# BINDURA UNIVERSITY OF SCIENCE EDUCATION

## FACULTY OF SOCIAL SCIENCE AND HUMANITIES




# HUMAN SECURITY IMPLICATIONS OF POOR WASTE MANAGEMENT IN MBARE, ZIMBABWE

**BY**

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**A Dissertation Submitted to the Department of Peace and Governance in partial fulfilment for the requirements for the Bachelor of Science in Peace and Governance Degree**

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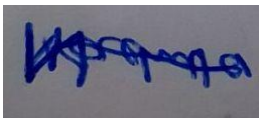
## ABSTRACT

This study analyzes the human security implications of poor waste management in Mbare, Zimbabwe which is a densely populated urban area facing public health and environmental challenges. The political ecology theory guided the research. It explores how inadequate waste management practices affect health, environmental sustainability and well-being. A mixed-methods approach was adopted using an explanatory sequential design. The study combined quantitative surveys and qualitative interviews with a sample of 30 participants comprising residents, traders and key informants. The findings of the research reveal that waste management systems in Mbare are inadequate with irregular municipal waste collection forcing residents to rely on unsafe practices like open dumping, burning and disposal in drainage systems. These practices contribute to serious human security threats like the spread of diseases such as cholera, typhoid and diarrhea, environmental degradation, pollution and increased flooding due to blocked drainage systems. The study also indicates that vulnerable groups such as women and children are mostly affected due to their increased exposure to unsafe environmental conditions. In addition, the findings also show that poor waste management is closely linked to governance challenges. These challenges include weak policy implementation, lack of resources and limited community engagement. Therefore, the study shows that addressing waste management in Mbare requires a combination of improved municipal services, stronger policy enforcement and active community participation. The measures can enhance human security and promote sustainable urban well-being.

**DECLARATION**

I, B222136B hereby declare that this is my original work and has not been submitted for any degree at any other university. All sources used have been acknowledged through proper referencing.

Student signature:  Date:28/08/26

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## DEDICATION

I dedicate this dissertation to my family for their unwavering support, love and encouragement which have carried me throughout this academic journey. The strength and belief in me have been my foundation. To my family thank you for sharing my resilience and inspiring me to pursue this work. This achievement is a reflection of your sacrifices and is dedicated to you with love.

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## ACRONYMS

**MSW-** Municipal Solid Waste

**UNEP-** United Nations Environment Programme

**EMA-** Environmental Management Agency

**SADC-** Southern African Development Community

**UNDP-** united Nations Development Programme

**WHO-** World Health Organization

**UNDRR-** United Nations Office for Disaster Risk Reduction

**UN-Habitat-** United Nations Human Settlements Programme

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# CHAPTER ONE

## 1.0 INTRODUCTION

### 1.1 Background of the study

The human security implications of poor waste management are an important issue at global, regional and local levels. Poor waste management contributes to environmental degradation, public health risks, and socio-economic problems. The United Nations Environment Programme (UNEP, 2020) highlights the importance of effective waste management systems in reduce these impacts. A lack of infrastructure in fast-growing cities makes waste management problems even worse, adding to the potential risks to human health (World Bank, 2021). Kaza et al. (2018) identified that the rising urban population contribute to increased solid waste generation. This waste can negatively impact the environment and cause serious health problems especially for the marginalized population. By 2050, the world is projected to generate 3.40 billion tons of waste. The increase in waste generation may contribute to the spread of disease, loss of biodiversity and environmental degradation.

Waste management problems in Africa are compounded by a shortage of resources, poor infrastructure and limited regulatory enforcement (Afrobarometer, 2019). The Southern African Development Community (SADC, 2023), has stated that inadequate waste management may cause environmental pollution, water-borne diseases and air quality problems, which affect low-income communities the most. According to the Environmental and Economic Performance of Municipal Solid Waste (2024), approximately 125 million tons of municipal solid waste are produced in Africa every year and only 55% of them are collected. Collection rates in Zimbabwe are even lower (44%), indicating that a large proportion of waste remain uncollected. This poses

risks to the environment and human health. Poor waste management therefore poses significant risks to human health, environmental sustainability and overall human security.

Waste management is a major problem in Zimbabwe particularly in congested communities such as Mbare. Inadequate resources and limited personnel for waste collection contributes to irregular waste collection and improper waste disposal. These conditions are associated with the accumulation of waste, water pollution, blocked drainage systems and health risks among residents. In Mbare poor waste management is evident through the disposal of waste in open spaces and drainage systems as well as inadequate waste collection services. These conditions have implications for human health, environmental safety and human security.

Poor waste management has significant health and environmental impacts including the spread of water-borne diseases such as cholera and typhoid. Inadequate resources and limited personnel for waste collection and disposal can contribute to the accumulation and improper disposal of waste, creating health and environmental risks for residents. The Local Waste Management Survey (2022) revealed that 45% of residents in reported receiving garbage collection services once per month, while 51% reported that they were not serviced at all. More than 20 % of population stated that waste was often disposed off in drains, while 55 % said that waste often disposed off in open fields. These conditions have contributed to environmental pollution, health hazards and disease outbreak in Mbare.

**1.2 Aim of the study**

To investigate the impact of inappropriate waste management on human security of Mbare, Zimbabwe.

## 1.3 Statement of the problem

Poor waste management is a significant environmental and human security problem in Mbare, Zimbabwe. The accumulation and improper disposal of solid Waste expose residents to various health and environmental risks including the spread of diseases, contamination of water sources, air pollution and the blockage drainage systems. Poor waste management is related to health problems such as cholera, skin irritation and diarrhea as mentioned by (Sultana 2021). In Zimbabwe poor household waste has been linked to risks to human health and loss of lives (Manyena, 2016). In Harare the problem has been evident through outbreaks of waterborne diseases associated with inadequate sanitation and waste management. For example, Chiredza (2018) reported that poor waste management contributed to conditions associated with a cholera outbreak affecting more than 10,000 people in Harare. The continued poor waste management in Mbare poses serious threats to resident's health, environmental safety and human security. This study therefore seeks to investigate the human security implications of poor waste management in Mbare by examining the existing poor waste management practices, assessing the associated human health implications and examining the environmental consequences of poor waste management that pose threats to human health and security.

## 1.4 Research Objectives

1) To examine the current waste management practices in Mbare.

2) To assess the human health implications of inadequate waste management in Mbare.

3) To examine the environmental consequences of poor waste management in Mbare, focusing on their potential threats to human health and security.

4) To propose strategies for improving waste management practices and mitigating health and environmental risks in Mbare.

**1.5 Research Questions**

1) What are the existing waste management practices in Mbare?

2) How does poor waste management contribute to the spread of diseases in Mbare?

3) What are the environmental impacts of poor waste management in Mbare that pose significant risks to human health and security?

4) What strategies can be implemented to improve waste management practices in Mbare?

**1.6 Assumptions of the study**

- This study assumes that poor waste management negatively impacts human health, livelihood and well-being in Mbare.

- The study assumes that inadequate waste collection, disposal and management contribute to human security in Mbare, Zimbabwe.

- This study also assumes that community participation is relevant to waste management practices and may influence the human security implications of poor waste management in Mbare.

**1.7 Significance of the study**

The study on the human security implications of poor waste management in Mbare, Zimbabwe is important for informing local policy and governance. Inadequate waste management creates significant public health risks leading to disease transmission and water pollution.

**Policymakers and local government officials**

The research offers policy decisions on waste management ensuring that policies are based on empirical evidence and adapted to the specific needs of Mbare. Policymakers can use this evidence to develop targeted intervention to address the specific challenges and needs of the community thereby reducing the risks associated with poor waste management.

