



**UNIVERSITY *of* LUSAKA**

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**SCHOOL OF LAW**

**AN ANALYSIS OF THE EFFICACY OF THE ZAMBIAN LEGAL FRAMEWORK ON  
SOLID WASTE MANAGEMENT FOR LOW-INCOME HOUSEHOLDS: LESSONS  
FROM KENYA**

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**AN OBLIGATORY ESSAY SUBMITTED TO THE UNIVERSITY OF LUSAKA IN  
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE  
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## **DECLARATION**

I WAITON DAKA do hereby declare that this dissertation titled “**AN ANALYSIS OF THE EFFICACY OF THE ZAMBIAN LEGAL FRAMEWORK ON SOLID WASTE MANAGEMENT FOR LOW-INCOME HOUSEHOLDS: LESSONS FROM KENYA**” which is hereby submitted to the school of law at the University of Lusaka as part of the requirements for the award of the Bachelor of Laws (LLB) degree is solely of my own and that it has , to the best of my knowledge, not yet been presented for any academic purposes in Zambia or elsewhere. Other peoples work and sources used in this study have been acknowledged. I hereby declare that I have read and understood the regulations governing the submission of the Bachelor of Laws Degree (LLB) Dissertation including those relating to length and plagiarism as contained in the rules of the University and that this dissertation conforms to the regulations

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## SUPERVISORS RECOMMENDATION

I JOY MULAMBIA, do recommend that this dissertation prepared under my supervision by WAITON DAKA, entitled **AN ANALYSIS OF THE EFFICACY OF THE ZAMBIAN LEGAL FRAMEWORK ON SOLID WASTE MANAGEMENT FOR LOW-INCOME HOUSEHOLDS: LESSONS FROM KENYA BE ACCEPTED FOR EXAMINATION**. I have checked it carefully and I am satisfied that it meets necessary requirements pertaining to the format laid down in the regulations governing directed research.



.....  
MR JOY MULAMBIA

(Supervisor)

.....  
(Date)

## **DEDICATION**

This Dissertation is dedicated to my grandmother, Charity Banda and my father, Kumbukani Daka and my aunty Alida D Michelo

## **ACKNOWLEDGEMENTS**

My first and profound acknowledgment is to God Almighty, my creator for affording me an opportunity to be alive and see this research to conclusion. Without God's love and guidance, this work would have remained a pipedream. For this, I thank God for his abundant blessings.

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## **LIST OF STATUTES**

Constitution of Zambia (Amendment) Act, 2016

Environmental Management Act, No. 12 of 2011

Solid Waste Regulation and Management Act, No. 20 of 2018

Local Government Act, Cap. 281 (as amended)

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Environmental Management and Coordination Act, 1999

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## **ABSTRACT**

This study analysed the efficacy of Zambia's legal framework on solid waste management with reference to its impact on low-income households, and draws comparative lessons from Kenya's more progressive and effectively implemented model. The ongoing discrepancies between the Solid Waste Regulation and Management Act of 2018's legal intent and the actual experiences of communities living in peri-urban and informal settlements that continue to get subpar or nonexistent waste collection services served as the impetus for the study. The study uses a comparative methodology in addition to qualitative analysis of international environmental obligations, institutional mandates, and statutory instruments.

The results showed that even though Zambia has a comprehensive legal framework thanks to the Solid Waste Regulation and Management Act of 2018 and the Environmental Management Act of 2011, the framework is still largely ineffective in practice because of institutional fragmentation, inadequate funding for local authorities, lax enforcement, and the exclusion of informal waste actors from regulatory recognition. Kenya's model, on the other hand, shows a more robust operationalization of environmental legislation, bolstered by a rights-based constitutional approach, devolved governance structures, and strategic alliances with the commercial sector and community-based organizations. According to the study's findings, Zambia's framework performs poorly administratively but is normatively solid. It suggested better fiscal devolution, formal integration of informal actors, increased institutional capacity, and domestic inclusion of international treaty responsibilities. The study contributes to the discourse on environmental justice by emphasizing the need to align legal frameworks with the socio-economic realities of low-income communities and to translate statutory provisions into practical, inclusive, and enforceable waste governance mechanisms

## CHAPTER ONE

### 1.1 INTRODUCTION

An analysis of the efficacy of the Zambian legal framework on solid waste management for low-income households with lessons from Kenya, Solid waste management (SWM) this is the systematic collection, transportation, treatment, recycling, and disposal of solid waste<sup>1</sup> and it has emerged as a pressing challenge in many developing countries. Waste management systems are under tremendous strain due to rapid urbanization, population increase, and inadequate infrastructure, especially in low-income areas where services are sometimes insufficient or nonexistent. The effects are especially noticeable in peri-urban areas of Zambia, where inadequate garbage collection results in poor sanitation, environmental deterioration, and increased hazards to public health. Although Zambia's legal framework, particularly the Solid Waste Regulation and Management Act No. 20 of 2018 and the Environmental Management Act of 2011, aims to address these problems, its efficacy is nonetheless compromised by inadequate funding, lax enforcement, and a lack of stakeholder coordination.

Kenya's legislative and policy reforms have been comparatively more successful in managing solid waste, despite the country facing similar socioeconomic and urbanization challenges. The 2010 Constitution, the Environmental Management and Coordination Act (EMCA) of 1999, and progressive policies like the 2017 ban on plastic bags <sup>2</sup>, has established the groundwork for more effective waste management. Kenya's success is also ascribed to the combination of public-private partnerships, community-based initiatives, and focused public awareness efforts.<sup>3</sup> As a result, urban centers like Nairobi have witnessed improved waste segregation, recycling rates, and informal sector integration compared to many Zambian cities.

This study assesses how well Zambia's current laws address the requirements of low-income households, finds gaps in enforcement and community engagement, and learns from Kenya's creative practices by directly comparing the legal and institutional

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<sup>1</sup> <https://www.britannica.com/technology/solid-waste-management> Accessed on 08/08/2025

<sup>2</sup> Environmental Management and Coordination Act 1999 (Kenya)

<sup>3</sup> Phindile Mudau, Geoffrey Mukwada and Paul Maponya, 'Municipal Solid Waste Management in Southern Africa: A Comparative Analysis' (2021) 13 Sustainability 1402

frameworks of Zambia and Kenya. In addition to Kenya's Environmental Management and Coordination Act 1999, the 2010 Kenyan Constitution, and the 2017 plastic bag ban legislation, the research will concentrate on Zambia's Environmental Management Act 2011 and the Solid Waste Regulation and Management Act No. 20 of 2018. These laws serve as the main legislative foundation for the comparative analysis and will direct the identification of workable changes that might help Zambia create a waste management system that is more sustainable, effective, and inclusive.

## **1.2 BACKGROUND**

Solid waste management is a critical global concern, with rapid urbanization, industrialization, and population growth driving a surge in waste generation. Developing countries, in particular, face the dual challenge of expanding waste management services while addressing resource constraints and infrastructure gaps.<sup>4</sup> In many cases, low-income households are disproportionately affected, as they often reside in areas underserved by formal collection systems.

The Environmental Management Act of 2011, the Solid Waste Regulation and Management Act No. 20 of 2018, and other local bylaws are the main regulations that govern solid waste in Zambia. Local governments are in charge of service delivery and enforcement, while the Zambia Environmental Management Agency (ZEMA) is in charge of the national framework. Inadequate finance, lax enforcement, and poor stakeholder cooperation plague Zambia's system despite these measures. Waste buildup in open areas, sewers, and roadways is typical in low-income communities like Kanyama and Chibolya in Lusaka and portions of Ndola. Although they frequently operate in hazardous and unregulated environments, informal rubbish pickers cover service gaps. These flaws lead to deterioration of the environment, increased risk of illness, and a worse standard of living for locals.<sup>5</sup>

Kenya has historically faced similar waste management challenges, especially in informal urban settlements. However, its legislative reforms spearheaded by the Environmental

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<sup>4</sup> David C Wilson, Costas Velis and Chris Cheeseman, 'Role of Informal Sector Recycling in Waste Management in Developing Countries' (2006) 30 *Habitat International* 797

<sup>5</sup> Muchaparara Mutsau and Liberty Chikodzi, 'Urban Solid Waste Management in Zimbabwe: A Case of Harare' (2015) 17 *Journal of Sustainable Development in Africa* 3

Management and Coordination Act 1999 and supported by the 2010 Constitution have strengthened the country's legal and institutional framework.<sup>6</sup> In addition to the National Solid Waste Management Strategy, which encourages waste segregation at the source, recycling, and public education, Kenya's 2017 nationwide ban on plastic bags represented a critical turning point in environmental protection. Increased community-based waste collection programs, formalized positions for unofficial recyclers, and active public-private partnerships that expand service coverage and provide jobs have all helped cities like Nairobi and Kisumu.<sup>7</sup>

Kenya's example shows how focused law reforms, stringent enforcement, and community engagement may produce quantifiable benefits, even though Zambia and Kenya share structural obstacles including fast urban population expansion, scarce resources, and socioeconomic disparities. In order to analyze how Zambia's current framework might embrace or modify Kenya's policies, especially to address the requirements of low-income households that are still neglected, this comparative backdrop is necessary.<sup>8</sup>

### **1.3 STATEMENT OF THE PROBLEM**

Despite the enactment of the Solid Waste Regulation and Management Act No. 20 of 2018, Zambia continues to face persistent challenges in managing solid waste in low-income communities. For example, section 4 of the Solid Waste Regulation and Management Act assigns primary responsibility for waste management to local authorities, yet inadequate funding, weak institutional capacity, and limited enforcement have hindered its effectiveness. Similarly, while section 20 of the Solid Waste Regulation and Management Act prohibits open dumping and burning of waste, these practices remain widespread in peri-urban areas such as Kanyama and Chibolya, reflecting a gap between law and enforcement.<sup>9</sup> The Environmental Management Act 2011 further provides in section 71 for compliance orders to be issued against offenders, but this tool

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<sup>6</sup> Rotich K Henry, Zhao Yongsheng and Dong Jun, 'Municipal Solid Waste Management Challenges in Developing Countries – Kenyan Case Study' (2006) 26 Waste Management 92

<sup>7</sup> *ibid*; Mudau, Mukwada and Maponya (n 3).

<sup>8</sup> Charles J Kibert, *Sustainable Construction: Green Building Design and Delivery* (4th edn, Wiley 2016).

<sup>9</sup> Solid Waste Regulation and Management Act No. 20 of 2018

is rarely used due to poor monitoring and lack of coordinated action by relevant agencies.<sup>10</sup>

In contrast, Kenya's Environmental Management and Coordination Act (EMCA) 1999 contains provisions that have been implemented more effectively. Section 87 of the EMCA prohibits littering and imposes strict penalties, which have been actively enforced in major cities such as Nairobi and Kisumu.<sup>11</sup> The 2010 Constitution of Kenya, under Article 42, guarantees the right to a clean and healthy environment, empowering citizens and civil society to hold authorities accountable<sup>12</sup>. Furthermore, the 2017 plastic bag ban, implemented through the EMCA's regulatory powers, has significantly reduced plastic waste, with compliance rates exceeding 80% in urban areas.

These instances demonstrate a clear disparity: whereas Zambia's laws appear to be very thorough on paper, enforcement mechanisms are either underutilized or underfunded, resulting in ongoing risks to the environment and public health. In contrast, Kenya has successfully operationalized important regulatory provisions through stakeholder partnership initiatives, public awareness campaigns, and tough enforcement; Zambia might adopt these strategies to improve its own waste management system.

