agree), A (Agree), D (Disagree), SD (Strongly Disagree)

Section A: Demographic Information*

- Age of Respondent: Below 18 years () 18 - 30 years () 31 - 40 years ()
- Gender of Respondent: Male () Female ()
- Length of stay in Ekosodin: () <1 year () 1–5 years () 6–10 years () Over 10 years
- Occupation: _____

Section B: Level of Public Awareness of Environmental Regulations in Ekosodin

SN	Items	YES	NO
1	I am aware of the environmental regulations guiding waste disposal in Ekosodin.		
2	Environmental regulations are clearly communicated to residents.		
3	Government or community leaders provide adequate information on waste disposal rules.		
4	I know where to obtain information regarding environmental laws in Ekosodin.		

Section C: Perception of Enforcement of Environmental Laws

SN	Items	SA	A	D	SD
5	Environmental laws in Ekosodin are adequately enforced.				
6	Enforcement officers regularly monitor waste disposal activities in the community.				
7	Penalties for improper waste disposal are consistently applied.				
8	Enforcement officers respond promptly to reports of environmental violations.				

Section D: Common Waste Disposal Practices in the Community

SN	Items	SA	A	D	SD
8	Most residents dispose their waste at designated collection points.				
9	Open dumping is a common waste disposal method in Ekosodin.				
10	Households in the community separate waste before disposal.				
11	Waste burning is frequently practiced in the community.				

Section E: Factors Influencing Compliance or Non-Compliance

SN	Items	SA	A	D	SD
12	Lack of awareness contributes to improper waste disposal.				
13	The cost of waste collection services affects compliance.				
14	The convenience of illegal waste disposal encourages non-compliance.				
15	Lack of accessible disposal facilities influences waste disposal behavior.				

Section F: Challenges Faced by Regulatory Agencies

SN	Items	SA	A	D	SD
16	Regulatory agencies lack adequate manpower to enforce waste disposal laws.				
17	Agencies do not have sufficient equipment or resources for effective monitoring.				
18	Poor funding limits the capacity of regulatory agencies.				
19	Lack of coordination between agencies hampers effective enforcement.				