**Local communities**

The study offers the importance of effective waste management in preventing disease outbreaks and enhancing community health outcomes. By addressing the challenges of poor waste management, local communities in Mbare will benefit from improved living conditions, reduced health risks and increased awareness of the importance of sustainable waste management practices.

**Waste Management Practitioners**

The study contributes in providing the waste management practitioners with valuable insights into the human security implications of poor waste management enabling them to make informed decisions and develop effective waste management plans. These findings can inform capacity building initiatives for waste management practitioners as it enhances their knowledge and skills in waste management and community engagement.

**International Organizations**

The study can be used to inform policy and programming decisions to ensure initiatives are tailored to the needs and challenges of Mbare, Zimbabwe. Thus, by knowing the human security implications of the poor waste management they can prepare specific interventions that will tackle the most pressing issues.

**Higher education and research institutes**

The study can be published in peer-reviewed journals, which will help the institution to build its academic reputation and contribute to the field of knowledge. The results of the study can be shared at workshops, where researchers can present their work and discuss it with others in the field.

### 1.8 Limitations of the study

This study was limited by its focus on Mbare, Harare meaning that the findings may not be generalizable to other urban areas in Zimbabwe because waste management challenges and human security issues vary across different municipalities. Makwara and Magudu (2019) argued that the results of their research are only applicable to other urban populations if they are not focused on individual suburbs. Wilson (2018) highlighted the case study approach that is used in waste research in low-income cities such as Mbare, which is useful to capture the local realities but may not adequately reflect the governance capacity and urban dynamics of other municipalities. Therefore, this study may not be generalized to all urban areas in Zimbabwe because it only focused on Mbare.

Furthermore, time and financial constraints limited the scope of data collection making it difficult to include larger sample size or additional study sites. Local governments lack the capacity and budget to implement waste policies into effective services, due to weak enforcement mechanisms (UNEP, 2021). Despite these limitations the researcher used questionnaires, interviews, observations and secondary data to gather information and enhance the credibility of the findings.

## 1.9 Delimitations of the study

This study geographically delimited to Mbare, Harare, Zimbabwe. It focuses specifically on selected areas within Mbare and does not cover other urban, peri-urban or rural areas of Zimbabwe. The study focuses of Mbare because it provides a specific setting in which to examine waste management practices and the human security implications associated with poor waste management.

The study is also thematically delimited to the human security implications of poor waste management with particular attention to health security. The study examines health risks such as the spread of diseases and environmental risks such as pollution, waste accumulation, water contamination and blocked drainage systems. Although human security has other dimensions, the study does not examine all of them, it concentrates on the dimensions that are most directly related to poor waste management in Mbare and are crucial the objectives of the study like political security is acknowledged but not examined in-depth.

## 1.10 Key definitions

**Environmental degradation** is the deterioration in environmental quality from ambient concentrations of pollutants and other activities and processes such as improper land use and natural disasters, (UNDRR, 2022).

**Human security** is a holistic approach that recognizes the interdependence of various forms of security-economic, health, environmental and political as essential to the overall safety and dignity of individuals (Mendez, 2021).

According to Azari & Borisch (2023) **public health** refers to all organized measures to prevent diseases, promote health and prolong life among the population as a whole.

According to Kumar et al. (2019) **waste management** is the processes and actions required to manage waste from its inception to its final disposal including collection, transport, treatment and disposal.

### 1.11 Dissertation outline

The dissertation is organized into five chapters. **Chapter One: Introduction** presents the background of the study, purpose of the study, the statement of the problem, the significance of the study, delimitations and limitations of the study, definition of key terms and the chapter summary. **Chapter Two: Literature review and theoretical framework** focuses on the theoretical frameworks, literature review, research gaps and scholarly views, critiques and the chapter summary. **Chapter Three: Research Design and Methodology** outlines the methodology that the researcher is going to apply which is the qualitative research approach, research design, target population, research sample, data collection tools, document analysis, data presentation analysis and ethical considerations. **Chapter Four: Data presentation, Analysis and Discussion of Findings** presents the research findings. The findings will be presented, analyzed and discussed and compared to other findings from other related studies. **Chapter Five: Summary, Conclusions, Recommendations and Areas of Further Research** provides the summary of the whole project, conclusions, and recommendations and areas of further research.

# CHAPTER TWO

## 2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### 2.1 Introduction

This chapter reviews existing literature and frameworks on waste management, human security and urban environmental challenges in Mbare, Zimbabwe. It also explores what scholars have written about waste management, human security and urban environmental challenges and to identify how these issues are connected. The chapter also provides a foundation for understanding how poor waste management affects safety, health, livelihoods and overall well-being of urban communities. Key frameworks on environmental governance and human security guide the analysis of health risks, environmental degradation and insecurity in Mbare. The review justifies the study's focus and highlights gaps it addresses.

### 2.2 Theoretical framework

#### Political Ecology Theory

The political ecology theory provides a useful framework for understanding how environmental problems are influenced by political, economic and social factors. According to Robbins (2020) political ecology is a field that has focused on the relationship between the environment and political, economic and social power dynamics and also examined how the government's failures, resource limitations and institutional neglect affect waste management and delivery of services. In Harare, notable disparities exist in the provision of municipal services in socio-political structures where low-income settlements like Mbare often receive few resources and less collection services than low density suburbs (Nhubu, 2021). Hence that is political ecology which provides the analytical basis for understanding how governance and policy

decisions produce uneven environmental burdens as well as worsening human insecurity among marginalized groups.

Political ecology emphasizes the importance of power relations in shaping environmental results. According to Jerrie (2024) municipal authorities restricted by limited budgets and political interference, prioritize central business districts and high-income areas for waste collection, leaving Mbare with irregular services. This results in environmental risks such as disease, pollution and flooding are concentrated among vulnerable groups. It is important to note that from a political ecology perspective, this represents environmental injustice which is a condition in which the burdens of environmental degradation heavily impacting disadvantaged groups (Walker, 2021). This theory provides a theoretical framework to explain why poor waste management in Mbare has become not just an environmental problem, rather a social and political one that undermines resident's human security.

Linking political ecology with the human security framework highlights those threats to human security such as disease outbreak, poor sanitation and loss of livelihoods result from governance failures and social inequalities. An example is when waste increases around Mbare Musika Market, this affects trader's income, and community health as well as local food safety and these insecurities are generated through political-economic processes which includes lack of accountability and exclusion of informal waste workers. Therefore, political ecology helps to identify how structural power like municipal priorities and corruption change into environmental degradation and diseases. Amato (2024) aligns the study with the objective of understanding human security not just as a matter of physical safety but as a function of governance, rights and access to environmental services.

## 2.3 Literature Review

Waste Management is a major problem in Harare, Zimbabwe especially in the suburb of Mbare. The implications of poor waste management are beyond environmental degradation, affecting human security and health. Empirical and review studies including Zhang et al (2024) , whose review of municipal solid Waste management challenges in developing regions highlights systematic challenges in waste management demonstrating that the problem is systematic rather than merely technical. The informal failures and informal adaptions of irregular council collection, the high cost of informal recycling economy and emergent cleanups are documented in practitioner reports and in scholarship reports in Mbare (Mukucha, 2025; Sverdlik, 2024). These studies state that informal actors, waste pickers and small recyclers face serious health risks at work thereby highlighting the struggles of poverty and lack of opportunities.

The comparative work situates Harare's experience particularly in Mbare within broader African and international discourses on human security, environmental justice and resilient urban systems. Enyia-Okon (2022) emphasizes health, livelihood and dignity rather than purely technical performance indicators. Field reports and recent news also underline the timely policy relevance as community advocacy in Mbare has produced measurable reductions in legal dumpsites, illustrating the limits of civic action in contexts of constrained municipal capacity (AP reporting, 2025; Accountability Lab, 2023).