## **1.4 GENERAL OBJECTIVE**

The aim of this research is to analyze the efficacy of the Zambian legal framework on Solid waste Management for low-income households and draw Lessons from Kenya

### **1.4.1 SPECIFIC OBJECTIVES**

1. To critically evaluate the effectiveness of Zambia's legal framework on solid waste management with reference to the Solid Waste Regulation and Management Act 2018 in addressing the specific needs and challenges of low-income households.
2. To undertake a comparative analysis of Kenya legal and institutional mechanisms for solid waste management and highlighting key legislative provisions, enforcement practices, and stakeholder engagement strategies.

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<sup>10</sup> Environmental Management Act 2011

<sup>11</sup> Environmental Management and Coordination Act 1999

<sup>12</sup> The 2010 Constitution of Kenya

3. To examine the role of international environmental agreements in shaping solid waste management frameworks and assess how Zambia can strengthen its legal and policy framework by aligning with these international commitments.

### **1.5 RESEARCH QUESTION**

1. How effective is Zambia's legal framework, particularly the Solid Waste Regulation and Management Act 2018 in addressing solid waste management challenges faced by low-income households?
2. What are the key legislative provisions, enforcement practices, and stakeholder engagement strategies that define Kenya's legal and institutional framework for solid waste management?
3. How can lessons from Kenya's best practices including its participation in international environmental treaties be adapted to strengthen Zambia's legal and policy framework for solid waste management, particularly in low-income communities?

### **1.6 SIGNIFICANCE AND PURPOSE OF THE STUDY**

The significance of this study lies in addressing the critical and underexplored issue of solid waste management in low-income households in Zambia. While the Solid Waste Regulation and Management Act of 2018<sup>13</sup> and other relevant regulations, such the Environmental Management Act of 2011, are intended to control waste management practices; nonetheless, their execution has encountered difficulties, especially in underprivileged areas. The study offers practical suggestions to enhance waste management systems by pointing out weaknesses in the existing framework and its implementation. Additionally, this study supports Zambia's overarching objectives of attaining sustainable urban growth, lowering environmental degradation, and advancing public health. Additionally, the study promotes equality and inclusivity in national waste management policies and practices by highlighting the needs of vulnerable groups.

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<sup>13</sup> Solid Waste Regulation and Management Act of 2018

The purpose of the study is to critically evaluate the efficacy of Zambia's legal framework in managing solid waste for low-income households and to draw lessons from Kenya's successful strategies. By comparing Zambia's waste management practices with Kenya's National Solid Waste Management Strategy, the research seeks to identify best practices, such as community engagement, public-private partnerships, and waste segregation, that can be adapted to the Zambian context. Ultimately, the study aims to inform policymakers, waste management service providers, and other stakeholders, providing them with evidence-based recommendations to create a more effective, inclusive, and sustainable waste management system that addresses the needs of low-income households and contributes to national development objectives.

### **1.7 SCOPE OF STUDY**

This study's objective is to assess how well Zambia's legal system specifically, the Solid Waste Regulation and Management Act of 2018 manages solid waste in low-income families. In particular, the study will evaluate how the framework tackles the difficulties these households encounter, including poor infrastructure, restricted access to garbage collection services, and inappropriate waste disposal methods. In the context of Zambia, it will also look at public awareness campaigns, stakeholder roles, and enforcement measures. In order to offer comprehensive, context-specific insights, the study is geographically restricted to specific low-income areas in Zambia. In order to highlight best practices that can be modified to enhance Zambia's waste management systems, the study will also use Kenya's National Solid Waste Management Strategy as a comparative case study.

### **1.8 KEY DEFINITIONS**

**Solid Waste:** Solid waste refers to discarded materials that are not liquid or gaseous, including household waste, industrial waste, and construction debris. It encompasses biodegradable and non-biodegradable waste.<sup>14</sup>

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<sup>14</sup> United Nations Environment Programme, Solid Waste Management (UNEP, 2020)  
<https://www.unep.org/resources/report/solid-waste-management> accessed 13 April 2025.

**Solid Waste Management (SWM):** Waste management involves the collection, transportation, treatment, and disposal of waste materials. It aims to minimize environmental impact and promote sustainability through practices like recycling and composting.<sup>15</sup>

**Legal Framework:** A legal framework consists of the laws, regulations, policies, and institutions established by a government to govern specific activities in this case, solid waste management<sup>16</sup>.

**Low-Income Households:** Low-income households refer to families or individuals with limited financial resources, often residing in underserved areas where access to services, such as waste management, is inadequate.<sup>17</sup>

**Informal Waste Sector:** This refers to unregulated waste collection, recycling, and disposal activities conducted by individuals or groups outside formal waste management systems.<sup>18</sup>

**Sustainable Waste Management:** Sustainable waste management involves practices that minimize environmental harm and maximize resource recovery through approaches such as recycling, reuse, and reducing waste generation.

**Waste Segregation:** Waste segregation is the process of separating waste materials into different categories e.g., organic, recyclable, and hazardous to facilitate proper disposal or recycling.

**Stakeholder Engagement:** Stakeholder engagement refers to the active involvement of various groups including government agencies, private companies, and communities in planning and implementing waste management strategies.

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<sup>15</sup> World Bank, What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050 (World Bank, 2018) <https://openknowledge.worldbank.org/handle/10986/30317> accessed 13 April 2025.

<sup>16</sup> Patricia Kameri-Mbote, Law, Environment and Development in Africa (Oxford University Press 2019) 53

<sup>17</sup> UN-Habitat, The Challenge of Slums: Global Report on Human Settlements 2003 (Earthscan Publications 2003) 23

<sup>18</sup> Melanie Samson, Wasted Citizenship: Reclaimers and the Privatised Expansion of the Public Sphere (HSRC Press 2015) 12–15

## 1.9 LITERATURE REVIEW

Because solid waste management (SWM) affects urban development, environmental sustainability, and public health, it is a crucial problem in emerging nations. Waste management is significantly shaped by the legal frameworks controlling SWM, especially for underprivileged areas. Based on scholarly research and empirical studies, this literature review examines the advantages and disadvantages of Zambia's legal system while comparing it to Kenya's methodology.

**Wilson et al.** emphasize the importance of the informal sector in SWM in developing nations, pointing out that, particularly in low-income areas, informal players frequently function in the absence of strong state processes. To increase sustainability and inclusivity, they support laws that officially acknowledge and incorporate unofficial waste collectors into local systems.<sup>19</sup>

**Rotich K Henry, Zhao Yongsheng and Dong Jun** provide a case study on Kenya's municipal waste challenges prior to the enactment of the Environmental Management and Coordination Act (EMCA), 1999. Their research demonstrates that institutional reform and legal innovation can lead to more efficient and inclusive waste systems.<sup>20</sup> This is directly relevant for Zambia as it explores how legal reform can address implementation failures.

**Muchaparara Mutsau and Liberty Chikodzi** examine urban waste systems in Zimbabwe and argue that while policies exist, poor enforcement and lack of resources still undermine their effectiveness.<sup>21</sup> Their findings connect with Zambia's experience under the Solid Waste Regulation and Management Act, 2018, which has faced similar enforcement issues in low-income areas.

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<sup>19</sup> David C Wilson, Costas Velis and Chris Cheeseman, 'Role of informal sector recycling in waste management in developing countries' (2006) 30 Habitat International

<sup>20</sup> Rotich K Henry, Zhao Yongsheng and Dong Jun, 'Municipal solid waste management challenges in developing countries – Kenyan case study' (2006) 26 Waste Management

<sup>21</sup> Muchaparara Mutsau and Liberty Chikodzi, 'Urban Solid Waste Management in Zimbabwe: A Case of Harare' (2015) 17 Journal of Sustainable Development in Africa 36

**Geoffrey Chileshe, Francis Moonga and Harold Kaliba** assess SWM in Lusaka and identify challenges specific to low-income households, including limited access to waste collection, open dumping, and lack of segregation.<sup>22</sup> Their work provides localized empirical evidence that supports the central focus of this dissertation.

**Phindile Mudau, Geoffrey Mukwada and Paul Maponya** explore municipal SWM strategies in Southern Africa, emphasizing the importance of public-private partnerships (PPPs) and participatory governance.<sup>23</sup> Kenya's PPP-driven model, particularly in Nairobi's informal settlements, is presented as a benchmark for reform.

**Peter Omwoma et al.** analyze SWM in Kisumu, Kenya, and emphasize the benefits of strong regulatory enforcement, waste separation at the source, and community-based recycling initiatives.<sup>24</sup> These strategies have led to job creation and environmental improvements and are suggested as models for Zambia to adopt.

**Jonathan Simukonda and Mary Phiri** provide a legal analysis of Zambia's SWM laws, pointing out that although the 2018 Act centralizes control, it does not include measures for integration of the informal sector or local interaction.<sup>25</sup> They advocate for stronger stakeholder participation and legal clarity to enhance implementation.

Finally, **Charles J Kibert**, He addresses how environmental policy must strike a balance between development and equity, particularly in vulnerable populations, in his work on sustainability legislation. His focus on legislative frameworks that support intersectoral cooperation and long-term sustainability is essential to Zambia's future.<sup>26</sup>

Together, these academic contributions show that although Zambia's SWM framework is legally comprehensive, it needs to be implemented more robustly, involve stakeholders,

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<sup>22</sup> Geoffrey Chileshe, Francis Moonga and Harold Kaliba, 'Assessing Solid Waste Management Practices in Lusaka, Zambia' (2016) 10 African Journal of Environmental Science and Technology

<sup>23</sup> Phindile Mudau, Geoffrey Mukwada and Paul Maponya, 'Municipal Solid Waste Management in Southern Africa: A Comparative Analysis' (2021) 13 Sustainability

<sup>24</sup> Peter Omwoma et al., 'Challenges of Solid Waste Management in Kenya: A Case Study of Kisumu City' (2017) 60 Environmental Management

<sup>25</sup> Jonathan Simukonda and Mary Phiri, 'An Analysis of the Solid Waste Regulation and Management Act of 2018 in Zambia' (2020) 35 Zambian Law Journal

<sup>26</sup> Charles J Kibert, Sustainable Construction: Green Building Design and Delivery (4th edn, Wiley 2016).

and be innovative to effectively serve low-income households. Zambia may learn valuable legal and policy lessons from Kenya's experience to close the implementation gap.

### **1.10 METODOLOGY**

To thoroughly assess the effectiveness of Zambia's regulatory framework for solid waste management for low-income households, this study will use a mixed-methods research approach, integrating qualitative and quantitative methodologies. Policymakers, local government representatives, waste management service providers, and low-income household representatives are among the main stakeholders whose opinions on the difficulties and efficacy of trash management will be gathered through structured interviews. Quantitative information on home waste practices and access to garbage collection services will be gathered through surveys. A review of pertinent laws, such as the Solid Waste Regulation and Management Act, 2018, and associated policies will be done through document analysis. Furthermore, case studies of particular low-income communities will offer comprehensive insights, and a comparison with Kenya's National Solid Waste Management Strategy will reveal lessons that Zambia can learn.

#### **1.10.1 RESEARCH APPROACH**

To assess Zambia's solid waste management legislation and its effects on low-income households, this study uses a comparative case study methodology. To find transferable best practices, it looks at pertinent laws, like the Solid Waste Regulation and Management Act 2018, and contrasts them with Kenya's National Solid Waste Management Strategy. combining quantitative surveys of low-income homes with qualitative techniques such as document reviews and interviews.