### 2.3.1 Current Waste Management Practices

Globally, literature on waste management analyzed that municipal solid waste (MSW) differs significantly between developed and developing regions which reflects variations in funding, governance and urban planning. In developed countries, such as Japan, Sweden and Germany, waste management systems are mostly in place with a high level of recycling

technologies and waste management infrastructure to minimize waste and promote waste recycling and energy recovery. However, in developing countries, including Asia and sub-Saharan Africa, they encounter such problems as poor infrastructure, weak policy enforcement and low public awareness, leading to poor waste collection and illegal dumping. The World Bank (2022) has conducted studies that indicate that waste production in African cities is growing and that only around 55% of this waste is collected, with the remainder dumped into drains and open spaces.

The situation of waste management in informal settlements is highlighted in studies conducted in different cities across Africa, such as Nairobi (Karanja & Makokha, 2018) and Lagos (Ogunmakinde et al, 2020), which indicate that waste collection is largely informal, and residents are not provided waste services and thus resort to self-disposal methods, such as open burning or burying. Similarly, Masocha (2019) Zimbabwean studies conducted in other areas, such as Harare and Bulawayo, indicate that poor service delivery and weak institutional coordination contribute to poor waste collection in these areas and thus calls for better waste management strategies and infrastructure to be developed in these areas (Masocha, 2019).

Nevertheless, there is a significant lack of information on a detailed level of settlements on operational efficiency, spatial distribution of waste services and the role of the informal sector in local waste management systems. Existing studies are very broad and general and do not provide detailed comparative analysis or evaluation of low-cost, inclusive and sustainable waste collection systems for informal urban areas.

### 2.3.2 Human Health implications due to inadequate waste management

It is noteworthy to mention that the relationship between waste mismanagement and human health has been reported globally. According to the World Health Organization (WHO, 2021),

uncollected waste fosters disease vector like flies and mosquitoes which contributes to the outbreaks of cholera, malaria and diarrhea diseases. Research in Asian countries like India and Indonesia (Singh et al., 2020; Putri et al., 2021) has revealed that residents who reside near dump sites are at a greater risk of developing respiratory infections and gastrointestinal diseases, as a result of smoke from burning waste and the pollution of water. Furthermore, in African cities such as Accra (Kuitunen, 2019) and Lagos (Ogunjobi, 2021), there is a close association between poor waste collection and high rate of hospitalizations for water borne and vector borne diseases resulting from poor waste collection.

There are indications of similar health risks in urban settlements in Zimbabwe, especially in the absence of municipal collection systems. On the other hand, many previous studies use self-reported health outcomes, without directly measuring pollutant exposures. The research gap is that there are no experimental studies that make a clear causal link between exposure pathways (e.g., contaminated water, smoke inhalation) and health. There is also limited research on the psychological and social aspects of living in waste polluted environments which includes stress, stigma and loss of dignity aspects. Filling these gaps would give more insight into the impact of inadequate waste management on human welfare, not limited to health.

### 2.3.3 The impacts of inadequate waste management on environmental security for human beings

The negative effects of poor waste management have led to global concerns about contamination of soil, water and air. Research in Europe and North America (Zhang et al., 2020) has indicated the risks of groundwater contamination, toxic emissions from open burning and greenhouse gas emissions. In less developed countries, the regulatory systems are less developed and the environmental effects are destroyed. Studies in South Asia and Sub-Saharan Africa

(Kassim & Ali, 2021) have shown that open dumping and clogged drainage systems can lead to frequent flooding, resulting in destruction of homes, disease outbreak and undermines human security.

In African cities such as Accra and Dar es Salaam, research indicates that inadequate waste management contributes to waterway blockages, resulting in seasonal flooding and displacement (Mrema & Mgaya, 2022). Zimbabwe's urban areas such as Harare and Chitungwiza are experiencing heightened flooding as a result of clogged drainage systems (Taruvinga, 2021). But there is still a lack of research on how waste directly affects human security issues, such as displacement, food insecurity and livelihood loss. The majority of research studies focus on environmental or health issues alone, instead of looking at them from a holistic human security perspective. Furthermore, environmental monitoring and scientific assessment of contamination in informal settlements is very limited locally. Therefore, the study in Mbare can fill these gaps by incorporating environmental degradation, health outcomes and human security outcomes into a single framework.

### 2.3.4 Strategies for improving waste management and mitigating risks

International studies by Wilson (2020) on waste management enhancement show the success of community-based approaches with the inclusion of the informal sector, participation of communities and municipal services. Dias (2019) shows the success of community-based approaches to Waste management, with the inclusion of the informal sector, participation of communities and municipal services. Waste pickers have proven themselves valuable assets in formal waste management systems, both in Brazil and India, for example, where they enhance collection rates and can provide employment opportunities. In South Africa and Kenya, decentralized composting and public- private partnerships have resulted in better coverage of

services and a decrease in legal dumping (Nzeadibe et al, 2020). These studies conducted in other countries emphasize the importance of governance changes, financial incentives and public education in the creation of a sustainable waste management system.

Although there are policy frameworks such as the Environmental Management Act (2007) and the National Waste Management Strategy (2014), their implementation in Zimbabwe is a challenge because of financial constraints, limited community engagement and inadequate monitoring. There has been limited empirical research examining municipal waste management that examines interventions in Zimbabwe and few studies have focused on efforts in Harare or Bulawayo to evaluate effectiveness of interventions or models for informal settlements. Thus, there is a clear research gap when it comes to design, testing and evaluation of context specific strategies that are both environmentally sustainable and human security oriented. Moreover, there are limited data on behavioral change programs to facilitate household involvement in waste segregation and proper disposal.

The reviewed literature indicates that there are major gaps such as the absence of focus on informal settlements, where poor service delivery and governance exacerbates the effect of failure to manage waste. There are few studies that integrate environmental, health and human security aspects into a single framework. There is also limited empirical assessment of waste management interventions, risks and a lack of consideration of socio-economic dynamics that influence waste behavior. These gaps demonstrate the need for locally focused and interdisciplinary research in Mbare to generate context-specific evidence and contribute to the literature on waste management in Zimbabwe.

## 2.4 Chapter Summary

Poor waste management in Mbare is a multi-dimensional human security challenge and poses a threat to health, environmental security and dignity as revealed by literature reviewed. This is driven by constrained municipal finances, weak institutions and unequal resource allocation, waste accumulates in residential areas which create disease breading grounds and exposing residents to health risks. Global views reveal strong differences with developed countries revealing governance failures and political economic differences in influencing waste outcomes. Theoretical inputs focus on people-centered approaches that are holistic in nature, combining environmental management with social protection and inclusive governance. Hence, the study posits that the waste management issue is significant to the environmental sustainability and protection of human security.

# CHAPTER THREE

## 3.0 RESEARCH METHODOLOGY

### 3.1 Introduction

The chapter showcases the research methodology employed in the study of human security implications of poor waste management in Mbare, allowing for a systematic approach to data collection, analysis and interpretation to support the study's objectives. It is important to highlight that poor waste management impacts on human security including environmental safety, health and livelihoods, and a comprehensive methodological approach was required to capture lived experiences and measurable impacts within the community. The chapter describes the research design, data collection methods, sampling techniques and analysis procedures and justifying their relevance to the human security framework as well as highlighting ethical considerations to ensure credibility, reliability and participant protection.

### 3.2 Research Design

Research design involved strategies and methods employed by the researcher to obtain valid and reliable results (Leavy, 2022). It is important to note that this study adopted a mixed-methods design, specifically an explanatory sequential design in which quantitative data was collected and analyzed first followed by qualitative data collection and analysis which helped to explain on the quantitative results. The study used a case study approach, with Mbare as the case, which managed to guide the examination of the human security implications of poor waste management in the context of Mbare, which enabled in-depth investigation of life experiences and institutional practices. Sequential approach was important as waste management was multidimensional with measurable impacts such as health statistics and perceptions of residents.

Therefore, the researcher quantified the problem to be able to give a complete understanding of the impact of the poor waste management on human security.

### 3.3 Methodology

According to Creswell (2018), research methodology is a plan and procedures for research that range from general assumptions to the specific methods of data collection and analysis. This research managed to utilize a mixed-methods research approach which combined both qualitative and quantitative techniques to provide more understanding of human security implications of poor waste management in Mbare. The use of a mixed methods approach was important as waste management was a complex issue impacting on health, the environment, livelihoods and community wellbeing. The mixed methods research approach also enabled the researcher to combine data from questionnaires and interviews, thereby improving the validity and reliability of the findings. Through the use of case studies of urban localities in Zimbabwe, institutional failures and local copying strategies in the context of municipal solid waste (MSW) have been exposed. The mixed methods used by the researcher to determine the magnitude of the waste problem and the impact that it is having on people helped to enhance the reliability and relevance of the study findings. Hence the method was found to be more reliable since it was tested with different methods and the result checked and confirmed.

### 3.4 Target population

The targeted population comprised of households residing in Mbare especially traders in Mbare Musika who experience the disposal environment and human security consequences, municipal actors like Harare City Council waste stuff and EMA officials and community leaders or informal including varied groups, the study aimed to capture a wide range of experiences and opinions regarding waste management practices and their influence on human security. Dube

(2023) stated that studies have shown that community involvement is critical in understanding environmental issues.

### 3.5 Sample and sampling techniques

Bryman (2021) emphasized the importance of sampling for selecting key informants with expertise or involvement in the research topic. The study consisted of 30 respondents including 24 general respondents which included the households and trader's residing in Mbare. The general respondents were selected to provide data on waste disposal practices, health risks, exposure to environmental hazards and livelihood impacts associated with poor waste management. The 6 key informants including informal waste collectors, community leaders and Environmental Management Agency (EMA) whose roles were directly linked to waste management and human security issues. Therefore, this sample size of 30 is considered appropriate for this study as it enables data saturation to be achieved for qualitative interviews.

#### 3.5.1 Stratified random sampling

A stratified random sampling technique was divided into geographical clusters like Mbare flats, Mbare Musika trading area and Matapi to ensure that representation of different settlement types and risk exposures. Thomas (2023) defines stratified random sampling as a method where the population is divided into subgroups and a random sample is taken from each subgroup. This approach helped to ensure that the selected households represent the diversity of Mbare's population and reduced the chance of bias in the selection process. Moyo & Nyoni (2018) stated that the stratified random sampling is important for obtaining comprehensive understanding of the perspectives of different social groups which may experience the implications of waste management.

### 3.5.2 Purposive sampling

Purposive sampling involves selecting individuals from a population in such a way that each member has an equal and independent chance of being included (Brennan, 2024). Purposive sampling also selected participants with direct knowledge or responsibilities related to waste, health or community mobilization and it was useful for qualitative key-informant work. Hence purposive sampling helped to select key informants who were knowledgeable about waste management practices, policies and challenges in the area.

## 3.6 Data collection methods and research instruments

This study used different methods to check and confirm the results as interviews explained mechanisms and meanings, observations and documents checked the facts and the surveys showed the extent of the issue. According to Leavy (2022) data collection involves gathering data through methods like surveys, interviews, focus groups and observations depending on the research design.

### 3.6.1 Semi structured interviews

Semi-structured interviews were important in collecting data as it ensured that all participants were asked the same questions in the same order as well as reducing interviewer bias and increasing data consistency. The semi-structured interviews with local government officials, community leaders, homes of residents and representative from non-governmental organizations were conducted as it helped to gather data on their perspectives and experiences with waste management in Mbare. The interview s enabled participants to provide detailed information about the challenges they face and the initiatives undertaken regarding waste management. The qualitative approach was used in order to facilitate deeper insights into the challenges faced and initiatives undertaken regarding waste management (Ngwenya, 2020). The flexibility of semi-

structured interviews also enabled the researcher to explore issues that emerged during the interviews and obtain detailed information relevant to the objectives of the study.

### 3.6.2 Surveys

The structured questionnaires were employed to gather quantitative data from residents. The surveys included scale questions which allowed for the assessment of attitudes towards waste management and the impacts of human security (Jones, 2021). Surveys were important in data collection methods because they allowed information to be gathered from a large number of residents in Mbare about their experiences, perceptions and behavior related to waste management as well as helped to understand how issues like waste related problems. Therefore, this method can help to inform management strategies to improve waste management in Mbare.

## 3.7 Validity and Reliability of research instruments

Validity is the extent to which a test measures what it is supposed to, ensuring accuracy and meaning in research (Karnia, 2024). It is important to note that in this study the human security impacts which is health, environment and safety of poor waste management in Mbare, content validity was ensured by aligning questions with study objectives and human security dimensions. Construct validity was achieved by breaking down concepts like human security, environmental risk and health vulnerability into measurable indicators. Human security captured indicators like exposure to diseases, access to clean surroundings and livelihood disruptions. Therefore, using multiple indicators ensured the research instruments to accurately reflect the human security framework.

### 3.7.1 Reliability of Research Instruments

Reliability in research methodology refers to the extent to which a research instrument or measurable tool produces consistent results when repeated under the same conditions (Lee, 2025). In this study consistency used logically related questions for example (multiple questions will be on health risks from waste). A pilot test in similar area helped to refine confusing questions and standardized data collection which strengthened reliability ensuring consistent findings on human security impacts.

## 3.8 Data presentation and analysis procedures

Data was examined using both quantitative and qualitative methods. Quantitative data from surveys was processed using statistical software which allowed correlation analyses and trend assessments. According to Nguyen (2025) presenting data correctly can help audience to understand complicated processes, identify trends and figure out whatever is going on. Qualitative data from interviews was evaluated to the thematic analysis where responses were categorized to extract key themes related to human security waste management. Visual aids such as charts and tables were used to present quantitative findings clearly. Therefore, data presentation was crucial as it transformed complex data into a format that is easy to understand, interpret and analyze.

## 3.9 Ethical Issues

Ethical considerations were important in research involving human subjects as the study ensured that informed consent was obtained from all participants. Confidentiality was maintained by anonymizing responses and securely storing data. Interview transcripts assumed names and identifying details was removed in the write-up (Bryman, 2020). To minimize harm, questions avoided sensitive topics where health concerns were disclosed, the research provided information

on local clinics and resources. The participants were made aware of their right to withdraw from the study at any phase without facing any negative consequences.

### 3.10 Chapter summary

The chapter outlined the research methodology used to examine human security implications of poor waste management in Mbare. It discussed the research design, research approach, target population, sampling techniques and sample size adopted for the study. The chapter also described the data collection methods and instruments including questionnaires, interviews and observations as well as procedures used to collect data. Furthermore, it explained the methods of data analysis for both quantitative and qualitative data, ethical considerations, the feasibility of the study and possible limitations of the research. Therefore, the chapter provided the methodological framework that guided the collection and analysis of data for the study.