#### **1.10.2 RESEARCH DESIGN**

This study's research design combines mixed methodologies with a comparative case study. It examines Zambia's solid waste management system using both qualitative and quantitative methods, with a focus on how it affects low-income households. In order to obtain both policy-level and grassroots insights, important elements include document analysis of laws such as the Solid Waste Regulation and Management Act, 2018, stakeholder interviews, and surveys of impacted communities. In order to find lessons

that can be applied to Zambia, Kenya's National Solid Waste Management Strategy is used as a comparative case, guaranteeing a fair and useful assessment.

### **1.10.3 RESEARCH TYPE**

The research type for this study is applied research. This type of research focuses on solving practical problems by analyzing the effectiveness of Zambia's legal framework for solid waste management and its impact on low-income households. By using a comparative approach with Kenya's practices, the study aims to provide actionable recommendations and real-world solutions to improve waste management systems in Zambia.

### **1.10.4 RESEARCH POPULATION**

The study population for this research comprises key stakeholders involved in solid waste management in Zambia, particularly in low-income communities. This includes local government officials responsible for implementing waste management laws, waste management service providers (both formal and informal), community leaders, and residents of low-income households. Additionally, experts and policymakers familiar with the Solid Waste Regulation and Management Act, 2018 and other relevant laws will form part of the study population to provide insights into the effectiveness and challenges of the legal framework. This diverse group ensures a comprehensive understanding of both policy-level implications and the lived experiences of affected communities.

### **1.10.5 SAMPLING SIZE**

Due to the qualitative nature of the research, purposive sampling will be employed. This study will use purposive sampling to select participants from low-income urban and peri-urban areas in Zambia, specifically targeting Lusaka's Kanyama and Chibolya compounds and parts of Ndola. The sample will include residents from low-income households, informal waste collectors, and 6 key informants such as officials from municipal councils, representatives from the Zambia Environmental Management Agency (ZEMA), and members of NGOs involved in solid waste management.

#### **1.10.6 SAMPLING TECHNIQUES**

This study subject will be sampled using purposive sampling technique, so as to make the study even more practical while still targeting people and work places that will help in delivering reliable results with regards to the study

#### **1.10.7 DATA COLLECTION**

Data for this study will be collected through legislation, text books, journal articles, research papers, published legal reports, various electronic sources and academic papers.

#### **1.10.8 DATA ANALYSIS**

All the data which has been collected from primary and secondary, will be analyzed qualitatively of which will involve taking down interviews and assembling the data into themes and patterns using content analysis and thematic methods of analysis. The objective is to acquire a deep understanding and interpretation of the data.

#### **1.10.9 ETHICAL CONSIDERATIONS**

Ethical considerations for this study include ensuring informed consent from all participants, particularly household respondents, and stakeholders. Participants will be fully informed about the study's purpose, their role, and how their data will be used. Confidentiality and anonymity will be strictly maintained to protect participants' personal information and privacy. Additionally, the research will avoid any form of discrimination or coercion, ensuring voluntary participation. Ethical approval will be sought from an appropriate research ethics committee, and all data collection methods will adhere to the principles of fairness, respect, and integrity. Special attention will be given to ensuring that the study does not exploit vulnerable groups, such as low-income households or informal waste workers. Further all the information obtained during the course of this thesis shall purely be for academic purposes.

## CHAPTER TWO

### THE ZAMBIAN LEGAL FRAMEWORK ON SOLID WASTE MANAGEMENT AND ITS EFFICACY IN LOW-INCOME HOUSEHOLDS

#### 2.1 INTRODUCTION

This chapter examines Zambia's legal framework on solid waste management with a particular focus on the Solid Waste Regulation and Management Act 2018 (SWRMA). The objective is to critically evaluate the extent to which this framework addresses the specific needs and challenges of low-income households, particularly those living in peri-urban and informal settlements. Solid waste management is both a legal and public health issue, and while Zambia has made significant progress in codifying statutory provisions to regulate waste, questions remain about the effectiveness of implementation whether the law sufficiently reflects the lived realities of poor communities.

#### 2.2 OVERVIEW OF ZAMBIA'S LEGAL FRAMEWORK ON SOLID WASTE MANAGEMENT

##### 2.2.1 THE CONSTITUTIONAL OF ZAMBIA (AMENDMENT) ACT 2016

The Zambia's constitutional framework provides a foundation for environmental protection. The Constitution of Zambia (Amendment) Act, 2016, under Part IX on National Values, Principles and Directive Principles of State Policy, obliges the State to ensure sustainable development, equitable access to resources, and environmental protection.<sup>27</sup> Further, Article 255 explicitly mandates the State to adopt principles of sustainable development and social justice in environmental governance.<sup>28</sup> These constitutional obligations reinforce the Environmental Management Act 2011 and the Solid Waste Regulation and Management Act 2018, situating solid waste management not only as a statutory duty but as part of the fulfilment of fundamental rights and state obligations.

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<sup>27</sup> The Constitution of Zambia (Amendment) Act, 2016

<sup>28</sup> Ibid

## **2.2.2 THE ENVIRONMENT MANAGEMENT ACT 2011 AND THE SOLID WASTE REGULATION AND MANAGEMENT ACT 2018**

Zambia's legal framework on solid waste management is primarily anchored in two key statutes: the Environmental Management Act 2011 (EMA) and the Solid Waste Regulation and Management Act 2018 (SWRMA). These laws are supplemented by subsidiary legislation, statutory instruments, and local government by-laws, which together establish the legal and institutional basis for regulating waste generation, collection, treatment, and disposal.

The Environmental Management Act 2011 was enacted as the principal environmental statute, replacing the Environmental Protection and Pollution Control Act. Its objective is to provide for the sustainable management of natural resources and the protection of the environment against pollution and degradation.<sup>29</sup> The EMA confers broad powers on the Zambia Environmental Management Agency (ZEMA), including the regulation of waste disposal sites, licensing of waste handlers, and enforcement of compliance with environmental standards.<sup>30</sup> Although the Act sets the overarching environmental policy framework, its provisions on solid waste management are general in nature, creating the need for more specialized legislation.

This gap was addressed by the Solid Waste Regulation and Management Act 2018, which specifically regulates solid waste management in Zambia. The Act was introduced against the backdrop of increasing waste generation in urban centers, inadequate collection systems, and widespread illegal dumping, particularly in peri-urban settlements. Its stated objectives include promoting sustainable, integrated solid waste management, enhancing public health, and ensuring environmental protection.<sup>31</sup> Unlike the EMA, the SWRMA is highly detailed and prescriptive: it establishes categories of waste, provides for the licensing of waste service providers, and sets out offences and penalties for non-compliance.<sup>32</sup>

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<sup>29</sup> Solid Waste Regulation and Management Act 2018

<sup>30</sup> Ibid

<sup>31</sup> Ibid

<sup>32</sup> Solid Waste Regulation and Management Act 2018

A notable feature of the SWRMA is the recognition of the role of local authorities as primary implementers of waste management. The Act mandates councils to provide waste collection and disposal services, develop integrated waste management plans, and enforce standards within their jurisdictions.<sup>33</sup> Local authorities are also empowered to enter into contracts with private operators for waste collection, reflecting a shift towards public-private partnerships in service delivery.

The framework is further reinforced by municipal by-laws, which operationalize national legislation at the local level. For instance, Lusaka City Council and Ndola City Council have enacted by-laws prescribing designated collection points, user fees, and penalties for illegal dumping.<sup>34</sup> These by-laws often supplement national statutes by addressing practical issues such as waste storage in residential areas, street sweeping, and waste transport.

Despite the presence of this relatively comprehensive legislative framework, questions remain as to whether these laws sufficiently address the specific challenges of low-income households. Many peri-urban communities, which house the majority of Zambia's urban population, continue to lack access to formal waste services.<sup>35</sup> This suggests that while the statutory framework is robust on paper, its implementation has struggled to keep pace with the realities of urbanization, poverty, and institutional constraints.

## **2.3 INSTITUTIONAL ROLES AND RESPONSIBILITIES**

The effectiveness of Zambia's solid waste management framework depends not only on the statutory provisions but also on the allocation of institutional mandates and the degree of coordination among different actors. The two primary institutions with formal responsibility are the Zambia Environmental Management Agency (ZEMA) and local

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<sup>33</sup> Ibid

<sup>34</sup> Lusaka City Council (Solid Waste Management) By-Laws 2011; Ndola City Council (Solid Waste Management) By-Laws 2013.

<sup>35</sup> Chisakuta M, 'Solid Waste Management Challenges in Zambia: Policy and Practice' (2020) 5 Zambia Journal of Environmental Management 45.

authorities, supported by other stakeholders such as the Ministry of Local Government and Rural Development, private contractors, and community-based organizations.

### **2.3.1 THE ZAMBIA ENVIRONMENTAL MANAGEMENT AGENCY (ZEMA)**

ZEMA derives its mandate from the Environmental Management Act 2011 (EMA). It is tasked with overseeing environmental protection in general, including the regulation of waste disposal sites, licensing of waste transporters and handlers, and enforcement of compliance with environmental standards.<sup>36</sup> ZEMA also plays a central role in policy formulation and monitoring, issuing environmental impact assessments (EIAs) and ensuring that waste management activities meet statutory requirements. However, ZEMA's oversight role is primarily regulatory rather than operational, meaning that the actual provision of waste services lies outside its direct mandate.

### **2.3.2 LOCAL AUTHORITIES (COUNCILS)**

Under the Solid Waste Regulation and Management Act 2018 (SWRMA), the responsibility for direct service delivery falls to local authorities. Councils are mandated to establish integrated solid waste management systems, designate disposal sites, and ensure regular waste collection.<sup>37</sup> They are further empowered to contract private operators to provide waste collection services, either through franchising or licensing models.<sup>38</sup> This approach reflects a recognition that public-private partnerships are often necessary to overcome resource constraints in local government. Despite this mandate, most councils face chronic funding shortages, which limit their ability to procure equipment, hire personnel, and maintain disposal sites.

### **2.3.3 THE MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT**

The Ministry of Local Government and Rural Development plays a supervisory role, providing policy direction and financial support to councils. In practice, however, the ministry's role has sometimes overlapped with that of ZEMA, creating jurisdictional ambiguity. For example, while ZEMA regulates waste facilities at the national level, local authorities often issue parallel permits, leading to duplication and inefficiency.

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<sup>36</sup> Environmental Management Act 2011

<sup>37</sup> Solid Waste Regulation and Management Act 2018

<sup>38</sup> Ibid

#### **2.3.4 PRIVATE CONTRACTORS AND PUBLIC-PRIVATE PARTNERSHIPS (PPPS)**

Beyond formal state actors, private contractors have increasingly been involved in waste management, especially in urban areas such as Lusaka and Kitwe. Councils often contract these private companies to collect waste from designated zones. The franchising and licensing of private operators demonstrate a shift towards PPPs in service delivery.<sup>39</sup> While this helps mitigate the resource constraints faced by councils, issues of regulation and accountability remain, particularly in ensuring that private actors comply with environmental standards and extend services to peri-urban settlements.

#### **2.3.5 COMMUNITY-BASED ORGANIZATIONS (CBOS) AND INFORMAL ACTORS**

CBOs and informal actors also play a critical role in waste management, particularly in peri-urban settlements where formal systems are absent. Community initiatives often fill service gaps by organizing waste collection at the local level, while informal waste pickers contribute significantly to recycling and reduction of waste at dumpsites. Despite their importance, these actors remain largely unrecognized under the legal framework, leaving them to operate without regulation, adequate support, or protective equipment.<sup>40</sup> Their exclusion not only exposes them to occupational health risks but also limits opportunities for integrating recycling into Zambia's broader waste management strategy.