# CHAPTER FOUR

## 4.0 DATA PRESENTATION AND ANALYSIS

### 4.1 Introduction

This chapter analyses the data collected during the study of human security implications of poor waste management in Mbare, Zimbabwe. The purpose of this chapter is to provide the findings obtained from the field and to interpret them in relation to the research objectives and questions. The data presented in this chapter were collected using the interviews, questionnaires and observations. These methods helped to gather both qualitative and quantitative information on waste management practices in Mbare and their effects on the well-being of residents. The analysis of the findings is guided by Political Ecology as this theoretical framework which is useful in explaining how environmental challenges like poor waste management are influenced by governance issues socio-economic inequalities and power relations.

### 4.2 Response rate

The study targeted 30 participants of these, 10 general respondents successfully completed and returned the questionnaires, representing a response rate of 33.3%. In addition, 10 participants were engaged through interviews achieving a 100% response rate for this category. For key informants 10 individuals were targeted however only 6 managed to participate resulting in the response rate of 60%. Therefore, the study obtained data from 26 participants out of intended 30 resulting in response rate of 86.7%. According to Taherdoost (2024) this response rate is considered adequate for analysis as supported by research standards.

### 4.3 Demographic Profile of Participants

The demographic profile of participants is an important in this study as it helps to show the characteristics of the respondents who provided information on the human security implications of poor waste management in Mbare. It is important to note that understanding the composition of the participants by gender is important in interpreting the findings since men and women may experience and respond to waste management challenges differently within the community. The researcher was able to overcome the problem of research absolutism with the assistance of the demographic information. Research absolutism is the assumption that the phenomenon of interest affects the same regardless of age, sex or other variable.

#### 4.3.1. Sex of the Participants

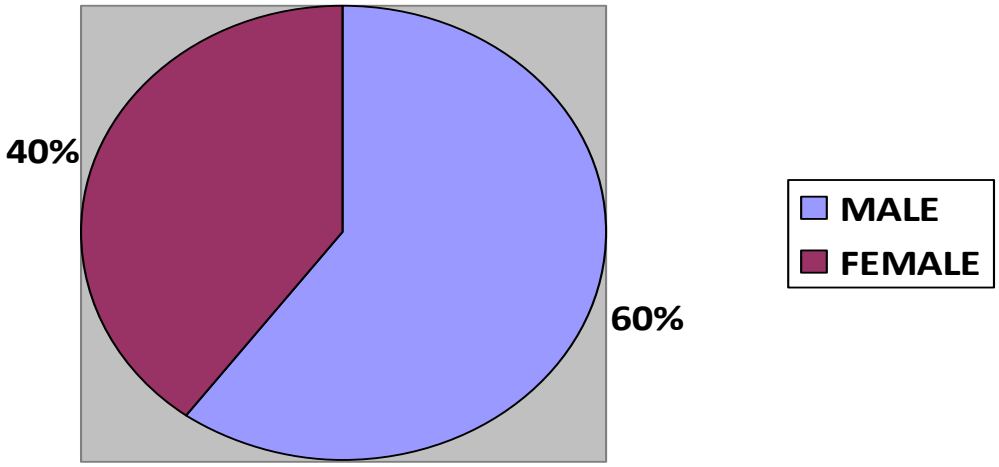


**Fig 4.3.1**

The demographic profile of participants reveals a gendered perspective on poor waste management in Mbare, with women making up 60% of respondents and men 40%. This gap likely

reflects women's involvement in household management, including waste handling and caregiving, giving them more direct experience with the issue as their dominance in the study highlights the impact of poor waste management on women tied to their socially assigned domestic roles. Men's participation though lower provided valuable insights allowing for understanding of the community experience.

### 4.3.2. Distribution by Age

| **Age Group** | **Frequency** | **Percentage** |
|---|---|---|
| 18-29 | 7 | 26.9% |
| 30-39 | 6 | 23.1% |
| 40-49 | 9 | 34.6% |
| 50 years and above | 4 | 15.4% |
| **Total** | **26** | **100%** |

**Table 4.3.2**

The table shows that most respondents were in the 30-39 and 40-49 age groups, with each group having 9 respondents (34.6%) and the other one 6 respondents (23.1%). This means that the study was mainly informed by mature and economically active people who are more likely to experience the effects of poor waste management in their lives including health risks, unsafe surroundings and challenges to livelihoods. The 18-29 age group had 7 respondents (26.9%), this shows that young adults also contributed to the study as their views are crucial because they are also directly affected by environmental and sanitation problems in Mbare. Respondents aged 50

years and above were 4 (15.4%) which makes them the smallest group in the study but even though they were fewer. Their responses were important because they may have deeper experience and knowledge of how waste management problems have changed overtime in Mbare. Therefore (WHO) World Health Organization (2024) notes that weak urban waste systems affect community's well-being, sanitation and livelihoods especially in densely populated settlements.

### 4.4 Current waste management practices in Mbare

Most respondents stated that there is lack of proper waste collection services in Mbare as waste is often left uncollected for long period leading to the accumulation of garbage in residential areas and streets. Most common waste disposal methods among 15 respondents (57.7%) are open dumping which shows that more than half of the households rely on informal and environmentally unsafe methods of waste disposal. One female respondent noted, "Mar*ara anogara kwenguva yakareba asina kutakura, saka tinozopedzisira tamarasa patinoona kuti pakakodzera*". (Sometimes *the rubbish stays for weeks without being collected and we have no choice but to dump it ourselves).*

Burning of waste is also the most common method as noted by 5 respondents (19.2%) suggesting that many people practice this even though they know that it is bad for their health and environment. Other 4 respondents (15.4%) stated that the use of bins for formal waste collection is low because of limited access to reliability of municipal waste collection services. Additionally, 3 respondents (11.5%) reported dumping in drains, which can contribute to drainage blockages and increase the risk of flooding and waterborne diseases. One of the participants noted, *People throw rubbish in the drains when it is not collected so when it rains, the drains get blocked and the water overflow which can cause diseases in the community.* Therefore, this situation forces residents to find other ways of disposing of the waste such as open dumping and burning.

The respondents were also unhappy about the irregularity and unreliability of the municipal services as many showed that waste collection is not on a regular schedule which make it difficult for households to plan proper disposal. Other participants complained that local authorities seem to neglect it compared with other suburbs. The feeling of neglect can lead to the feeling of being marginalized and less trust in service providers. Male respondent commented,

*"The council does not come regularly and we are not even told when will they come. Sometimes weeks pass without any waste collection services which results in garbage piling in our surroundings. As residents we feel ignored as there is no clear communication and stable schedule from the council to deal with the waste collection".*

The participants highlighted that resident's lack of knowledge of waste collection schedules and of the changes in service delivery is caused by lack of communication from municipal authorities. This results in waste continues to pile up, creating unpleasant living conditions, bad smells and increased exposure to diseases. Shabani (2022) found that policy failures and institutions cause waste problems. Therefore, the lack of communication and accountability from local authorities reflects government weaknesses reinforcing the idea that environmental challenges are deeply connected to political structures and decision-making processes.

**4.5 Human health implications of poor waste management**

Respondents linked the accumulation of waste in Mbare to the outbreak and spread of diseases within the community. The participants explained that uncollected garbage creates breeding grounds for flies, mosquitoes and rodents. These vectors contaminate food and water sources thereby increasing risk of waterborne diseases such as cholera, typhoid and diarrhea. Cholera was the most frequently reported illness accounting for 10 respondents (38.5%) followed

by diarrhea 8 participants (30.8%) and typhoid 6cases (23.1%). Hence over 80% of respondents linked unsafe waste practices to waterborne diseases with cholera, diarrhoea and typhoid making up all reported illnesses. One respondent mentioned, *Poor waste management is causing diseases like cholera because the waste contaminates our water.* This situation reflects public health studies that indicate that inadequate waste management is a major factor in the spread of diseases in urban areas.

Concerns about children's health were raised in the responses as participants emphasized that children are more vulnerable because they play near waste dumps and contaminated environments. It is crucial to note that some respondents noted that children are exposed to infections through direct contact with waste or by consuming contaminated food and water and other respondents expressed worry about frequent illness among children which affects school attendance and well-being. One respondent mentioned, *the waste attracts flies and they contaminate our food, which is why children are always getting sick.* This finding is consistent with WHO (2022), which states that poor waste management attracts disease vectors such as flies that contaminate food and increase the risk of diseases.

These findings are consistent with UNICEF (2020) which reports that children living in areas with poor sanitation are more likely to suffer from diarrhoea diseases and other infections because of increased exposure to contaminated environments. The uncollected garbage, contaminated water and children's vulnerability indicate how marginalized communities like Mbare are unequally exposed to environmental health risks. The residents' experiences confirm that environmental conditions directly influence public health outcomes. Henceforth the political ecology theory provides an explanatory to the fact that these health challenges are not purely

environmental but are connected to power relations, resource distribution and institutional failures that influence who is the most affected by the poor sanitation and waste management.

### 4.6 Environmental impacts of poor waste management

The respondents in Mbare highlighted that the accumulation of solid waste in drainage systems is a major cause of flooding during the rainy season as land pollution was the most common impact from 11 respondents (42.3%) showing widespread dumping of waste on land, followed by 6 respondents (23.1%) who highlighted on how waste accumulation obstructs with water flow systems. The 5 respondents (19.2%) showed that waste is also contamination water sources as well as air pollution from burning waste reported least by 4 respondents (15.4%). The participants explained that the plastic waste, food remains and other things are often dumped into drains due to the absence of proper disposal facilities and this result in waste blocking the flow of water, causing drainage systems to overflow. One female respondent mentioned that, *there was a time when the drainage system got blocked and sewage ended up bursting into a house here in Matapi, Mbare exposing residents to serious health risks.*

The findings show that the problem of urban flooding in the majority of the cities is due to poor solid waste management. According to (UNEP) United Nations Environment Programme (2021) stated that blocked drainage systems caused by waste accumulation increase the risk of flooding and water stagnation especially in high-density urban settlements. In addition, participants also reported that burning of waste is a practice that reduce the accumulation of garbage but they raised concern on the smoke produced which pollutes the air and effects in breathing. According to the World Bank (2019) poor waste disposal practices particularly open burning release harmful and toxic gases that contribute to the air pollution and respiratory problems. In communities like Mbare these environmental disadvantages are often concentrated

among the marginalized communities. Hence the flooding, pollution and health risks outlined are not therefore not only environmental hazards but also result of resource inequalities in the cities.

### 4.7 Strategies for Improving waste management

Residents in Mbare emphasized on the need for government intervention in addressing poor waste management. Regular waste collection was the most preferred solutions by 13 participants (50.0%) as one of the participants mentions that inconsistency or absent collection services are a major concern. Seven respondents (26.9%) indicated the need for proper disposal infrastructure, similarly other 2 respondents (7.7%) suggested strict laws and enforcement which implies that while regulation matters residents need to prioritize practical service delivery and infrastructure. The remaining respondents agreed that efficient waste management services should be provided primarily by the local authorities because if there is no involvement of the government it will continue to rise and cause threat to public health and environment. *"Hurumende ngaitibatsirewo kuti kanzuru itakure marara kana katatu pavhiki". (The government should intervene and regularly pick up waste because we cannot do this on our own).* Male respondent. This suggests that residents expect local authorities to play active role in providing regular waste collection services. Effective urban waste management therefore requires strong municipal systems, proper policy implementation and adequate allocation of resources.

Respondents (15.4%) also highlighted the importance of community participation and also acknowledged the role of government. A number of participants noted the need for residents to be responsible in waste disposal and keeping their environment clean. Some participants noted that community-based work such as awareness programs, clean-up campaigns and local monitoring systems might have been helping to improve the situation. Respondent commented that, *as*

*residents we need to take initiative as a community to educate each other on the importance of proper waste disposal by not dumping waste in the streets and drainage system.*

UN- Habitat (2020) stated that community engagement is a key pillar of sustainable urban waste management as it promotes behavioral change and encourages shared responsibility between residents. Therefore, the idea of shared responsibility between residents and the government reflects the interaction between structure which is the government systems, policies and power and the agency which is the community action.

**4.8 Chapter Summary**

This chapter presented and analyzed the findings of the study on the human Security Implications of poor waste management in Mbare, Zimbabwe. Data were collected from 26 participants using quantitative and qualitative methods and the findings were presented using tables and descriptive explanations. The findings revealed that waste management in Mbare remain inadequate with residents mainly relying on open dumping, burning and improper disposal methods due to unreliable waste collection services. The study further established that poor waste management poses risks to human health, as respondents associated accumulated waste with diseases such as cholera, diarrhoea and typhoid. Environmental challenges such as land and water contamination, pollution and blocked drainage systems that can contribute to flooding were also identified. Vulnerable groups especially children were identified as the most affected due to their higher exposure to unsafe environmental conditions. In terms of improving waste management, respondents identified regular waste collection provision of adequate waste disposal infrastructure, enforcement of waste management regulations, government intervention and community participation as important measures. Therefore, the findings presented in this chapter demonstrate

that poor waste management in Mbare affects several dimensions of human security and requires coordinated efforts from local authorities, government and the community.

# CHAPTER FIVE

## 5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Introduction

The chapter presents the summary, conclusions and recommendations of the study on the Human Security Implications of Poor Waste Management in Mbare, Zimbabwe. The major purpose of this chapter is to review the major findings of the research in relation to the study objectives and research questions. It also shows the key issues identified regarding how poor waste management affects different dimensions of human security including health, environmental, economic security and community well-being. The chapter begins with a summary of the main findings derived from data analysis, followed by conclusions drawn from the study based on evidence gathered from respondents and key informants. Finally, the chapter proposes practical and policy recommendations aimed at improving waste management systems in Mbare to enhance human security and promote sustainable urban development.

### 5.2 Summary of the whole study

The study examines human security implications of poor waste management in Mbare, a crowded suburb of Harare, Zimbabwe. The study investigated how poor waste management affects human security, particularly resident's health, safety and livelihoods. The study applied human security which focuses on protection from threats to life, dignity and basic needs. The research posits that inadequate waste management in Mbare is caused by rapid urbanization, limited municipal resources and government problems that lead to irregular waste collection services and environmental degradation especially in low-income communities. The study found that poor waste management resulted in outbreaks of waterborne and vector-borne diseases such as cholera, typhoid, diarrhea and respiratory infections due to open burning of waste and contaminated water.

The second chapter looked at the guiding theory and literature review. The research applies political Ecology theory which shows that waste issues are linked to social inequalities and unequal distribution of municipal services where marginalized areas like Mbare receive fewer resources. The literature review demonstrate that similar patterns exist globally and many African cities where inadequate infrastructure, weak policy implementation and limited public awareness cause waste challenges. It also highlighted a significant research gap in studies that combine environmental, health and human security dimensions with informal settlements.

The third chapter described the research methodology adopted in the study. A mixed-methods approach was used to address this gap through combining surveys with qualitative interviews in a case study of Mbare enabling deeper understanding of resident's lived experiences and institutional responses. Data was collected from households, traders at Mbare Musika, municipal officials and informal waste collectors through stratified random sampling to ensure representation of different groups affected by waste issues. The methodology emphasized validity, reliability, ethical considerations including informed consent form and confidentiality. Systematic data analysis used techniques for survey data and thematic analysis for interview response bias and sample size in Mbare.