#### **2.3.6 CHALLENGES IN INSTITUTIONAL COORDINATION**

Despite the clear statutory allocation of responsibilities, the institutional framework is weakened by poor coordination among ZEMA, local authorities, and the ministry. This often results in overlapping mandates and inconsistent enforcement. Furthermore, the chronic underfunding of councils and the limited integration of private and community actors into the formal legal framework have hampered effective implementation.<sup>41</sup> Consequently, while the law outlines institutional roles in detail, fragmentation and resource constraints undermine the delivery of sustainable and inclusive waste management.

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<sup>39</sup> Mulenga C, 'Community Participation in Waste Management in Lusaka's Peri-Urban Settlements' (2018) 7 Zambia Journal of Development Studies 88.

<sup>40</sup> David C Wilson, Costas Velis and Chris Cheeseman, 'Role of informal sector recycling in waste management in developing countries' (2006) 30 Habitat International 797, 801.

<sup>41</sup> Chisakuta, 'Solid Waste Management and Environmental Governance in Zambia' (2019) 22 Zambia Journal of Social Sciences 56, 60.

The effectiveness of Zambia's solid waste management framework depends not only on the statutory provisions but also on the allocation of institutional mandates and the degree of coordination among different actors. The two primary institutions with formal responsibility are the Zambia Environmental Management Agency (ZEMA) and local authorities, supported by other stakeholders such as the Ministry of Local Government and Rural Development, private contractors, and community-based organizations.

The Zambia Environmental Management Agency (ZEMA) derives its mandate from the Environmental Management Act 2011 (EMA).<sup>42</sup> ZEMA is tasked with overseeing environmental protection in general, including the regulation of waste disposal sites, licensing of waste transporters and handlers, and enforcement of compliance with environmental standards.<sup>43</sup> It also plays a central role in policy formulation and monitoring, issuing environmental impact assessments (EIAs) and ensuring that waste management activities meet statutory requirements. However, ZEMA's oversight role is primarily

In addition, there is a growing need to enhance inter-agency collaboration through clear accountability frameworks and decentralized management structures. The effectiveness of Zambia's solid waste management system depends on coherent coordination among ZEMA, local authorities, and the Ministry of Local Government and Rural Development, yet these institutions often operate in silos. Establishing inter-ministerial task forces or waste management committees at both national and municipal levels could promote shared planning, data exchange, and resource pooling. Moreover, decentralizing operational responsibilities to ward-level environmental units under the supervision of local councils would enhance community ownership and responsiveness to local waste challenges. This approach has proven successful in countries such as Kenya and Rwanda, where decentralized waste governance has enabled more efficient service delivery and accountability at the community level. Strengthening these institutional linkages would ensure that the legal mandates established under the Solid Waste Regulation and Management Act 2018 are effectively translated into coordinated and practical action.

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<sup>42</sup> Environmental Management Act 2011

<sup>43</sup> Ibid

## 2.4 CHALLENGES IN IMPLEMENTATION

Although Zambia has enacted a relatively comprehensive legal framework for solid waste management, implementation has been fraught with persistent challenges. These difficulties stem from financial, institutional, socio-economic, and infrastructural constraints, which have collectively undermined the effectiveness of the Environmental Management Act 2011 (EMA)<sup>44</sup> and the Solid Waste Regulation and Management Act 2018 (SWRMA).

First, inadequate financing remains the most significant obstacle. Local authorities, who bear the primary responsibility for waste collection and disposal under the SWRMA,<sup>45</sup> operate with limited budgets that are insufficient to cover the costs of vehicles, fuel, protective equipment, and salaries for waste workers. A 2021 Zambia Institute for Policy Analysis and Research (ZIPAR) report found that most councils allocate less than 10% of their budgets to waste management, despite the rising waste volumes in urban areas.<sup>46</sup> This financial shortfall has led to irregular waste collection, poorly maintained dumpsites, and reliance on donor-funded pilot projects that lack sustainability.

Second, weak institutional coordination has hindered the enforcement of waste management laws. While ZEMA has regulatory authority under the EMA,<sup>47</sup> local councils are tasked with direct service delivery under the SWRMA,<sup>48</sup> and the Ministry of Local Government and Rural Development retains an oversight role.<sup>49</sup> This overlap of mandates often results in duplication and conflicts. For instance, both ZEMA and councils have, at times, claimed responsibility for licensing private waste collectors, creating uncertainty for operators.<sup>50</sup>

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<sup>44</sup> Environmental Management Act 2011

<sup>45</sup> Solid Waste Regulation and Management Act 2018

<sup>46</sup> Zambia Institute for Policy Analysis and Research, Financing Urban Service Delivery in Zambia (Policy Paper No 34, 2021).

<sup>47</sup> Environmental Management Act 2011

<sup>48</sup> Solid Waste Regulation and Management Act 2018

<sup>49</sup> Ministry of Local Government and Rural Development, National Urban Solid Waste Management Strategy (2019).

<sup>50</sup> Chisakuta M, 'Solid Waste Management Challenges in Zambia: Policy and Practice' (2020) 5 Zambia Journal of Environmental Management 45

Third, inadequate enforcement capacity undermines compliance. Despite clear offences and penalties under the SWRMA including fines and imprisonment for illegal dumping<sup>51</sup> enforcement is rare due to limited manpower. Local councils lack sufficient inspectors to monitor peri-urban areas, where uncollected waste is most prevalent. As a result, informal dumping sites continue to proliferate, particularly in unplanned settlements that fall outside formal collection routes.

Fourth, exclusion of the informal sector remains a major gap. Waste pickers and community-based organizations provide essential services in low-income settlements but often operate outside the legal framework.<sup>52</sup> The absence of formal recognition and regulation means these actors lack access to protective gear, training, and secure markets for recyclables. This not only exposes them to health risks but also limits the potential for integrating recycling into Zambia's waste management strategy.

Fifth, inadequate infrastructure continues to frustrate effective waste management. Zambia has only a few engineered landfills the Chunga landfill in Lusaka being the most notable while most districts rely on open dumpsites that pose environmental and public health risks.<sup>53</sup> The absence of transfer stations, recycling plants, and proper waste segregation facilities undermines the efficiency of collection systems.

Finally, socio-economic barriers reduce household participation. Many low-income households are unable to afford user fees imposed by councils and private operators, leading to non-payment and eventual withdrawal of services.<sup>54</sup> Consequently, waste accumulates in these communities, exacerbating health risks such as cholera and dysentery outbreaks.

In summary, while the legal framework provides a strong foundation, these implementation challenges reveal a substantial gap between law and practice. Without

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<sup>51</sup> Solid Waste Regulation and Management Act 2018

<sup>52</sup> Mulenga C, 'Community Participation in Waste Management in Lusaka's Peri-Urban Settlements' (2018) 7 Zambia Journal of Development Studies 88.

<sup>53</sup> Zulu E, 'Urban Solid Waste Management and Public Health in Zambia' (2020) 14 African Journal of Public Health 56.

<sup>54</sup> Banda T, 'Affordability of Solid Waste Collection Services in Zambia's Low-Income Communities' (2019) 3 Journal of Southern African Studies 212.

addressing financing, institutional coordination, enforcement, and inclusion of informal actors, Zambia's solid waste management laws risk becoming aspirational rather than transformative.

## **2.5 IMPACT ON LOW-INCOME HOUSEHOLDS**

The effectiveness of Zambia's solid waste management framework cannot be meaningfully assessed without considering its impact on low-income households, particularly those residing in peri-urban and informal settlements. These communities constitute the majority of Zambia's urban population and are disproportionately affected by deficiencies in waste collection and disposal systems.<sup>55</sup> Despite the enactment of the Solid Waste Regulation and Management Act 2018 (SWRMA),<sup>56</sup> many of the legal and institutional measures fail to address the socio-economic vulnerabilities that shape waste management outcomes for the poor.

First, inadequate access to formal services leaves low-income households reliant on informal disposal methods. Local authorities, constrained by limited financial and logistical capacity, often exclude peri-urban areas from regular waste collection routes.<sup>57</sup> As a result, residents resort to open dumping in nearby fields, drains, or unoccupied land. This practice creates unsanitary living conditions and contributes to the proliferation of disease vectors such as flies and rodents.

Second, unaffordable user fees exacerbate inequities. Councils and private operators frequently charge households for waste collection services, yet many low-income households cannot afford these fees.<sup>58</sup> In such cases, residents either discontinue using formal services or avoid them altogether, perpetuating cycles of informal disposal. Banda's study on waste management in Lusaka found that affordability is the primary

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<sup>55</sup> UN-Habitat, Solid Waste Management in the World's Cities: Water and Sanitation in the World's Cities 2010 (Earthscan 2010)

<sup>56</sup> Solid Waste Regulation and Management Act 2018

<sup>57</sup> Chisakuta M, 'Solid Waste Management Challenges in Zambia: Policy and Practice' (2020) 5 Zambia Journal of Environmental Management 45.

<sup>58</sup> Zambia Institute for Policy Analysis and Research (ZIPAR), Financing Urban Service Delivery in Zambia (Policy Paper No 34, 2021).

determinant of whether low-income communities utilize formal collection systems.<sup>59</sup> This raises questions about whether the SWRMA adequately accommodates the principle of equity in access to public services.

Third, public health consequences are disproportionately borne by low-income households. Outbreaks of cholera and dysentery in Lusaka and Ndola have been directly linked to poor waste disposal and blocked drainage in informal settlements.<sup>60</sup> The failure to integrate public health considerations into waste management law and policy has had devastating effects on already vulnerable populations.

Fourth, exclusion of the informal sector undermines opportunities for both livelihoods and improved waste management. Informal waste pickers play a crucial role in recycling and reducing the volume of waste that ends up in dumpsites, yet they remain unrecognised under the legal framework.<sup>61</sup> Their exclusion not only limits their ability to operate safely but also weakens the potential for Zambia to develop a circular economy approach that could generate income opportunities for the poor.

Finally, lack of community participation in policy-making and enforcement reduces the responsiveness of waste management laws to local realities. The SWRMA vests significant authority in councils and ZEMA,<sup>62</sup> but offers limited mechanisms for involving communities in decision-making. This top-down approach has resulted in legal frameworks that often fail to reflect the everyday challenges faced by poor households, such as long distances to designated disposal sites or lack of storage containers.

In short, while Zambia's legal framework sets out commendable objectives, its implementation has largely overlooked the socio-economic barriers that shape waste practices in low-income settlements. The result is a cycle of exclusion in which the poor

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<sup>59</sup> Banda T, 'Affordability of Solid Waste Collection Services in Zambia's Low-Income Communities' (2019) 3 Journal of Southern African Studies 212.

<sup>60</sup> Zulu E, 'Urban Solid Waste Management and Public Health in Zambia' (2020) 14 African Journal of Public Health 56

<sup>61</sup> Mulenga C, 'Community Participation in Waste Management in Lusaka's Peri-Urban Settlements' (2018) 7 Zambia Journal of Development Studies 88.

<sup>62</sup> Solid Waste Regulation and Management Act 2018

bear the heaviest burden of ineffective waste management, both in terms of public health and environmental degradation.