The fourth chapter presented and analyzed the findings of the study. The study found that poor waste management in Mbare poses significant human security challenges that require solutions such as improving municipal services, engaging communities and inclusive waste strategies for the alleviation of risks, strengthening of resilience and improving the lives of the people living in the high-density urban settlements.

### 5.3 Summary of the key findings

The findings expose that there is poor waste management systems in Mbare which cause serious threats to human security. The residents are experiencing irregular collection of municipal waste, leading to the adoption of unsafe disposal practices such as open dumping (57,7%), burning municipal waste (19,2%) and dumping the waste in drains (11,5%). This shows a lack of service provision and a lack of communication between local government and residents – and waste has become a common issue which has led to unsafe and unhealthy living conditions.

The study also shows that the improper waste management has grave consequences for health and environment security. Bad waste management practices promote the proliferation of diseases like cholera, typhoid and diarrhoea that are the most vulnerable to children as they are more exposed to contaminated environments. Waste disposal is a negative impact to the environment due to land pollution, pollution of water sources, and clogging of drainage systems, causing floods during the rainy season. The results also highlight governance challenges which include neglect by authorities which undermines trust and deepens inequality. Thus, the scenarios demonstrate a general human security problem, which needs to be addressed through cooperation between the government and the community in order to upgrade the waste management systems and living conditions.

#### I. Current waste management practices in Mbare

The findings by the study showed that waste management practices in Mbare are mostly inadequate and inefficient as disposal facilities are insufficient, waste collection is irregular and infrastructure is poorly maintained. This result in open dumping, burning of waste and roadside littering which is common strategies which is being used by the residents. These practices show

failures in municipal service delivery and highlight the need for improved waste management systems.

**ii. The human health implications of inadequate waste management**

The study showed that poor waste management has a severe health problem for residents as accumulated waste provides breeding grounds flies and rodents which contribute to the outbreaks of diseases such as cholera, diarrhea and respiratory infections. Smoke from the burning waste also causes harm to the residents as it increases the risk of respiratory problems. The study therefore concluded that inadequate waste management poses direct threat to public health and human security in Mbare.

**iii. The environmental consequences of poor waste management and their threats to human security.**

The study concluded that environmental degradation in Mbare is linked to poor waste disposal practices. Blocked drainage systems caused by waste accumulation contribute to flooding, poor living conditions and water pollution. Soil contamination and air pollution threaten environmental quality as these environmental hazards not only damage ecosystems but also increase vulnerabilities among residents. Hence threatening human security and sustainable development.

**iv. Strategies for improving waste management and mitigating risks**

The findings showed that effective improvement requires multi-stakeholders such as involving government authorities, private sector participation and community engagement. There is need to strengthen municipal waste collections systems, increasing funding, promoting recycling initiatives, enforcing environmental regulations and enhancing public awareness on proper waste

disposal. Community participation and education is also important for achieving sustainable solutions. Therefore, without interventions and coordination the waste management crisis in Mbare is likely to continue.

## 5.4 RECOMMENDATIONS

Based on the study findings and conclusions, the following evidence-based recommendations are proposed.

### 1 Policy makers and government authorities

#### a. Strengthen waste collection systems

The local authority should improve the frequency of waste collection services in Mbare as regular collection schedules can reduce illegal dumping and minimize disease outbreaks.

#### b. Increase budget allocation for waste management

Adequate financial resources should be allocated to waste management departments to ensure the availability of waste bins, protective equipment and trucks. There should be penalties for illegal dumping to promote accountability.

### 2 Local communities in Mbare

#### a. Report illegal dumping

Community members should report illegal dumping and blocked drainage systems to authorities to ensure intervention.

#### b. Practice waste separation at household Level

Residents should separate recyclable, organic and non-recyclable waste to make the disposal easier

**3 Waste management practitioners**

**a. Adopt Modem Waste Management Approaches**

Practitioners should promote innovative methods including composting, waste to energy initiatives and recycling partnerships.

**b.) Capacity building and training**

Waste management practitioners should receive regular training in sustainable waste management techniques, recycling technologies and safe waste handling practices.

**4. Informal waste collectors (waste pickers)**

**a. Provide protective equipment**

Gloves, masks, boots and uniforms should be provided to reduce exposure to diseases and waste

**b. Support their work**

Authorities should recognize waste pickers into formal waste management systems as they play a crucial role in recycling.

**5.5 Area for Further Research**

The study recommends the following areas for future research:

a) An assessment of government policies and their effectiveness in waste management.

b) The role of informal waste collectors in improving waste management systems.

c) The impact of recycling initiatives on reducing waste in urban areas.

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**APPENDIX 1: Interview guide for general respondents**

My name is Nashly Kachuta, a peace and governance student at Bindura University of Science education. I am conducting a study on the human security implications of poor waste management in Mbare, Zimbabwe as part of my academic research.

The aim of this interview is to understand waste management practices, associated health and environmental risks and possible improvement strategies. Your participation is voluntary and all responses will be treated with strict confidentiality.

**1. Background Information of the Respondent**

1.What is your age group and gender?

2. How long have you lived or work in Mbare?

3. Are you involved in any formal or informal waste management activities.

**2. Existing Waste Management Practices in Mbare**

4. How would you describe the current waste management situation in Mbare?

5. How is waste commonly disposed of in Mbare?

6. How often is waste collected by local authorities?

7. Are there any recycling, informal waste collection practices in the community?

8. What challenges are faced in the current waste management system?

**3. Health Security and Disease Risks**

9. In your opinion how does poor waste management affect human health in Mbare?

10. What common diseases or health problems are associated with poor waste disposal in this area?

11. Which groups are most expose to health risks caused by poor waste management (children, elderly, waste pickers)?

**4. Environmental and Human Security Impacts**

12. How does poor waste management affect the local environmental (air, land and water?

13.Are there areas in Mbare where waste accumulation poses serious environmental threats?

14. How does environmental degradation caused by waste affect people's safety, livelihoods and well-being?

**5. Strategies for Improving Waste Management**

15. What measures so you think can improve waste management in Mbare?

16. How can community participation help improve waste management and human security?

17. What support is needed from government, NGOs or private sectors?

**6. Closing question**

18. Is there anything else you like to add regarding waste management and human security?

**CONCLUSION**

• Thank you for your time and contributions. Your responses will greatly assist in understanding the human security implications of poor waste management in Mbare.

**APPENDIX 2: Questionnaire**

I am Nashly Kachuta a fourth-year student at Bindura University of Science Education, pursuing a Bachelor of Science Honors Degree in Peace Governance. I am conducting a study on the Human Security Implications of Poor Waste Management in Mbare, Zimbabwe.