## **2.6 SCHOLARLY AND EMPIRICAL PERSPECTIVE**

Scholarly analysis of Zambia's solid waste management framework provides valuable insights into both its strengths and limitations. The consensus in the literature is that, while the Solid Waste Regulation and Management Act 2018 (SWRMA) represent progress towards codifying a modern waste management regime, its implementation has not sufficiently accounted for Zambia's socio-economic realities, particularly the needs of low-income households.

First, the issue of legal comprehensiveness versus practical enforcement is frequently raised. Chisakuta argues that the SWRMA, while comprehensive in its scope, suffers from the same weakness as earlier statutes: a gap between law and practice.<sup>63</sup> This gap is attributed to institutional fragmentation, insufficient resources, and weak enforcement capacity. Chisakuta highlights the absence of effective coordination mechanisms between ZEMA and local authorities, which undermines consistent application of the law.

Second, the literature highlights inequities in access to services. Banda's study on affordability of waste services in Lusaka demonstrates that user fees disproportionately exclude low-income households.<sup>64</sup> According to Banda, the law's failure to provide explicit subsidies or targeted support for vulnerable communities entrenches environmental injustice, whereby the poor bear the greatest health risks from uncollected waste. This critique is echoed in global studies, such as UN-Habitat's Solid Waste Management in the World's Cities, which notes that pro-poor policy design is a critical determinant of success in urban waste systems.<sup>65</sup>

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<sup>63</sup> Chisakuta M, 'Solid Waste Management Challenges in Zambia: Policy and Practice' (2020) 5 Zambia Journal of Environmental Management 45.

<sup>64</sup> Banda T, 'Affordability of Solid Waste Collection Services in Zambia's Low-Income Communities' (2019) 3 Journal of Southern African Studies 212.

<sup>65</sup> UN-Habitat, Solid Waste Management in the World's Cities: Water and Sanitation in the World's Cities 2010 (Earthscan 2010).

Third, the exclusion of informal actors has been a recurring theme in the literature. Mulenga argues that waste pickers and community-based organizations are indispensable in peri-urban settlements, yet remain unrecognized under Zambia's legal framework.<sup>66</sup> This omission reflects a top-down, formalist orientation in the law, which prioritizes licensed operators while ignoring the practical role of informal actors in waste collection and recycling. As a result, opportunities for building inclusive, circular economies remain underutilized.

Fourth, empirical perspectives highlight the public health dimension of ineffective waste management. Zulu's research establishes a direct correlation between poor waste collection and recurrent outbreaks of cholera in Lusaka.<sup>67</sup> This underscores the urgent need for the legal framework to integrate public health priorities more explicitly into waste management policy. Failure to do so undermines both environmental and human rights objectives, particularly the right to health.

Finally, broader theoretical perspectives on law and development suggest that Zambia's waste management laws reflect a common pattern in African urban governance: laws are often transplanted from global models without sufficient adaptation to local contexts. McAuslan argues that development laws must "bring the law back in" by engaging with local social and economic conditions rather than merely replicating foreign templates.<sup>68</sup> Applied to Zambia, this suggests that while the SWRMA aligns with international best practice, its effectiveness depends on deeper localization and participatory governance.

Taken together, these scholarly and empirical perspectives emphasize that Zambia's legal framework, while progressive on paper, requires significant reforms in implementation, financing, and inclusivity if it is to address the needs of low-income households effectively.

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<sup>66</sup> Mulenga C, 'Community Participation in Waste Management in Lusaka's Peri-Urban Settlements' (2018) 7 Zambia Journal of Development Studies 88.

<sup>67</sup> Zulu E, 'Urban Solid Waste Management and Public Health in Zambia' (2020) 14 African Journal of Public Health 56.

<sup>68</sup> Patrick McAuslan, *Bringing the Law Back In: Essays in Land, Law and Development* (Ashgate 2003).

## 2.7 CONCLUSION

Zambia's legal framework on solid waste management, with particular attention to the Environmental Management Act 2011 (EMA) and the Solid Waste Regulation and Management Act 2018 (SWRMA). While these statutes together provide a comprehensive legal foundation for regulating waste, the analysis has revealed persistent implementation gaps that undermine their effectiveness, particularly for low-income households.

The framework demonstrates Zambia's commitment to aligning domestic law with international best practices in integrated solid waste management. However, several challenges hinder its impact. Financing for local authorities remains inadequate, institutional mandates are often fragmented, and enforcement is weak. Moreover, the legal framework fails to adequately account for the lived realities of poor communities, who are often excluded from formal services due to unaffordable user fees, inadequate infrastructure, and limited participation in decision-making<sup>69</sup>.

low-income households disproportionately bear the environmental and health consequences of ineffective waste management, as evidenced by recurrent outbreaks of cholera and dysentery in informal settlements. The exclusion of informal actors such as waste pickers further entrenches inequities while limiting opportunities for recycling and livelihood generation.

In conclusion, while Zambia's waste management laws represent a significant step forward, they remain insufficient in practice. Addressing these shortcomings will require reforms that go beyond legislative drafting to focus on implementation, financing, and participatory governance.

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<sup>69</sup> Zulu E, 'Urban Solid Waste Management and Public Health in Zambia' (2020) 14 African Journal of Public Health 56

## CHAPTER THREE

### KENYA'S LEGAL FRAMEWORK ON SOLID WASTE MANAGEMENT

#### **3.1 INTRODUCTION**

Over the last two decades, Kenya has demonstrated significant progress in establishing a robust legal and institutional framework for solid waste management (SWM). Anchored in the Environmental Management and Coordination Act (EMCA) 1999, supplemented by the Environmental Management and Coordination (Waste Management) Regulations 2006, the Constitution of Kenya 2010, and innovative measures such as the 2017 plastic bag ban, Kenya's framework represents a progressive, rights-based approach to environmental governance. Through devolution, counties have been empowered to manage waste locally, while public-private partnerships (PPPs) and community-based initiatives have expanded service delivery. This chapter highlights these advances, illustrating how Kenya has shifted from fragmented and underdeveloped regulation to a comprehensive and inclusive legal framework that offers valuable lessons for Zambia.

#### **3.2 CONSOLIDATION OF ENVIRONMENTAL LAW UNDER EMCA 1999**

Prior to 1999, Kenya's environmental law was fragmented, with multiple statutes regulating air, water, land, and waste in isolation. The Environmental Management and Coordination Act (EMCA) 1999 marked a milestone by consolidating these provisions into a single comprehensive statute.<sup>70</sup> EMCA introduced the principles of sustainable development, the polluter-pays principle, and precautionary approaches into Kenyan law, aligning it with international environmental law standards.

Section 3 of EMCA enshrined the right of every Kenyan to a clean and healthy environment, while section 7 established the National Environment Management Authority (NEMA) as the principal body responsible for environmental oversight.<sup>71</sup> EMCA also introduced specific obligations on waste management. Section 87(1) prohibits the discharge of waste into the environment except in accordance with a license, while

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<sup>70</sup> Environmental Management and Coordination Act 1999 (Kenya).

<sup>71</sup> Ibid

section 89 obliges waste generators to minimize waste through cleaner production technologies.<sup>72</sup>

This consolidation was not merely procedural. It elevated waste management from a municipal matter to a national priority, giving NEMA a supervisory mandate across all counties and ensuring environmental protection became a legally enforceable right.

### **3.3 OPERATIONALISATION THROUGH THE 2006 WASTE MANAGEMENT REGULATIONS**

The progress made under EMCA was consolidated by the Environmental Management and Coordination (Waste Management) Regulations 2006, which operationalized EMCA's provisions. These regulations represent Kenya's first detailed legislative framework on waste handling, treatment, transportation, and disposal. The regulations introduced several progressive requirements such as:

Segregation of waste: Regulation 4 requires all waste generators to segregate waste at source and use appropriate receptacles.

Licensing of handlers: Regulation 7 mandates that all transporters and handlers of waste must be licensed by NEMA.

Regulation of disposal sites: Regulation 9 provides that no person may operate a waste disposal site without a NEMA permit.

Ban on open burning: Regulation 12 prohibits open burning of waste, a practice previously common in urban settlements.<sup>73</sup>

These provisions positioned Kenya ahead of many African states at the time by mandating segregation, recycling, and accountability through licensing. As Rotich, Zhao and Dong observe, the regulations provided “one of the most detailed African models of municipal solid waste management law” and aligned with global best practices.<sup>74</sup>

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<sup>72</sup> Ibid

<sup>73</sup> Environmental Management and Coordination (Waste Management) Regulations 2006

<sup>74</sup> Rotich KH, Zhao Y and Dong J, 'Municipal Solid Waste Management Challenges in Developing Countries – Kenyan Case Study' (2006) 26 Waste Management 92.

### 3.4 RECOGNITION OF ENVIRONMENTAL RIGHTS IN THE 2010 CONSTITUTION

A defining moment in Kenya's environmental governance was the promulgation of the Constitution of Kenya 2010, which elevated environmental protection to the level of constitutional rights. Article 42 provides that every person has "the right to a clean and healthy environment," while Article 69 obliges the state to ensure sustainable management of natural resources, encourage public participation, and eliminate processes harmful to the environment.<sup>75</sup>

This constitutionalizing of environmental rights has had far-reaching implications. Kenyan courts have enforced these rights, as seen in ***Peter K Waweru v Republic***, where the High Court recognized the right to a clean environment as part of fundamental human rights, later reinforced by the 2010 Constitution.<sup>76</sup> Similarly, in ***Joseph Leboo & 2 Others v Director Kenya Forest Service***, the court invoked Article 42 to restrain harmful environmental practices.<sup>77</sup>

By embedding environmental rights in its supreme law, Kenya established a powerful tool for litigation, activism, and accountability. Citizens and civil society can compel authorities to improve waste management and protect environmental health.

Beyond its legal recognition, Kenya's constitutionalizing of environmental rights has transformed governance by empowering citizens, communities, and civil society organizations to act as environmental watchdogs. Through mechanisms such as public interest litigation and citizen petitions under Articles 22 and 70 of the Constitution, individuals can directly challenge environmental harm and compel government agencies to fulfil their duties. This has encouraged transparency and accountability, fostering a participatory culture in environmental decision-making. Environmental courts and tribunals, established under the Environment and Land Court Act, have further strengthened enforcement by providing specialized forums for resolving environmental disputes efficiently. This model demonstrates how constitutional rights, when coupled with accessible enforcement institutions, can translate legal guarantees into tangible

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<sup>75</sup> Constitution of Kenya 2010, arts 42, 69.

<sup>76</sup> *Peter K Waweru v Republic* [2006] KLR (Kenya High Court).

<sup>77</sup> *Joseph Leboo & 2 Others v Director Kenya Forest Service* [2013] KLR.

protection for communities. For Zambia, incorporating similar constitutional or statutory recognition of the right to a clean and healthy environment could empower citizens to hold authorities accountable and strengthen the overall implementation of environmental and waste management laws.

### **3.5 THE 2017 PLASTIC BAG BAN AS A GLOBAL BENCHMARK**

One of Kenya's most celebrated reforms is the 2017 ban on plastic carrier bags, enacted under EMCA through Gazette Notice No. 2356. The law prohibited the manufacture, importation, and use of plastic bags, imposing penalties of up to four years' imprisonment or fines of up to KSh 4 million.<sup>78</sup>

The ban has been transformative. NEMA reports show over 80% compliance in urban areas, with visible improvements in drainage systems and reduced plastic pollution in rivers and wetlands.<sup>79</sup> A 2019 UN Environment assessment hailed Kenya's ban as "the world's toughest" and a model for other developing countries.<sup>80</sup>

Kenya's bold step demonstrates political will in environmental protection. It shows how legislation, when combined with strict enforcement and public sensitization, can achieve measurable results.

### **3.6 DEVOLUTION OF SOLID WASTE MANAGEMENT TO COUNTIES**

The Fourth Schedule of the 2010 Constitution assigned waste management to county governments. This devolution has been a major source of progress, enabling counties to tailor solutions to local realities.

Nairobi City County enacted the Solid Waste Management Act 2015, which introduced franchising models for waste collection, designated zones, and penalties for illegal dumping.<sup>81</sup> Kisumu County has pioneered PPPs in waste collection, integrating private

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<sup>78</sup> Gazette Notice No 2356 of 2017 (Kenya).

<sup>79</sup> NEMA Kenya, 'Status of Plastic Bag Ban Implementation Report' (2018).

<sup>80</sup> UN Environment, 'Kenya's Plastic Bag Ban: The World's Toughest' (2019).

<sup>81</sup> Nairobi City County Solid Waste Management Act 2015.

companies and CBOs.<sup>82</sup> Mombasa County has also developed by-laws to regulate collection and disposal, with increasing investment in recycling initiatives.

Devolution has localized waste management, bringing decision-making closer to citizens and enhancing accountability. Counties now legislate and enforce waste laws; a significant step compared to the centralized system of the past.

### **3.7 PUBLIC-PRIVATE PARTNERSHIPS AND COMMUNITY INITIATIVES**

Kenya has also progressed in integrating private and community actors into waste management.

Public–Private Partnerships (PPPs): Counties like Nairobi and Kisumu contract private companies for door-to-door collection, improving efficiency in middle- and high-income areas.<sup>83</sup>

Community-Based Organizations' (CBOs): In informal settlements such as Kibera and Mathare, CBOs provide door-to-door collection and recycling services where county coverage is limited.<sup>84</sup>

Informal Sector Recognition: While not yet fully formalized in law, informal waste pickers are increasingly acknowledged in county strategies and NGO partnerships.<sup>85</sup>

This participatory model of governance demonstrates progress in inclusivity. By recognizing the value of non-state actors, Kenya has diversified waste management beyond the state, fostering sustainability and community ownership.

### **3.8 POSITIVE IMPACTS ON URBAN SANITATION AND RECYCLING**

Kenya's reforms have yielded measurable outcomes. The plastic bag ban has reduced plastic waste in urban drainage channels, lowering the frequency of flooding.<sup>86</sup> Devolution

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<sup>82</sup> Omwoma P and others, 'Challenges of Solid Waste Management in Kenya: A Case Study of Kisumu City' (2017) 60 Environmental Management 753.

<sup>83</sup> Njogu HK, 'The Political Economy of Solid Waste Management in Nairobi' (2019) African Journal of Environmental Law and Policy 34.

<sup>84</sup> African Population and Health Research Center, Urban Sanitation and Solid Waste Management in Nairobi Informal Settlements (2017).

<sup>85</sup> Wilson DC, Velis C and Cheeseman C, 'Role of Informal Sector Recycling in Waste Management in Developing Countries' (2006) 30 Habitat International 797.

<sup>86</sup> UN Environment (n 11).

has enabled counties like Kisumu to achieve higher recycling rates through PPPs and community participation.<sup>87</sup>

Grassroots initiatives in Kisumu and Nairobi have created employment in waste sorting, composting, and recycling, improving livelihoods while promoting environmental sustainability.<sup>88</sup> These successes illustrate how Kenya has moved towards a circular economy model, integrating waste reduction and resource recovery into legal and policy frameworks.

### **3.9 CONCLUSION**

In conclusion Kenya's experience in reforming solid waste management demonstrates how deliberate, sustained, and multi-layered legal development can transform environmental governance. From the consolidation of environmental statutes under EMCA 1999 to the detailed operationalization through the 2006 Waste Regulations, the constitutional recognition of environmental rights in 2010, and the landmark plastic bag ban of 2017, Kenya has consistently deepened its commitment to sustainable waste management. Devolution has empowered counties to innovate locally, while partnerships with the private sector, community-based organizations, and recognition of the informal sector have made service delivery more inclusive. Judicial enforcement has elevated environmental rights into actionable remedies, and Kenya's integration of international obligations further reflects its global alignment. The passage of the Sustainable Waste Management Act 2022 illustrates a forward-looking reform trajectory, ensuring that waste is addressed not only as an environmental hazard but also as an economic resource in a circular economy. Together, these achievements highlight Kenya's progress from a fragmented system to one of the most advanced waste management frameworks in Africa. For Zambia, the Kenyan experience offers valuable lessons on the importance of constitutional guarantees, institutional strengthening, community participation, and bold legislative reforms in building an effective and sustainable solid waste management regime.

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<sup>87</sup> Omwoma P and others (n 13).

<sup>88</sup> APHRC (n 15).

## CHAPTER FOUR

### INTERNATIONAL ENVIRONMENTAL TREATIES AND THEIR RELEVANCE TO ZAMBIA'S SOLID WASTE MANAGEMENT

#### **4.1 INTRODUCTION**

The problem of solid and hazardous waste has become a major environmental challenge globally, and international environmental treaties play a pivotal role in guiding national responses. For Zambia, as a developing country experiencing rapid urbanization and industrialization, international treaties provide legal and policy direction for waste regulation, pollution control, and sustainable environmental management.

This chapter analyses three principal international environmental treaties that underpin global waste management standards and have direct relevance to Zambia: the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989), the Stockholm Convention on Persistent Organic Pollutants (2001), and the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (1991). These instruments collectively establish legal norms for hazardous waste minimization, control, and environmentally sound disposal practices.

Their objectives align closely with Zambia's domestic environmental laws, notably the Environmental Management Act 2011 (Act No 12 of 2011) and the Solid Waste Regulation and Management Act 2018 (Act No 20 of 2018). However, gaps remain in Zambia's domestication, enforcement capacity, and institutional coordination necessary to realize the full objectives of these treaties.

#### **4.2 THE BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL (1989)**

The Basel Convention, adopted in 1989 and entering into force in 1992, is the foremost international instrument governing the transboundary movement of hazardous wastes. It was negotiated in response to incidents in the 1980s where toxic wastes from

industrialized nations were exported to developing countries in Africa and Latin America for cheap disposal, resulting in serious environmental and health crises.<sup>89</sup>

The Convention seeks to reduce hazardous waste generation at source and ensure that such wastes are managed and disposed of in an environmentally sound manner (ESM).<sup>90</sup> Article 4(2) obliges each Party to ensure that hazardous wastes are managed within its territory and to prohibit exports to countries lacking the capacity for safe disposal.<sup>91</sup> Articles 6–8 introduce the Prior Informed Consent (PIC) procedure, requiring that transboundary movements of hazardous waste occur only with the explicit consent of importing and transit states.

The Basel Ban Amendment, adopted in 1995 and entering into force on 5 December 2019, further strengthens these provisions by prohibiting the export of hazardous wastes from OECD to non-OECD countries.<sup>92</sup>

Zambia acceded to the Basel Convention in 1994, thereby committing itself to its principles.<sup>93</sup> Domestically, section 9(2)(f) of the Environmental Management Act 2011 (EMA) mandates the Zambia Environmental Management Agency (ZEMA) to “implement international environmental agreements to which Zambia is a party.”<sup>94</sup> Section 71 further empowers ZEMA to issue compliance orders for pollution and waste control. However, neither the EMA nor the Solid Waste Regulation and Management Act 2018 (SWRMA) explicitly incorporate Basel’s provisions on transboundary waste tracking, PIC procedures, or export/import permits.

Consequently, Zambia lacks a comprehensive system for monitoring hazardous waste movements or for ensuring compliance with Basel’s technical standards.<sup>95</sup> UNEP has

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<sup>89</sup> United Nations Environment Program (UNEP), Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1673 UNTS 57 (adopted 22 March 1989, entered into force 5 May 1992).

<sup>90</sup> Basel Convention

<sup>91</sup> Basel Convention

<sup>92</sup> Basel Convention, Ban Amendment to the Basel Convention (adopted 22 September 1995, entered into force 5 December 2019).

<sup>93</sup> United Nations Treaty Collection (UNTC), Status of the Basel Convention <https://treaties.un.org> accessed 18 October 2025.

<sup>94</sup> Environmental Management Act 2011

<sup>95</sup> Environmental Management Act 2011

noted that ZEMA's limited laboratory facilities and staffing constraints hinder effective enforcement.<sup>96</sup> Strengthening Zambia's regulatory alignment with Basel by creating a national hazardous waste tracking system and integrating PIC procedures would enhance compliance and curb illegal waste trafficking.

### **4.3 THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS (2001)**

The Stockholm Convention, adopted on 22 May 2001 and entering into force on 17 May 2004, is a legally binding treaty that seeks to eliminate or restrict the production and use of Persistent Organic Pollutants (POPs). These are toxic chemical substances that persist in the environment, bioaccumulate through the food web, and pose significant risks to human health and ecosystems.<sup>97</sup>

Article 3 of the Convention requires Parties to eliminate or restrict the production and use of listed POPs, while Article 5 mandates them to develop action plans to reduce or eliminate unintentional releases of POPs from anthropogenic sources. Each State Party must also prepare and implement a National Implementation Plan (NIP) outlining national measures for compliance.<sup>98</sup>

Zambia ratified the Stockholm Convention in 2006 and, through the Ministry of Green Economy and Environment, developed its first NIP in 2012. The NIP identified major POP sources in Zambia, including obsolete pesticide stockpiles, open burning of waste, and electrical equipment containing polychlorinated biphenyls (PCBs).<sup>99</sup> However, progress in implementing the NIP has been limited due to inadequate funding, technical capacity, and public awareness.

The EMA 2011 and SWRMA 2018 incorporate several principles consistent with the Stockholm Convention. Section 74 of the EMA prohibits the discharge of hazardous substances into the environment, while section 10(1) of the SWRMA promotes pollution

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<sup>96</sup> UNEP, Zambia: National Report on the Implementation of the Basel Convention (UNEP 2023)

<sup>97</sup> Stockholm Convention on Persistent Organic Pollutants, 2256 UNTS 119 (adopted 22 May 2001, entered into force 17 May 2004)

<sup>98</sup> Stockholm Convention

<sup>99</sup> Government of the Republic of Zambia (GRZ), National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (Ministry of Environment 2012)

prevention and recycling. Yet, Zambia lacks specific regulations governing POP waste identification, classification, and disposal.<sup>100</sup> Consequently, POP-contaminated wastes such as e-waste and obsolete agrochemicals are often disposed of in municipal dumpsites without treatment.

Comparatively, Kenya and South Africa have incorporated Stockholm principles into domestic legislation, demonstrating the benefits of explicit legal alignment. Zambia could emulate these models by enacting POP-specific waste management regulations and by strengthening inter-ministerial coordination between ZEMA, the Ministry of Health, and local authorities.

#### **4.4 THE BAMAKO CONVENTION ON THE BAN OF THE IMPORT INTO AFRICA AND THE CONTROL OF TRANSBOUNDARY MOVEMENT AND MANAGEMENT OF HAZARDOUS WASTES WITHIN AFRICA (1991)**

The Bamako Convention, adopted in Bamako, Mali, on 30 January 1991 and entering into force on 22 April 1998, represents Africa's regional response to the weaknesses of the Basel Convention, particularly its failure to impose an absolute ban on hazardous waste exports to developing countries.<sup>101</sup> It was adopted under the Organization of African Unity (OAU) and is now administered by the African Union (AU).