**INSTRUCTIONS**

• Please tick (✓) the appropriate answer where applicable

• Answer honestly based on own experiences

• There are no right or wrong answers

**SECTION A: Demographic Information**

**1. Gender**

| Male | Female |
|---|---|
| | |

**2.Age Group**

| **Below 18** | **18-29** | **30-39** | **40-49** | **50 and above** |
|---|---|---|---|---|
| | | | | |

**3.Marital status**

| **Single** | **Married** | **Divorced** | **Widowed** |
|---|---|---|---|
| | | | |

**4. Occupation**

| Informal trader | Formal employment | Unemployed | Student | Other |
|---|---|---|---|---|
| | | | | |

**5. How long have you lived in Mbare?**

| **Less than 1 year** | **1-5 years** | **6-10 years** | **More than 10 years** |
|---|---|---|---|
| | | | |

**SECTION B: Existing Waste Management Practices in Mbare**

6. What type of waste is common in your area?

| Household waste | Market waste | Plastic | Organic waste | Mixed waste |
|---|---|---|---|---|
| | | | | |

7. How do you usually dispose waste?

| Municipal collection | Open dumping | Burning | Informal collectors | Other |
|---|---|---|---|---|
| | | | | |

8. How often is waste collected by the local authority?

| Daily | Weekly | Monthly | Rarely | Never |
|---|---|---|---|---|
| | | | | |

9. In your opinion how effective is the current waste management systems?

| Very effective | Effective | Fair | Poor | Very poor |
|---|---|---|---|---|
| | | | | |

**SECTION C: Health Security and Disease Risks**

10.Does poor waste management affect human health in your community?

| Yes | No |
|---|---|
| | |

11. Which health problems are common due to poor waste management?

| Cholera | Diarrhea | Typhoid | Respiratory problems | Skin diseases |
|---|---|---|---|---|
| | | | | |

12. Who is most affected by health risks from poor waste management?

| Children | Elderly | Women | Waste pickers | Everyone |
|---|---|---|---|---|
| | | | | |

**SECTION D: Environmental and Health Security Impacts**

13. Does poor waste management cause environmental pollution in Mbare?

| Yes | No |
|---|---|
| | |

14. Which environmental problems are caused by poor waste management?

| Water pollution | Air pollution | Land degradation | Bad smells |
|---|---|---|---|
| | | | |

15.Does environmental pollution affect your safety and well-being?

| Yes | No |
|---|---|
| | |

16. To what extent does poor waste management threaten human security?

| Very high | High | Moderate | Low | Very low |
|---|---|---|---|---|
| | | | | |

**SECTION E: Strategies for Improving Waste Management**

17. What strategies can improve waste management in Mbare?

| Regular waste collection | More refuse bins | Community clean-up campaigns | Recycling initiatives | Environmental awareness programs |
|---|---|---|---|---|
| | | | | |

18. Who should take the leading role in improving waste management?

| Local authority | Community members | Government | NGOs | Private sector |
|---|---|---|---|---|
| | | | | |

19. Would you be willing to participate in community waste management programs?

| Yes | No |
|---|---|
| | |

**SECTION F: General Comments**

20. In your opinion, how can improved waste management enhance human security in Mbare?

.....

.....

21. Any additional suggestions.....

**APPENDIX 3: Key informant interview guide**
**Study title:** Human Security Implications of Poor Waste Management in Mbare, Zimbabwe

**Targeted participants:** key informants from institutions and organizations involved in waste management, environmental health, public health and community development in Mbare for example municipal officials, environmental health officers, community leaders and representatives of NGOs.

**Purpose of the interview:** The purpose of this interview is to obtain perspectives from institutional perspectives on waste management practices in Mbare and to understand how poor waste management affects different dimensions of human security.

**SECTION A: Background Information**

1. Please indicate your position and the institution or organization you represent?

2. How long have you been working in this role, particularly in relation to waste management or public/environmental health issues in Mbare?

**SECTION B: Existing Waste Management Practices**

3. What are the waste management practices which are currently being implemented in Mbare?

4. Who are the main actors responsible for waste collection, disposal and monitoring in the area?

**SECTION C: Health Security Implications**

5. In your view, how does poor waste management affect public health in Mbare?

6. What common waste-related diseases or health conditions have been observed in the area?

7. How does waste accumulation influence the vulnerability of residents, especially children, the elderly and informal workers?

**SECTION D: Environmental and Human Security Risks**

8. What are the environmental problems arise from poor waste management in Mbare (e.g pollution, blocked drainage, flooding)?

9. How do these environmental conditions threaten human security including safety, livelihoods and living conditions?

10. Which areas or groups are most affected by these environmental and security risks?

**SECTION E: Strategies and Policy Responses**

11. What policies, laws or strategies currently guide waste management in Mbare?

12. How effective are these policies in addressing waste-related human security challenges?

13. What strategies do you recommend to improve waste management and enhance human security in Mbare?

14. How can collaboration between local authorities, government agencies, NGOs and community be strengthened?

**APPENDIX 4: Consent form**

**Study Title:** Human Security Implications of Poor Waste Management in Mbare, Zimbabwe.

**Researcher:** l am Nashly Kachuta doing Peace and Governance at Bindura University of Science Education.

**Purpose of the study**

You are invited to participate in a research study that seeks to examine the implications of poor waste management in Mbare, Zimbabwe. The study focuses on the impacts on health, the environment, economy and personal safety due to inadequate waste management.

**Nature of participation**

Your participation in this study is voluntary. You may choose to participate or to withdraw at any stage without any penalty.

**Procedures**

If you agree to participate, you will be asked to take part in an interview or complete a questionnaire. The interview will take approximately 20-30 minutes.

**Risks and Benefits**

There are no physical risks associated with this study. There are no direct personal benefits, the findings may contribute to improved waste management practices and policies that enhance human security in Mbare.

**Confidentiality**

All information provided will be treated with strict confidentiality. Your identity will not be disclosed and no personal identifiers will be used in the research report, Data collected will be used for an academic purpose only.

**Consent Statement**

I confirm that l have read and understood the information above. I voluntarily agree to participate in this study.

**Participant Signature: .....**

**Date: .....**

**Researcher's Signature: .....**

**APPENDIX 5: Permission letters**



BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SOCIAL SCIENCES AND HUMANITIES

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DEPARTMENT OF PEACE AND GOVERNANCE

21 NOVEMBER 2025

TO WHOM IT MAY CONCERN

RE: REQUEST TO UNDERTAKE RESEARCH IN YOUR ORGANISATION

This serves to introduce the bearer, KACHUTA NASHILY Student Registration Number B222136B who is a **HBSC PEACE AND GOVERNANCE** student at Bindura University of Science Education and is carrying out a research project in your area/institution.

May you please assist the student to access data relevant to the study, and where possible, conduct interviews as part of a data collection process.

Yours respectfully

BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF SOCIAL SCIENCES & HUMANITIES
DEPARTMENT OF PEACE AND GOVERNANCE
25 NOV 2025
P. BAG 1020, BINDURA, ZIMBABWE

J.KUREBWA (DR)
Chairperson

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CITY OF HARARE

HUMAN CAPITAL DEPARTMENT
TOWN HOUSE, HARARE, ZIMBABWE
POST OFFICE BOX 990
TELEPHONE 752979 / 753000

EMAIL: hrd@hararecity.co.zw
ADDRESS ALL CORRESPONDENCE TO HUMAN CAPITAL DIRECTOR

Bindura University Of Science Education
P. Bag 1020
Bindura
Zimbabwe

29 January 2026

**RE: AUTHORITY TO UNDERTAKE RESEARCH: KACHUTA NASHLY**

This letter serves as an authority for Kachuta Nashly to undertake a research survey on the topic, **"HUMAN SECURITY IMPLICATIONS OF POOR WASTE MANAGEMENT IN MBARE , ZIMBABWE"**.

The city of Harare has no financial obligation and neither shall it render any further assistance in the conduct of the research. The researcher is however requested to avail a soft and hard copy of the research to the undersigned so that residents of Harare can benefit out of it. The research should not be used for any purposes other than the study purpose specified.

**This letter is issued upon payment of 5usd administration fee.**

**Receipt number:16150078**

**Yours faithfully**

**MR J. DUVE**
**ACTING HUMAN CAPITAL DIRECTOR**

CITY OF HARARE
HUMAN CAPITAL DEPARTMENT
03 FEB 2026
P.O. BOX 990, HARARE
7529

**Harare to achieve a WORLD CLASS CITY STATUS by 2025**