The Bamako Convention prohibits the importation of hazardous waste into Africa and establishes strict controls on its movement within the continent. Article 4(1) declares an absolute ban on hazardous waste imports, while Article 4(3)(b) requires Parties to adopt national legislation prohibiting the dumping of hazardous waste in African territories.<sup>102</sup>

Zambia is a signatory to the Bamako Convention, reflecting its commitment to African environmental solidarity. The EMA 2011, in section 6(2), enshrines the polluter-pays and precautionary principles, both of which are central to the Bamako ethos. However, the Convention has not been domesticated into Zambian law, and the SWRMA 2018 does

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<sup>100</sup> Environmental Management Act 2011

<sup>101</sup> Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, 2101 UNTS 177 (adopted 30 January 1991, entered into force 22 April 1998).

<sup>102</sup> Bamako Convention

not expressly prohibit the importation of hazardous waste.<sup>103</sup> As a result, Zambia's enforcement relies primarily on general environmental offence provisions under section 69 of the SWRMA, which do not fully reflect the strict prohibitions of Bamako.

Full domestication of the Bamako Convention would strengthen Zambia's ability to combat illegal dumping and hazardous waste trafficking, while also enhancing regional cooperation under the African Ministerial Conference on the Environment (AMCEN).<sup>104</sup> It would also align Zambia's waste governance with the African Union Agenda 2063, which emphasizes environmental sustainability and safe waste management.

#### **4.5 AGENDA 21 (1992)**

Agenda 21, the companion action plan to the Rio Declaration, contains a comprehensive strategy for sustainable development. Chapter 21 of Agenda 21 specifically addresses "Environmentally Sound Management of Solid Wastes and Sewage-Related Issues," calling for waste minimization at source, recycling, and the strengthening of local authorities.<sup>105</sup>

The Agenda 21 advocates for community participation and the inclusion of informal waste collectors measures directly relevant to Zambia's peri-urban areas, where formal waste services are inadequate. Integrating Agenda 21's participatory approach into Zambia's National Solid Waste Management Strategy could improve inclusion of community-based organizations and informal recyclers in decision-making and implementation.

#### **4.6 THE AFRICAN UNION'S AGENDA 2063 AND THE AFRICAN MINISTERIAL CONFERENCE ON THE ENVIRONMENT (AMCEN)**

The African Union's Agenda 2063: The Africa We Want outlines the continent's long-term vision for inclusive growth and sustainable development. Aspiration 1, Goal 7 of Agenda

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<sup>103</sup> Solid Waste Regulation and Management Act 2018 (Zambia)

<sup>104</sup> African Union, Decisions and Declarations of the African Ministerial Conference on the Environment (AMCEN) 2023 <https://au.int> accessed 18 October 2025.

<sup>105</sup> United Nations, Agenda 21: Program of Action for Sustainable Development (Rio de Janeiro, 14 June 1992) ch 21.

2063 seeks an “environmentally sustainable and climate-resilient economy and communities.”<sup>106</sup>

The African Ministerial Conference on the Environment (AMCEN), established in 1985, provides a policy forum for coordinating continental environmental action. Through AMCEN decisions, member states, including Zambia, are encouraged to adopt the circular economy approach, strengthen waste-to-energy initiatives, and harmonize regional waste policies.<sup>107</sup> Zambia’s participation in AMCEN offers opportunities for capacity-building, regional cooperation, and access to international funding mechanisms, particularly under the Global Environment Facility (GEF).

#### **4.7 CONCLUSION**

The Basel, Stockholm, and Bamako Conventions collectively form the backbone of international and regional law on hazardous waste management. They establish the global standards for waste minimization, chemical safety, and transboundary waste control. Zambia’s ratification of all three instruments demonstrates its formal commitment to sustainable waste governance.

Nevertheless, the absence of explicit domestication and enforcement mechanisms within the EMA 2011 and SWRMA 2018 undermines full compliance. Strengthening Zambia’s national legislation to incorporate specific obligations under these treaties particularly on hazardous waste tracking, Prior Informed Consent procedures, and POPs disposal would enhance the country’s environmental governance framework.

Further, institutional capacity-building for ZEMA and inter-agency coordination with local authorities are necessary to operationalized treaty commitments. Aligning Zambia’s waste management framework with these international obligations would not only improve compliance reporting but also unlock access to international funding under mechanisms such as the Global Environment Facility (GEF).

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<sup>106</sup> African Union Commission, Agenda 2063: The Africa We Want (Addis Ababa 2015) Aspiration 1, Goal 7.

<sup>107</sup> African Ministerial Conference on the Environment (AMCEN), Decision 17/4 on Waste Management in Africa (Durban, November 2019).

Ultimately, a harmonized approach that integrates the principles of these treaties into domestic law will advance Zambia's commitment to sustainable development, environmental justice, and public health protection.

## CHAPTER FIVE

### FINDINGS, LESSONS, CONCLUSION AND RECOMMENDATIONS

#### **5.1 INTRODUCTION**

This chapter discusses the findings of the study in relation to its objectives and the existing body of literature. It draws on Zambia's internal legislative framework, Kenya's comparative experience, and the significance of international environmental agreements in developing national waste management policy. The chapter also provides the study's findings and makes recommendations to improve the effectiveness of Zambia's solid waste management regime, particularly for low-income households.

#### **5.2 FINDINGS**

The findings demonstrate that Zambia has developed a relatively sound statutory foundation for solid waste management through the Environmental Management Act 2011 and the Solid Waste Regulation and Management Act 2018. The legislative framework is, however, constrained by institutional, financial, and structural deficiencies that limit its operational effectiveness. The legal framework is therefore normatively comprehensive but functionally weak.

A crucial finding concerns the implementation gap, which is mostly due to a lack of institutional capacity among local governments, which have legislative duty for providing solid waste services. Limited financial resources, insufficient technical experience, and a lack of suitable enforcement measures have resulted in limited-service coverage in low-income settlements. This has resulted in continued informal dumping, environmental deterioration, and increased public health concerns.

Kenya, on the other hand, has a better alignment between legislative requirements and practical achievements. The study discovered that Kenya's success is based on the constitutionalizing of the right to a clean and healthy environment, institutional accountability under a devolved governance structure, and the inclusion of private, informal, and community actors into formal waste management systems.

### **5.3 LESSONS FOR ZAMBIA**

Zambia's participation in the Basel, Stockholm, and Bamako Conventions reveals valuable lessons for strengthening its national waste governance framework. While the country has demonstrated its commitment through ratification, the primary challenges remain implementation, domestication, and institutional coordination.

**Strengthen Domestication:** Zambia should expressly incorporate treaty provisions into its domestic legislation. Kenya and South Africa's constitutional and legislative frameworks demonstrate how domestication improves enforcement.

**Set up a National Hazardous Waste Tracking System:** The Basel Convention demands waste inventories and annual reporting. Zambia's absence of a consolidated database impedes compliance. A national tracking system would increase openness and reduce unlawful trafficking.

**Develop POP-Specific Regulations:** Zambia's NIP (2012) identified POP sources, however implementation stalled. Adopting South Africa's regulatory regime would make Section 74 of the EMA operational, ensuring POP segregation and safe disposal.

**Domesticate the Bamako Convention:** Including Bamako's prohibitions in SWRMA 2018 would improve Zambia's ability to pursue unlawful importers and accord with African environmental policy frameworks.

**Improve Institutional Capability:** ZEMA's enforcement is hampered by technological and financial limitations. UNEP and GEF-supported capacity-building would increase monitoring, laboratory testing, and data management capabilities.

**Integrate international standards into policy planning.** Incorporating the polluter-pays, precautionary, and waste hierarchy concepts into the National Solid Waste Management Strategy would align Zambia's approach with worldwide best practices.

### **5.4 GENERAL CONCLUSION**

The study suggests that Zambia's legal framework for solid waste management, while admirable in terms of statutory design, does not result in effective service delivery to low-

income households. The main flaws are insufficient enforcement capacity, institutional fragmentation, insufficient funding for local governments, and a lack of formalized participation by informal and community players.

Kenya's experience clearly shows that excellent implementation, rather than legislative drafting alone, is the most important aspect in successful solid waste governance. Zambia's framework would thus benefit from policy decentralization, legislative acknowledgment of informal entities, increased regulatory accountability, and the translation of international treaty requirements into enforceable national practice.

## **5.5 SUMMARY OF CHAPTERS**

This study was structured into four main chapters preceding this conclusion, each addressing a specific component of the research objectives.

### **5.5.1 CHAPTER ONE**

This chapter lays the foundation for the study by situating solid waste management (SWM) within Zambia's broader environmental and socio-economic context. It introduces the persistent challenges of waste accumulation, poor sanitation, and inadequate service delivery in low-income urban and peri-urban communities. The chapter presents the research problem the gap between Zambia's progressive legal provisions and their weak practical implementation and formulates the general and specific objectives guiding the research. It also establishes the study's significance in promoting environmental justice and sustainable development, particularly for vulnerable households. Through a mixed-methods approach combining qualitative and comparative analysis, the chapter positions Kenya as a case study for deriving lessons that can strengthen Zambia's legal and institutional frameworks. It further defines key terms, reviews relevant literature, and outlines the methodology that underpins subsequent chapters.

### **5.5.2 CHAPTER TWO**

This chapter provides an in-depth examination of Zambia's domestic legal instruments governing solid waste management, chiefly the Environmental Management Act 2011 and the Solid Waste Regulation and Management Act 2018. It analyses how these statutes allocate institutional responsibilities among the Zambia Environmental Management Agency (ZEMA), local authorities, and the Ministry of Local Government

and Rural Development. The chapter highlights major gaps in implementation: inadequate funding for councils, overlapping institutional mandates, weak enforcement, and the exclusion of informal actors such as waste pickers. It further discusses how these challenges disproportionately affect low-income communities, who face limited access to formal collection services, unaffordable user fees, and serious public-health risks. Drawing on scholarly and empirical sources, the chapter concludes that while Zambia's legal framework is normatively sound, its efficacy is undermined by financial, institutional, and social constraints.

### **5.5.3 CHAPTER THREE**

Chapter Three turns to Kenya's experience, illustrating how the Environmental Management and Coordination Act 1999, the 2006 Waste Management Regulations, and the 2010 Constitution collectively created a robust and rights-based environmental governance system. It details the operationalization of waste laws through NEMA (Kenya), the constitutional right to a clean and healthy environment, and progressive reforms such as the 2017 plastic-bag ban and the 2022 Sustainable Waste Management Act. The chapter also analyses how devolution under the 2010 Constitution empowered counties like Nairobi and Kisumu to localize waste management, fostering innovation through public-private partnerships and community-based initiatives. Kenya's measurable outcomes improved recycling, reduced plastic waste, and enhanced community participation illustrate the effectiveness of combining constitutional guarantees with practical enforcement. The chapter thus identifies Kenya's legal evolution as a valuable model for Zambia, emphasizing devolution, inclusivity, and accountability.

### **5.5.4 CHAPTER FOUR**

This chapter situates Zambia's waste management framework within the broader context of international environmental law. It analyses key global and regional instruments the Basel, Stockholm, and Bamako Conventions, Agenda 21, and the African Union's Agenda 2063 and assesses Zambia's level of compliance and domestication. While Zambia has ratified these treaties, the chapter finds that their principles are only partially reflected in domestic law, with significant gaps in hazardous-waste tracking, Prior Informed Consent procedures, and regulation of persistent organic pollutants (POPs). The discussion underscores the importance of integrating international standards into Zambia's national

policy to enhance monitoring, enforcement, and funding access. It also recommends full domestication of the Bamako Convention and the establishment of a national hazardous-waste inventory to align with global best practices.

## **5.6 RECOMMENDATIONS**

To enhance or improve the effectiveness, inclusiveness, and sustainability of Zambia's solid waste management framework particularly for low-income households the study proposes a set of comprehensive recommendations. These are designed to close the gaps identified in enforcement, coordination, financing, public participation, and legislative integration. Each recommendation aims to transform the Solid Waste Regulation and Management Act 2018 from a largely theoretical framework into a practical tool for environmental protection and social equity.

### **1. Strengthen Enforcement Capacity**

One of the most significant weaknesses identified in this study is the lack of enforcement at both national and local levels. The Zambia Environmental Management Agency (ZEMA) and local councils require substantial technical and logistical support to fulfil their statutory duties. Government should increase staffing levels of environmental inspectors, provide modern waste-monitoring equipment, and ensure that vehicles and fuel are readily available for field operations. Establishing dedicated Environmental and Waste Management Units within local councils and setting up specialized environmental courts or tribunals would expedite prosecution of waste-related offences and improve deterrence. Consistent enforcement of penalties for illegal dumping and open burning would also build public confidence and enhance compliance.

### **2. Clarify Institutional Mandates and Improve Inter-Agency Coordination**

Overlapping responsibilities among ZEMA, the Ministry of Local Government and Rural Development, and municipal authorities have resulted in duplication and inefficiency. The government should therefore establish a National Solid Waste Management Council or an inter-ministerial coordination committee to serve as a central platform for policy harmonization, performance monitoring, and data sharing. Such a body would develop

national service standards, clarify roles, and ensure that national and local policies complement rather than contradict one another. Enhanced coordination would also facilitate joint budgeting, technical training, and cross-agency accountability mechanisms.

### 3. Formalize and Integrate Informal and Community Waste Actors

The exclusion of informal waste pickers and community-based organizations (CBOs) represents both a governance and social-justice gap. These groups provide vital collection and recycling services in areas where formal coverage is limited. The government should create a regulatory framework that recognizes them as legitimate partners, offering registration, capacity-building programs, and access to protective equipment. Integrating these actors into municipal waste systems through franchising or cooperative models would enhance recycling rates, create employment, and promote safer working conditions. This approach also aligns with the principle of inclusive development under Zambia's national sustainable-development policies.

### 4. Enhance Fiscal Decentralization and Introduce Pro-Poor Financing Models

The study found that most local authorities lack adequate funding to implement the Solid Waste Regulation and Management Act 2018. To address this, the central government should allocate ring-fenced budget lines for waste management within the national fiscal framework. Councils should be allowed to retain a portion of collected user fees and environmental levies to sustain service delivery. Additionally, targeted subsidies for low-income communities and the introduction of polluter-pays mechanisms such as environmental taxes on non-recyclable packaging would create predictable funding streams for waste operations while ensuring fairness in cost distribution.

### 5. Establish a National Waste Information and Data-Management System

A persistent challenge in Zambia is the absence of accurate and up-to-date data on waste generation, composition, and collection coverage. This hinders evidence-based planning and compliance with international reporting obligations. ZEMA should therefore develop a centralized waste-information database integrating data from local councils, private operators, and CBOs. Such a system would support effective policy evaluation, inform

infrastructure investment, and enable Zambia to meet its obligations under the Basel and Stockholm Conventions, which require annual reporting on waste flows and hazardous-waste management.

#### 6. Promote Public Awareness and Community Participation

The success of any waste-management framework ultimately depends on behavioral change and community ownership. The government, in collaboration with NGOs and media organizations, should implement continuous awareness campaigns on waste segregation, recycling, and public health impacts of poor disposal practices. Environmental education should be incorporated into school curricula at all levels to cultivate long-term behavioral change. Establishing community environmental committees at ward level would empower residents to participate in monitoring, reporting, and designing local waste solutions, thereby strengthening participatory governance.

#### 7. Foster a Circular Economy and Waste-to-Resource Initiatives

Zambia's legal framework should promote a shift from waste disposal to waste utilization. Encouraging private investment in recycling, composting, and waste-to-energy projects would not only reduce landfill dependency but also generate green employment. The government could introduce incentives such as tax holidays, grants, or low-interest loans for companies engaged in recycling and eco-innovation. Supporting producer-responsibility schemes would ensure that manufacturers take part in managing post-consumer waste, advancing the principle of extended producer responsibility (EPR).

#### 8. Review and Amend the Legal Framework to Fill Normative Gaps

Although the Solid Waste Regulation and Management Act 2018 is comprehensive, it lacks detailed provisions for community participation, informal-sector recognition, and hazardous-waste regulation. Amendments should:

Mandate councils to include informal and community actors in Integrated Solid Waste Management Plans; Introduce explicit enforcement guidelines and administrative penalties for non-compliance; Incorporate the Basel, Stockholm, and Bamako

Conventions into domestic law through subsidiary legislation; and define technical standards for hazardous-waste segregation, transport, and disposal.

Such reforms would harmonize Zambia's domestic framework with international best practices and strengthen legal certainty.

#### 9. Mainstream Gender and Social Inclusion

Waste management in low-income communities is highly gendered, with women and youth often bearing the brunt of informal collection and recycling. National and local programs should therefore integrate gender-responsive strategies, ensuring equitable access to training, financial support, and decision-making roles. Empowering women and youth in the waste value chain contributes to poverty reduction and social resilience while aligning with Zambia's commitments under Sustainable Development Goals 5 and 11.

#### 10. Support Research, Innovation, and Technology Development

Sustainable waste management requires continuous research and technological adaptation. Government should collaborate with universities, research institutions, and the private sector to develop low-cost recycling technologies, biodegradable packaging alternatives, and efficient waste-collection systems. Establishing a National Centre for Waste Innovation could facilitate pilot projects, policy research, and data exchange, providing evidence to guide future reforms.

#### 11. Strengthen Alignment with International Environmental Obligations

Finally, Zambia should accelerate the domestication of the Basel, Stockholm, and Bamako Conventions by developing implementing regulations and technical guidelines. Establishing a dedicated international-treaty implementation unit within ZEMA would ensure continuous monitoring, reporting, and coordination with global partners. Enhanced alignment with international norms would not only improve compliance but also unlock access to global environmental funds and technical assistance programs

The author also supports or recommends formal acknowledgment and incorporation of informal waste pickers and community-based organizations into the legal system, as they

play an important role in service delivery in areas where the state's presence is weakest. Their formal inclusion would allow for safer working conditions, structured engagement, and increased recycling. Additionally, the study proposes fiscal devolution and the adoption of pro-poor financing models that allow local authorities to sustain waste services through dedicated budgetary allocations and subsidy schemes for vulnerable households.

Furthermore, Zambia should completely domesticate its international treaty responsibilities, particularly those under the Basel, Stockholm, and Bamako Conventions, by incorporating them into legally binding rules governing hazardous waste management, monitoring, and transboundary control. To enhance accountability and environmental justice, the legal structure should adopt a rights-based model, either through constitutional recognition or legislative inclusion of the right to a clean and healthy environment, as Kenya has done. Finally, the study emphasizes the necessity of public education and behavior change activities to improve household trash segregation, recycling habits, and civic participation in local waste governance. Together, these reforms will ensure that Zambia moves away from a framework that is only comprehensive on paper to one that provides tangible environmental and public health advantages to low-income people.

## **5.7 CLOSING REMARKS IN SUMMARY**

the study demonstrates that the transformation of Zambia's solid waste management framework requires not only legislative reform but deliberate efforts aimed at strengthening institutional capacity, enhancing regulatory accountability, and ensuring inclusive participation by all stakeholders, particularly those in low-income communities. By aligning enforcement mechanisms with socio-economic realities and drawing practical lessons from Kenya's devolved and rights-based model, Zambia can move towards a more equitable and sustainable system of waste governance. The recommendations advanced herein therefore provide a practical pathway for translating statutory intent into meaningful environmental protection and improved public health outcomes for marginalized households.

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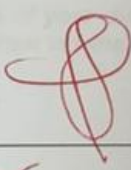
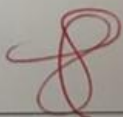
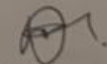
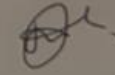
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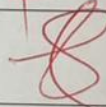
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L400B / Dissertation II – DIRECTED RESEARCH (OBLIGATORY ESSAY)

RESEARCH CLEARANCE FORM

NAME: WAITION DAKA STUDENT NUMBER: LB211463300  
SUPERVISOR: JOY MULAMBIA TOPIC: AN ANALYSIS OF THE  
EFFICACY OF THE ZAMBIAN LEGAL FRAMEWORK ON SOLID  
WASTE MANAGEMENT FOR LOW-INCOME HOUSEHOLDS: LESSONS FROM KENYA

| Stage                    | Supervisor's Comments                       | Supervisor's Signature & Date                                                        | Student's Signature & Date                                                                        |
|--------------------------|---------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Research Proposal        | change to chapter 1<br>28/8/25              |   | <br>28/8/25  |
| Chapter 1 – Introduction | 22/9/25<br>Submit chapter 2                 |   | <br>22/9/25  |
| Chapter 2 –              | Make corrections<br>27/9/25 start chapter 3 |  | <br>27/9/25  |
| Chapter 3 –              | 4/10/25 OK                                  |   | <br>4/10/25  |
| Chapter 4 –              | 28/10/25                                    |   | <br>28/10/25 |

|                                                                   |          |                                                                                   |                                                                                                                   |
|-------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Chapter 5 –<br>Conclusions &<br>Recommendations                   | 2/10/25  |  | <br>2/10/25                    |
| Abstract, Table of<br>Contents,<br>Bibliography and<br>Appendices | 4/11/25  |  | <br>4/11/25                    |
| First Draft                                                       | 4/11/25  |  | 4/11/25                        |
| Second Draft                                                      | 7/17/25  |  | <del>7/17/25</del><br> 7/11/25 |
| Final Draft                                                       | 10/11/25 |  |  10/11/25                      |

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## Report #29881611

SCHOOL OF LOW An analysis of the efficacy of the Zambian legal framework on Solid waste Management for low-income households: Lessons from Kenya BY WAITON DAKA LLB211463300 2025 An analysis of the efficacy of the Zambian legal framework on solid waste management for low-income households with lessons from Kenyan, Solid waste management (SWM) this is the systematic collection, transportation, treatment, recycling, and disposal of solid waste 1 and it has emerged as a pressing challenge in many developing countries. 28 Rapid urbanization, population growth, and limited infrastructure have placed immense pressure on waste management systems, particularly in low-income communities where services are often inadequate or absent. 32 In Zambia, the impact is most severe in peri-urban settlements, where insufficient waste collection leads to poor sanitation, environmental degradation, and heightened public health risks. 48 While Zambia's legal framework, notably the Environmental Management Act of 2011 and the Solid Waste Regulation and Management Act No. 20 of 2018, seeks to address these issues, weak enforcement, limited funding, and lack of stakeholder coordination continue to undermine effectiveness. Kenya faces similar socio-economic and urbanization pressures, yet its legal and policy reforms have achieved relatively greater success in managing solid waste. The Environmental Management and Coordination Act (EMCA) of 1999, complemented by the 2010 Constitution and progressive measures such